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GOVERNOR OF HAWAII



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OFFICE OF CONSERVATION AND COASTAL LANDS

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KAHOOLAWE ISLAND RESERVE COMMISSION  
LAND  
STATE PARKS

Ref.:PB:MM

File: KA-3128

MEMORANDUM

JUL 11 2003

TO: Genevieve Salmonson, Director  
Office of Environmental Quality Control

FROM: Dierdre S. Mamiya, Acting Administrator   
Office of Conservation and Coastal Lands

SUBJECT: Final Environmental Assessment (FEA)/Finding of No Significant Impact (FONSI) for CDUA KA-3128 for a Single Family Residence, Kalihiwai, Kauai, located in the Limited Subzone of the Conservation District.

The Department of Land and Natural Resources has reviewed the FEA. The DEA was published in OEQC's Environmental Notice on May 23, 2003. We have determined that this project will not have significant environmental effects, and have therefore issued a FONSI. Please publish this notice in the July 23, 2003 OEQC Environmental Notice.

We have enclosed four copies of the Final EA for the project. The Department is submitting the OEQC Bulletin Publication Form. Comments on the draft EA were sought from relevant agencies and the public, and were included in the final EA.

It should be noted that acceptance of this EA does not constitute a project approval by the Board of Land and Natural Resources (BLNR). The BLNR has the discretion to approve or deny or modify the project.

Please contact Matthew Myers of our Office of Conservation and Coastal Lands at 587-0382 if you have any questions on this matter.

Enclosures

JUL 23 2003

FILE COPY

2003-07-23-KA-FA-

## Final Environmental Assessment

### Robert and Yvette Bothman Single-Family Residence

*TMK (4) 5-3-03: 014  
Kalihwai, Kauai, Hawaii*

Submitted by:

**Robert A. Bothman**

June 2003

*In Accordance with the Requirements for Chapter 343, HRS and  
Chapter 200 of Title II, Administrative Rules  
Department of Health, State of Hawai'i*



Landmark Consulting Services Inc., P.O. Box 915, Hanalei HI. 96714, phone: 808.828.6332, fax: 808.828.6242 email: welborn@aloha.net

**Attention:**

**REGARDING REVISIONS**

**FINAL ENVIRONMENTAL ASSESSMENT**

This Final Environmental Assessment (FEA) has been amended to reflect the comments that were received from various agencies and private individuals after their review of the Draft Environmental Assessment (DEA) during the statutory 30-day public comment period. The revised FEA addresses each recommendation and/or concern, which was raised by those who took the opportunity to comment on the proposed actions.

Documentation of the comments that were received and responses thereto are included herewith in Appendix 1 and referenced throughout the FEA where applicable. All changes and additions to the content of the FEA are ***highlighted for ease of recognition by the use of an emboldened and italicized script with a font that differs from the body of the original text of the DEA.*** Additional exhibits have been included with the FEA and the numbering of the appendices differs slightly from that of the DEA.

# TABLE OF CONTENTS

	<u>Page</u>
<b>SECTION I – Project Description</b>	
A. Applicant Information	1
B. Approving Agency	1
C. Proposed Action	1
D. Anticipated Determination	2
E. Project Site Location	2
F. Necessary Permits and Environmental Requirements	2
G. Agencies Consulted in Preparing Environmental Assessment	3
H. Public Policies	4
I. Project Characteristics	5
<b>SECTION II – Summary Description of the Affected Environment &amp; Identification of Potential Impacts</b>	
A. Physical Site Description	7
B. Existing Land Use	7
C. Topography	7
D. Flora and Fauna	8
E. Soils	8
F. Climate	8
G. Air Quality	8
H. Noise Impact	9
I. Archaeological and Historical Sites	9
J. Cultural Impacts	11
K. Visual Impacts	11
L. Natural Hazards	11
M. Land Use Classifications & Compatibility With Surrounding Environment	12
N. Public Services and Facilities	12
1. Access	12
2. Water	12
3. Wastewater	12
4. Solid Waste	13
5. Fire Protection	13
6. Emergency Medical Service	13
7. Police Protection	13
8. Public Schools	13
9. Utilities	13
<b>SECTION III – Summary of Major Impacts &amp; Alternatives Considered</b>	14
<b>SECTION IV – Expected Determination &amp; Significance Criteria</b>	17
<b>SECTION V – Permits, Variances &amp; Approvals</b>	20

## **LIST OF EXHIBITS**

<b>Exhibit 1</b>	<b>Vicinity Map – Island of Kauai</b>
<b>Exhibit 2</b>	<b>Tax Map of Subject Parcel</b>
<b>Exhibit 3</b>	<b>State &amp; County Zoning Map</b>
<b>Exhibit 4</b>	<b>Site Plan</b>
<b>Exhibit 5</b>	<b>Dwelling Floor Plan</b>
<b>Exhibit 6</b>	<b>Dwelling Front (North) Elevation</b>
<b>Exhibit 7</b>	<b>Dwelling Exterior Perspective</b>
<b>Exhibit 8</b>	<b>Justification for Setback Exception</b>
<b>Exhibit 9</b>	<b>Lava Rock Wall Detail</b>
<b>Exhibit 10</b>	<b>SMA – Letter of Exempt Status</b>
<b>Exhibit 11</b>	<b>Princeville Library Deposit Memo</b>
<b>Exhibit 12</b>	<b>Flood Zone Interpretation</b>

## **APPENDICES**

<b>Appendix 1</b>	<b>Documentation of Draft EA Comment Letters and Accompanying Responses</b>
<b>Appendix 2</b>	<b>Archaeological Inventory Level Survey &amp; Supporting Documentation</b>
<b>Appendix 3</b>	<b>Burial Treatment Plan</b>
<b>Appendix 4</b>	<b>Cultural Impact Assessment</b>
<b>Appendix 5</b>	<b>Documentation of Pre-Assessment Consultation with Governmental Agencies and Impacted Parties</b>
<b>Appendix 6</b>	<b>Archaeological Monitoring Plan</b>

**SECTION I**  
**PROJECT DESCRIPTION**

**A. OWNER / APPLICANT**

Robert A. Bothman  
20385 Iron Springs Road  
Los Gatos, CA 95030

**Consultant for Applicant:**

Landmark Consulting Services, Inc.  
Contact: Ben Welborn  
P.O. Box 915  
Hanalei, HI 96714  
Phone: (808) 828-6332  
Fax: (808) 828-6242  
Email: welborn@aloha.net

**B. APPROVING AGENCY**

State of Hawaii  
Board of Land and Natural Resources (BLNR)  
P.O. Box 621  
Honolulu, HI 96813

**C. PROPOSED ACTION**

The Applicant, Mr. Robert A. Bothman proposes to construct a three (3) bedroom Single-Family Residence (SFR) of approximately 3,468 square feet, on the subject .23 acre (10,022 square foot) parcel of land. The structure will be constructed on piers, elevated off of the existing grade to conform to applicable County regulations regarding the National Flood Insurance Program for coastal high hazard areas. The lowest horizontal structural member of the residence will have a minimum elevation of 16 feet above mean sea level. The 3,468 square feet of development area will be comprised of approximately 2,440 square feet of interior living spaces, and 1,028 square feet of exterior lanai (deck areas). Refer to Exhibits 4, 5, 6 and 7 for a Site Plan, Floor Plan, Front Elevation and Exterior Perspective of the proposed residence.

The architecture of the building will be of a contemporary Polynesian "Plantation-Style" vernacular, the owner's intent is to design and construct a home which will be compatible with the surrounding environment and the existing development on nearby parcels. Minimal site grading will occur, primarily for driveway access and in the

footprint of the homesite to create automobile parking spaces and a storage area. The maximum height of the proposed structure shall not exceed 25 feet.

Landscaping will be used to soften the visual impact of the proposed structure. Landscaping will consist of groundcovers, ornamental shrubs, and various trees, which are known to be compatible with the soils and climate of the area.

**D. ANTICIPATED DETERMINATION**

EIS REQUIRED \_\_\_\_\_ NOT REQUIRED  X

**E. PROJECT SITE LOCATION**

The project site is located on Kalihiwai Road (formerly the "Old Kuhio Highway") in Kalihiwai Bay, approximately 1.8 miles northwest of Kilauea town on the northern coast of Kauai. Refer to Exhibits 1, 2, and 4 for a graphic representation of the site location and characteristics.

TMK:	(4) 5-3-03:14
Island:	Kauai
District:	Hanalei
Zoning:	Conservation/Open
State Land Use:	Conservation (Limited Subzone)
County General Plan:	Open / Special Management Area (SMA)
Current Land Use:	Vacant Undeveloped Land
Proposed Land Use:	Single-Family Residence
Adjacent Land Use:	Residential Development & Vacant Parcels

**F. NECESSARY PERMITS AND ENVIRONMENTAL REQUIREMENTS**

- 1. State Conservation District Use Permit (CDUP)**  
Department of Land and Natural Resources, Planning Branch
- 2. Environmental Assessment**  
State Office of Environmental Quality Control  
Department of Health
- 3. County of Kauai Building Permit**  
Department of Public Works (with approval from other County agencies)

4. **Special Management Area (SMA)**  
Determination of Exempt Status for Single-Family Residence (*enclosed*)  
County of Kauai Planning Department
5. **Individual Wastewater System Permit**  
State Department of Health (*see attached comments from the Dept. of Health in Appendix #1*)

**G. AGENCIES CONSULTED IN PREPARING ENVIRONMENTAL ASSESSMENT**

The following agencies and affected parties have been consulted and given an opportunity to review and comment upon the proposed project in the preparation of this Draft Environmental Assessment (See Appendix 5 for documentation of correspondence and recommendations):

**FEDERAL**

- No agencies contacted

**STATE**

- Office of Environmental Quality Control (OEQC)
- State Department of Health
- DLNR, Division of Aquatic Resources
- DLNR, Division of Forestry and Wildlife
- DLNR, State Historic Preservation Division

**COUNTY**

- County Planning Department
- Department of Public Works, Engineering Division
- Department of Public Works, Building Division
- Department of Water

**COMMUNITY GROUPS, ADJACENT PROPERTY OWNERS, ETC.**

- Kilauea Neighborhood Association
- Sierra Club, Kauai Chapter
- Gaylord Kaonohi, Neighboring Property Owner
- William Akana, Neighboring Property Owner



## H. PUBLIC POLICIES

### 1. STATE LAND USE LAW

The project site is situated within a Limited Subzone of the State Conservation District. The proposed action is therefore subject to the land use regulations and permit application review process of Chapter 13-5, Hawaii Administrative Rules, as administered by the Department of Land and Natural Resources.

The Applicant is proposing an identified use within the Limited Subzone. A Board Permit is being requested.

### 2. COUNTY GENERAL PLAN

The Kauai County's General Plan designates the project area as Open Space. This represents the County's desire to manage large development within the vicinity of the project and to promote open spaces, recreational uses, and natural landscapes.

The Applicant is proposing to develop approximately 3,468 square feet of the 0.23-acre parcel, which is equivalent to about 35% of the overall land area. The remaining 65% of the parcel will be kept in open space, in a naturally landscaped setting as provided in the County's General Plan.

### 3. COUNTY ZONING

Conservation / Open

### 4. SPECIAL MANAGEMENT AREA

The project site is located within the Coastal Zone Special Management Area (SMA); it is therefore subject to the SMA Rules and Regulations of the County of Kauai. However, at the discretion of the County Planning Department, the construction of a Single-Family Residence such as the Applicant is proposing is typically exempted from obtaining an SMA permit. The proposed residence is not part of a larger development planned for the area. Additionally, the proposed project is located approximately 250 feet from the shoreline and is therefore not subject to the shoreline setback requirements of the County of Kauai. ***A letter from the County of Kauai, Planning Department is attached hereto as Exhibit 10 verifying SMA exempt status.***

**I. PROJECT CHARACTERISTICS**

**1. GENERAL CHARACTERISTICS**

Refer to Section III – “Proposed Action” for a general description of the proposal.

**2. TECHNICAL CHARACTERISTICS**

Technically this action will authorize the Applicant to:

- Construct a Single-Family Residence and appurtenant infrastructure on the subject parcel.
- Perform the necessary grading and grubbing work in preparing the parcel for construction, pursuant to the issuance of all additionally required permits.

**3. ECONOMIC CHARACTERISTICS**

Significant long-term economic impacts are not anticipated as a result of the proposed action. Should the proposal meet the approval of the Board, there would be a short-term benefit upon the local construction industry, and an increase in real-property tax values. Money paid into the construction industry would most likely generate income in other sectors of the local economy.

**4. SOCIAL CHARACTERISTICS**

There are no significant social benefits or negative impacts that are anticipated as a result of the proposed action. The Applicant will apply Best Management Practices (BMP) in the development of the parcel. To the greatest practical extent the Applicant will mitigate the visual impact of the new residence through the planting of ornamental vegetation. This will help to screen the proposed structure from the adjoining roadway and the public beach at Kalihiwai. The proposed use will not displace any exiting residences. The project site is currently vacant. A single new household in the area will not overburden existing public services or facilities.

**5. ENVIRONMENTAL CHARACTERISTICS**

The proposed action is not anticipated to have any significant long-term negative or beneficial impacts upon the environment. The proposed residence will not displace any existing agricultural or recreational land uses. No prime or unique land uses of the State of Hawaii or its residents will be adversely affected by the proposed action. Section II of this Draft EA, reviews in greater detail the potential environmental impacts of the proposed action, and where applicable suggests measures for the mitigation of negative outcomes.

**6. TIME FRAME OF PROJECT**

The completion of project design and permitting is anticipated for the third quarter of 2003. Construction of the residence is expected to commence shortly thereafter, most likely during the first quarter of 2004. Construction activities are expected to have a duration of approximately 8 to 12 months, with the completion of the residence projected toward the end of 2004.

**7. FUNDING AND SOURCE**

Development of the residence and appurtenant infrastructure is estimated to cost approximately \$ 450,000.00, which is roughly calculated as \$130.00 per square foot of the proposed 3,468 feet of development area. The Applicant will privately fund the development of the project.

## SECTION II

### Summary Description of the Affected Environment & Identification of Potential Impacts and Proposed Mitigation

#### A. PHYSICAL SITE DESCRIPTION

The subject parcel is located in Kalihiwai Bay, in the district of Hanalei, on the northern coastline of the Island of Kauai, Hawaii. The parcel is designated by Kauai Tax Map Key No. (4) 5-3-03:14, and consists of approximately .23 acres or 10,022 square feet of undeveloped land. The location of the parcel is graphically depicted in Exhibits 1, 2, and 3 attached hereto.

The subject parcel is accessed along Kalihiwai Road, which runs parallel to Kalihiwai Beach. Kalihiwai Road separates the parcel from two (2) parcels of undeveloped land to the northwest:

**Tax Map Key No. (4) 5-3-03:29 - State-owned**

**Tax Map Key No. (4) 5-3-03:68 - Princeville Development Corp.**

Both of these undeveloped parcels are used as popular public parking areas, providing access to the beach and Kalihiwai River. Tax Map Key No. (4) 5-3-03:13 abuts the subject parcel to the southwest, the property tax records show Mr. Gaylord Kaonohi to be the registered owner of this undeveloped lot. Tax Map Key No. (4) 5-3-03: 15 abuts the subject parcel to the northeast, Mr. William Akana is the owner of this parcel which has a small older residence located upon it. The subject parcel does not abut the shoreline, which (as determined by the seasonal high wash of the waves and established shoreline vegetation) is located approximately two hundred and fifty (250) feet from the front boundary of the property.

#### B. EXISTING LAND USE

The project parcel is currently vacant and undeveloped.

#### C. TOPOGRAPHY

The topography of the subject parcel ranges between approximately 7.5 and 12.0 feet above mean sea level. The topography of the parcel will be altered within the footprint of the proposed SFR and along the driveway.

#### **D. FLORA AND FAUNA**

In a walk-through inspection of the subject property no rare or endangered plant or animal species and/or significant habitats of environmental concern were noted. The subject parcel is dominated by a low undergrowth of alien plant species. The following species of vegetation were predominant along with various grasses and understory weeds:

<b><u>Common Name</u></b>	<b><u>Scientific Name</u></b>	<b><u>Status</u></b>
Ironwood	Casuarina equisetifolia	Alien
Java Plum	Syzigium cumini	Alien
False Kamani	Calophyllum inophyllum	Polynesian Introduction
Coconut Palm	Cocos nucifera	Indigenous
Mango	Mangifera Indica	Alien
Wedelia	Wedelia Trilobata	Alien
Castor Bean	Ricinus communis	Alien
Banana	Musa Spp.	Polynesian Introduction.

#### **E. SOILS**

According to the Soil Survey of the Island of Kauai, State of Hawaii, prepared by the U.S. Soil Conservation Service, Department of Agriculture, the project parcel is located on land characterized by *Mr – Mokuleia fine sandy loam* type soils. *Mr* soils have a moderately rapid permeability in the surface layer and rapid permeability in the subsoil. Runoff is very slow, and the erosion hazard is slight. Nevertheless, in order to further mitigate the potential for surface water runoff and the siltation of nearshore waters, a silt retention/construction fence will be erected along the front (roadside) boundary of the parcel prior to the commencement of construction. Said silt fence will remain until construction of the residence is completed and the soils are stabilized through the planting of ornamental vegetation.

#### **F. CLIMATE**

Rainfall is estimated to be between 50 and 100 inches per year. The proposed action should not affect the local or macro climates in any manner.

#### **G. AIR QUALITY**

The air quality in the project area is excellent. The rural character of the site, the prevailing tradewinds, and a close proximity to the ocean all combine to buffer the area against significant airborne pollutants.

During construction, minimal short-term impacts on air quality will result from dust-generated grading activities. The impacts will be temporary and relatively insignificant. Best Management Practices (BMP) including the sprinkling of exposed

soils and the erection of a 6 ft. high dust fence along the perimeter of the roadway will be employed to further minimize the impact of airborne dust. The inconvenience of dust associated with the proposed action is therefore anticipated to be negligible.

#### **H. NOISE IMPACT**

The project parcel and abutting properties are currently impacted by vehicular noise along the frontage of Kalihiwai Road. Other predominant sources of sound within the vicinity of the project parcel include noise generated by the surf, winds rustling the vegetation, people talking on the nearby roadway and beach, and occasionally noise associated with overhead aircraft. By and large, the project area has a very low and pleasant noise level, as one would expect of such a rural site.

Noise levels are anticipated to temporarily increase with the onset of construction. Increased noise will be associated with the use of heavy machinery during the grading phase of the project, as well as with the use of power tools and hammers during construction of the residence. Once the house is completed, the construction-related noise will cease. Mitigative measures will be implemented to lessen the impact of the short-term noise generated by construction. This shall include the use of muffling devices on all gasoline or diesel-powered equipment. Furthermore, construction activities shall be restricted to the working hours between 8:00 AM and 5:00 PM.

Long-term noise resulting from the proposed action will be similar to that which is generated by other Single-Family Residences within the surrounding area. No State regulations regarding noise are anticipated to be violated.

#### **I. ARCHAEOLOGICAL AND HISTORICAL SITES**

As per the requirements of the State Historic Preservation Division (SHPD) an Archaeological Inventory Level Survey was conducted on the subject property. Work commenced in March 2000 under the direction of the project archaeologist, *Archaeological Consultants of the Pacific, Inc. (ACP)*. Initially five backhoe trenches were excavated. A habitation site (designated as State Site number 50-30-03-671) with cultural deposits was discovered which included both pre and post-Contact components. Five burials were encountered at that time. Due to the unanticipated discovery of the burials, work was voluntarily halted until further recommendations were made by the SHPD.

After consulting with SHPD and the Kauai Island Burial Council (KIBC), a second investigative phase of the Archaeological Inventory Survey was conducted from July 11<sup>th</sup> through 16<sup>th</sup>, 2000. This second phase was directed at determining the horizontal extent of the burial features across the subject property. ACP staff excavated thirty (30) hand-dug shovel test pits within the portion of the parcel planned for construction. This second phase of testing identified one additional burial.

Upon the completion of phase 2, ACP determined that Site 671 was of both historical and cultural significance. As such, ACP recommended that a determination be made that future construction activities would have an "adverse effect" and further

proposed measures to mitigate these adverse impacts through the preparation of an appropriate Burial Treatment Plan.

The owner/applicant, Mr. Robert Bothman, was consulted for his input in these matters and then a recommendation was made that a consolidated burial reinterment site be created near the northeastern corner of the subject property. A Burial Treatment Plan (BTP) was then prepared and later approved by both the SHPD and the Kauai Burial Council. After a series of Burial Council hearings, the BTP was accepted and SHPD further approved the relocation of all previously identified and inadvertently discovered burials to the designated reinterment area. In the process of removing the previously identified burials, still more graves were discovered. In the end, five previously identified and seven inadvertently discovered individuals were relocated to the northeastern corner of the property. A reinterment ceremony, under the direction of Leilani Kaleohi, was held on December 2, 2002. Present were the property owners, ACP staff, directors from the Kauai Burial Council, members of the local community, and other interested individuals.

Attached hereto in Appendix 2 is an Archaeological Inventory Level Survey and supporting documentation pertaining to the archaeological findings and approvals granted for the subject property. An approved Burial Treatment Plan is attached hereto in Appendix 3.

***The SHPD, after reviewing the CDUA & DEA, has granted a conditional approval of the proposed residence. SHPD comments and recommendations are included herewith in Appendix 1. Specifically the owner shall be required to carryout the following conditions of approval:***

- 1. A qualified archaeologist will be required to be on hand to conduct monitoring during any and all subsurface and/or ground disturbing phases of the project in accordance with the approved monitoring plan. The owner (applicant) clearly understands that if historic sites, including burials, are found during monitoring, construction must stop in the immediate vicinity and the archaeologist shall be allowed sufficient time to evaluate the site and carry out mitigation, as needed.***
- 2. If additional burials are found, they will be treated in accordance with the protocol established by the existing (approved) burial treatment plan as well as via the burial treatment standards outlined in Chapter 6E, HRS for inadvertent discoveries. The monitoring archaeologist shall be required to report any additional findings to the SHPD and the KIBC. Thereafter, upon confirmation by the SHPD, the owners shall be granted authority to remove additional inadvertent discoveries for eventual reinterment in the burial vault at the northeast corner of the subject property, which was constructed with a removable lid specifically for this***

purpose. All additional burials thus found and disinterred during monitoring would be gathered, identified, and contained on site in a secure location until subsurface and ground disturbing activities have ceased. Thereafter (if needed), reinterment would occur only after due consultation with SHPD and the KIBC. Furthermore, so as to avoid any potential confusion that might result from the drafting of a second BTP, it is hereby suggested that (if necessary) the project archaeologist summarize any additional findings in an addendum to the existing BTP.

3. The addendum to the BTP shall document the monitoring activities and burial treatment work, which addendum shall be submitted to the SHPD for review and approval. The addendum shall include the following information:
- 1) Detailed drawings of burials and deposits to scale;
  - 2) All artifacts shall be sketched and photographed;
  - 3) Analysis of all perishable and datable remains shall be conducted;
  - 4) Stratigraphic profiles shall be drawn to scale;
  - 5) All locations of historic sites shall be identified on an overall map of the project area;
  - 6) Initial significance evaluations shall be included for each historic site found; and
  - 7) Documentation of the nature and age of the historic sites shall be done.

#### **J. CULTURAL IMPACTS**

See attached Cultural Impact Assessment - Appendix 4

#### **K. VISUAL IMPACTS**

The proposed residence will be situated in a partially developed residential neighborhood. The residence will be compatible with the surrounding environment. Vegetation will be used to soften the visual impact of the new residence as it is viewed from the abutting roadway and the adjacent parcels.

#### **L. NATURAL HAZARDS**

The project is situated within Flood Zone VE as designated on the Federal Flood Insurance Rate Map (FIRM). Zone VE is defined as a coastal flood area with a velocity hazard, which is created by wave action, and is susceptible to a 100-year inundation by tsunami. County regulations regarding structures located within this coastal high-hazard area require a "base flood elevation" for the lowest horizontal structural member of the



proposed residence to be 16 ft. above mean sea level. The design of the proposed residence is entirely compliant with these County guidelines.

Kauai is the oldest of the major Hawaiian Islands; therefore, there are no active or dormant volcanoes which pose a threat to the parcel. There is evidence however, for a moderate threat of landslides near the eastern border of the parcel just beyond the boundary line with TMK (4) 5-3-03:58. Here, directly adjacent to the parcel, there is a steeply sloped hillside that is approximately 150 feet in height with slopes ranging between 60 and 80 degrees. Due to landslide concerns, and a concern for the potential damage which may result from large tsunami waves rebounding off the steep slope, the Applicant is proposing that the residence be situated toward the front of the parcel, thereby creating an effective buffer between the slope and the residence.

Within the boundaries of the parcel itself, soil erosion concerns are negligible due to the relatively flat topography of the land, and the highly permeable soils of the area.

#### **M. LAND USE CLASSIFICATIONS & COMPATIBILITY WITH SURROUNDING ENVIRONMENT**

The State Land Use Commission designates the subject property as Conservation. The County General Plan classifies the property and surrounding areas as Conservation/Open.

No land use change is required as the proposed action is consistent with, and supportive of both the State's and the County's intended land uses.

#### **N. PUBLIC SERVICES AND FACILITIES**

The construction of the proposed Single-Family Residence on the parcel shall not place an unreasonable additional burden upon public agencies or public utility providers servicing the area.

##### **1. ACCESS**

The parcel is readily accessed from the east along Kalihiwai Road.

##### **2. WATER**

County water is available to the parcel. No additional source or storage facilities are planned as a result of the proposed action.

##### **3. WASTEWATER**

Residential and public wastewater within the project area are treated through the use of individual septic systems. There are no existing treatment plant facilities or public sewer pipelines associated with the project area, nor are any planned for the future. Prior to the construction of the proposed SFR, the applicant will be required to apply

for a building permit from the County of Kauai. A component of the building permit application is a State Department of Health approved Individual Wastewater System (IWS) plan. *There is an approved IWS design on file with the Department of Health, Septic Tank File #3617. See comments contained in Appendix 1.*

4. **SOLID WASTE**

Residential solid waste is collected at curbside on a weekly basis. Collected waste is compacted and transported to the Kekaha landfill for disposal.

5. **FIRE PROTECTION**

Fire protection is provided by the County of Kauai. The nearest station is the Princeville fire station with an estimated response time of less than 10 minutes to the subject parcel. Under extreme emergency conditions, both the Kapaa and Lihue fire stations are prepared to respond to calls within the project area.

6. **EMERGENCY MEDICAL SERVICE**

Emergency medical service is provided by the Princeville fire station in conjunction with American Medical Response (AMR) a private medic firm, which is contracted with the State Department of Health. Response time is approximately 10 minutes to the subject property.

7. **POLICE PROTECTION**

Police protection is provided by the Kauai Police Department. The closest substation is located in Princeville, approximately 10 minutes from the project parcel.

8. **PUBLIC SCHOOLS**

Public schools servicing the Kalihiwai area are Kilauea School (Grades K-6), and Kapaa High School & Intermediate (Grades 7-12).

9. **UTILITIES**

Electrical power is provided by Kauai Electric and telephone service is provided by GTE Hawaiian Telephone. Utilities are supplied via overhead distribution lines along Kalihiwai Road.

## SECTION III

### SUMMARY OF MAJOR IMPACTS & ALTERNATIVES CONSIDERED TO THE PROPOSED ACTION

#### A. SUMMARY OF MAJOR IMPACTS

The subject parcel is currently characterized by undeveloped land. The proposed action will result in the construction of a Single-Family Residence, which will occupy approximately 35% of the lot area. The remainder of the lot (approximately 65%) will be landscaped. Site preparation and grading will be required, this will involve the removal of some of the existing vegetation and alteration of the terrain within the vicinity of the footprint and access roadway for the proposed structure (refer to Site Plan in Exhibit 4). The building's architectural style and construction materials are compatible with the natural environment and the existing development of the area.

Long-term impacts of the proposed action shall include a marginal increase in traffic along Kalihiwai Road and the use of public utilities. Short-term impacts associated with construction of the proposed residence will be more significant. Dust, noise and some traffic will be generated by the construction of the residence. Erosion will be negligible due to the gentle slopes of the parcel and the permeability of the sandy soils which characterize the project area. Nevertheless, to further mitigate the potential for surface water runoff and the siltation of nearshore waters, a silt retention/construction fence will be erected along the front (roadside) boundary of the parcel prior to the commencement of construction activities.

*Furthermore, in response to comments received from the DLNR, Division of Aquatic Resources (See Appendix 1), the owner/applicant and/or their contractor(s) shall employ the following measures in order to mitigate the potential of environmental contaminants from flowing, blowing or leaching into the aquatic environment: 1) A portable dumpster will be maintained on site throughout the construction of the proposed residence for the containment and appropriate disposal of all construction related debris. 2) Petroleum based construction materials and byproducts/waste such as paints, solvents, fuels, etc. will be properly stored in sheltered areas throughout construction activities and properly disposed of thereafter. The construction contractor(s) will be made aware of these requirements. 3) Herbicides, pesticides, and fertilizers will be applied sparingly and only during episodes of dry weather so as to avoid leaching into the aquatic environment.*

**B. ALTERNATIVES CONSIDERED**

**1. NO ACTION**

A "No Action" alternative will result in no construction of a residence on the subject parcel. This would convey that there would be no removal or trimming of trees and no alteration to the topography of the site. There would be no construction activity and related employment prospects. There would be no increase in the land value or associated government revenues from higher property taxes. Moreover, the owner will not be able to use the property for his personal and preferred use. For these reasons, a no action alternative is unfavorable to the Applicant.

**2. ALTERNATIVE LOCATION**

The location of the proposed structure on the subject parcel, as graphically depicted in the Site Plan (Exhibit 4), is the most appropriate and preferred location in the opinion of the Applicant. The Applicant wishes to locate his residence toward the front of the parcel in order to create a reasonable buffer between his home and the steep slope, which runs along the eastern boundary of the lot. The Applicant feels that landslide concerns and the potential for damage due to rebounding tsunami waves may be sufficiently mitigated by locating the structure closer to the front of the parcel.

**3. ALTERNATIVE USE**

The Applicant has not considered any alternative uses for the subject parcel. The construction of a residence was the primary reason for the purchase of the property from its previous owner.

**C. SUMMARY OF MITIGATIVE MEASURES**

The major impacts of the proposed action will occur during the construction of the residence. As described herein, the primary impacts will be construction noise and dust, as well as a temporary increase in construction traffic.

The Applicant will implement all of the mitigative measures describe herein to prevent or reduce the negative impacts that are anticipated as a result of construction activities. Furthermore, the applicant will adhere to any additional measures that the Board deems appropriate.

Control measures will be employed during construction to minimize airborne pollutants and dust. The heavy equipment that will be used for site grading will emit air pollutants in the form of engine exhaust. However, with proper maintenance and proper exhaust systems, emissions from such equipment can be minimized. Prevailing tradewinds will assist in dispersing airborne pollutants.

Construction activity will create a temporary increase in noise levels. Heavy equipment used for site preparation will be a primary source of such noise. Mitigative measures such as the use of muffling devices on diesel or gas-powered equipment, and limiting construction to the working hours between 8:00 AM and 5:00 PM will be

employed. Noise levels shall comply with the State of Hawaii, Department of Health noise regulations.

Over the course of the past 2 years, the Applicant has worked patiently with his consultant, *Archaeological Consultants of the Pacific*, the SHPD and the Kauai Burial Council to overcome the archaeological and burial issues associated with his parcel. Complete documentation of the resolved archaeological issues is attached hereto in Appendix 2. An approved Burial Treatment Plan is included as Appendix 3.

## SECTION IV

### EXPECTED DETERMINATION & SIGNIFICANCE CRITERIA

**A. DETERMINATION:**

This Draft Environmental Assessment indicates that, other than the significance of the now-resolved burial issues associated with the parcel, **no significant negative impacts** upon the environment, be they primary, secondary or cumulative, will result due to the implementation of the proposed action. Furthermore, the action does not have any associated hidden long-term environmental or social costs. The proposed construction of a Single-Family Residence is an identified land use within the Limited Subzone of the Conservation District. As such, in compliance with HRS 343 11-200-11, a **Finding of No Significant Impact (FONSI)** is anticipated. Therefore it is the Applicant's opinion that the manageable impacts of the project do not warrant the preparation of an Environmental Impact Statement.

**B. SIGNIFICANCE CRITERIA:**

Chapter 200 of Title 11, Administrative Rules of the department of Health which is entitled "Environmental Impact Statement Rules" establishes significance criteria for evaluating the impacts of a proposed action upon the environment. The relationship of the proposed **Bothman Single-Family Residence** to each of these criteria is reviewed below:

- 1. Involves an irrevocable commitment to loss or destruction of any natural or cultural resources.**

The proposed action will not involve a loss or destruction of any natural or cultural resources. Rather the proposed action has taken the appropriate measures to mitigate negative impacts to natural and cultural resources (see Cultural Impact Assessment attached hereto in Appendix 4).
- 2. Curtails the range of beneficial uses of the environment.**

The proposed action will not curtail the range of beneficial uses of the environment. Long-term negative environmental impacts are not anticipated as a result of the proposed action. All development is proposed to occur on private property.

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 project does not conflict with the State's long-term environmental policies, goals and guidelines.
4. **Substantially affects the economic or social welfare of the community or State.**  
The project will not have a significant impact upon either the economic or social welfare of the community or State.
5. **Substantially affects public health.**  
The proposed action is not anticipated to substantially or negatively impact public health. The air quality and noise impacts that will result during the construction of the proposed residence will be of a short-term and insubstantial nature.
6. **Involves substantial secondary impacts, such as population changes or effects on public facilities.**  
The proposed action will not involve substantial secondary impacts. The development of a Single-Family Residence in an area which is already characterized by similar residential development, will not create any additional pressures of a substantial nature.
7. **Involves a substantial degradation of the environmental quality.**  
The proposed action is not anticipated to have a negative impact upon the environment.
8. **Is individually limited, but cumulatively has considerable effect upon the environment or involves a commitment for larger actions.**  
The proposed project will not create a commitment for any larger action, nor will it contribute to a cumulative negative effect upon the environment. The proposed action is a stand-alone development project for the construction of a Single-Family Residence.
9. **Substantially affects a rare, threatened, or endangered species or habitat.**  
The project area is devoid of any rare, threatened or endangered species. The project will not place any nearby habitat at risk.
10. **Detrimently affects air or water quality or ambient noise levels.**  
As identified in the text of this Environmental Assessment, air quality and noise levels will be negatively affected throughout the various phases of project construction. Nevertheless, measures are proposed herein which

will help to mitigate the extent of such impacts. No long-term negative impacts will result upon the air or water quality or upon ambient noise levels as a result of the proposed action.

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

The project is situated in Zone VE as designated on the Federal Flood Insurance Rate Map (FIRM) prepared by the National Flood Insurance Program. Zone VE is defined as a coastal flood area with a velocity hazard (wave action) susceptible to a 100-year tsunami inundation. County regulations regarding structures located within this coastal high hazard area require a base flood elevation for the lowest horizontal member of the proposed structure to be 16 ft. above mean sea level. The design of the proposed residence is entirely compliant with these FIRM guidelines. By situating the proposed residence toward the front of the parcel, the Applicant feels that he will lessen the potential impact of tsunami rebounding off the cliff face near the back boundary of the parcel.

- 12. Substantially affects scenic vistas and viewplains identified in County or State plans or studies.**

The proposed action will not substantially affect scenic vistas and/or public viewplains. The Applicant proposes to landscape the parcel with appropriate vegetation to soften the visual impact of the development.

- 13. Requires substantial energy consumption.**

The proposed Single-Family Residence will not consume substantial or undue amounts of energy.



## **SECTION V**

### **PERMITS, VARIANCES, AND APPROVALS**

#### **A. SPECIAL MANAGEMENT AREA USE PERMIT**

Since the project site is located within the Special Management Area (SMA), it is subject to the SMA Rules and Regulations of the County of Kauai; however, because the project is a Single-Family Residence, it is specifically exempt from the SMA requirements. We are currently awaiting a letter from the County of Kauai Planning Department confirming said exemption.

#### **B. SHORELINE SETBACK CERTIFICATION / VARIANCE**

The proposed project is located approximately 250 feet from the shoreline; it is therefore not subject to the shoreline setback requirements of the County of Kauai.

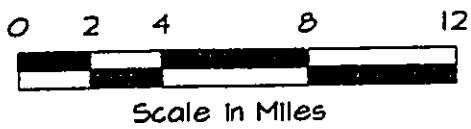
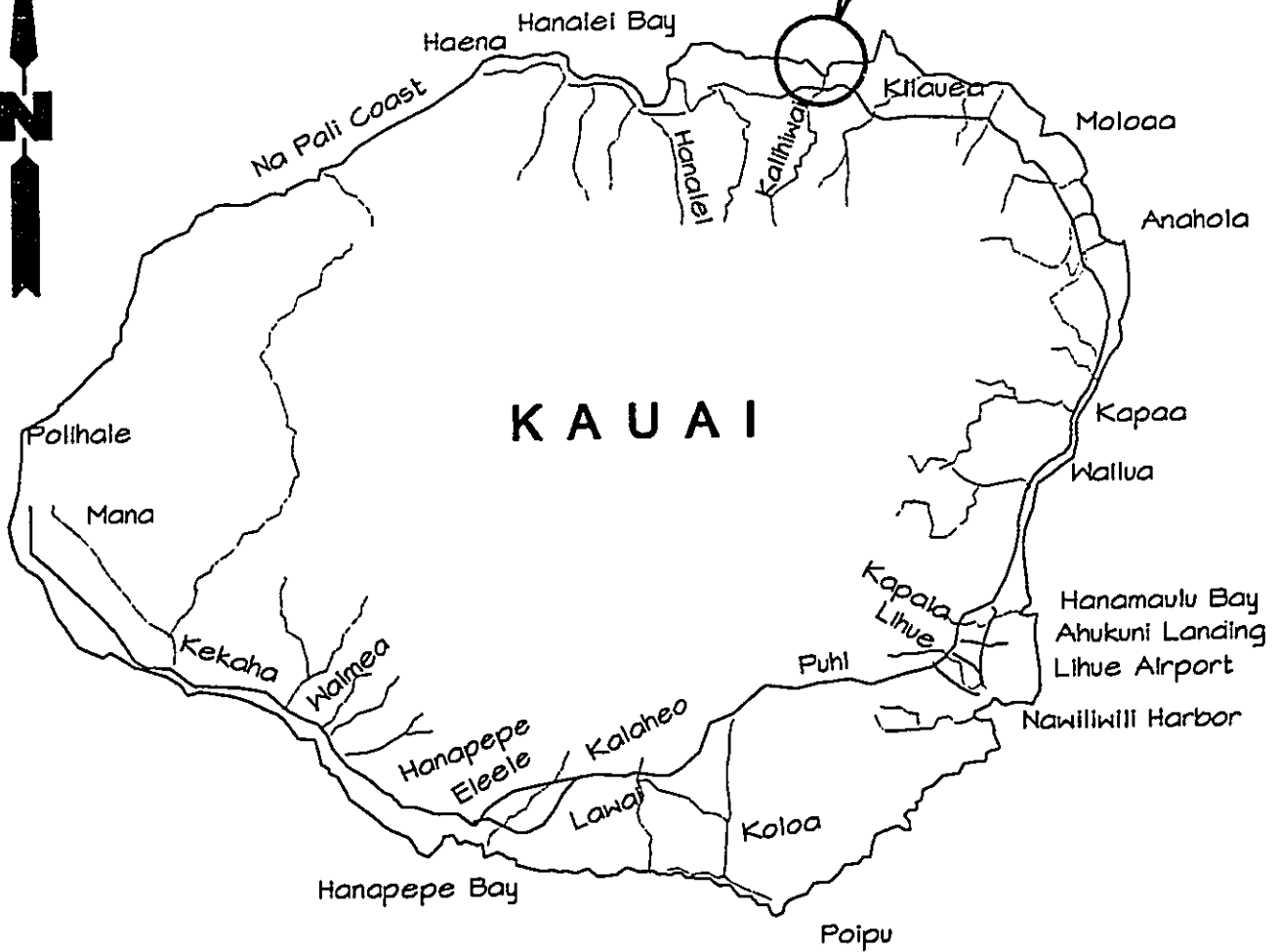
#### **C. OTHER DEPARTMENTAL PERMITS**

Additional construction related permits shall be obtained from both County and State regulatory agencies as required through the Building Permit application process administered by the Department of Public Works, County of Kauai. This shall include among other things a Department of Health approval for wastewater treatment, and Public Works approval for grading, grubbing and structural design.

# EXHIBITS

Bothman Single Family Residence – Final Environmental Assessment  
TMK (4) 5-3-03: 014

**PROJECT  
VICINITY**



BOTHMAN RESIDENCE  
VICINITY MAP  
KALIHUWAI, KAUAI, HAWAII

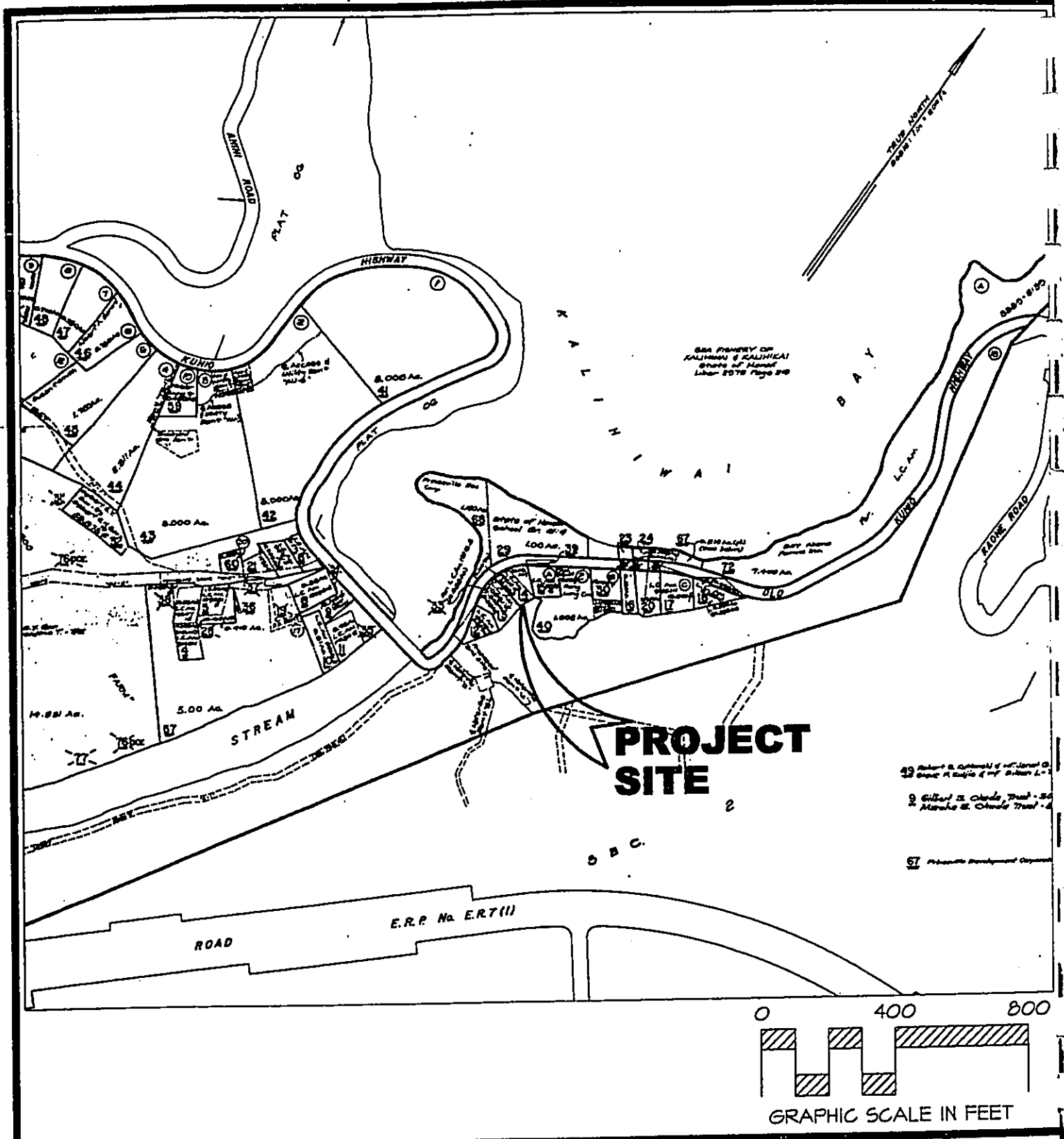
SHEET

**EXHIBIT 1**



Wagner Engineering Services, Inc.

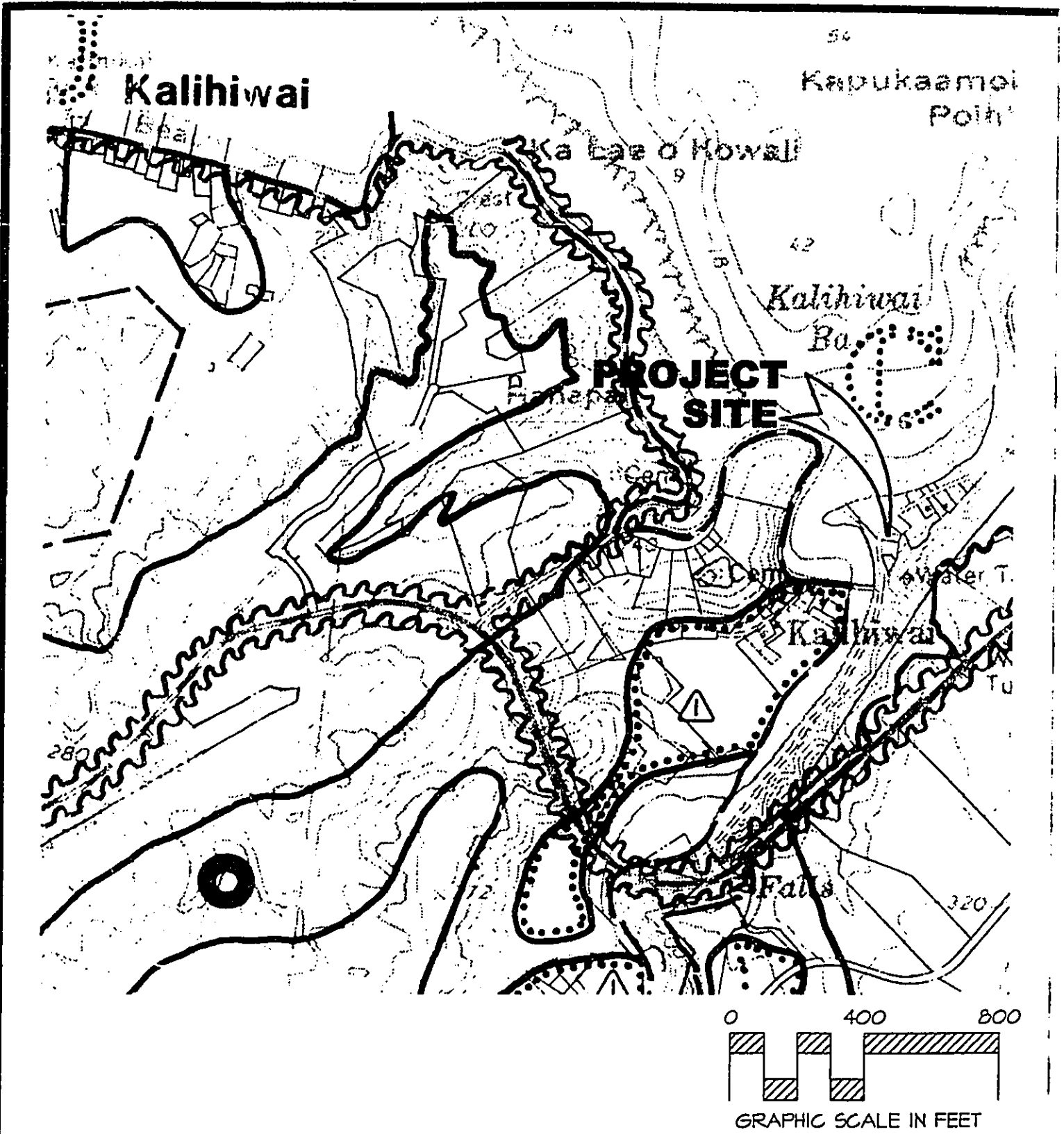
P.O. Box 851 Hanalei, HI 96714 (808) 826-7256



BOTHMAN RESIDENCE  
**TAX MAP**  
 KALIHIWAI, KAUAI, HAWAII

SHEET  
 1

**EXHIBIT 2**

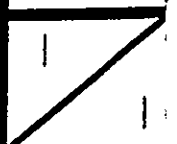


BOTHMAN RESIDENCE

# STATE & COUNTY ZONING MAP

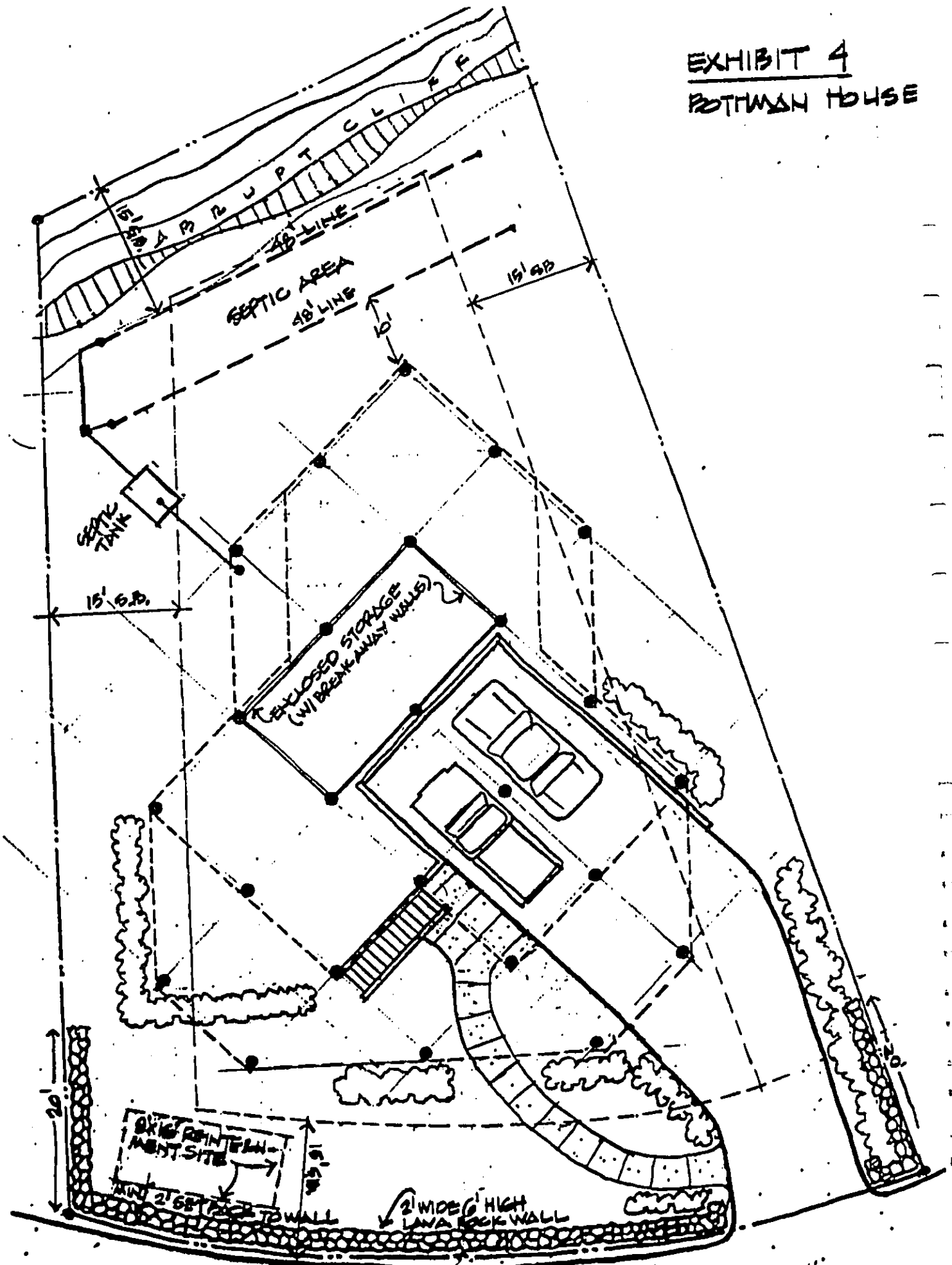
KALIHIWAI, KAUAI, HAWAII

SHEET



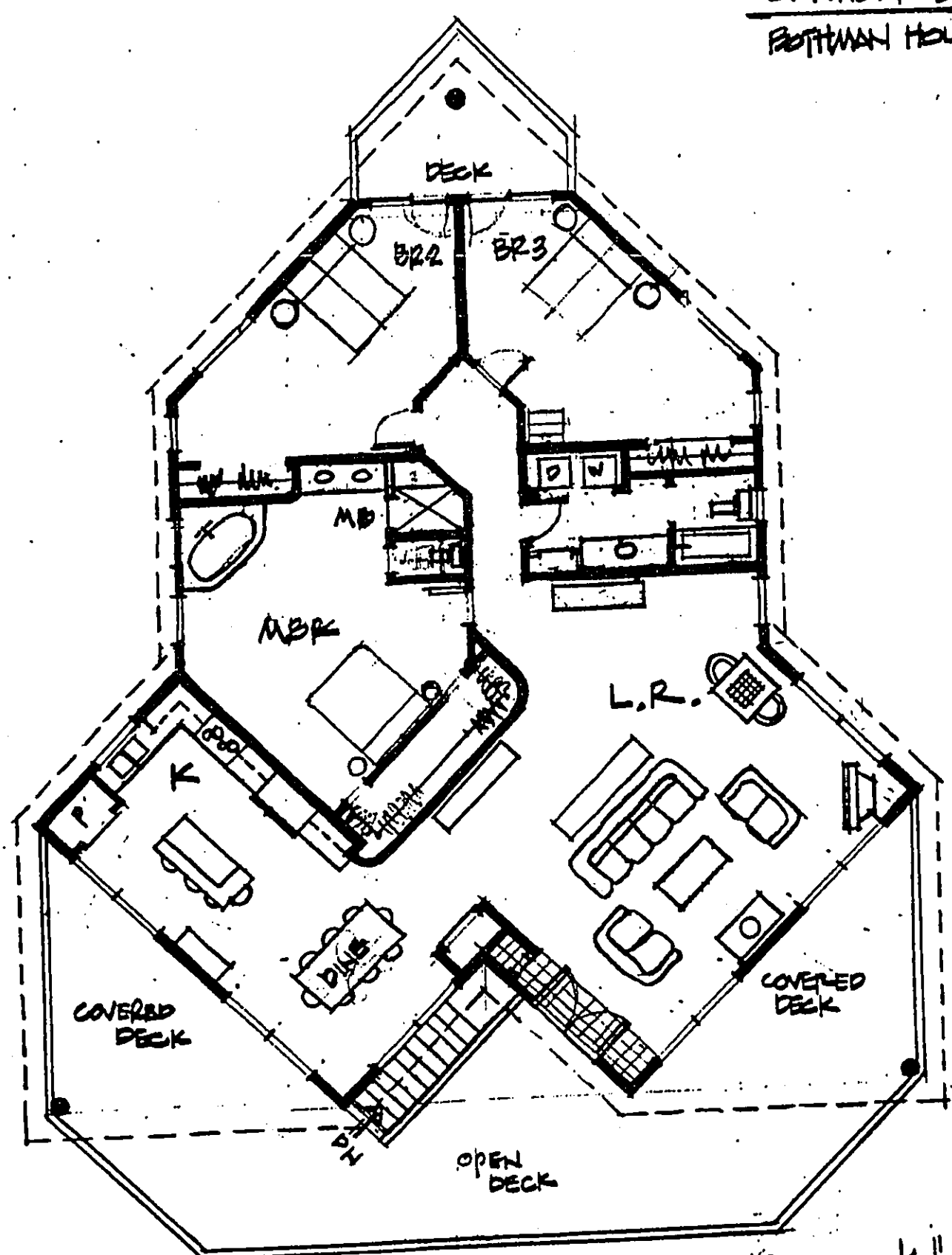
**EXHIBIT 3**

EXHIBIT 4  
ROTHMAN HOUSE



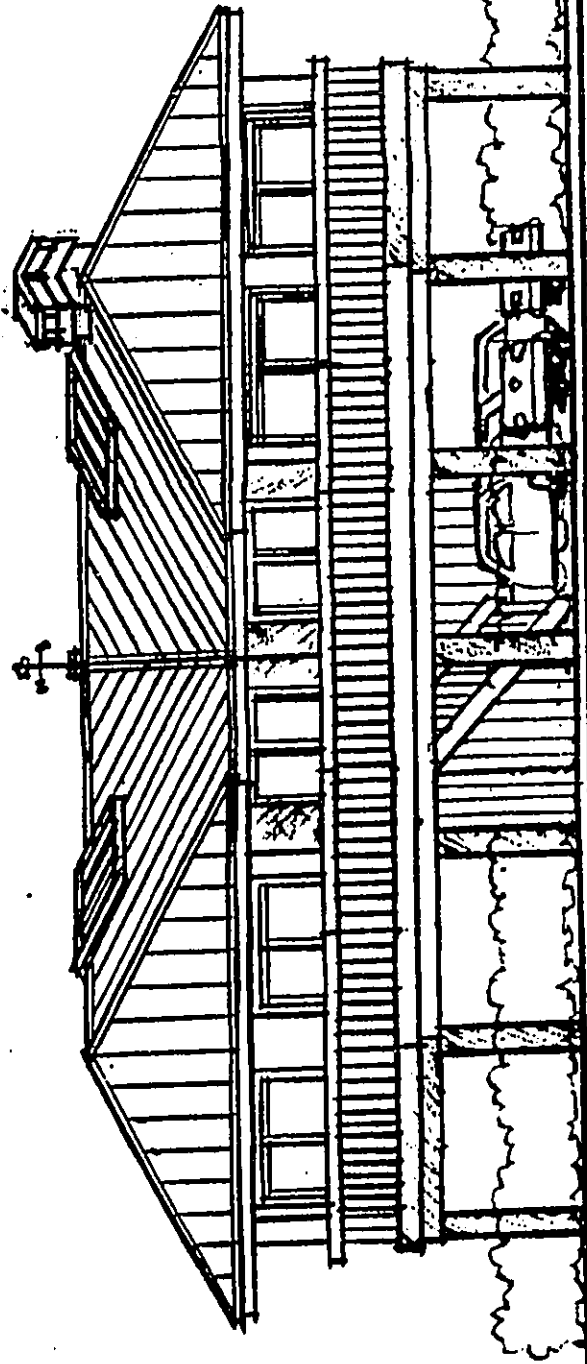
**SITE PLAN**  
 AREA: 10022 SF

EXHIBIT 5  
BOTHMAN HOUSE



INTERIOR 2440 SQ. FT.  
DECKS 1028 " "

DWELLING FLOOR PLAN 1/10" = 5'-0"  
0 5 10 15  
BOTHMAN HOUSE



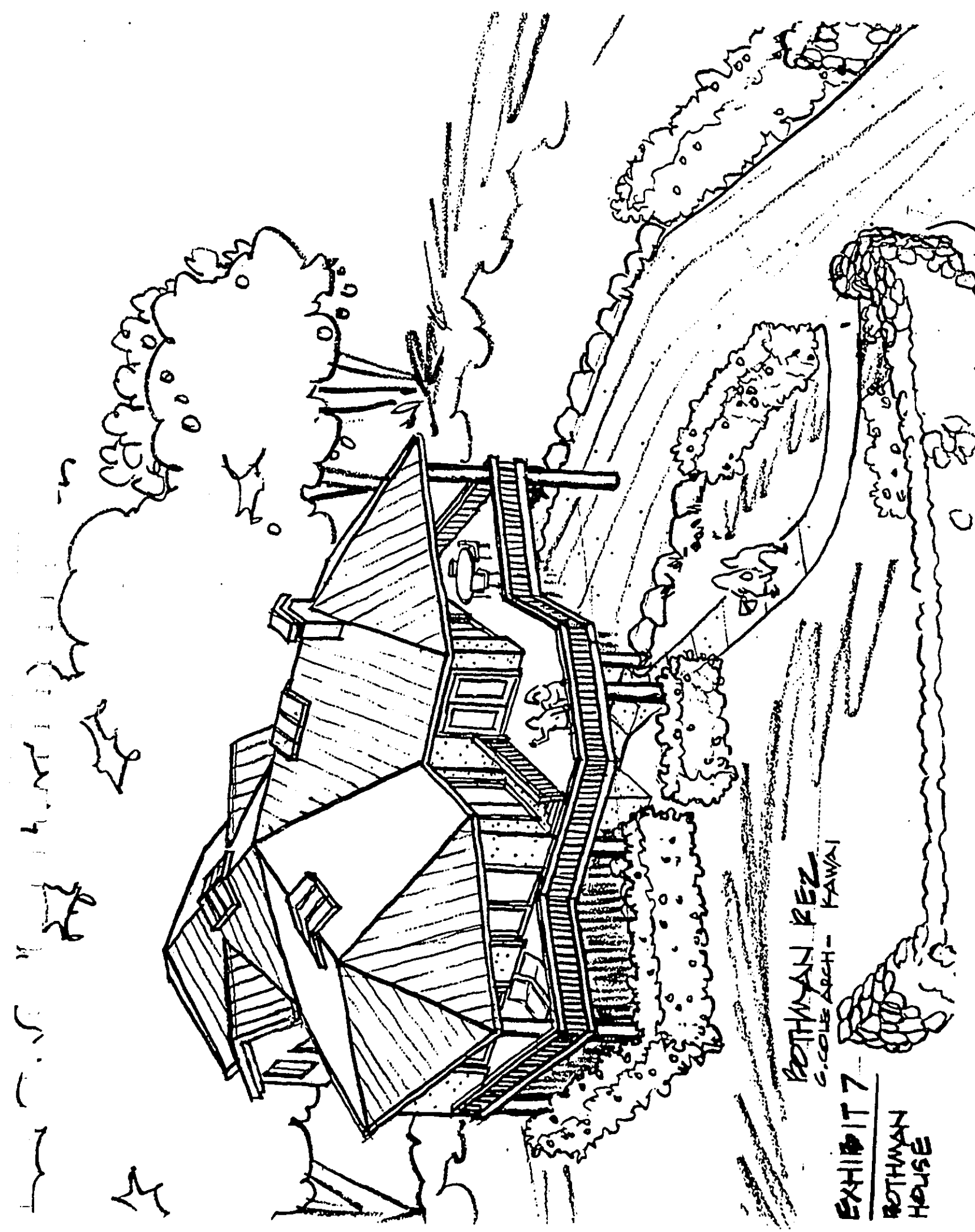
NORTH ELEVATION

VIEW FROM KALHIWA RD.

10.11.01

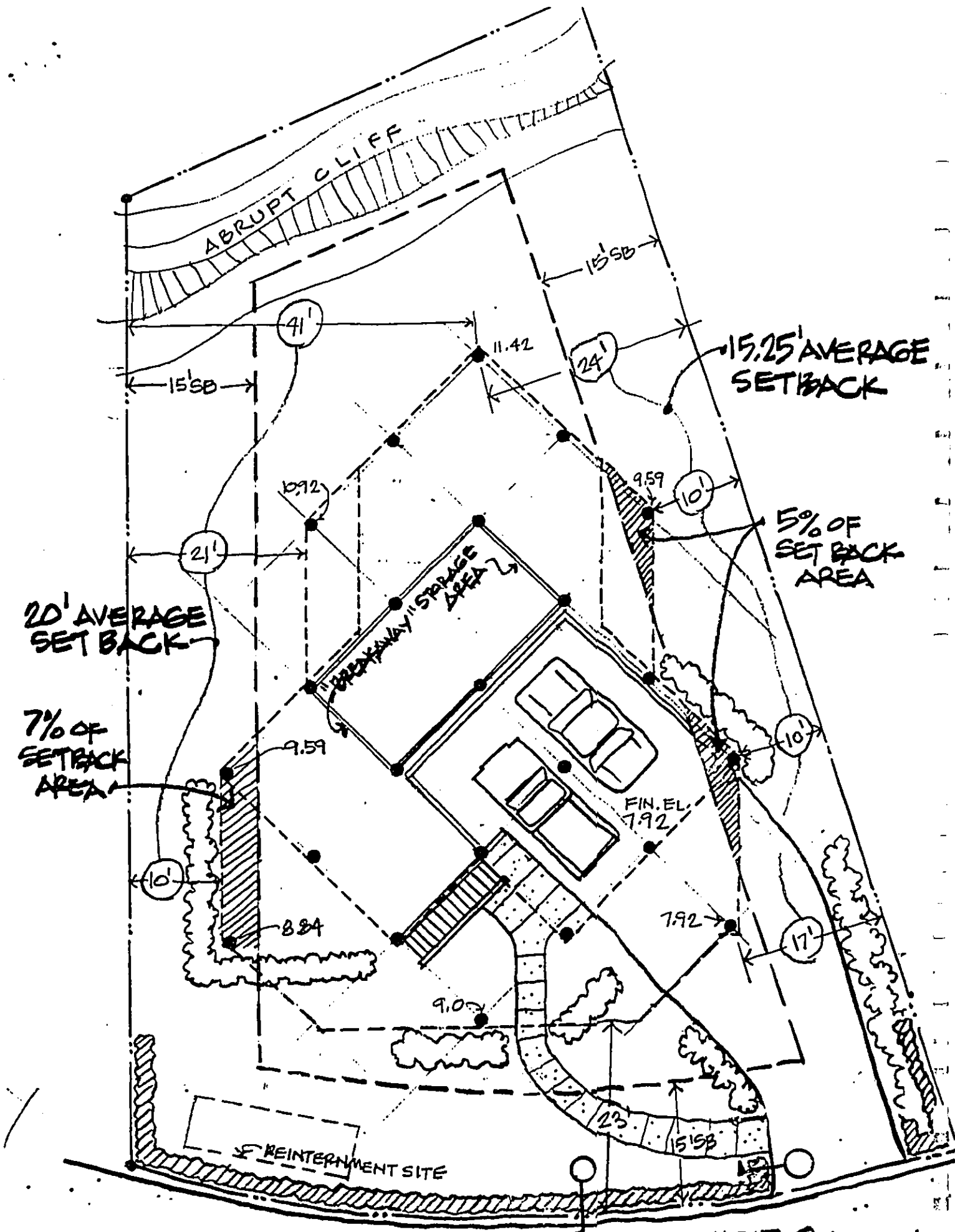
EXHIBIT 6  
ROTHMAN  
RESIDENCE





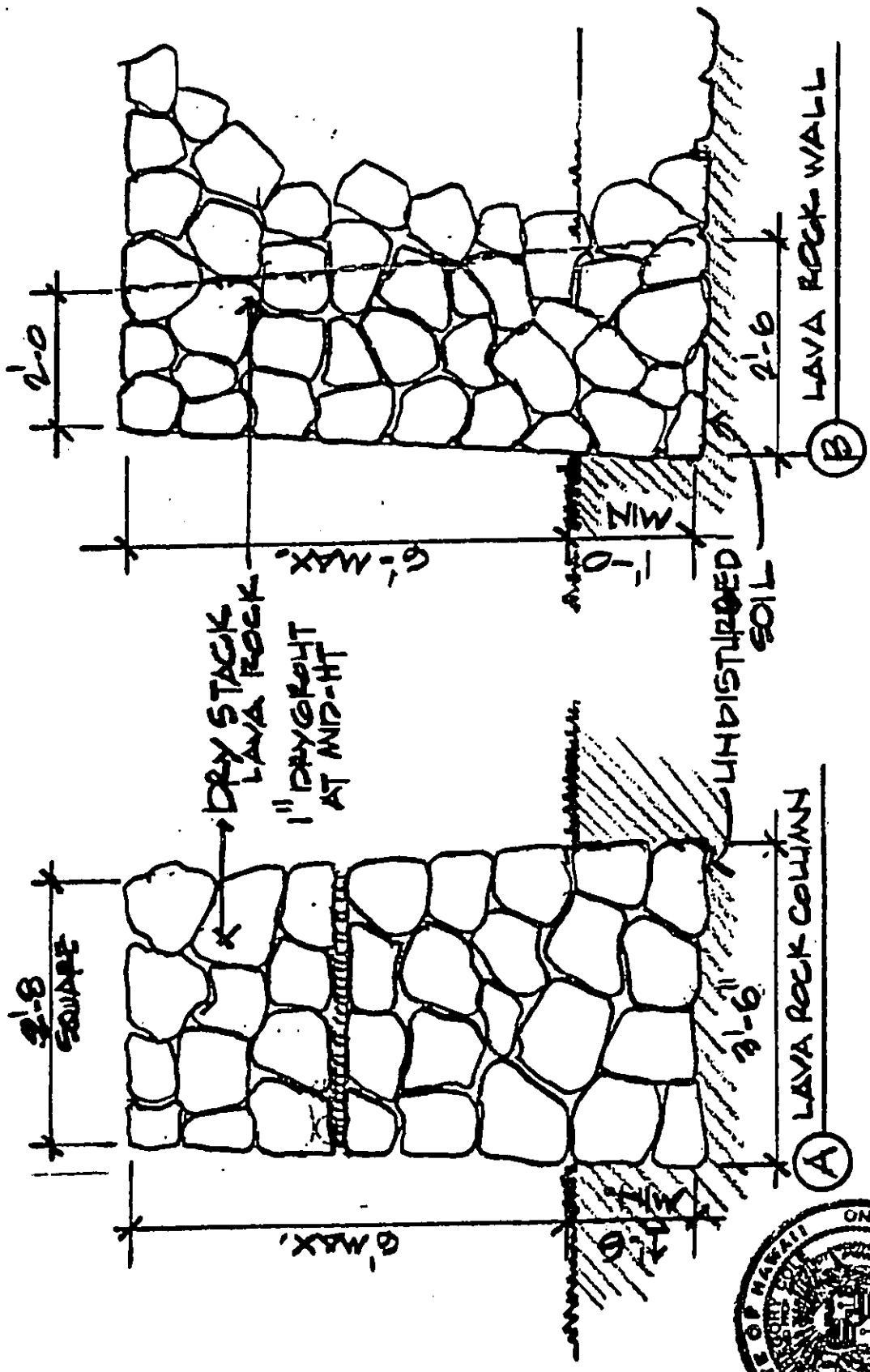
ROTHMAN REZ  
 G. COLE ARCH - HAWAII

EXHIBIT 7  
 ROTHWAN  
 HOUSE



**SITE PLAN**  
 AREA: 10,082 SF. 0 5 10 20 25

**EXHIBIT 8**  
**"JUSTIFICATION"**



*Gregory Cole*  
 THIS WORK WAS PREPARED BY ME  
 OR UNDER MY SUPERVISION  
 IN CONNECTION WITH THE PROJECT  
 AND I BE UNOCCUPY SUPERVISOR

**EXHIBIT 9**  
**RETHMAN HOUSE**

EXHIBIT 10  
BRYAN J. BAPTISTE  
Mayor



IAN K. COSTA  
Director of Planning

SHEILAH N. MIYAKE  
Deputy Director of Planning

COUNTY OF KAUAI  
PLANNING DEPARTMENT  
4444 RICE STREET, SUITE A473  
LIHUE, HAWAII 96766-1326  
(808) 241-6677

February 25, 2003

Ben Welborn  
Landmark Consulting  
P. O. Box 915  
Hanalei, HI 96714

Subject: Special Management Area Requirements  
Single Family Dwelling  
TMK:5-3-03:014  
Kalihiwai, Kauai

Dear Mr. Welborn:

This letter is being sent in response to your request for a determination regarding the need for a Special Management Area (SMA) Permit for construction of one single family dwelling on the above identified property. As noted in your letter, the County of Kauai SMA Rules and Regulations, Section 1.4.H states that development does not include construction of a single family residence that is not part of a larger development. Therefore, provided that the property does not currently contain other development, the proposed construction of one single family dwelling would not require an SMA Permit.

Please be advised that construction of a second single family dwelling or Additional Dwelling Unit (ADU) may require an SMA Permit. In addition, the proposed development may be subject to other requirements of the Planning Department and other government agencies, and it will be the applicant's responsibility to comply with those requirements.

Please contact George Kalisik of my staff at 241-6677 if you have any questions or wish to discuss this matter further.

Sincerely,

Ian K. Costa  
Planning Director

AN EQUAL OPPORTUNITY EMPLOYER

EXHIBIT 11

LINDA LINGLE  
GOVERNOR



VIRGINIA LOWELL  
STATE LIBRARIAN

STATE OF HAWAII  
HAWAII STATE PUBLIC LIBRARY SYSTEM  
PRINCEVILLE PUBLIC LIBRARY  
4343 EMMALANI DRIVE, PRINCEVILLE, HAWAII 96722  
PHONE: (808) 826-4310

## MEMORANDUM

February 26, 2003

TO: Ben Wellborn  
RE: Conservation District Use Application for Bothman Single-Family Residence

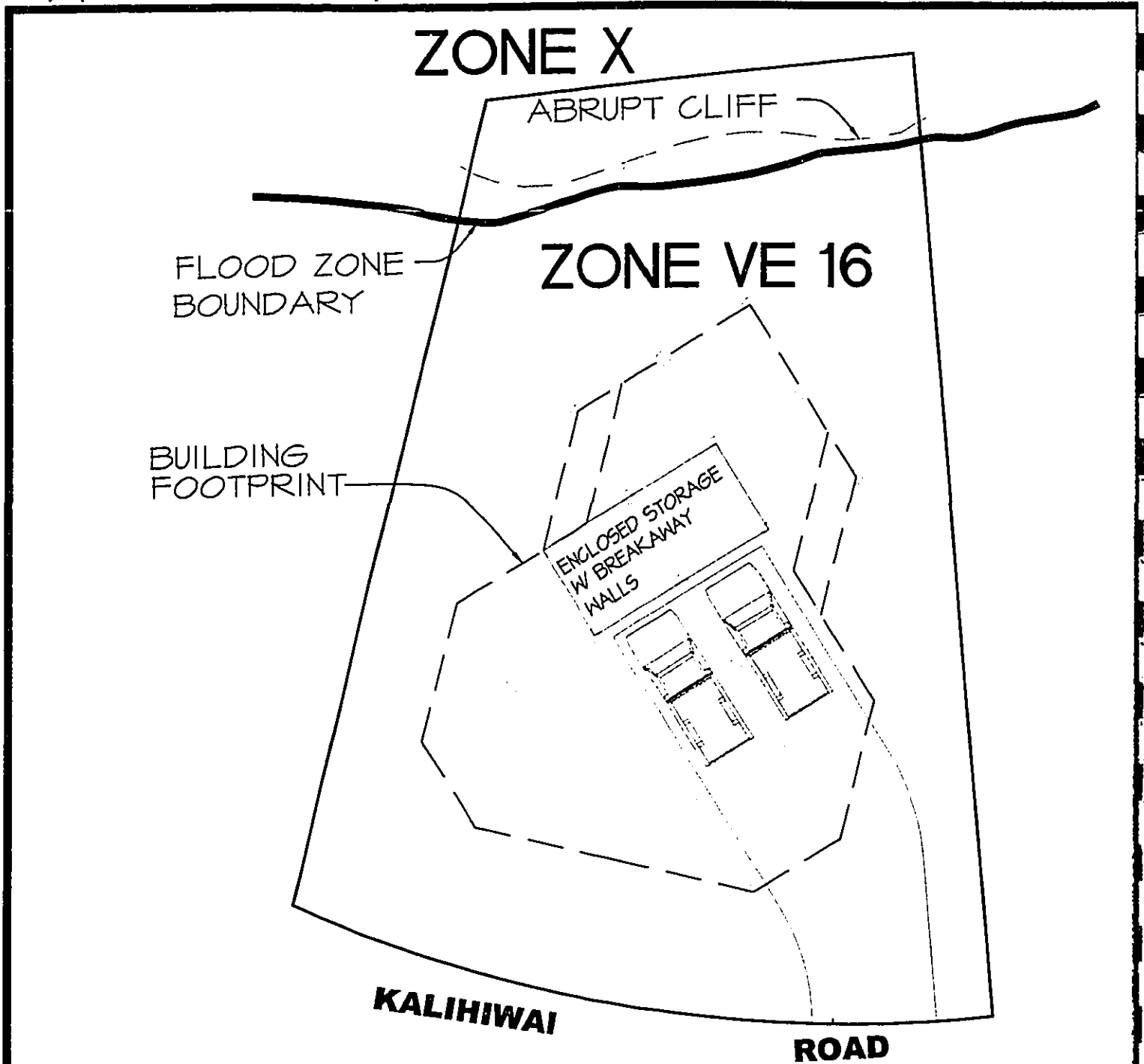
Princeville Public Library has received the application to put on reference for public viewing.

EXHIBIT 12



Wagner Engineering Services, Inc.

P.O. Box 851 Hanalei, HI 96714 (808) 826-7256



SUBJECT PARCEL LIES PREDOMINANTLY WITHIN FLOOD ZONE VE 16  
COASTAL HIGH HAZARD AREA SUSCEPTIBLE TO TSUNAMI INUNDATION  
FLOOD ZONE BOUNDARY ASSUMED TO BE AT BASE OF CLIFF  
PER FIRM MAP NO. 150002 0035C

BOTHMAN RESIDENCE  
FLOOD ZONE  
KALIHAI, KAUAI, HAWAII

SHEET

1

# APPENDICES

Bothman Single Family Residence – Final Environmental Assessment  
TMK (4) 5-3-03: 014

# **APPENDIX 1**

## **DOCUMENTATION OF DRAFT EA COMMENTS AND RESPONSES**

**Bothman Single Family Residence – Final Environmental Assessment  
TMK (4) 5-3-03: 014**





**LANDMARK**  
CONSULTING

June 12, 2003

Dierdre Mamiya  
Acting Administrator  
DLNR, Office of Conservation and Coastal Lands  
P.O. Box 621  
Honolulu, HI 96809

**Re: Bothman Single Family Residence  
Responses to Draft EA comment letters  
Kalihiwai, Kauai**

Dear Ms. Mamiya,

Thank you for providing us with all of the comment letters that you received pertaining to the Draft EA for the proposed Bothman Single Family Residence. We have responded to all comments received, none of which raised substantive concerns. All comment letters and accompanying responses shall be included with the filing of a Final EA for the project.

Sincerely,

Ben Welborn  
Project Consultant

Cc: Genevieve Salmonson, OEQC

LINDA LINGLE  
GOVERNOR



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

PETER T. YOUNG  
CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES

ERNEST LAU  
DEPUTY DIRECTOR

DEAN A. NAKANO  
ACTING DEPUTY DIRECTOR FOR  
THE COMMISSION ON WATER  
RESOURCE MANAGEMENT

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

APR 17 2003

REF:PB:MM

File: CDUA KA-3128B

Acceptance Date: March 25, 2003

180-Day Expiration Date: September 21, 2003

Ben Welborn  
Landmark Consulting  
P.O. Box 915  
Hanalei, HI 96714

**NOTICE OF ACCEPTANCE AND PRELIMINARY ENVIRONMENTAL  
DETERMINATION**

Conservation District Use Application (CDUA) File No. KA-3128B  
(Board Permit)

Dear Mr. Welborn,

This acknowledges receipt and acceptance for processing your Conservation District Use Application (CDUA) for the construction of a single-family residence at Hanalei, Kauai, TMK: (4) 5-3-003:014, located in the Limited Subzone of the Conservation District.

According to the submitted materials the application is for the construction of a three (3) bedroom single-family residence (SFR) of approximately 3,468 square feet, on the subject .23 acre (10,022 square foot) parcel of land. The structure will be constructed on piers, elevated off the existing grade to conform to applicable County regulations regarding the National Flood Insurance Program for coastal high hazard areas. The architecture of the building will be of a contemporary Polynesian "Plantation-Style" vernacular. Minimal grading will be involved in the construction process, and landscaping will be incorporated into the proposed structure.

After reviewing the application, we find that:

1. The proposed use is an identified land use within the Limited Subzone of the Conservation District and is specifically identified under Chapter 13-5-23, Hawaii Administrative Rules (HAR), Identified land uses in the limited subzone, L-6 Single Family Residence, D-1, A single family residence in a floodplain or coastal high hazard area that conforms to applicable county regulations regarding the

National Flood Plain Insurance Program and single family residential standards as outlined in this chapter.

2. A public hearing pursuant to 13-5-40 (3) will not be required.
3. In conformance with Hawaii Administrative Rules, Title 11, Department of Health, Chapter 200, Environmental Impact Statement Rules, the Department anticipates a finding of no significant impact to the environment (FONSI) due to the proposed action.

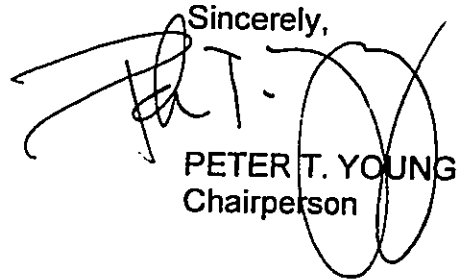
A preliminary interpretation of the FIRM map by Ron Wagner, Wagner Engineering, submitted by Landmark Consulting Services, Inc. and received by the Department on March 27, 2003, verifies that the proposed Bothman residence (footprint) lies within an area designated as a Flood Zone VE 16 – a "Coastal High Hazard Area Susceptible to Tsunami Inundation".

The County of Kauai, Planning Department in a letter dated February 25, 2003 determined that "provided that the property does not currently contain other development, the proposed construction of one single family dwelling would not require an SMA Permit."

Upon completion of the application review process, the item will be scheduled for Board decision making.

Should you have any questions regarding your CDUA application, please feel free to contact Matthew Myers, of the Land Division, Planning Branch at 587-0382.

Sincerely,



PETER T. YOUNG  
Chairperson

Cc: Kauai Board Member  
Kauai District Land Agent  
DOH/OHA  
HPD/DOCARE(Kauai)/DAR  
County of Kauai, Department of Planning



**LANDMARK**  
CONSULTING

June 16, 2003

Peter T. Young, Chairperson  
Department of Land & Natural Resources  
P.O. Box 621  
Honolulu, Hawaii 96809

ATTN: MATTHEW MYERS, Land Division, Planning Branch

**Re: Proposed Bothman Single Family Residence  
Notice of Acceptance and Preliminary Environmental Determination  
Conservation District Use Application (CDUA0 File No. KA-3128B)**

Dear Mr. Young,

Thank you for your *Notice of Acceptance and Preliminary Environmental Determination* dated April 17, 2003. We are now in the process of responding to all comments received on the Draft Environmental Assessment (DEA) pertaining to the proposed Bothman residence, and we anticipate the submittal of a Final Environmental Assessment (FEA) within the coming week.

We shall be including your *Notice of Acceptance and Preliminary Environmental Determination* as supportive documentation with the FEA.

Thank you for your assistance in this regard.

Sincerely,

Ben Welborn  
Project Consultant

Cc: Dierdre S. Mamiya, DLNR  
Genevieve Salmonson, OEQC

May 05 03 12:10p

Dept. of Health

7

LINDA LINGLE  
GOVERNOR OF HAWAII



GENEVIEVE SALMONSON  
DIRECTOR

STATE OF HAWAII  
OFFICE OF ENVIRONMENTAL QUALITY CONTROL  
235 SOUTH BERETAMA STREET  
SUITE 702  
HONOLULU, HAWAII 96813  
Telephone: (808) 586-4185  
Facsimile: (808) 586-4186  
Email: oqoc@health.state.hi.us

May 5, 2003

Deirdre Mamiya  
Department of Land and Natural Resources  
P.O. Box 621  
Honolulu, Hawaii 96809

Attention: Matt Myers

Dear Ms. Mamiya:

Subject: Draft Environmental Assessment (EA) for **Bothman Single Family Residence**  
Kalihiwai, Kauai

We have no comments at this time. If you have any questions, call Nancy Heinrich at 586-4185.

Sincerely,

*Genevieve Salmonson*  
GENEVIEVE SALMONSON  
Director

c: Ben Welborn



**LANDMARK**  
CONSULTING

June 12, 2003

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

**Re: Comments on Draft Environmental Assessment  
Bothman Single Family Residence  
Kalihiwai, Kauai**

Dear Ms. Salmonson,

Thank you for your review of the Draft Environmental Assessment (DEA) for the proposed Bothman Single Family residence.

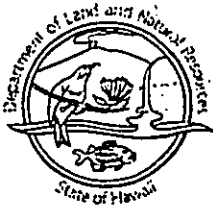
In your letter dated May 5, 2003 you offered no comments on the DEA. Your letter will be included with the Final EA.

Thank you,

Ben Welborn  
Project Consultant

cc: Dierdre Mamiya, DLNR

LINDA LINGLE  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES

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

May 6, 2003

PETER T. YOUNG  
CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE MANAGEMENT

DAN DAVIDSON  
DEPUTY DIRECTOR - LAND

ERNEST Y.W. LAU  
DEPUTY DIRECTOR - WATER

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

**MEMORANDUM**

LOG NO: 2003.0502  
DOC NO: 0304NM29

TO: Diedre S. Mamiya, Administrator  
Land Division

FROM: P. Holly McEldowney, Acting Administrator *PHM*  
State Historic Preservation Division

SUBJECT: **Historic Preservation Review – Ka-3128B CDUA for Single Family  
Residence for Robert and Yvette Bothman  
Kalihiwai, Hanalei, Kauai, (TMK: (4) 5-3-03.014)**

Thanks you for submitting this application for our review. We have reviewed the archaeological inventory survey report for this project (Elmore and Kennedy 2001. *An Archaeological Inventory Survey for a Property Located at TMK: 5-3-03: 14 ... ACP ms.*). The report was approved on March 27, 2001. According to the report one significant historic site [671 – a subsurface habitation sites with six associated burials] was found. A Burial Treatment Plan was submitted to the Historic Preservation Burial staff and the Kauai/Niihau Island Burial Council [KIBC] who approved the disinterment and relocation of the six burials to a location near the front of the property boundary.

In June 2002, burials were disinterred but additional (6) burials were discovered inadvertently. The Department of Land and Natural Resources Historic Preservation Burial staff concurred with the disinterment of all previously identified and inadvertent burials in October 2002. In Appendix B of this CDUA, a report titled (Elmore, Cob, and Kennedy 2002) *Summary of the Treatment of Burials at Site 671 Located at TMK: 5-3-03: 14 in Kalihiwai Ahupua'a, Hanalei District, Island of Kaua'i....ACP ms.*, was submitted to our burial staff on December 9, 2002. Unfortunately, the report has not been reviewed by our staff archaeologist or the KIBC at this time. In December 2002, a reinterment ceremony was held. On March 28, 2003, an archaeological monitoring plan [Elmore and Kennedy, 2003. *Archaeological Monitoring Plan for Site 50-30-03-67114 in Kalihiwai Ahupua'a, Hanalei District, Island of Kaua'i....ACP ms.*] was submitted and approved by our office.

We recommend the following conditions be attached to this permit to mitigate a "no adverse effect" to site 671:

1. The burial treatment report (Elmore, Cob, and Kennedy 2002) *Summary of the Treatment of Burials at Site 671 Located at TMK: 5-3-03: 14 in Kalihiwai Ahupua'a, Hanalei District, Island of Kaua'i*...ACP ms., must be approved by the State Historic Preservation Division. The report needs to include information on the relocation of each burial disinterred.
2. A qualified archaeologist shall be hired to conduct monitoring during the project. The archaeological monitoring plan which has already been approved is to be implemented during any subsurface or ground disturbing work. It must be clear that if historic sites, including burials, are uncovered during the monitoring, construction must stop in the immediate vicinity and the archaeologist shall be allowed sufficient time to evaluate the site and carry out mitigation, as needed.
3. If burials are found, a burial treatment plan shall be prepared for inadvertent burial discoveries encountered during the monitoring of the project. In addition, consultation with the appropriate ethnic groups, the procedures outlined in Chapter 6E-43 shall be followed. It is necessary for the treatment plan to be prepared after consultation with native Hawaiians, such as the Kaua'i Island Burial Council and the Office of Hawaiian Affairs.
4. A report documenting the monitoring and burial treatment work shall be submitted to the State Historic Preservation Division for review and approval. The report shall include: 1) Detailed drawings of burials and deposits to scale. 2) All artifacts shall be sketched and photographed. 3) Analyses of all perishable and datable remains shall be conducted. 4) Stratigraphic profiles shall be drawn to scale. 5) All locations of historic sites shall be on an overall map of the project area. 6) Initial significance evaluations shall be included for each historic site found. and 7) Documentation on the nature and age of the historic sites shall be done.

If you have any questions, please call Nancy McMahon 742-7033.

NM:ak





**LANDMARK**  
CONSULTING

June 16, 2003

Holly McEldowney, Acting Administrator  
State Historic Preservation Division  
Kakuhihewa Building, Room 555  
601 Kamokila Blvd.  
Kapolei, HI 96707

**Re: Historic Preservation Review – CDUA KA-3128B & Draft EA  
Bothman Single Family Residence  
Kalihiwai, Hanalei, Kauai (TMK: (4) 5-3-03: 014)**

Aloha Ms. McEldowney,

Thank you for your comments regarding the above referenced CDUA & Draft EA for the proposed Bothman Single Family Residence on Kauai. The conditions of permit approval that you have recommended in order to mitigate a “no adverse effect” to site 671 shall be included in the Final Environmental Assessment and thereby become a part of the public record. This correspondence establishes a commitment on the part of the owners to comply with your departmental requirements. Furthermore, please be advised that the contents of this letter supercede and replace the letter from Archaeological Consultants of the Pacific dated June 12, 2003.

The owners will carryout the following measures in the development of their residence near Kalihiwai Beach on Kauai.

1. The Bothmans look forward to the SHPD, Burials Program and KIBC review of the report entitled (Elmore, Cob, and Kennedy 2002) *Summary of the Treatment of Burials at Site 671 Located at TMK: 5-3-03: 014 in Kalihiwai Ahupua`a, Hanalei District, Island of Kaua`i*. Once the report has been reviewed please send your comments to Archaeological Consultants of the Pacific (ACP) and Landmark Consulting.
2. Regarding condition #1, wherein you are requiring that the *Summary Report* include information pertaining to the identification and relocation of those individuals disinterred on the subject parcel. Allow me to address this: each individual was reinterred in the approved burial vault, which is located in the northeast corner of the subject property. The location of this vault is shown on a map included with the Burial Treatment Plan (BTP). The individuals contained within the relocation vault were placed in hand-woven “iwi baskets” and to each of these baskets was affixed a metal tag that corresponds to the feature number/location that was assigned to each individual during the field portion of the project. Therefore, in the future, should anyone desired to identify any of the individuals thus reinterred, they will be able to do so by matching the tags to the corresponding feature number contained in the report(s).
3. A qualified archaeologist will be on hand to conduct monitoring during any and all subsurface and/or ground disturbing phases of the project in accordance with the approved monitoring plan. The owners clearly understand that if historic sites, including burials, are found during monitoring, construction must stop in the immediate vicinity and the archaeologist shall be allowed sufficient time to evaluate the site and carry out mitigation, as needed.

4. In response to your condition # 3, which recommends that "*if burials are found, a burial treatment plan shall be prepared for inadvertent burial discoveries encountered during the monitoring of the project*", it is hereby suggested that (as per the prior approvals granted by both SHPD, Burial Programs staff and the KIBC during a series of burial council meetings held in 2002) additional inadvertent discoveries (if any) associated with construction activities be handled in accordance with the protocol established by the existing (approved) BTP as well as via the burial treatment standards outlined in Chapter 6E, HRS. Therefore, should additional burials be encountered, the monitoring archaeologist shall be required to report such findings to the SHPD and the KIBC. Thereafter, upon confirmation by the SHPD, the owners shall be granted authority to remove additional inadvertent discoveries for eventual reinterment in the burial vault at the northeast corner of the subject property, which was constructed with a removable lid specifically for this purpose. All additional burials thus found and disinterred during monitoring would be gathered, identified, and contained on site in a secure location until subsurface and ground disturbing activities have ceased. Thereafter (if needed), reinterment would occur only after due consultation with SHPD and the KIBC. Furthermore, so as to avoid any potential confusion that might result from the drafting of a second BTP, it is hereby suggested that (if necessary) the project archaeologist summarize any additional findings in an addendum to the existing BTP.
5. As per condition # 4 of your letter, the addendum to the BTP shall document the monitoring activities and burial treatment work, which addendum shall be submitted to the SHPD for review and approval. The addendum shall include the following information: 1) Detailed drawings of burials and deposits to scale; 2) All artifacts shall be sketched and photographed; 3) Analysis of all perishable and datable remains shall be conducted; 4) Stratigraphic profiles shall be drawn to scale; 5) All locations of historic sites shall be identified on an overall map of the project area; 6) Initial significance evaluations shall be included for each historic site found; and 7) Documentation of the nature and age of the historic sites shall be done.

I have spoken at length with Nancy McMahon about your conditions and the owner's commitment to the satisfaction of your concerns. On behalf of the Bothmans, thank you for your comments, time and consideration of this matter.

Sincerely,



Ben Welborn  
Project Consultant

cc: Dierdre S. Mamiya, DLNR  
Genevieve Salmonson, OEQC  
Nancy McMahon, SHPD  
Joe Kennedy, Archaeological Consultants of the Pacific  
La France Kapaka-Arboleda, Kauai Island Burial Council  
Robert & Yvette Bothman



**STATE OF HAWAII**  
**OFFICE OF HAWAIIAN AFFAIRS**  
711 KAPI'OLANI BOULEVARD, SUITE 500  
HONOLULU, HAWAII 96813

April 22, 2003

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

**SUBJECT: PROPOSED ROBERT AND YVETTE BOTHMAN SINGLE  
FAMILY RESIDENCE - CDUA AND DEA**

Dear Ms. Mamiya:

Thank you for the opportunity to review and comment on the above referenced Conservation District Use Application and Draft Environmental Assessment for the construction of a single family residence in Kalihiwai, Kauai, Hawaii.

The Office of Hawaiian Affairs (OHA) has no comment at this point in time. If you have any questions, please contact Jerry B. Norris at 594-1847 or email him at [jerryn@oha.org](mailto:jerryn@oha.org).

Sincerely,

A handwritten signature in black ink, appearing to read "Peter L. Yee".

Peter L. Yee  
Director  
Nationhood and Native Rights Division



**LANDMARK**  
CONSULTING

June 16, 2003

Peter L. Yee  
Director, Nationhood and Native Rights Division  
Office of Hawaiian Affairs  
711 Kapiolani Boulevard, Suite 500  
Honolulu, HI 96813

**Re: Response to Comments Received  
Proposed Bothman Single Family Residence  
Conservation District Use Application & Draft Environmental  
Assessment  
Kalihiwai, District of Hanalei, Kauai; TMK (4) 5-3-03: 014**

Dear Mr. Yee,

Thank you for your review of the Draft Environmental Assessment (DEA) for the proposed Bothman Single Family Residence.

In your letter dated April 22, 2003 you offered no comments on the DEA. Your letter will be included with the Final EA.

Sincerely,

Ben Welborn  
Project Consultant

cc: Dierdre Mamiya, DLNR  
Genevieve Salmonson, OEQC

DIVISION OF AQUATIC RES	013
DIVISION	Supervisor
COM FISH/ERIES	Draft/Apply
AG PROG/AM	Supervisor
ADVISOR	Supervisor
STATESMANS	
FILE NO	
SUBJECT	
DATE	
BY	
REMARKS	
INITIALS	
SIGNATURE	
DATE	

STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
Land Division

Ref: PB:MM  
*02-011*  
*3/1*

File #: CDUA KA-3128B  
Acceptance Date: March 25, 2003  
180-Day Expiration Date: September 21, 2003  
SUSPENSE DATE: 21 Days from stamped date

APR 17 2003

MEMORANDUM

TO: Division of Aquatic Resources, Division of Conservation and Resource Enforcement, Historic Preservation Division

FROM: Dierdre S. Mamiya, Administrator *Dierdre Mamiya*  
Land Division

SUBJECT: REQUEST FOR COMMENTS  
Conservation District Use Application (CDUA)  
[Board Permit]

APPLICANT: Robert and Yvette Bothman

FILE NO.: KA-3128B

REQUEST: Single Family Residence

LOCATION: Kalihiwai, District of Hanalei, Kauai, TMK: (4) 5-3-03:014

PUBLIC HEARING: YES \_ NO X

Attached please find a copy of the subject CDUA, Draft Environmental Assessment and our Department's Notice of Acceptance and Environmental Determination. We would appreciate your review and comment on this CDUA by the suspense date noted above.

Should you require additional information, please call Matthew Myers of our Planning Branch at 587-0382. If no response is received by the suspense date, we will assume there are no comments.

Attachment(s)

*William S. Devick*  
\_\_\_\_\_  
William S. Devick  
Date: 5/13/03

*5/13/03*



SUSPENSE DATE: May 9, 2003

STATE OF HAWAII  
Department of Land and Natural Resources  
Division of Aquatic Resources

MEMORANDUM

To: William Devick, Administrator  
From: Richard Sixberry, Aquatic Biologist *RS*  
Subject: Comments on Conservation District Use Application KA-3128B

Comments Requested By: Diedre Mamiya - Land Division

Date of Request: 4/17/03

Date Received: 4/21/03

Summary of Project

Title: Single Family Residence  
Proj. By: Robert & Yvette Bothman  
Location: Kalihiwai, Kauai

Brief Description:

The applicant proposes to construct a single family dwelling with related improvements on a parcel fronting Kalihiwai Road at Kalihiwai, Kauai. The seaward property boundary is a steep cliff at the shoreline.

Comments:

Significant impacts adverse to aquatic resource values are not expected from the proposed single family dwelling.  
Precautions should be taken to prevent debris, landscaping chemicals, eroded soil, petroleum products and other potential contaminants from flowing blowing or leaching into the aquatic environment.

Richard Sixberry  
Aquatic Biologist



June 12, 2003

Richard Sixberry  
Aquatic Biologist  
DLNR, Division of Aquatic Resources  
1151 Punchbowl Street, Rm. 330  
Honolulu, HI 96813

**Re: Bothman Single Family Residence  
Comments on Draft Environmental Assessment (DEA)  
Kalihiwai, Kauai**

Aloha Mr. Sixberry,

Thank you for taking the time to review and comment upon the DEA for the proposed Bothman Single Family Residence.

**Note:** In your response memo, under the heading "Brief Description", you made the following statement: "The applicant proposes to construct a single family dwelling with related improvements on a parcel fronting Kalihiwai Road at Kalihiwai, Kauai. *The seaward property boundary is a steep cliff at the shoreline.*" For clarification, the seaward property boundary is not a steep cliff at the shoreline. Rather, the seaward property boundary abuts Kalihiwai Road. Across from the subject parcel, on the opposite (seaward) side of Kalihiwai Road, there is a 1.0-acre parcel of land, identified as TMK (4) 5-3-03: 029, that is owned by the State of Hawaii. The state-owned parcel is undeveloped and is commonly used as a public parking area for beachgoers. The Bothman parcel does not abut the shoreline. The shoreline (as determined by the seasonal high wash of the waves and the established shoreline vegetation) is located approximately two hundred and fifty feet from the front (seaward) boundary of the Bothman parcel. Along the rear (mauka) boundary of the Bothman property there is a steep semi-vegetated cliff with slopes ranging between 60 and 80 degrees. The steeper sections of the slope are approximately 150 feet in height. Most of the Bothman parcel is generally flat, with the topography ranging between approximately 8 to 11.5 feet above mean sea level. I hope this explanation helps to better visualize the layout of the Bothman parcel, for further clarification please refer to exhibits 2 & 4 of the DEA.

With regards to you comments concerning contaminants such as construction debris, landscaping chemicals, eroded soils, petroleum products, etc. having the potential of flowing, blowing or leaching into the aquatic environment, the owners and shall employ the following measures:

1. In order to mitigate the potential for surface water runoff and the siltation of nearshore waters, a silt retention/construction fence will be erected along the front

(roadside/seaward) boundary of the parcel prior to the commencement of construction. This silt fence will remain until construction of the residence is completed and the soils are stabilized through the planting of permanent vegetation.

2. A portable dumpster will be maintained on site throughout the construction of the proposed residence for the containment and appropriate disposal of all construction related debris.
3. Petroleum based construction materials and byproducts /waste such as paints, solvents, fuels, etc. will be properly stored in sheltered areas throughout construction activities and properly disposed of thereafter. The construction contractor will be made aware of these requirements.
4. Herbicides, pesticides, and fertilizers will be applied sparingly and only during episodes of dry weather so as to avoid leaching into the aquatic environment.

Your comments along with these conditions will be included with the filing of a Final Environmental Assessment for the proposed project.

Sincerely,

A handwritten signature in black ink, appearing to read "Ben Welborn". The signature is fluid and cursive, with a large initial "B" and "W".

Ben Welborn  
Project Consultant

cc: Dierdre Mamiya, DLNR  
Genevieve Salmonson, OEQC



LINDA LINGLE  
GOVERNOR OF HAWAII



CHIYOME L. FUKINO, M.D.  
DIRECTOR OF HEALTH

**STATE OF HAWAII**  
**DEPARTMENT OF HEALTH**

P.O. BOX 3378  
HONOLULU, HAWAII 96801

In reply, please refer to:  
EMD / WB

K5 03 03 14.wpd  
WFB 030391

April 30, 2003

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

Dear Ms. Mamiya:

**Subject:** Request for Comments  
Conservation District Use Application (CDUA)  
Kalihiwai Road, District of Hanalei, Kilauea, Kauai  
TMK: (4) 5-3-3: 14

We have reviewed the subject document which proposes to construct a single family residence (SFR) on the subject parcel.

As there is no County sewer service system in the vicinity and none will be constructed in the near future, we will concur with the this project on the condition that a treatment individual wastewater system (IWS) be constructed on site for wastewater treatment and disposal. We do have a file on record, Septic Tank File #3617 and wastewater plans have been approved as of July 30, 1999. However, final inspection and approval to use the wastewater system have not been granted. The applicant needs to confirm that wastewater plans submitted to the Department are still applicable to this project. Please refer to the attached septic tank file record for further information.

All wastewater plans must conform to applicable provisions of the Department of Health's Administrative Rules, Chapter 11-62, "Wastewater Systems." We do reserve the right to review the detailed wastewater plans for conformance to applicable rules. Should you have any questions, please contact the Planning & Design Section of the Wastewater Branch 586-4294, or feel free to contact Mr. Joe Tateyama of our Kauai Office at (808) 241-3323.

Sincerely,

Handwritten signature of Harold K. Yee in black ink.

HAROLD K. YEE, P.E., CHIEF  
Wastewater Branch

Attachment: Septic Tank File record information

c: J.Tateyama, Wastewater Branch, Kauai District Health Office

LINDA LINGLE  
GOVERNOR OF HAWAII



CRYSTAL L. FUKINO, M.D.  
DIRECTOR OF HEALTH

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

In reply, please refer to:  
EMD / WB

Wastewater Branch  
919 Ala Moana Blvd. Room 309  
Honolulu, Hawaii 96814-4920  
Phone (808) 586-4294 Fax (808) 586-4300

A septic tank file has been found and the following information is provided. In general, the Department of Health has reviewed and approved of the plans based on the information submitted as verification that a treatment individual wastewater system (IWS) such as a septic tank was constructed and authorized to be used for wastewater disposal from a building/dwelling.

Tax Map Key number

( 4 ) 5 - 3 - 3 : 14

Address

Kalihiwai Rd, Kilauea

Septic Tank File #

3617

Applicant Name

Robert & Yvette Bothman

Submit Plan Date

7-9-1999

Plan Approval Date

7-30-1999

Inspection Date

\_\_\_\_\_

System Approved for Use Date

\_\_\_\_\_

System / Disposal Via

septic tank, trench/chambers

Capacity

1250 gallons

# of Bedrooms or Other

3BR

Designed By

Kagimoto

Wastewater Branch Engineer

JOE T

Planning/Design Section (Oahu)

For further information, you may also call the Wastewater Branch neighbor island engineers:

[ ] Mr. Dane Hiromasa at the Kealahou Health Center, Kona at (808)322-1507

[ ] Mr. Jerry Nunogawa at the Hawaii District Health Office, Hilo at (808)933-0401

Mr. Joe Tateyama at the Kauai District Health Office at (808)241-3323

[ ] Mr. Roland Tejano at the Maui District Health Office at (808)984-8232



**LANDMARK**  
CONSULTING

June 16, 2003

Harold K. Yee, P.E. Chief  
Wastewater Branch  
Department of Health  
P.O. Box 3378  
Honolulu, HI 96801

**Re: Response to Comments Provided  
Proposed Bothman Single Family Residence  
Conservation District Use Application & Draft Environmental Assessment  
Kalihiwai, District of Hanalei, Kauai; TMK (4) 5-3-03: 014**

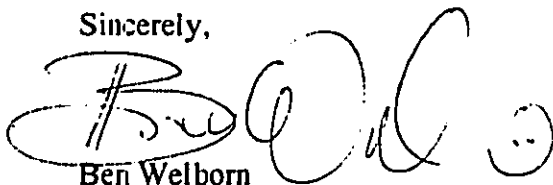
*Aloha Mr. Yee,*

This is to acknowledge receipt of your letter dated April 30<sup>th</sup>, 2003 pertaining to the wastewater treatment requirements for the proposed Bothman Single Family Residence on Kauai. As per your requirement, an Individual Wastewater System (IWS) will be constructed on site for wastewater treatment and disposal.

The approved design referenced in your letter, Septic Tank File #3617, is still applicable to this project but the system has not yet been constructed. Upon the successful issuance of a CDUP for the residence, and thereafter upon obtaining all necessary County of Kauai building permits, the owner intends to construct system as shown on the approved file plan. Thereafter the necessary intermediate and final inspections will be secured prior to initiating use of the IWS.

Thank you for your time and consideration of this matter.

Sincerely,

  
Ben Welborn  
Project Consultant

cc: Dierdre S. Mamiya, DLNR  
Genevieve Salmonson, OEQC  
Joe Tateyama, Wastewater Branch, Kauai District Office

April 26, 2003

Ben Welborn  
Landmark Consulting Services, Inc.  
P.O. Box 915  
Hanalei, HI 96714

RE: Bothman Residence – Kalihiwai Beach  
Conservation District Use Application & Draft Environment Assessment

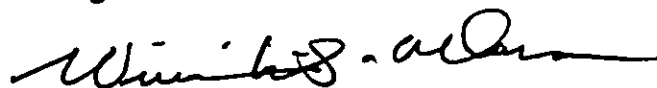
Dear Mr. Welborn:

Thank you for your letter advising us of the pending project next to our property at Kalihiwai for the proposed Robert and Yvette Bothman Single-Family Residence. We have seen the house plans and have met the Bothmans and feel they will be an asset to the community. They are very sensitive to the cultural and environmental issues in the area.

We do not have any concerns about the structure planned on their property. We had expected to replace our little cottage with a similar structure but Hurricane Iniki changed our plans.

Sincerely,

  
Margaret L. Akana



William A. S. Akana  
6466 Kalama Rd.  
Kapaa, HI 96746



**LANDMARK**  
CONSULTING

June 12, 2003

William & Margaret Akana  
6466 Kalama Road  
Kapaa, HI 96746

**Re: Bothman Single Family Residence  
Draft Environmental Assessment  
Kalihawai, Kauai**

Aloha Mr. & Mrs. Akana,

Thank you for your letter dated April 26, 2003 in which you voiced your support for the proposed Bothman residence adjacent to your property in Kalihawai. Your comments will be included with the filing of a Final Environmental Assessment (FEA) for the proposed residence.

Sincerely,

Ben Welborn  
Project Consultant

cc: Dierdre Mamiya, DLNR  
Genevieve Salmonson, OEQC



**LANDMARK**  
CONSULTING

May 2, 2003

Wendell Goo  
P.O. Box 34  
Kilauea, HI 96754

**Re: Bothman Residence – Kalihiwai Beach  
Conservation District Use Application & Draft Environmental Assessment  
Public Review and Comment Period – June 6<sup>th</sup> Deadline**

Aloha Mr. Goo,

I am writing to inform you of the pending construction of a single-family residence near Kalihiwai Beach on Kauai. As an owner of real property within close proximity to the parcel upon which the project is proposed, it is required by law that the owner/applicant notify you of the pending project, providing you with an opportunity to review the relevant documentation and your offer comments or concerns. For this purpose, you may go to the Princeville Public Library and ask the clerk to review the reserve copy of the Conservation District Use Application (CDUA) for the *Proposed Robert and Yvette Bothman Single-Family Residence*. The CDUA contains a Draft Environmental Assessment of the proposed action, as well as archaeological reports, and a Cultural Impact Assessment.

If you wish to comment on the proposed action, you may do so within the statutory 30-day comment period, the deadline of which is set to expire on Friday, June 6, 2003. You may send your written comments to my P.O. Box 915 in Hanalei, 96714. Your comments (if any) will be duly addressed and included with the Final Environmental Assessment for the proposed project. If you have any questions about this matter, please do not hesitate to contact me at 828-6332.

Sincerely,

Ben Weiborn  
Project Consultant

**Bothman CDUA & Draft EA – Neighboring Property Owner Notification List:**

<b>Name</b>	<b>TMK #</b>
1. Wendell Goo	(4) 5-3-03: 12
2. Gaylord Kaonohi	(4) 5-3-03: 13
3. William Akana	(4) 5-3-03: 15
4. Edward Miller	(4) 5-3-03: 16 & 23
5. Samuel Keala Jr.	(4) 5-3-03: 17
6. Stanley Kaluahine Jr.	(4) 5-3-03: 18
7. Chauncey Pa	(4) 5-3-03: 20 & 24
8. David Silver	(4) 5-3-03: 30
9. Johnny Akana & Family	(4) 5-3-03: 72

## Draft Environmental Assessments

### (1) Bothman Single Family Residence

**District:** Hanalei  
**TMK:** 5-3-03: 014  
**Applicant:** Robert Bothman (408-279-1235 x 222)  
20385 Iron Springs Road  
Los Gatos, CA 95030

**Approving Agency/Accepting Authority:** Board of Land and Natural Resources  
P.O. Box 621  
Honolulu, Hawai'i 96809  
Contact: Matthew Myers (587-0382)

**Consultant:** Landmark Consulting Services, Inc.  
P.O. Box 915  
Hanalei, Hawai'i 96714  
Contact: Ben Welborn (828-6332)

**Public Comment Deadline:** June 7, 2003  
**Status:** DEA First Notice pending public comment.  
Address comments to the applicant with copies to the approving agency or accepting authority, the consultant and OEQC.

**Permits Required:** CDUP, Building, SMA Exemption, IWS (DOH)

The proposed action is for the construction of a 3,468 sq. ft. single-family residence in an established neighborhood near Kalihiwai Beach on Kaua'i's North Shore. The proposed residence will be of a contemporary plantation style and shall be elevated on piers above the existing grade to conform to applicable County regulations regarding the National Flood Insurance Program for coastal high hazard areas. The applicant in this action is requesting that the Board of Land and Natural Resources make a discretionary allowance for the reduction of the standard building setbacks. If approved, this would allow the applicant to have a 10-foot building setback rather than a 15-foot setback as is customary within the Conservation District. The applicant is requesting said exception due to landslide and tsunami concerns taken in conjunction with the limiting size and configuration of the subject parcel. Historical and cultural impacts of the proposed action have been resolved to the satisfaction of the State Historic Preservation Division and the Kaua'i/Ni'ihau Islands Burial Council. A copy of the Draft Environmental Assess-



ment will be available for public review at the Princeville Public Library, the findings of which indicate that as a result of the proposed actions there will be no significant negative environmental impacts be they primary, secondary or cumulative. A Finding of No Significant Impact (FONSI) is anticipated.

## Final Environmental Assessments/ Findings of No Significant Impacts (FONSI)

### (2) Kapa'a Homesteads Well No. 3

**District:** Kawaihau  
**TMK:** 4-5-15: por. 6  
**Applicant:** Department of Land and Natural Resources  
1151 Punchbowl Street, Room 221  
Honolulu, Hawai'i 96813  
Contact: Eric Hirano (587-0230)

**Approving Agency/Accepting Authority:** Same as above.  
**Status:** FEA/FONSI issued, project may proceed.  
**Permits Required:** Well Construction



# **APPENDIX 2**

## **ARCHAEOLOGICAL INVENTORY LEVEL SURVEY & SUPPORTING DOCUMENTATION**

**Bothman Single Family Residence – Final Environmental Assessment  
TMK (4) 5-3-03: 014**

BENJAMIN J. CAYETANO  
GOVERNOR OF HAWAII



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

DEPUTIES  
JANET E. KAWELO  
LUNNEL NISHIOKA

STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES

HISTORIC PRESERVATION DIVISION  
Kakuhikawa Building, Room 555  
601 Kamokila Boulevard  
Kapolei, Hawaii 96707

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

March 27, 2001

Ms. Michelle Elmore  
ACP, Inc.  
59-624 Pupukea Road  
Haleiwa, Hawaii 96712

LOG NO: 26985 ✓  
DOC NO: 0102NM03

Dear Ms. Elmore:

**SUBJECT: Historic Preservation Review -- Revised Inventory Survey Report  
(Bothman), Kahiliwai, Hanalei, Kauai.  
TMK: 5-3-03: 14**

Thank you for sending us this revised report (Elmore and Kennedy 2001. An Archaeological Inventory Survey Report for a Property Located at TMK: 5-3-03: 14 ... ACP ms). The revisions were made in response to our review letter of November 15, 2000.

The background section of this report is now acceptable. It indicates that the parcel was likely a houselot in the 1840s.

We now believe that the project area has been adequately surveyed, finding 1 historic site [671] - a subsurface habitation site with associated burials, which covers the entire parcel. Six burials were found, and it is quite likely that more are present in the parcel. The report now adequately describes and interprets the site. It is clear that the site has been extensively disturbed by modern activities, leaving only remnants of deposits and burials or damaged burials. Most of the burials are currently clustered near the center of the parcel, but that may be because that is where the major test trench was placed.

We agree that the site is significant for its information content and the burial features for their cultural significance. We agree that the habitation deposits is largely disturbed and seems to be "no longer significant" by-in-large, now that your firm has recorded the basic significant information on these deposits. Thus, the burials are the significant features of this site surviving today.

Your client will need to go before the Kaua'i/Ni'ihau Islands Burial Council with a burial treatment proposal (and plan). Please contact our Burials Program staff for the information that the Council needs and to be placed on the agenda. You or your client can check with Kana'i Kapeliela, at 692-8037 to coordinate this process.

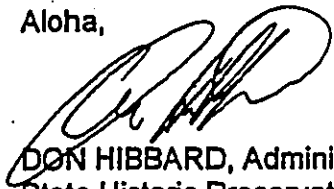
M. Elmore

2

We agree that construction activities will need to be monitored by a professional archaeologists in case additional burials are found. A brief monitoring plan (scopes of work) would need to be prepared for this work, and the burial treatment plan should also address treatment for any such burial finds.

If you have any questions, please call Nancy McMahon 742-7033.

Aloha,



DON HIBBARD, Administrator  
State Historic Preservation Division

NM:amk

c. KIBC

**A REVISED ARCHAEOLOGICAL INVENTORY SURVEY  
REPORT FOR A PROPERTY LOCATED AT TMK: 5-3-03: 14  
IN KALHIWAI AHUPUA'A, HANAIEI DISTRICT,  
ISLAND OF KAUA'I  
JANUARY 2001**

**Prepared for: Mr. Bob Bothman  
650 Quinn Ave.  
San Jose, CA. 95112**

**Prepared by: Archaeological Consultants of the Pacific, Inc.  
Michelle Elmore, B.A.  
Joseph Kennedy, M.A.  
59-624 Pupukea Road  
Haleiwa, Hawaii 96712**



*Inventory Reports Data Recovery Reports Research Design Documents Monitoring Due  
Diligence Work Historical Studies Cultural Studies Burial Treatment Plans Preservation  
Plans Interpretive Reconstructions Restorations Qualified Expert Witness Testimony*

**59-624 Pupukea Road Haleiwa, Hawaii 96712 Phone: 638-7442/Fax: 638-0703**

## Abstract

An Archaeological Inventory Survey with subsurface testing has been conducted on property located in Kalihiwai on the Island of Kaua'i. The purpose of the investigations was to determine if significant historic properties exist within the project limits and, if present, properly document and evaluate those sites.

Investigations took the form of a surface survey as well as subsurface investigations including five backhoe trenches and thirty shovel test pits. The trenches and shovel test pits were placed in areas which will be impacted by future development. One site of significance to the interests of historic preservation was identified on the subject property, a habitation site, designated State Site number 50-30-03-671, at which at least six individuals were interred. Cultural deposits include both pre- and post-Contact components.

The current investigations have determined that Site 50-30-03-671 is significant for its information content as well as having cultural significance. Archaeological Consultants of the Pacific, Inc. recommends that a determination be made that future construction activities would have an "adverse effect" on significant historic properties under the Advisory Council Regulations, 36 CFR 800. In order to help mitigate the effects of proposed development, the appropriate treatment of the burials identified during the current investigations will be required. Details of the recommendations for burial treatment will be presented in a separate document. In addition, it is recommended that archaeological monitoring take place during all subsurface construction activities.

## Table of Contents

Abstract.....	i
List of Plates.....	iii
List of Tables.....	iii
Section 1: Introduction .....	1
Section 2: Physical Setting.....	3
Section 3: Historic Background .....	3
Section 4: Methodology .....	13
Section 5: Findings .....	15
Section 5.1: Stratigraphy .....	15
Section 5.2: Descriptions of Subsurface Testing .....	15
Section 5.3: Feature Descriptions.....	19
Section 5.4: Cultural Materials.....	29
Section 6: Discussion.....	34
Section 7: Evaluations of Site Significance and Recommendations .....	34
Conclusion.....	36
References Cited .....	37
Appendix A: Artifact Accession List and Analysis of Recovered Vertebrate Faunal Remains.....	A1

## List of Illustrations

Figure 1: Project Location on a Map of Kaua'i .....	2
Figure 2: Location of the Subject Property on a U.S.G.S. Topographic Map .....	4
Figure 3: Location of the Subject Property on a TMK Map .....	5
Figure 4: Map of Northern Half of Kalihiwai Ahupua'a Depicting all LCA's for the Ahupua'a.....	7
Figure 5: Kalihiwai Circa 1892.....	8
Figure 6: Top Plan of Excavations Conducted on the Subject Property .....	16
Figure 7: Southwestern Profiles of Trench 1.....	18
Figure 8: Plan View of Feature 671:A.....	24
Figure 9: Plan View of Feature 671:B.....	25
Figure 10: Trench 4, Feature 671:C.....	26
Figure 11: Plan View of STP:17, Feature 671:F .....	28

## List of Plates

Plate 1: Photograph of Trench 1 .....	17
Plate 2: Photograph of Southwest Wall of Trench 1 .....	17
Plate 3: Scanned Images of Artifacts .....	32

## List of Tables

Table 1: Land Commission Awards in Kalihiwai Ahupua'a .....	9
Table 2: Summary of Shovel Test Pits, Site 671 .....	20
Table 3: Summary of Artifact Totals from Site 671 .....	30
Table 4: Summary of Site Significance Evaluations .....	35
Table 5: Artifact Accession List, Site 671 .....	A2
Table 6: Analysis of Recovered Vertebrate Remains, Site 671 .....	A7

# An Archaeological Inventory Survey Report for a Property Located at TMK 5-3-03:14 in Kalihiwai Ahupua'a, Hanalei District, Island of Kaua'i

## Section 1: Introduction

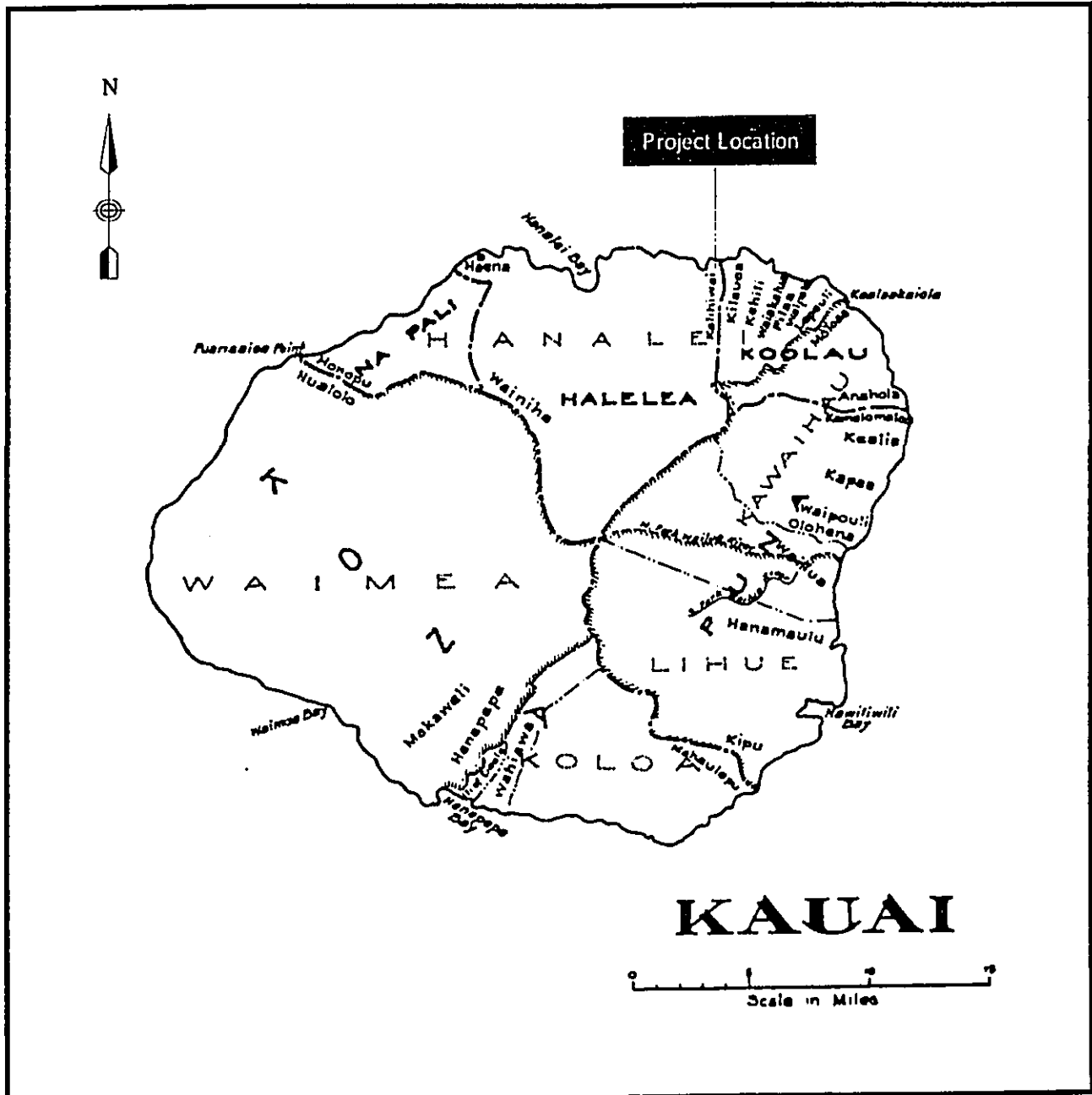
At the request of Mr. Robert Bothman, Archaeological Consultants of the Pacific, Inc. (ACP) has conducted an Inventory Survey with subsurface testing for property at which a private residence has been proposed to be constructed. The subject property (TMK: 5-3-03:14) is located in the *ahupua'a* of Kalihiwai, current district of Hanalei, Island of Kaua'i (see Figure 1). The property is currently owned by Mr. Robert Bothman.

The purpose of these archaeological investigations was to perform the tasks and meet the requirements specified by the National Historic Preservation Act (NHPA) and the Department of Land and Natural Resources, State Historic Preservation Division (DLNR-SHPD). These investigations would allow for the evaluation of the significance of potential historic resources located on the property including their eligibility for inclusion in the National Register of Historic Places. These investigations also allow for the making of recommendations concerning the mitigation of the impact of future construction activities upon potentially significant historic resources.

Inventory Survey investigations have determined that one site (Site 50-30-03-671; note that in the remainder of this document only the individual three digit site number will be cited) of historic significance is located on the subject property. The mitigation of the effects of proposed development will require the appropriate treatment of the burials identified during the current investigations, the details of which will be presented in a separate document.



Figure 1: Project Location on a Map of Kauai



Kalihiwai TMK: 5-3-03: 14

source: Spriggs and Tanaka 1988xiv

## Section 2: Physical Setting

The subject property (TMK: 5-3-03: 14) is located in the *ahupua'a* of Kalihiwai, current district of Hanalei, Island of Kaua'i. The project area is located at geographic grid coordinates 159° 25' 50"W by 22° 13' 10"N and UTM (Universal Transverse Mercator) coordinates 2457050mN by 454800mE (see Figure 2). The property is bordered by Kalihiwai Road along its western border, a lot with a private residence to the north, a steep hillside to the east and an empty lot to the south (see Figure 3).

The current subject property is comprised of one parcel located on a coastal plain, approximately 60m from the ocean. The dimensions of Parcel 14 are 23 x 30 x 34 x 43m encompassing an area of approximately 0.37 acres. The property is mostly level with a slight rise toward the eastern end of the property. Vegetation on the parcel consists of mostly various grasses and weeds as well as a few coconut palms (*Cocos nucifera*), tropical almond trees (false *kamani*, *Terminalia catappa*), a java plum tree (*Eugenia cumini*), heleconia (*Heleconia* sp.) and banana plants (*Musa* sp.) along the edges of the property.

Average annual rainfall ranges between 50 and 75 inches (Armstrong 1973). Foote *et al.* (1972) describe the soils in the area as beaches (BS). These soils consist "... mainly of light colored sands derived from coral and seashells" (Foote *et al.* 1972). The current investigations by ACP found that the soil on the property consists of soils similar to those described by Foote *et al.*, however an A-horizon consisting dark grayish brown sandy loam is present above light colored sand. Refer to Section 5.1 for more detailed description of the soils.

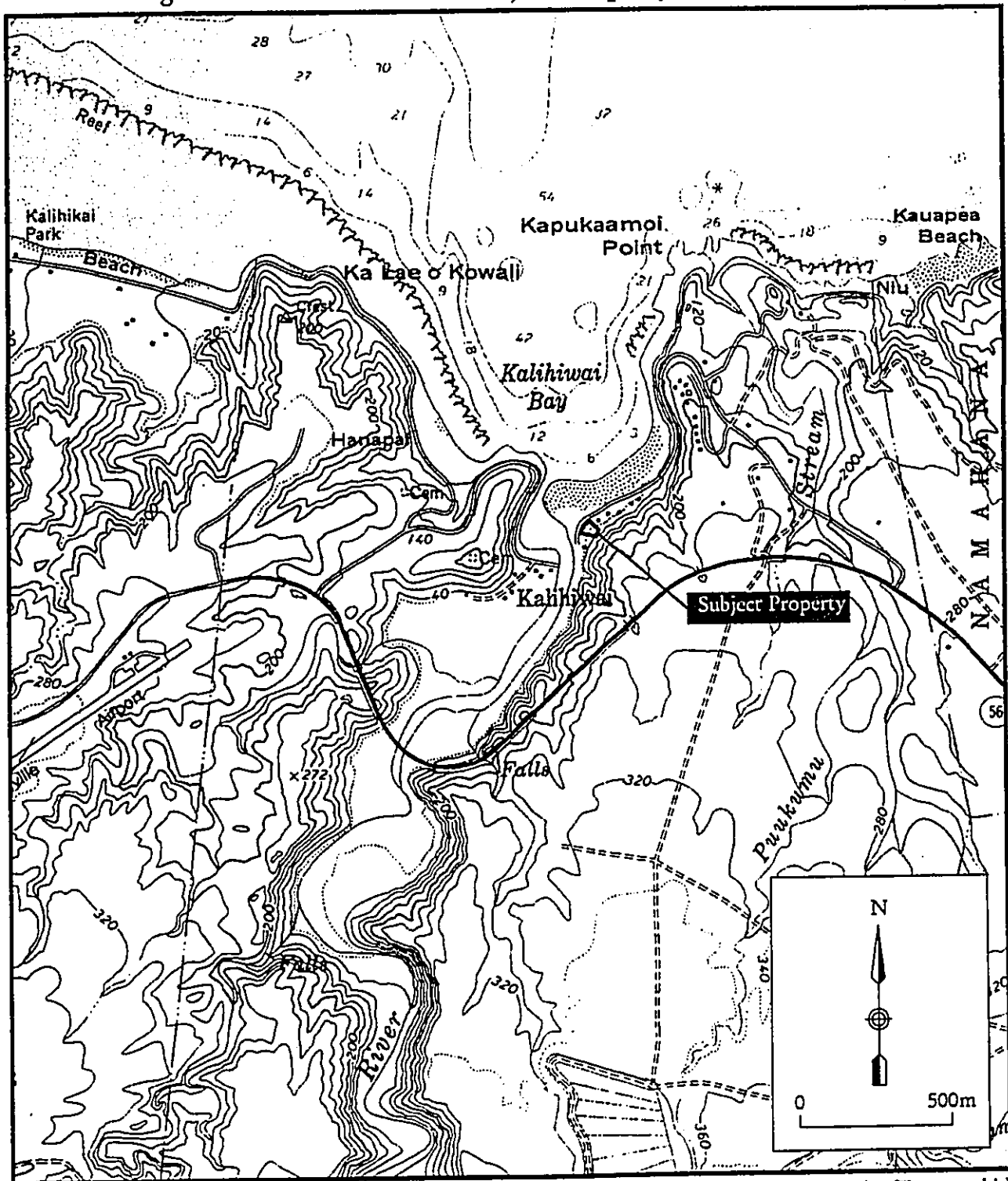
## Section 3: Historic Background

### *Land Use History*

The subject property is located in the *ahupua'a* of Kalihiwai, current district of Hanalei, traditional district of Halele'a. Kalihiwai Ahupua'a lies along the eastern edge of Halele'a District and lies between the *ahupua'a* of Kalihikai on the west and both Kilauea and Namahana on the east. Kalihiwai Stream meanders through the center of the *ahupua'a*. The name Kalihiwai stems from the words *kalih*i, or edge, and *wai*, or stream (Pukui *et al.* 1974:77).

Very little is known about pre-Contact or early post-Contact activities in this area of Kaua'i. Handy and Handy (1972:421) discuss *lo'i* cultivation in the *ahupua'a* of Kalihikai, Kalihiwai and Kilauea:

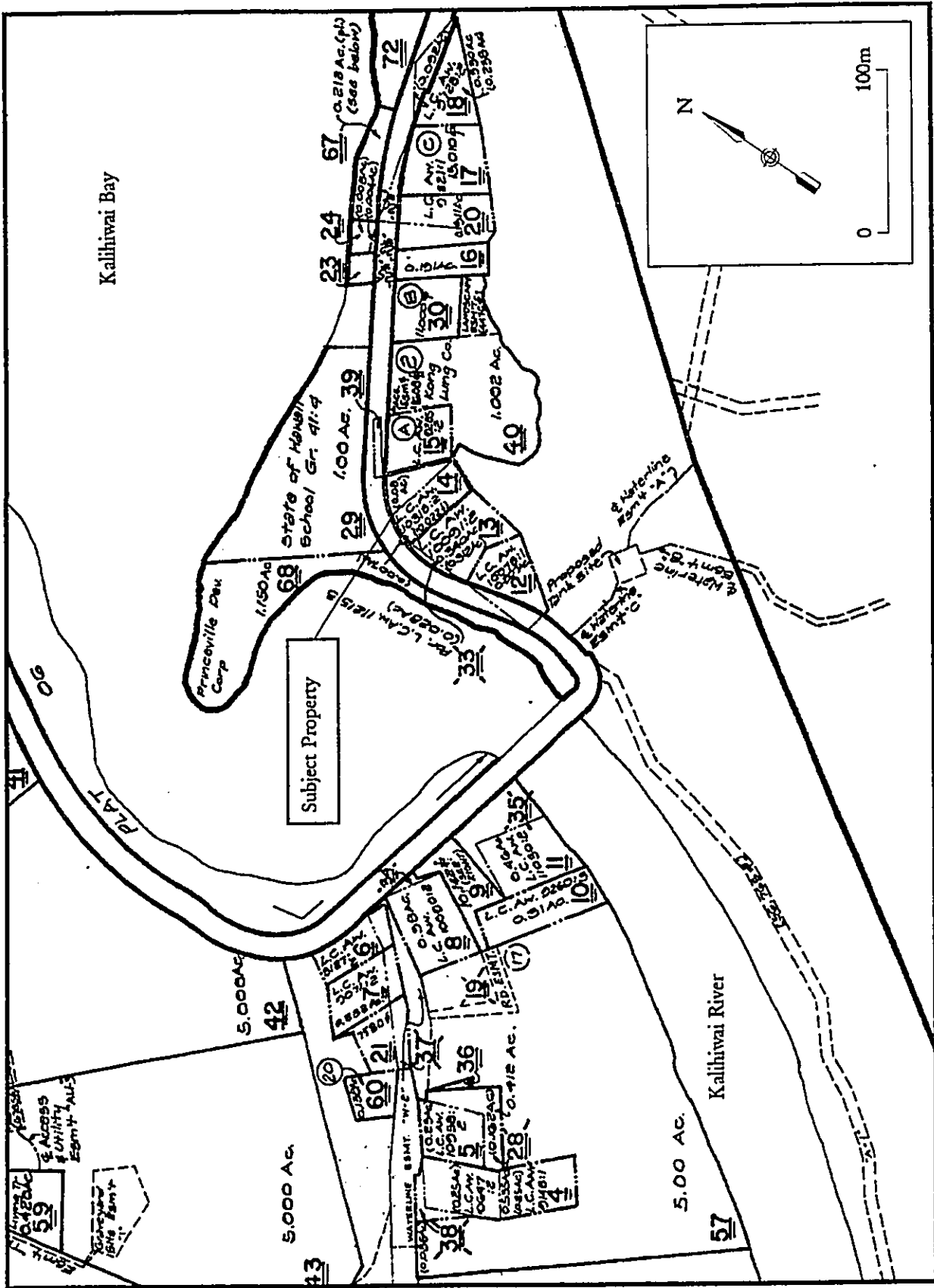
Figure 2: Location of the Subject Property on a U.S.G.S. Map



Kalihiwai TMK: 5-3-03: 14

Source: U.S.G.S. 7.5 Minute Series (Topographic)  
Hanalei Quadrangle 1983

Figure 3: Location of the Subject Property on a TMK Map



Source: Dept. of Taxation, Tax Maps Branch 1936

Kalihiwai TMK: 5-3-03: 14

East of Hanalei are two small *ahupua'a*, Kalihi-kai and Kalihi-wai, both of which had quite extensive *lo'i* near the sea. There were *lo'i* back along main streams and side streams, but both valleys are shallow. Actually the stream flow from both valleys is diverted eastward to Kilauea, the adjacent *ahupua'a* in the *moku* of Ko'olau.

Also, a number of irrigation ditches were recorded in the 1850's stemming from Kalihiwai Stream (Earle 1978:35).

Early written accounts of the north shore of Kaua'i are few. Although Cook and Vancouver both sailed to Kaua'i in the late eighteenth century, their visits were limited to the southern shore. Kalihiwai Valley is mentioned, however, by Henry Whitney, who wrote in his "Hawaiian Guide Book" in 1875:

Just outside of Kilauea is the beautiful Kalihiwai valley, whose fertile lands are watered by the river of the same name. A short sail up the river, whose banks are shaded by large trees, a beautiful little cascade is disclosed, while further inland is another and still another, which though smaller, vie in beauty with many larger waterfalls (Whitney 1875 in Rosendahl 1990:4)

During the Great Mahele of 1848, the entire *ahupua'a* of Kalihiwai was awarded to William Lunalilo (LCA 8559-B). A total of twenty-four *kuleana* claims were awarded to individuals living within Kalihiwai. Figure 4 depicts the location of all the LCA's for the *ahupua'a*, and the awardees and land uses are indicated on Table 1. Native and foreign register and testimony indicate that these lands were used primarily for house lots and *lo'i*, with some *kula*. The LCA's often contained more than one *apana*, typically with differing land uses for each *apana* (Board of Commissioners to Quiet Land Titles 1846-1855). The *apana* numbers as listed in Foreign and Native Testimony apparently in many instances do not correspond with the *apana* numbers indicated on Figure 4. An example of this is LCA 10318, of which *apana* 2 is located on a portion of the current subject property. This land was awarded to Nohomalie, and foreign testimony indicated that LCA 10318 was in two pieces (*apana*) containing one house lot (listed as *apana* 1) and four *lo'i* (listed as *apana* 2). The house lot is described as being bounded by Kalihiwai River, *pali*, and two house lots, which is in accordance with the surroundings of the subject property. The subject property also contains sandy soils, on which wet taro could not be produced. Figure 4 depicts *apana* 1 in an area further inland next to Kalihiwai River in a low marshy area, much more suited to cultivation of *lo'i*. An 1892 map by Monserrat also depicts a structure in the general location of the subject property (see Figure 5). Therefore, LCA 10318:2 on the subject property most certainly was the location of Nohomalie's house lot.

In the late nineteenth century, land use and demographics were changing throughout Kaua'i. According to Joesting:

By 1890 there were villages and hotels where once there had been no inhabitants at all, a reflection of how the centers of population were shifting. The places that had offered the most to Hawaiians - the sea to fish in, a stream to provide water for taro - these things became less important as the new commercial world took increasing

Figure 4: Map of Northern Half of Kalihiwai Ahupua'a Depicting all LCA's for the Ahupua'a

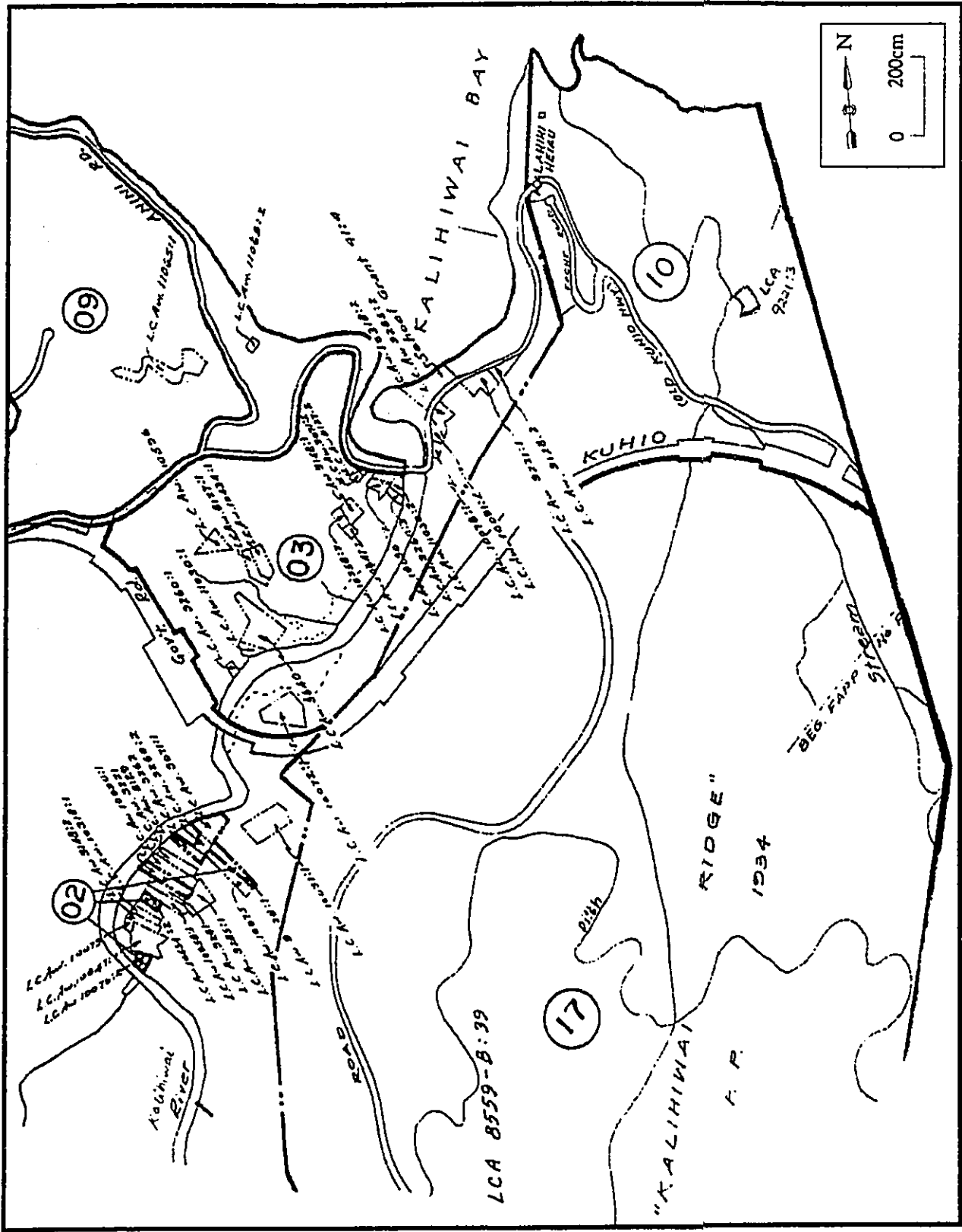
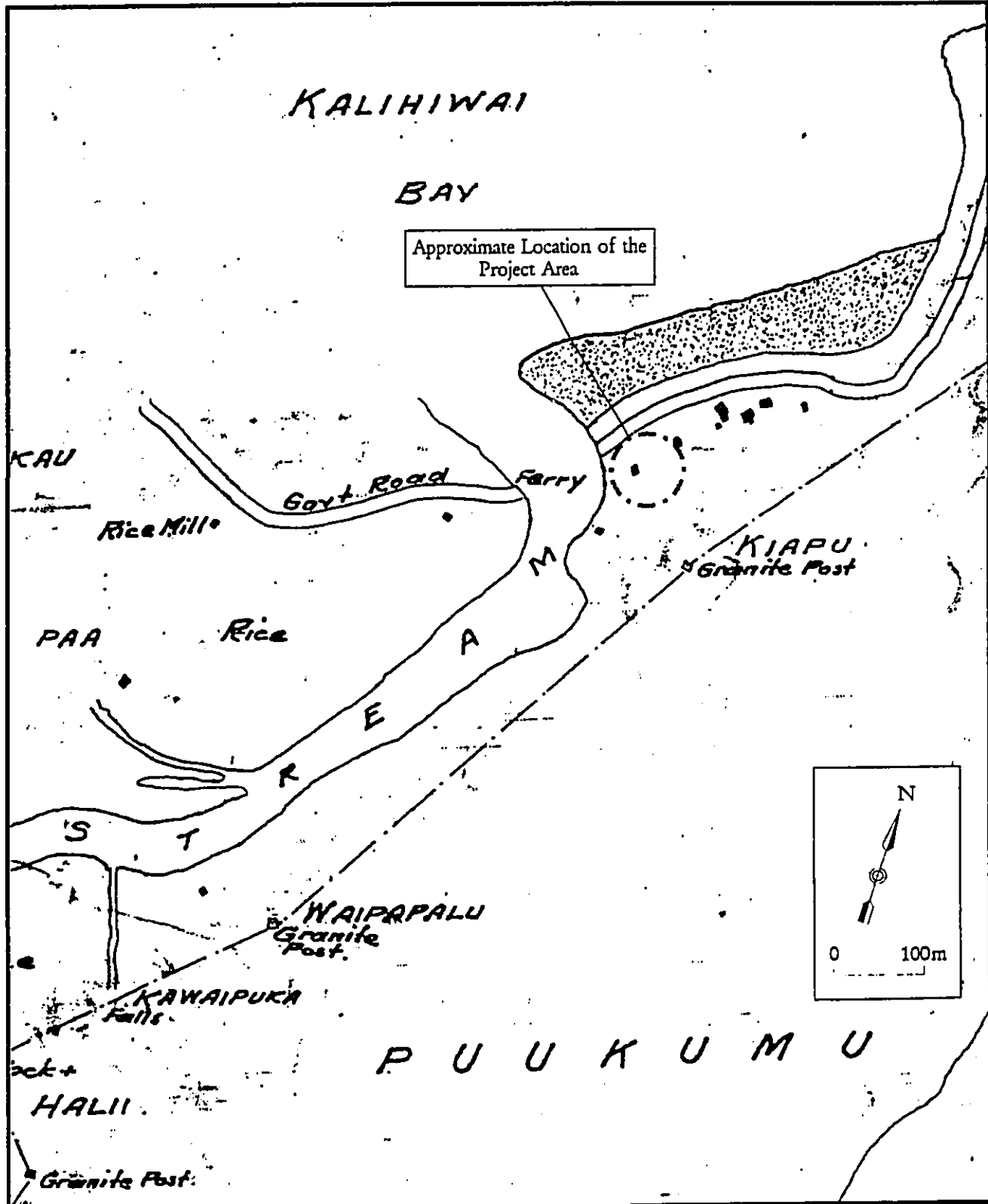


Figure 5: Kalihiwai Circa 1892



Kalihiwai TMK: 5-3-03: 14

Source: Monsarrat 1892 (Gov't Survey Reg. Map No. 1971)

**Table 1: Land Commission Awards in Kalihiwai Ahupua'a**

Award Number	Number of <i>Apana</i>	Awardee	Land Use (Based on Foreign and Native Testimony)	Comments
8559-B	1	Lunalilo, W.C.		Encompasses entire <i>ahupua'a</i>
8127	3	Heau	1: house lot 2: 4 <i>lo'i</i> , <i>kula</i> 3: 1 <i>lo'i</i> , <i>kula</i>	<i>Apana</i> numbers likely do not correspond to TMK map
8129	1	Heke	<i>lo'i</i>	
9071	2	Kaina		Likely use for 1: <i>lo'i</i> and 2: house lot
9128	2	Kaumana	1: house lot 2: 5 <i>lo'i</i> , <i>kula</i>	<i>Apana</i> numbers likely do not correspond to TMK map
9148	2	Kekoa	1: house lot 2: 4 <i>lo'i</i>	
9221	3	Kupihea	1: house lot 2: 5 <i>lo'i</i> 3: 15 <i>kula</i>	
9260	3	Kea	house lot and 2 <i>lo'i</i>	Likely use for 1: <i>lo'i</i> , 2: <i>lo'i</i> and 3: house lot
9262	1	Kunihinihi	5 <i>lo'i</i>	
9281	1	Keoki	<i>lo'i</i>	
9285	5	Kekaululu	1: house lot 2: <i>kula</i> 3: <i>lo'i</i> 4: <i>lo'i</i> 5: <i>lo'i</i>	<i>Apana</i> numbers likely do not correspond to TMK map
9840	1	Kikoi	house lot, 2 <i>lo'i</i> , <i>kula</i>	
10072	1	Mainui	house lot, <i>lo'i</i> , <i>kula</i>	
10075	1	Mahina	<i>lo'i</i>	
10078	2	Manewa	1: house lot 2: <i>lo'i</i>	
10079	1	Manaka		Likely use for <i>lo'i</i>
10090	2	Makuakane	1: house lot 2: 4 <i>lo'i</i>	<i>Apana</i> numbers likely do not correspond to TMK map
10091	2	Mauale, I.	1: house lot 2: <i>lo'i</i> and <i>kula</i>	<i>Apana</i> numbers likely do not correspond to TMK map
10318	2	Nohomalie	1: house lot 2: 4 <i>lo'i</i>	<i>Apana</i> numbers likely do not correspond to TMK map
10434	2	Naehu	1: <i>lo'i</i> 2: <i>lo'i</i>	
10596	1	Pepeiaonui	5 <i>lo'i</i> , <i>kula</i>	
10647	2	Pupu	1: house lot 2: 10 <i>lo'i</i> , <i>kula</i>	<i>Apana</i> numbers likely do not correspond to TMK map
10958	2	Wahahua	1: house lot 2: 5 <i>lo'i</i>	<i>Apana</i> numbers likely do not correspond to TMK map
11030	2	Sila	1: house lot 2: 1 <i>lo'i</i> , <i>kula</i>	
11065	3	Alahipa		Likely use for 1: <i>lo'i</i> and 2: house lot
<b>Claim not awarded:</b>				
9051	1	Kaina		



control. Although some Hawaiians preferred the old life-style, many moved close to the plantation mill with the nearby company store, and their generally thinning numbers reduced old villages to fragments of what they had once been. ...Places like Anahola Valley, Moloaa, Kalihiwai, and Waipouli had previously been centers of population (Joesting 1984:249-250 in Rosendahl 1990:6).

As the Hawaiian people moved out of Kalihiwai, coffee, sugar, cattle and rice came in. Coffee was introduced in Kalihiwai in 1862 on lands belonging to Foreign Minister Robert C. Wyllie (McGerty and Spear 1999). Sugar production began in the area in the 1870's (Kennedy 1990:2). Evidence of cattle is indicated in Thrum, where it is said that Kaunonoli Heiau was destroyed by use as a cattle pen (Thrum 1907:42). The Kalihiwai flood plain was used extensively during the historic period for rice cultivation. Handy (1940:71) discusses the shift from *lo'i* to rice in *The Hawaiian Planter*:

Kalihiwai has an extensive terrace area on the flatland through which Kalihiwai River meanders to the bay. This whole area is now planted in rice. Where the valley becomes narrower, a mile inland, there were small terraces. Two miles inland, and again 2.75 miles inland, in sharp bends of the river, there are small flatlands where wet taro was formerly grown. Just east of Kalihiwai Bay, Puulumu Stream flows in a shallow valley. A quarter of a mile below the road there is a small area of old terraces.

Monserrat's 1892 map depicts areas in Kalihiwai in which rice was cultivated. Flood plains along either side of the river were planted in rice (see Figure 5). Much of this plain was inundated in 1947 during a tsunami.

### *Previous Archaeology*

Thrum (1907) was the first to record archaeological sites in Kalihiwai, including Kalahihi Heiau (Site 134), Kaunonoli Heiau (Site 135), Kaihalulu Heiau (Site 136) and Kihei Heiau (Site 137). The foundation of Kalahihi Heiau was located on the west side of Kalihiwai valley (Thrum 1907:42). In 1931, Bennett wrote that Sites 135 and 136 were destroyed years ago, and that Kihei Heiau was located below a waterfall on the east side of Kalihiwai Valley.

Exact locations of Sites 135 and 136 could not be identified precisely because, as stated above, they were destroyed prior to 1931. State Historic Sites file numbers 135 and 136 give descriptions of their locations. Site 135 is located "...on the east bluff of Kalihiwai valley on a little mound near a bend in the Puukumu stream. No rocks now remaining." Site 136 is "said to have been located on the hill just inland from the government road, destroyed. A small high walled heiau of the Pookanaka class dedicated to Kane and Kaneloa used to build a mill." These descriptions do not give enough information to be useful in defining the sites' prior locations.

Earle (1978), in his study of the Halele'a district provides a description of the *ahupua'a* of Kalihiwai:

...extensive alluvial areas in large bends of main stream and at the confluence of the main and side streams. Coral reefs. No modern taro farming is found in Kalihiwai and recent land uses have apparently destroyed all archaeological remains of traditional agriculture systems in the lower valley areas. In 1850, several irrigation systems were active in the lower valley and on both of the independent streams.

Formal archaeological surveys were not conducted in Kalihiwai until 1989. In April of 1989, Rosendahl conducted an archaeological inventory survey at ten house sites in the northern portion of Kalihiwai Valley, west of Kalihiwai River, near Kalihiwai Bay. With the exception of one house site, all had been recently bulldozed and grubbed of all vegetation (Rosendahl 1989:1). No surface or subsurface archaeological fieldwork was recommended.

In 1990, Quebral and Cleghorn of the Bishop Museum conducted an archaeological and historical survey of a proposed realignment of Kuhio Highway in Kalihikai. No surface features were found, and Po'oku Heiau and its terraces were determined not to be impacted by the realignment of the highway.

Later in 1990, Archaeological Consultants of Hawaii, Inc., (ACH) performed a reconnaissance survey of property in the Kalihiwai River Valley five kilometers from the coast. No surface features were found. The property had been extensively cultivated in sugarcane, and it was hypothesized that any surface features which might have once been present would probably have been destroyed (Kennedy 1990). ACH conducted further archaeological investigations of this property in 1991 during an inventory survey (Kennedy 1991). One site (Site 50-30-03-6007) was located on the banks of Kalihiholo Stream which consisted of a crudely constructed agricultural terrace. Test excavations produced no cultural materials.

Also in 1990, Rosendahl conducted a study further upland in Kalihiwai Ahupua'a. No archaeological features were identified.

An inventory survey was conducted in 1992 on an upland property in both Kalihiwai and Namahana Ahupua'a (Hammatt and Chiogioji 1992). No sites were identified during this investigation.

More recently, an inventory survey was conducted by Scientific Consultant Services, Inc. on a coastal property in Kalihiwai and Kalihikai Ahupua'a (McGerty and Spear 1999). Inventory survey and testing revealed no surface or subsurface archaeological sites on the property.

Overall, historical documentation conducted within the *ahupua'a* of Kalihiwai have determined that the area was actively utilized in pre-Contact times. After Western contact the population tended to shift away from traditional agricultural systems towards modern systems that caused massive disturbances to the land and any archaeological remains that may have been present.

## *Settlement Patterns*

Settlement patterns previously proposed for the Hawaiian Islands suggest that occupation initially occurred in coastal areas (Green 1980 in Rosendahl 1990:6, Cuddihy and Stone, and others). Kalihiwai Bay and River Valley offered a perennial river, large areas of fertile alluvial and colluvial soils, and various offshore reef environments which supported a variety of marine resources (Rosendahl 1990).

Expansion of pre-Contact settlement within Kalihiwai was probably concentrated within the river valley and/or coastal areas, with the upland forest used for the collection of various raw materials (Rosendahl 1990). Religious activities, as evidenced by the remains of several *heiau*, probably took place near the coast.

By the early historic period, Kalihiwai had become a center of population. Kalihiwai River provided a source for irrigation of *lo'i*. Rainfall in the valley would have been sufficient for the growing of dry taro at higher elevations, without the need for extensive terracing. The LCA testimony supports this supposition, with claims for *kula* lands used for dry taro cultivation (Kennedy 1991). Research of LCA's also showed that house lots were primarily located near to the shore, and *lo'i* along Kalihiwai River.

By the late 1800's the population in Kalihiwai had waned significantly, and the lands once utilized for *lo'i* were replaced predominately by rice. The small number of houses depicted on Monserrat's 1892 map are located mostly along the coast (see Figure 5).

## *Predicted Findings*

From the land use history and archaeological investigations conducted in Kalihiwai Ahupua'a, the expected finds for the current project may be surmised. Given the location of the subject property in a coastal area containing sandy soils (Foote *et al.* 1972), it is unlikely that the land was utilized for the cultivation of *lo'i* or rice. The project area was more likely utilized for temporary and permanent habitation dating from both the pre-Contact and post-Contact periods.

A portion of the subject property contains LCA 10318. Foreign testimony indicated that LCA 10318 was in two pieces (*apana*) and contained one house lot and four *lo'i*. It is likely that the *apana* on the subject parcel is the one which contained the house lot.

Indeed, as stated above and shown on an 1892 map depicted in Figure 5, the subject property was located in a general area utilized for habitation during the latter part of the nineteenth century. A small number of houses are depicted on this map in the vicinity of the subject property. Unfortunately, it could not be determined whether any of the houses depicted were actually on the subject property.

Surface structures which could be potentially found include platforms, stone pavements, enclosures, C-shaped structures, petroglyphs and possibly ritualistic features such as fishing shrines. Typically, subsurface cultural remains could include buried stone structures, midden deposits, post holes, fire pits and traditional artifacts such as fishing gear and stone tools, as well as historic debris. It is also possible that human burials could be present in areas related to human habitation. The potential of finding burials is even greater given that the subject property is located near the coast in an area containing sandy soils, a setting known to have been used by the native population for the interment of the deceased. Significant land alterations may have occurred as a result of modern developments, such as bulldozing and grading.

## Section 4: Methodology

Archaeological investigations were conducted on March 21<sup>st</sup> and July 11<sup>th</sup> through 16<sup>th</sup>, 2000. All fieldwork was conducted under the direction of the principal investigator, Joseph Kennedy, M.A.. On March 21<sup>st</sup> fieldwork was conducted by MaryAnne Maigret, M.A. and Michelle Elmore, B.A.. The field crew utilized the assistance of a backhoe provided by Kobayashi Trucking and Equipment, Inc.. In July, the field crew consisted of Michelle Elmore, B.A., Michael O'Shaughnessy, B.A., Etsuko Yoshifuku, B.A., Kehaulani P. Kennedy and Thomas Kille.

The subject property was systematically investigated by conducting a 100% surface survey of the parcel. The field crew swept the property using transects spaced approximately 10 meters (m) apart. Transects ran roughly east to west. Visibility was moderate. No surface features were located during the surface survey.

Subsurface investigations took the form of five backhoe trenches and thirty shovel test pits. The trenches and shovel test pits were placed strategically across the subject property in order to test the areas which will be impacted by construction activities, including the proposed location of the house, septic tank and leach field. The shovel test pits were excavated at increments of five meters forming a grid which covered the area of proposed development. All trenches and shovel test pits were excavated to sterile basal deposits.

All trench and shovel test pit locations were mapped using a measuring tape and compass and were plotted on a plan map of the subject property prepared by ACP.

All soils removed from the trenches were raked and visually examined in order to identify cultural materials or deposits. Samples from one out of every four backhoe scoops were sifted through one quarter inch mesh screen in order to better determine the presence of cultural materials. All materials recovered from these procedures were collected. Soil samples

were collected from each stratigraphic layer identified and a profile drawn of a representative section of one face of each trench.

Between 33% and 100% of the soils removed from the controlled manually excavated shovel test pits were sifted through a one quarter inch mesh screen. All materials recovered from these procedures were collected. Soil samples were collected from each stratigraphic layer identified and a complete profile was drawn of one face of each unit.

All sampling was conducted using standard archaeological methods including the screening of soils using one quarter inch mesh in order to retrieve significant cultural deposits. Soil samples were collected and placed in airtight zip-lock bags and labeled for use in laboratory analyses. Faunal material collected from the sift were similarly bagged. No samples suitable for radiocarbon dating were obtained.

*In situ* human remains encountered during subsurface testing were left in place in the ground. All human osteological materials inadvertently disturbed by the backhoe were retrieved from the backdirt by means of sifting the soil through a one quarter inch mesh screen and were returned to their original locations and the excavation units immediately refilled.

Laboratory analyses included a range of diagnostic endeavors and were conducted according to standard scientific and archaeological methods and recorded on standardized analysis forms. Descriptions were made of soils according to USDA standards of composition and color. Artifacts were sorted by type, weighed, measured and presented by provenience by ACP personnel. Vertebrate remains were identified to the species level, as possible, by Dr. Alan Ziegler with the results being presented by provenience and weight by ACP personnel.

This report provides complete descriptions of the excavations undertaken including written accounts, placement of all excavation units on plans drawn to scale, and profiles depicting stratigraphic deposits. Also included are soil descriptions according to USDA standards and the presentation of the results of all laboratory analyses described above.

All materials collected during test excavations will be bagged and labeled appropriately, placed in labeled and inventoried boxes, and curated at the ACP offices located at 59-624 Pupukea Road, Hale'iwa, Hawai'i.

## Section 5: Findings

One site of significance to the interests of historic preservation was encountered during subsurface testing conducted during the current investigations. Site 671 was determined to be a habitation site at which at least six individuals have been interred. This site was utilized from the pre-Contact to post-Contact era. Modern disturbances have resulted in a substantial disruption of the stratigraphic sequence. Descriptions of the stratigraphy encountered, subsurface excavations, individual features and the cultural materials encountered follows. A map depicting the locations of all excavations and features on the subject property may be found on Figure 6.

### Section 5.1: Stratigraphy

The stratigraphy encountered on the subject property generally consisted of two layers. Layer I soils consisted of very dark grayish brown (10YR 3/2) sandy loam to very dark brown (10YR 2/2) sandy clay loam. This layer was encountered from the surface to depths of between 20 and 60cm below surface (cmbs). Layer II soils generally consisted of light yellowish brown (10YR 6/4) sand, which were found to extend to depths as great as 250+cmbs. Occasionally, another layer was present between these two layers which consisted of yellowish brown to dark brown (10YR 5/4 to 3/3) loamy sand. Fill layers were also present along the portion of the property fronting Kalihiwai Road. In some locations the soils were completely disturbed, particularly along Kalihiwai Road.

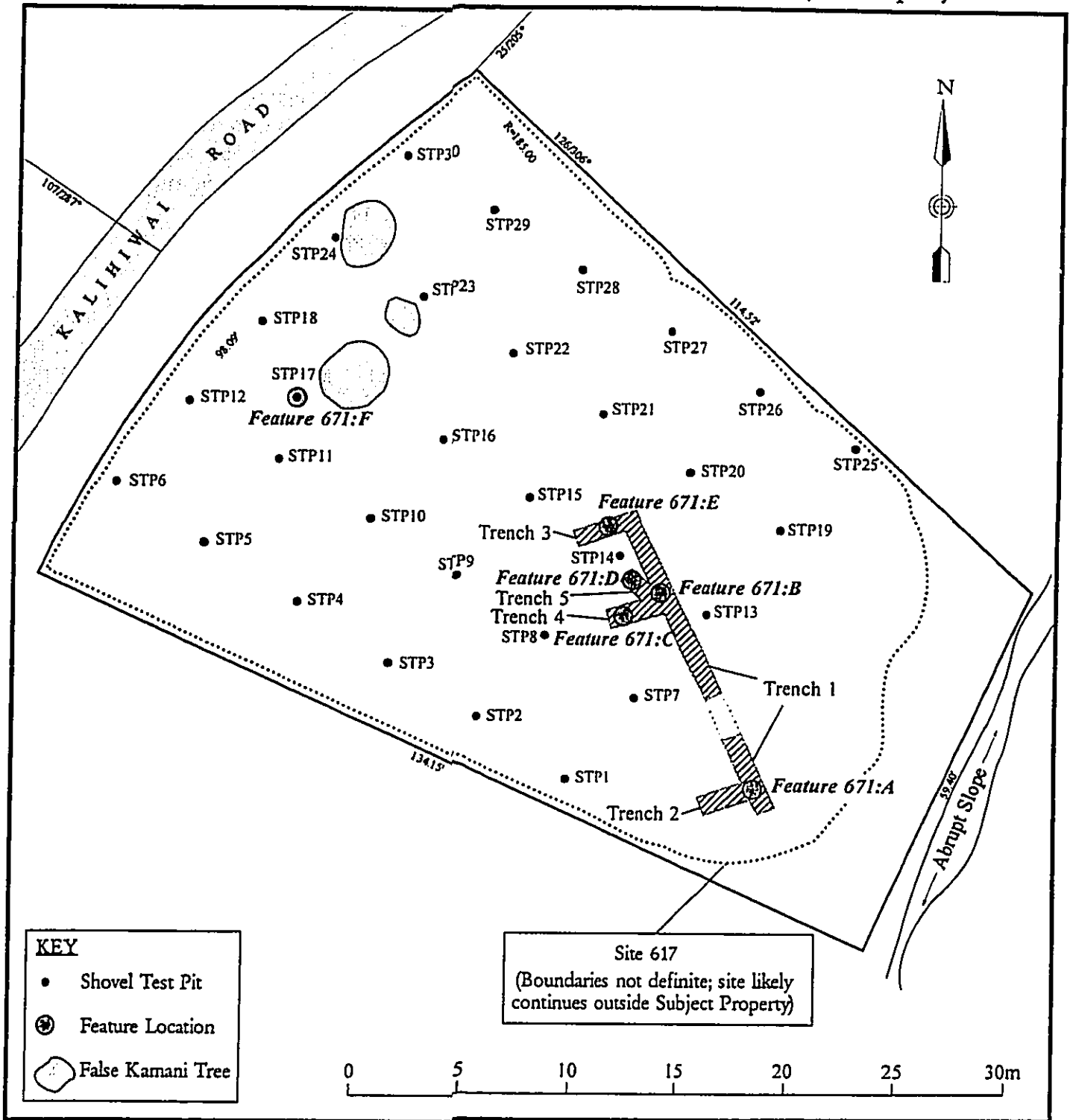
### Section 5.2: Descriptions of Subsurface Testing

#### *Trenches*

Five trenches were excavated on the subject property in areas of proposed construction (see Plate 1). No invertebrate marine materials were collected. Likewise, modern debris was not collected. All trench locations may be found on Figure 6.

Trench 1 was excavated in two segments. The southeastern end of the trench measured 3.9m in length and was terminated upon encountering a human burial. Excavation of Trench 1 continued after a gap of three meters with the second segment reaching a length of 10m. Profiles of both segments are presented in Figure 7. Two layers of soil were encountered (see Figure 7 and Plate 2). Layer I consisted of a very dark grayish brown (10YR 3/2) sandy loam encountered from the ground surface to 50cmbs. Layer II was present below Layer I, and extended to the base of the excavations. The maximum depth of Trench 1 reached 250cmbs. Two burials (Features 671:A & B) were encountered during the excavation

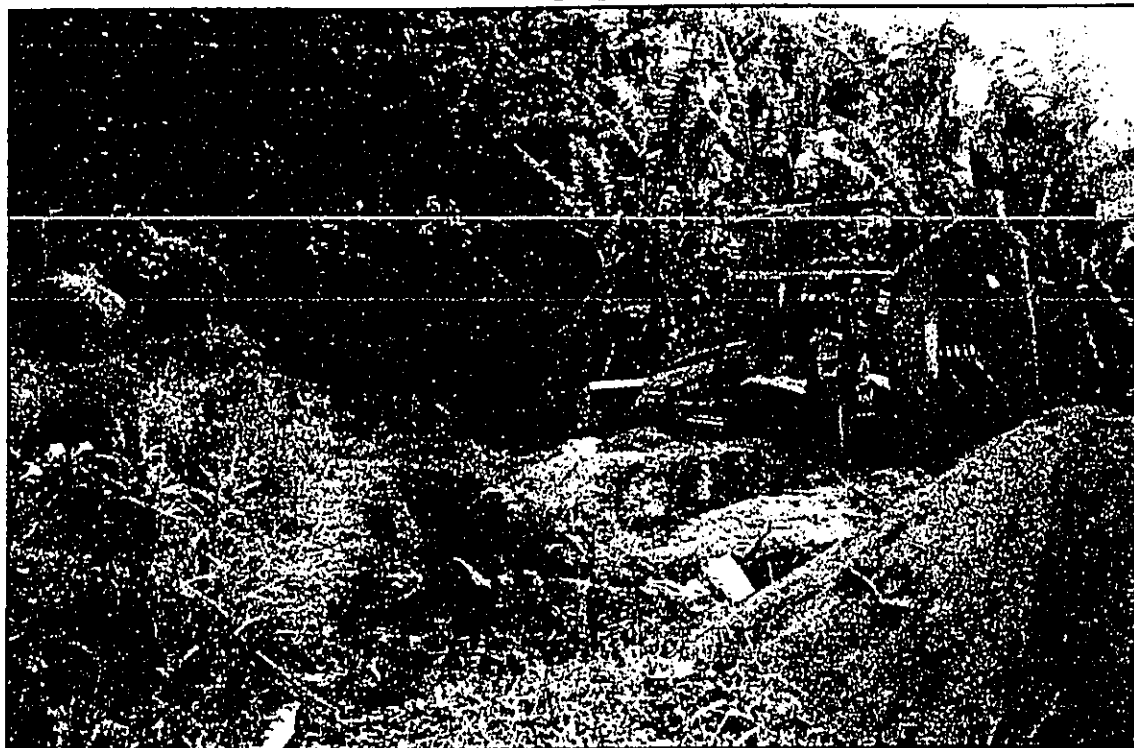
Figure 6: Top Plan of Excavations Conducted on the Subject Property



Kalihivai TMK: 5-3-03: 14

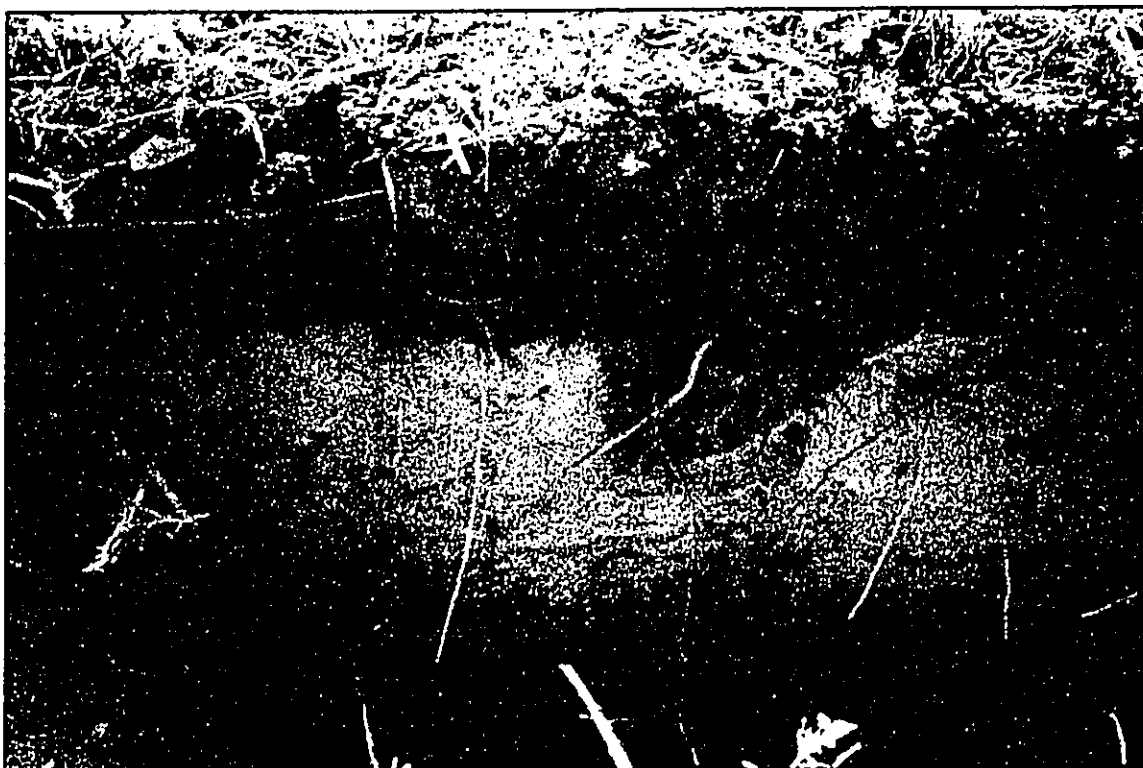
Source: Wagner Engineering Services, Inc. 2001

Plate 1: Photograph of Trench 1



View facing Southeast

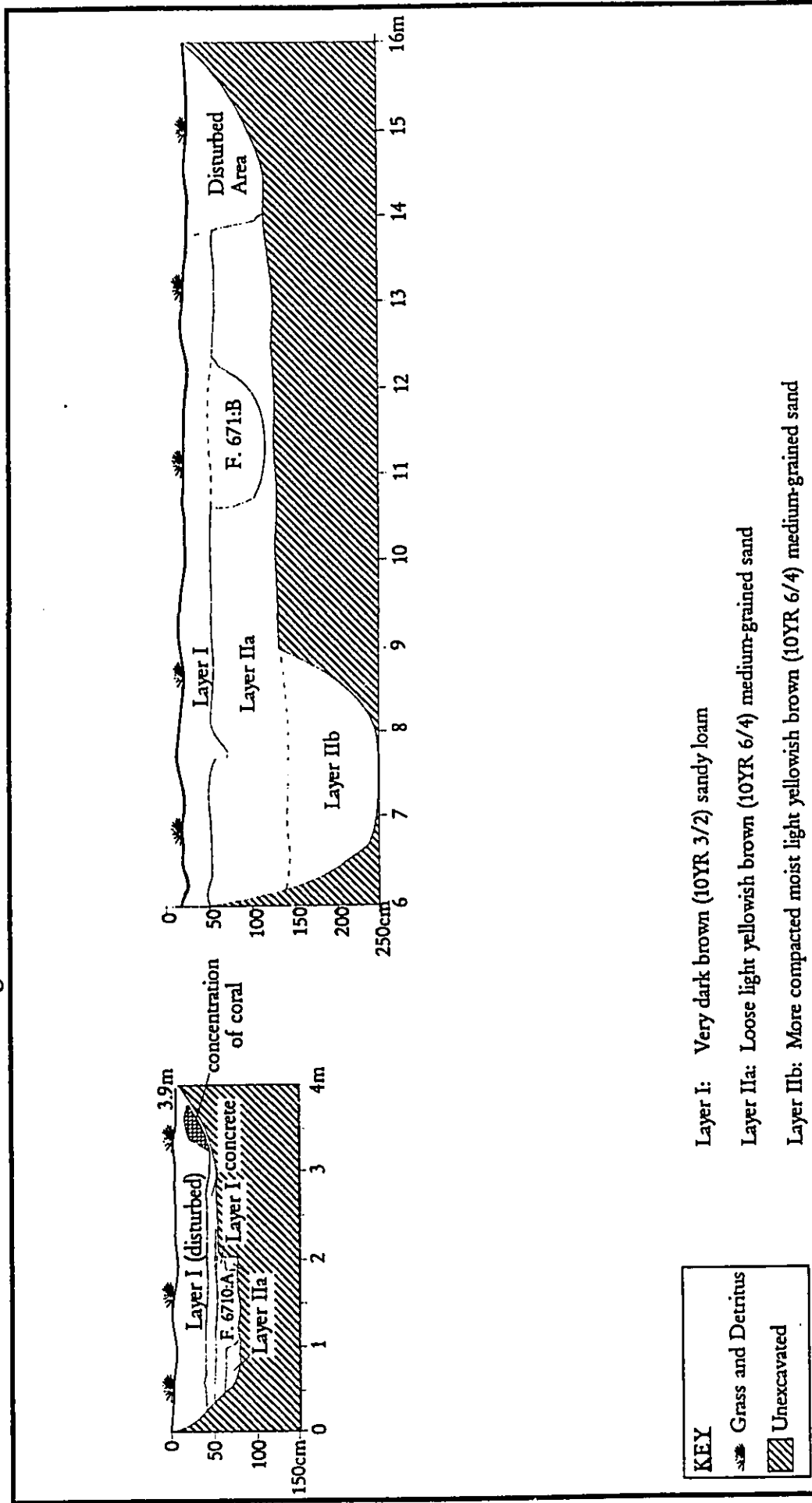
Plate 2: Photograph of Southwest Wall of Trench 1



View facing Southwest



Figure 7: Southwestern Profiles of Trench 1



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Kalhiwai TMK: 5-3-03: 14

of this trench along with a concrete pad and an area of modern disturbance. Subsequent to the identification of human burials, four additional small trenches were expanded off the southwestern side of Trench 1 (see Figure 6).

Similar soils were encountered during the subsequent excavations of Trenches 2, 3, 4 and 5. Three additional burials (Features 671:C, D & E) were encountered during these excavations. Feature 671:C was encountered in Trench 4, Feature 671:D in Trench 5, and Feature 671:E in Trench 3.

### *Shovel Test Pits*

Thirty shovel test pits (STP's) were excavated on the subject property within the portion of the parcel planned for construction, covering the majority of the parcel (see Figure 6). Refer to Table 2 for a summary of the shovel test pit findings. These STP's generally encountered similar stratigraphy as in the trenches. More areas of disturbance were encountered as well as one additional burial (Feature 671:F, in STP17). Historic and modern debris were mixed together with traditional materials. These materials were present primarily within the upper 60cm of soil, in Layer I. Only a small amount of traditional materials remained undisturbed below Layer I. Soils became increasingly disturbed with proximity to Kalihwai Road, whereupon they became completely disturbed. A metal pipe was encountered running parallel with Kalihwai Road in STP's 12 and 18. Only two shovel tests (STP1 and 26) contained a significant amount of traditional materials in an undisturbed context, both of which were located on opposite edges of the property.

## **Section 5.3: Feature Descriptions**

Site 671 consisted of a subsurface habitation deposit with burials. The site was present across the entire parcel and likely extends outside the boundaries of the current subject property. The six features of Site 671 encountered during subsurface testing consist of six burials, one at each feature. In addition, a cement pad/foundation and cultural deposits which have been subjected to numerous modern disturbances were identified. Each will be described separately below

### *Feature 671:A*

Feature 671:A was encountered at the southeastern end of Trench 1. A burial pit and human remains representing one individual were encountered immediately below a concrete foundation. The remains were found to extend into the southwestern face of the trench. A small trench (Trench 2) was expanded to the southwest to expose the remainder of the burial. All but the cranial portion of the individual was exposed. The burial pit measured 40 by

Table 2: Summary of Shovel Test Pits

Shovel Pit No.	Soil Description	Depth (cm)	Soil Color	Soil Texture	Soil Moisture	Soil Consistency	Soil Fragments	Soil Characteristics
1	L-IA (0-40) very dark brown (10YR 2/2) sandy clay loam L-IB (40-75) very dark grayish brown (10YR 3/2) sandy loam L-II (75-100) brown sand	50				100	plastic, metal, nails, ceramics, glass, basalt adze fragments, basalt and volcanic glass flakes, marine shell	
2	L-I (0-55) very dark grayish brown (10YR 3/2) sandy clay loam L-II (55-100) light yellowish (10YR 6/4) brown sand	60				50	plastic, button, metal, glass, basalt adze fragment (?), basalt flakes, marine shell	soil is concretized from 80-100cmbs
3	L-I (0-30) very dark brown (10YR 2/2) sandy clay loam L-II (30-45) marbled dark brown (10YR 3/3) loamy sand L-III (45-100) light yellowish brown (10YR 6/4) sand	65				50	glass, basalt flakes, marine shell	
4	L-I (0-25) very dark brown (10YR 2/2) sandy clay loam L-II (25-45) dark brown (10YR 3/3) loamy sand L-III (45-100) light yellowish brown (10YR 6/4) sand	60-70				50	flashlight light bulb, glass, basalt flakes (one possibly retouched), marine shell	soil is concretized from 80-100cmbs
5	L-I (0-80) mottled dark/very dark brown (10YR 3/3 & 2/2) sandy loam L-II (80-140) light yellowish brown (10YR 6/4) sand	80				50	metal, nails, knife(?) handle, buttons, ceramics, glass, basalt adze fragment, abrader and flakes, marine shell	soil is concretized from 90-140cmbs
6	L-I (0-15) very dark grayish brown (10YR 3/2) sandy loam L-II (15-110) very dark brown (10YR 2/2) sandy loam	70				50	metal, glass, buttons, basalt flakes, marine shell	completely disturbed soils
7	L-I (0-30) very dark brown (10YR 2/2) sandy clay loam L-II (30-60) brown (10YR 5/3) sand L-III (60-100) light yellowish brown (10YR 6/4) sand	60				100	metal, nails, concrete, pumice stone, plastic, rubber, buttons, ceramics, glass, basalt adze fragment and flakes, marine shell	
8	L-I (0-50) very dark grayish brown (10YR 3/2) sandy loam L-II (50-100) light yellowish brown (10YR 6/4) sand	60				50	nail, glass, plastic, basalt flakes, marine shell	
9	L-I (0-58) very dark grayish brown (10YR 3/2) sandy loam L-II (58-87) light yellowish brown (10YR 6/4) sand	60				50	plastic, metal, glass, volcanic glass flake, basalt flakes, marine shell	soil is concretized from 87 + cmbs
10	L-I (0-49) very dark grayish brown (10YR 3/2) sandy loam L-II (49-100) light yellowish brown (10YR 6/4) sand	60				50	metal, nails, plastic, glass, ceramic, basalt flakes, marine shell	soil is concretized from 90-100cmbs
11	L-I (0-44) very dark brown (10YR 2/2) sandy clay loam L-II (44-105) light yellowish brown (10YR 6/4) sand	70				50	rubber, plastic, button, ceramics, glass, concrete, basalt flakes, marine shell	soil is concretized from 85-105cmbs
12	Fill (0-18) brown (10YR 4/3) sandy loam Fill (18-40) banded light yellowish brown (10YR 6/4) sand L-I (40-100) very dark grayish brown (10YR 3/2) sandy loam with mottling of light yellowish brown (10YR 6/4) sand from 95-100	60				50	metal, button, glass, glass marble, ceramics, basalt adze fragments and flakes, marine shell	completely disturbed soils; 3" Metal pipe encountered at 63cmbs, quite rusty
13	L-IA (0-30) very dark brown (10YR 2/2) sandy clay loam L-IB (30-60) very dark brown (10YR 2/2) sandy clay loam mottled with light yellowish brown (10YR 6/4) sand L-II (60-100) light yellowish brown (10YR 6/4) sand	70				50	lead net sinker, metal, nails, concrete, button, glass, ceramics, basalt flakes, marine shell	
14	L-I (0-100) very dark brown (10YR 2/2) sandy clay loam mottled with light yellowish brown (10YR 6/4) sand	60				50	metal, nails, buttons, glass, ceramic, basalt adze fragments and flakes, marine shell	completely disturbed soil with modern materials throughout
15	L-I (0-20) very dark grayish brown (10YR 3/2) sandy loam L-II (20-100) light yellowish brown (10YR 6/4) sand	60				50	nails, glass, flake, marine shell	soil is concretized from 80-100cmbs

Table 2: Summary of Shovel Test Pits

Shovel Test Pit No.	Soil Profile	Soil Color	Soil Description	Soil Type	Soil Depth (cm)	Soil Findings	Soil Notes
16	70	L-I (0-45/70) very dark grayish brown (10YR 3/2) sandy loam L-II (45/70-100) light yellowish brown (10YR 6/4) sand			50	bolt, nails, metal, metal, button, glass, basalt adze fragment and flakes, marine shell	sloping Layer I; soil is concretized from 80-100cmbs
17	60	L-I (0-70) very dark brown (10YR 2/2) sandy clay loam L-II (70+) light yellowish brown (10YR 6/4) sand			50	nails, plastic, glass, basalt flakes, marine shell	671: F
18	80	Fill (0-15) dark brown (10YR 3/3) sandy loam Fill (15-40) yellowish brown (10YR 5/4) sand L-I (40-130) very dark grayish brown (10YR 3/2) sandy loam			50	plastic, concrete, styrofoam, metal, nails, glass, ceramics, basalt flakes, marine shell	completely disturbed soils; 3" Metal pipe encountered at 80cmbs along west side of unit, quite rusty
19	60	L-I (0-66) very dark brown (10YR 2/2) sandy clay loam L-II (66-100) light yellowish brown (10YR 6/4) sand			33	metal file, metal nails, ceramics, glass, mortar, lead, metal fishhook, silver dime (1944), wheat penny (1919), saki cup, volcanic glass, flake, basalt flakes, marine shell	
20	70	L-I (0-58) very dark grayish brown (10YR 3/2) sandy loam L-II (58-100) light yellowish brown (10YR 6/4) sand			33	metal, nails, glass, ceramics, basalt flakes, marine shell	possible coffin nail in Layer II
21	60	L-I (0-82) very dark grayish brown (10YR 3/2) sandy loam L-II (82-100) light yellowish brown (10YR 6/4) sand			33	nails, glass, paint brush fibers(?), basalt flakes, marine shell	soil is concretized from 90-100cmbs
22	70	L-I (0-43) very dark grayish brown (10YR 3/2) sandy loam L-II (43-100) light yellowish brown (10YR 6/4) sand			33	metal, glass, basalt flakes, marine shell	soil is concretized from 85-100cmbs
23	60	L-I (0-70) very dark grayish brown (10YR 3/2) sandy loam L-II (70-78) concretized light yellowish brown (10YR 6/4) sand			33	metal, nails, glass, basalt flakes, marine shell	soil is concretized from 78 + cmbs
24	50	Fill (0-22) dark brown (10YR 3/3) sandy loam Fill (22-41) banded yellowish brown (10YR 5/4) sand L-I (41-92) very dark grayish brown (10YR 3/2) sandy loam L-II (92-107) light yellowish brown (10YR 6/4) sand			50	metal, nails, plastic, styrofoam, mortar, glass, basalt flakes, marine shell	completely disturbed soils
25	75	L-I (0-53) very dark grayish brown (10YR 3/2) sandy loam L-II (53-100) light yellowish brown (10YR 6/4) sand			50	metal, skeleton key, mails, ceramics, button, glass, basalt adze fragment and flakes, marine shell	
26	65	L-I (0-25) very dark grayish brown (10YR 3/2) sandy loam L-II (25-70) yellowish brown (10YR 5/4) sand L-III (70-100) light yellowish brown (10YR 6/4) sand			50	nails, glass, volcanic glass flakes, basalt flakes, marine shell	soil is concretized from 90-100cmbs
27	70	L-I (0-54) very dark grayish brown (10YR 3/2) sandy loam L-II (54-92) light yellowish brown (10YR 6/4) sand			33	metal, nails, glass, plastic, basalt flakes, marine shell	soil is concretized from 92+cmbs
28	70	L-I (0-15/50) very dark grayish brown (10YR 3/2) sandy loam L-II (15/50-75) light yellowish brown (10YR 6/4) sand			50	metal, nails, glass, ceramic, basalt flakes, marine shell	soil is concretized from 70-100cmbs
29	60	Fill (0-17) banded dark brown and yellowish brown (10YR 3/3 & 5/4) sandy loam and sand L-I 17-40) very dark grayish brown (10YR 3/2) sandy loam L-II (40-70) light yellowish brown (10YR 6/4) sand			50	lead net sinker, nails, glass, basalt adze fragment and flakes, marine shell	soil is concretized from 50-70+cmbs

Table 2: Summary of Shovel Test Pits

Shovel Depth (cm)	Soil Description	Depth (cm)	Soil Description	Soil Description
30	95	50	metal, nails, plastic styrofoam, plastic, glass, wheat penny(1935), screw with bolts, basalt flakes	completely disturbed soils
	Fill (0-25) very dark grayish brown (10YR 3/2) sandy loam			
	Fill (25-55) yellowish brown (10YR 5/4) sand			
	L-1 (55-135) very dark grayish brown (10YR 3/2) sandy loam			

90+ cm in diameter and was present from 50 to 80cmbs extending immediately from the base of the concrete slab in (Layer I) and extending into Layer II. Osteological materials were present from 55 to 80cmbs (see Figure 8). The remains appeared to have been previously disturbed as the legs and hands were in disarray, although the feet, vertebrae and arms appeared to be properly articulated. The individual appeared to have been in a flexed position. No cultural materials were found in direct association with the remains, although midden remains including fish bones, shell and basalt flakes were found scattered within the burial fill. These items were not collected. The traditional style of interment in a flexed position indicates that the individual was likely of Hawaiian ethnicity interred during the pre-Contact era.

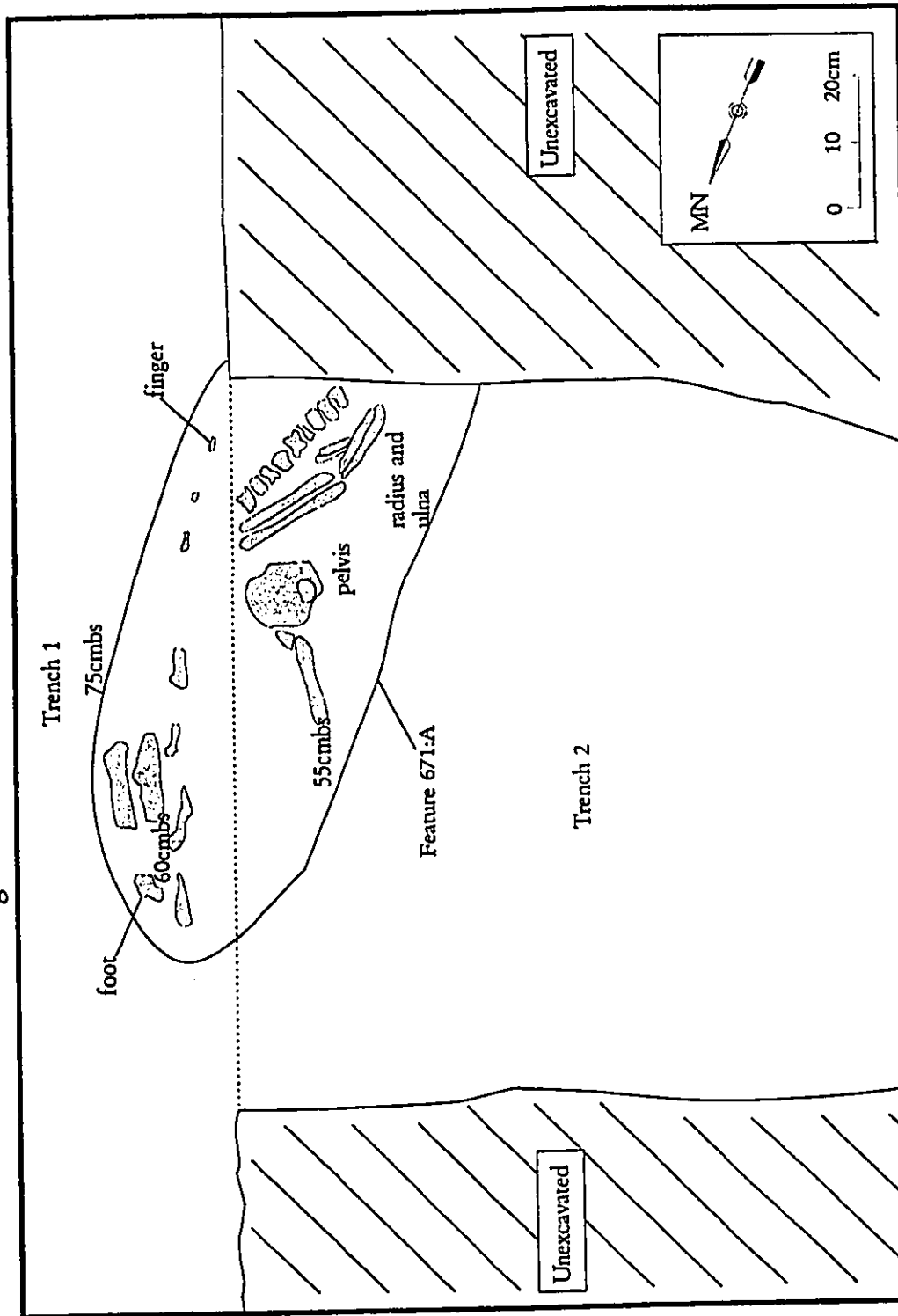
#### *Feature 671:B*

Human remains were encountered at a second location in Trench 1 along the southwestern face approximately 5m from the northwestern end of the trench. These remains were located approximately nine meters from Feature 671:A. A small trench, Trench 4, was expanded to the southwest to expose the remainder of the burial. Another burial, Feature 671:C, was encountered during the excavation Trench 4 less than two meters from Feature 671:B. Subsequently, Feature 671:B was found to extend in a more westerly direction. Another small trench (Trench 5) was excavated to the west. During the mechanical removal of soils in Trench 5, yet another burial, Feature 671:D, was encountered. ACP decided to cease excavation in this location, and the remainder of Feature 671:B was not exposed. The small exposed portion of the burial was found to contain the remains of a wooden coffin and feet, fibula and tibia of one individual, *in situ* from 80 to 90cmbs from the base of Layer I extending into Layer II (see Figure 9). The burial pit measured approximately 80cm in width and was of undetermined length. The coffin was narrow, only 35cm wide and 20cm in height, from 80 to 100cmbs. No lid remained to the coffin, and as the human remains were left *in situ*, the depth and composition of the base of the coffin could not be determined. Items which appeared to be coffin hardware were present including a copper rivet encased by preserved wood, and a rusted nail with a square head. Also present in the feature fill was a small amount of coral and a basalt flake with polish. Charcoal flecking was also noted in the soil above the burial. This may have been a result of the practice of burning Chinese paper money. None of these items were collected. While the presence of a coffin lid clearly dates the burial within a post-Contact context, the only possible indication of ethnicity derives from the supposition of associated Chinese ritual burial practices.

#### *Feature 671:C*

Feature 671:C was encountered during the excavation of Trench 4. Human remains were present at 55cmbs (Layer II) in a pit of undetermined size which extended into the northwestern face of Trench 4 (see Figure 10). Osteological materials included a broken femur, patella, pelvic and cranial fragments. The position of the skeleton could not be determined. Remains of only one individual were present. No cultural materials were found

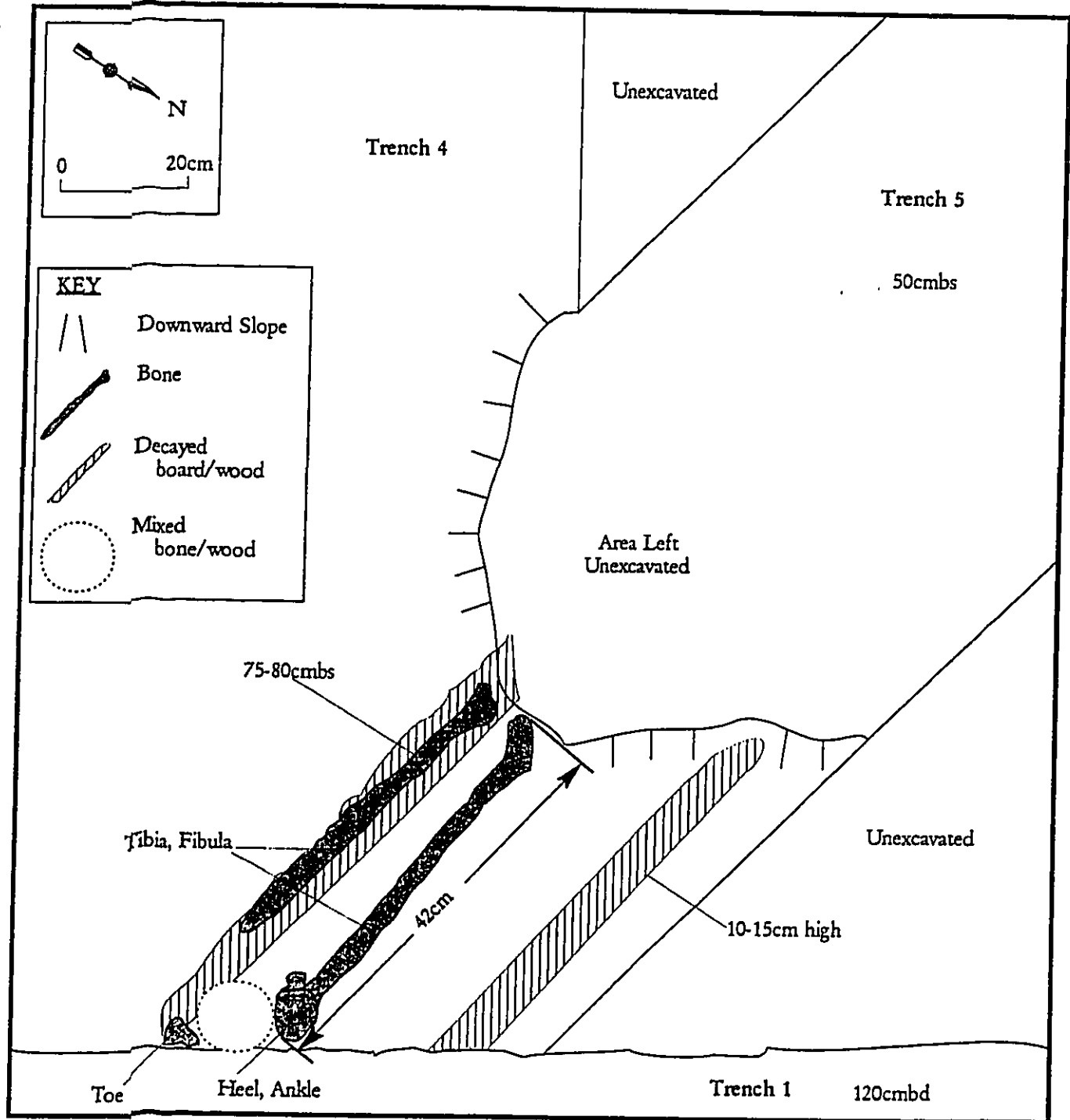
Figure 8: Plan View of Feature 671:A



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Kalihiwai TMK: 5-3-03: 14

Figure 9: Plan View of Feature 671:B

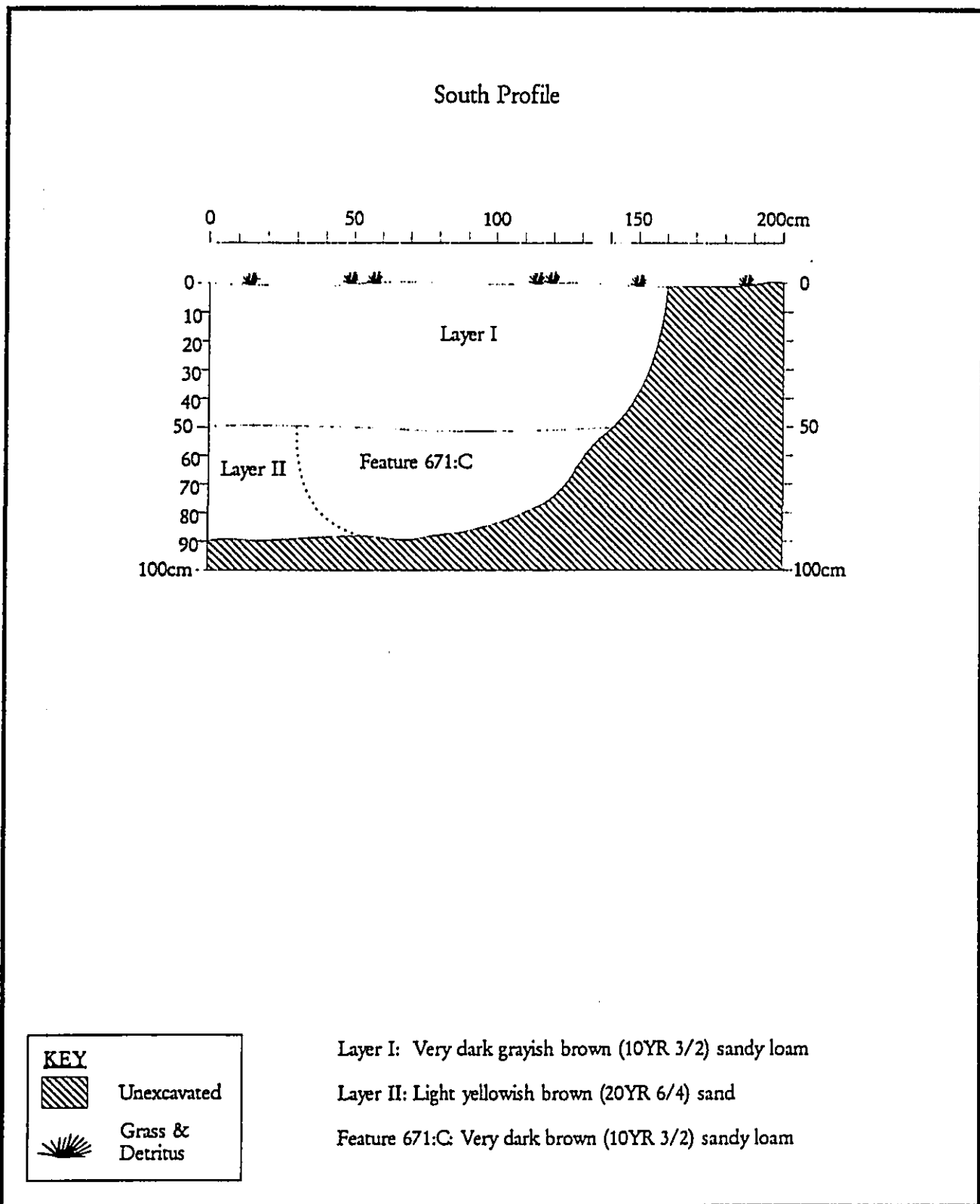


Kalihiwai TMK: 5-3-03: 14

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Figure 10: Trench 4, Feature 671:C



in association with the remains. With the absence of a coffin, it may be conjectured that the individual was of Hawaiian ethnicity and interred during the pre-Contact era.

#### *Feature 671:D*

A fourth individual (Feature 671:D) was found during the excavation Trench 5. These remains were quite shallow, only 50cmbs, at the interface of Layers I and II. No pit was identified. These remains appeared to be either on top of or immediately next to the unexposed remainder of Feature 671:B. The extent of this feature was not determined. Only longbone fragments were observed. If the remains were indeed located above Feature 671:B, the feature would then fall within the post-Contact era. Ethnicity and position were not determined. As the feature was not fully examined, no plan view or profile was created.

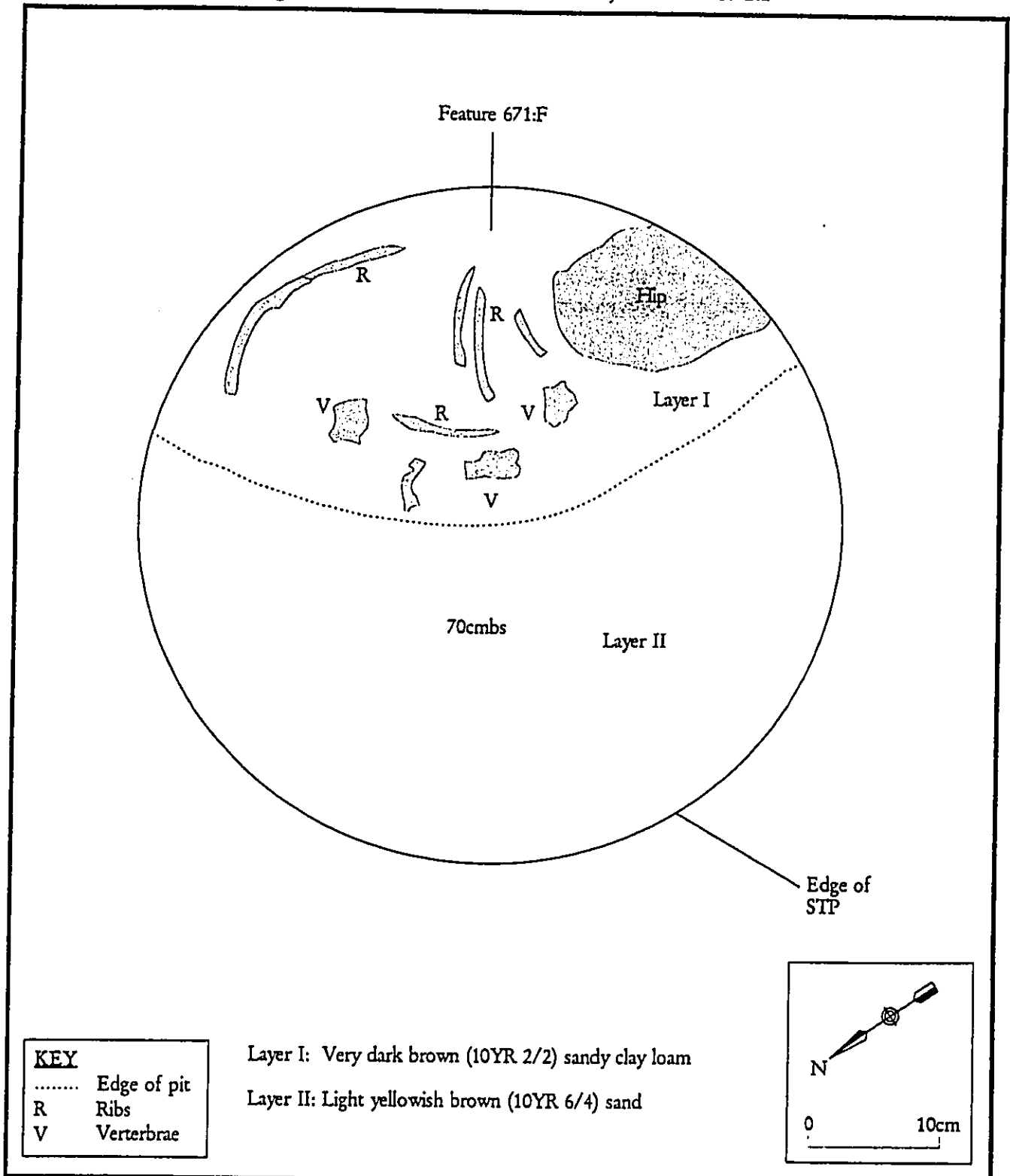
#### *Feature 671:E*

Feature 671:E was encountered during the excavation of Trench 3. Human remains including fibula, tibia and foot materials were disturbed from Layer II by the backhoe. The remains were recovered from the backdirt and placed back in the ground in the location from which they were disturbed. No pit was identified and the burial was not further examined. A button and what appeared to be coffin hardware were present in the backdirt, indicating that the feature may have been a coffin burial. If the feature was indeed a coffin burial, the individual would likely have been in an extended position and would date to the post-Contact era. Ethnicity was not determined. As this feature was not fully examined, no plan view or profile was created.

#### *Feature 671:F*

During the excavation of shovel test pits on the subject property, one burial was encountered. Feature 671:F was identified in the eastern half of STP17. A burial pit containing human osteological materials was present extending from the base of Layer I into Layer II. Ribs, vertebrae and pelvic remains were identified at 70cmbs extending into the east wall of the shovel test pit (see Figure 11). The remains were semi-articulated, with some disruption of the articulation of the vertebrae and ribs. This may have been either a result of modern disturbances, or due to bioturbation, as a large False Kamani tree is present immediately next to the burial. Layer II soils were identified beginning at 70cmbs outside the burial pit. The burial was not further examined, and the position of the individual could not be determined. Although cultural materials were present in the soil above the burial, no cultural materials were found in direct association with the human remains. All human osteological materials were left in place. Given the absence of a coffin or coffin hardware, it is likely that the individual was interred during the pre-Contact era and was of Hawaiian ethnicity.

Figure 11: Plan View of STP17, Feature 671:F



Kalihiwai TMK: 5-3-03: 14

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### *Concrete Foundation*

A buried concrete foundation was located at the southeastern end of Trench 1. The foundation was present extending into both side walls of the trench from 40 to 50cmbs and measured 10cm in thickness, continuing for at least 3m in length from the eastern end of Trench 1. Trench 2 was expanded from the southwestern wall of Trench 1 in the vicinity of the foundation. The foundation continued to the southwest for an additional 160cm. The total extent of the foundation was not determined. Based upon the presence of historic debris in Layer II soils of STP's 9 and 20 at depths greater than 58cmbs, it is believed that this structure is likely of relatively recent construction and not considered to be a component of Site 671. Because Feature 671:A was located immediately below this feature and appeared to be somewhat disturbed, it is believed that the construction of the concrete foundation caused the disturbances to the burial.

### *Additional Modern Disturbances*

Modern disturbances to the stratigraphy were identified in two locations along Trench 1. The soils above the concrete foundation at the southeastern end of the trench were disturbed and contained modern debris. A large pit was also located at the northwestern end of the trench which appears to be modern due to its size, possibly mechanically derived. In addition, several layers of fill were identified in shovel test pits excavated along Kalihiwai Road. These deposits of fill are believed to be associated with road construction activities.

## **Section 5.4: Cultural Materials**

### *Artifacts*

Traditional and historic materials as well as modern debris were encountered during the subsurface investigations on the subject property (refer to Table 3 for a summary of artifacts and Appendix A, Table 5, for a complete listing of artifacts). Both historic and traditional artifacts were present in all thirty shovel test pits. Cultural materials were recovered from both Layer I and II deposits with historic artifacts being recovered from depths of up to 100cmbs as a result of stratigraphic disturbances.

The majority of traditional artifacts were present in Layer I, intermixed with historic materials. Eleven out of the thirty shovel tests contained a layer with traditional materials in an unmixed context (containing no historic materials). However, only two (STP 1 and 26) out of those eleven shovel tests contained a substantial amount of traditional materials (i.e., five or more), in an unmixed context, and the remaining nine shovel tests contained an average of five times the amount of traditional materials in a mixed context. From this analysis of the data, it is apparent that while the late pre-Contact/early post-Contact deposit is

Table 3: Summary of Artifact Totals from Site 671

**Object**      **Count**

**GLASS**

various clear glass	154
clear window glass	123
aqua glass	30
brown glass	27
olive glass	15
light green glass	10
green glass	8
milk glass	4
cobalt blue glass	2
clear glass lamp globe	1
clear glass mustard jar	1
glass marble	1
"Sloan's Linament bottle	1
<i>Total Glass</i>	<i>377</i>

**METAL**

indeterminate metal	153
nails	146
lead net sinker	2
wall hook	2
bolt	1
"Pepsi" can	1
eye hook	1
file	1
fishhook	1
indeterminant lead	1
knife(?) handle fragment	1
screw with bolts	1
skeleton key	1
<i>Total Metal</i>	<i>312</i>

**CERAMICS**

porcelain	37
whiteware	20
flower pot ceramic	2
porcelain saki cup	3
blackware	1
blue edgeware	1
brown earthenware	1
stoneware	1
yellow ware	1
<i>Total Ceramics</i>	<i>67</i>

**Object**      **Count**

**BUTTONS**

bone buttons	13
milk glass buttons	2
plastic buttons	5
<i>Total Buttons</i>	<i>20</i>

**COINS**

wheat penny	2
silver mercury dime	1
<i>Total Coins</i>	<i>3</i>

**VARIOUS MODERN DEBRIS**

plastic	28
styrofoam	3
rubber	2
flashlight bulb	1
concrete	NA
mortar	NA
paint brush fibers	NA
<i>Total Various Modern Debris</i>	<i>34</i>

**BASALT**

flakes	382
adze fragments	15
abrader	1
possible retouched flake	1
<i>Total Basalt</i>	<i>399</i>

**VOLCANIC GLASS**

flakes	5
<i>Total Volcanic Glass</i>	<i>5</i>

**OTHER**

puka shell possible bead	2
echinoderm abrader	1
pumice stone	1
<i>Total Other</i>	<i>4</i>

present across the entire property and likely continues outside the boundaries of the subject property, it has suffered a significant amount of disturbance. STP 1 and 26 were located on the opposite edges of the subject property, indicating that perhaps greater densities of traditional materials in an undisturbed context are present on the neighboring properties.

Traditional materials included mostly basalt flakes. Basalt adze fragments were also present along with a few volcanic glass flakes, one echinoderm abrader and a basalt abrader. These items indicate both tool use and manufacture during the pre-Contact occupation. One finely polished basalt adzelet was found in Trench 1 (see Plate 3).

Historic materials consisted of square nails, glass, ceramics, etc.. These items indicate post-Contact era habitation. One bottle still containing "Sloan's Linament" was found in Shovel Test 5 (see Plate 3). Fishing gear was present including a metal fishhook and a lead net sinker, indicating that the occupants participated in various forms of fishing. The presence of saki cups (see Plate 3) suggests that individuals of Asian descent may have resided at this location. Numerous buttons were observed during the backhoe testing and several were collected from the shovel tests, suggesting that one of the former occupants collected buttons.

Modern debris consisted of plastic, glass, styrofoam, etc.. While there has been no modern habitation at this site, these items likely derived from littering and/or washing in during high surf events.

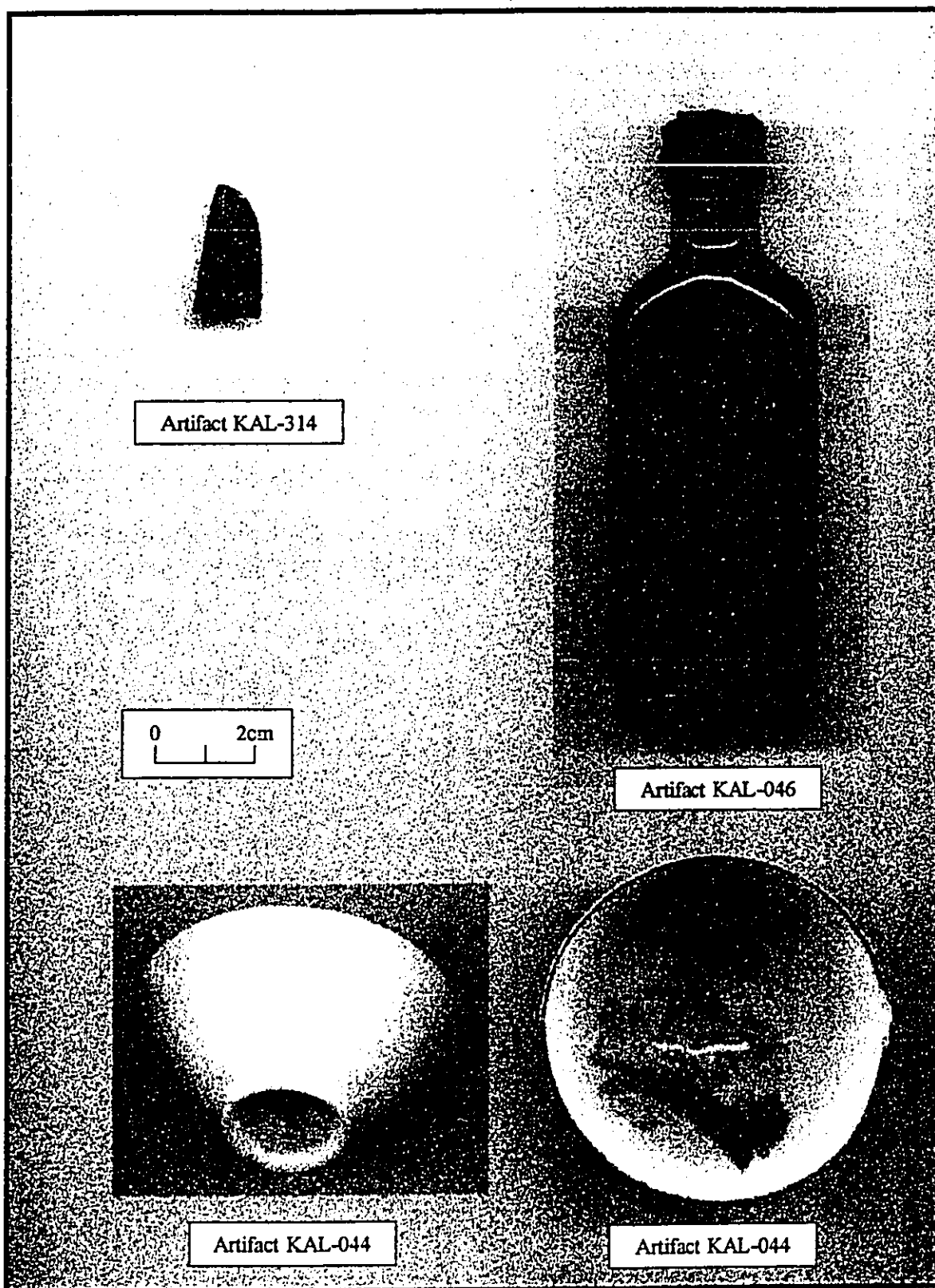
### *Faunal Remains*

A range of vertebrate materials were recovered during the excavation of shovel test pits conducted on the subject property. These included a total of 227.4 grams (g) of fish, toad, sea turtle, bird and mammal (rat, mouse, dog, cat, horse, pig and cow) as well as indeterminate vertebrate remains. The most predominant were pig (67.6g), dog (18.5g), fish (13.7g total), sea turtle (11.3g) and bird (7.0g). No extinct species were identified during the current investigations (refer to Appendix A, Table 6). From his analyses of the vertebrate faunal remains, Dr. Ziegler (2000) notes that:

Consumption—and, in a few STs, cooking—of food appear to have been the primary now-identifiable activities in the entire area. Mammals such as dog and pig seem to have provided most of the vertebrate protein, with "Sea Turtle", fish, and birds—in that order—making up the rest. The few fish families identified are all common reef groups, and their members could all have been taken from or near the shore by a variety of methods, including at least netting, hooking, and spearing, without need of watercraft. The "Carangid" and/or the two or so "Shark/Ray" individuals, however, could conceivably have been taken from vessels a little offshore, as were quite possibly the "Sea Turtle" individuals represented.

... Very few of the remains from any of the STs suggest deposition through nonanthropogenous means, such as natural deaths or accumulation of prey or other remains by avian or nonhuman mammalian predators and/or scavengers. Exceptions,

Plate 3: Scanned Images of Artifacts



Kalihiwai TMK: 5-3-03: 14

Archaeological Consultants of the Pacific, Inc. 2000

though, are probably the bones of "*Bufo marinus*", the "*Mus musculus*" skeleton and likely most of the other rodent items, as well as shed milk teeth of "*Sus scrofa*" and "*Equus caballus*" (these teeth quite possibly being lost in an animal pen or grazing area).

... There are no vertebrate remains that would definitely restrict time of deposition to pre-Contact times (e.g., prehistorically extinct bird species). But, on the other hand, there are remains of several species or faunal categories that could only have been deposited post-Contact (i.e., "*Bufo marinus*", "*Felis catus*", "*Equus caballus*", "cf. *Bos taurus*", and "Large mammal" (the later category here apparently including only nonmarine species).

... The collective vertebrate remains that presumably represent human dietary items, however, include at least two general faunal types that are rather typical of a Polynesian-style diet, but not usually of a European or other foreign one. These traditional-fare categories here include at least two species of "Medium Procellariid" and "*Canis familiaris*".

Based solely on his analysis of the vertebrate faunal remains, Ziegler hypothesized that the "... human habitation of the entire area sampled was primarily by people of Polynesian heritage, and that they utilized the area mostly if not entirely during post-Contact times" (Ziegler 2000).

With regards to variation of vertebrate remains by stratigraphic layer, the majority of these materials were present in Layer I. Species introduced during the post-Contact period were generally only present in Layer I, with the exception of STP 6, which contained completely disturbed stratigraphy. Species indicative of a Polynesian-style diet were also present mainly in Layer I. Only six (STP 6, 8, 19, 20, 26 and 27) out of the thirty shovel test pits contained vertebrate materials in Layer II. While these remains were generally suggestive of a Polynesian-style diet, in comparing the vertebrate remains with the artifact analysis, it can be seen that the Layer II deposits in STP 6, 20 and 27 were disturbed, containing historic materials. In addition, STP 8, 19 and 26 contained a greater amount of vertebrate materials indicative of a Polynesian-style diet in Layer I, averaging five to six times the amount (by weight) present in Layer II.

Invertebrate marine materials were present in all trenches and shovel test pits, in all layers of soil. These remains took the form of marine fauna including gastropods, bivalves, coral, crustaceans and echinodermata. Gastropods included *Cellana* sp., *Turbo* sp., *Nerita* sp., *Littorina* sp., *Strombus* sp., *Cypraea* sp., *Cymatium* sp., *Morula* sp. and *Conus* sp.. Bivalves included *Brachidontes* sp., *Isognomon* sp., *Tellina* sp. and *Periglypta* sp.. Invertebrate marine materials were noted but not collected. A portion of this assemblage is likely culturally associated and related to food consumption. However, given the close proximity to the ocean, it is assumed that some of these remains were naturally deposited.

Artifacts and faunal remains on the subject property clearly indicate the use of Site 671 for habitation purposes, from as early as the late pre-Contact period. Based upon the analyses above, it can be seen that very little of these materials were found in an undisturbed context.



## Section 6: Discussion

From the subsurface investigations conducted on the current subject property information has been obtained relating to its cultural use. The subject property, Site 671, was utilized for habitation from as early as the late pre-Contact or early post-Contact period. Modern disturbances, however, have significantly disrupted the stratigraphic sequence.

The earliest use of the subject property likely occurred during the late pre-Contact to early post-Contact period. A number of basalt flakes, adze fragments, a few abraders, and a variety of vertebrate and invertebrate remains related to Polynesian-style food consumption were present in addition to burials (at least one, and possibly as many as three or more) of a traditional style interment. Habitation may have been either temporary or permanent during this period.

By 1850, the subject property was utilized as a house lot occupied by the family of an individual named Nohomalie. Evidence of utilization during the nineteenth and twentieth centuries includes the presence of a concrete foundation, ceramics, glass, metal, etc., as well as at least one coffin burial (and possibly two or more additional ones). The occupation during this era contributed to the disruption of the previous stratigraphic sequence, as evidenced by the presence of a concrete slab lying directly atop a traditional style burial.

Modern man-made and natural disturbances are also present. Deep pits containing modern debris, a metal pipe, fill soils, etc., were encountered during subsurface testing. The 1957 hurricane which destroyed the bridge across Kalihiwai Stream as well as a number of buildings along Kalihiwai Road likely resulted in a significant amount of disturbance on the subject property due to high winds, high surf and flooding. These disturbances have significantly impacted the stratigraphy of Site 671, precluding the recovery of cultural evidence regarding the utilization of the property over time. The only significant undisturbed remnants being deeper buried features, mainly burials.

## Section 7: Evaluation of Site Significance and Recommendations

### *Evaluation of Site Significance*

One site of significance to the interests of historic preservation, Site 671, was identified during the current investigations. Site 671 consists of a habitation site with at least six individual human burials located along the coast near the mouth of Kalihiwai Stream. Due to the number of burials present, these features were not fully examined. Of the six burials

identified, at least one was interred in a traditional style, and at least one was in a coffin. The investigations conducted on the subject property indicate that the site was likely utilized during both the pre- and post-Contact periods. Habitation was likely temporary during its earliest time of use, and was eventually used for permanent habitation at least by the mid-1800's. This site qualifies to be considered significant under Criterion D (site has yielded, or is likely to yield, information important in prehistory or history) of the National Register of Historic Places criteria. Due to the presence of burials, this site also qualifies to be considered significant under Criterion E (site has cultural significance) of the Hawaii Register of Historic Places (refer to Table 4).

**Table 4: Summary of Site Significance Evaluations**

Site	Description	Function	Significance Evaluations
671	Subsurface archaeological deposit with artifacts and human skeletal remains	B and H	D & E

**Functional Interpretations**

- B: Burial
- H: Habitation

**Code For Significance Evaluation Criteria**

- A: Site is associated with events that have made a significant contribution to the broad patterns of history.
- B: Site is associated with the lives of persons significant in the past.
- C: Site embodies the distinctive characteristics of a type, period, or method of construction; or is the work of a master; or possesses high artistic values; or represents a significant and distinguishable entity.
- D: Site has yielded or is likely to yield information important in prehistory or history.
- E: Site has Cultural Significance (*heiau*, shrine, burial, etc.).
- NS: Not Significant.
- NLS: No Longer Significant.

Criteria A-D represent National Register of Historic Places criteria.  
 Criterion E represents Hawaii Register of Historic Places criterion.  
 NS and NLS represent designations acceptable to the DLNR-SHPD.

**Recommendations**

Modern disturbances have disrupted the stratigraphic sequence which contained cultural deposits from as early as the late pre-Contact period to modern times. As the site likely continues onto the neighboring properties, and the only two shovel tests containing a

significant amount of cultural materials in an undisturbed context were located on opposite edges of the property, it is possible that deposits which have suffered less disturbance exist outside the subject property which would be better candidates for further study. For this reason, ACP recommends no further archaeological investigations for the subject property. However, due to the presence of burials on the subject property, the preparation and execution of a Burial Treatment Plan will be required. Monitoring of future subsurface construction activities is also recommended due to the possibility of encountering additional burials.

## Conclusion

An Inventory Survey with subsurface testing has been conducted on property located in Kalihiwai on the Island of Kaua'i. One site of significance to the interests of historic preservation was identified on the subject property, a habitation site designated State Site number 50-30-03-671 at which six individuals were interred. Cultural deposits include both late pre-/early-Contact and post-Contact components.

The current investigations have determined that Site 50-30-03-671 is significant for its information content as well as having cultural significance. Archaeological Consultants of the Pacific, Inc. recommends that a determination be made that future construction activities would have an "adverse effect" on significant historic properties under the Advisory Council Regulations, 36 CFR 800. In order to help mitigate the effects of proposed development, the appropriate treatment of the burials identified during the current investigations will be required. Details of the recommendations for burial treatment will be presented in a separate document. In addition, it is recommended that archaeological monitoring take place during all subsurface construction activities.

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**Appendix A: Artifact Accession List and  
Analysis of Recovered Vertebrate Faunal Remains  
(Tables 5 & 6)**

Table 5: Artifact Accession List, Site 671

Site	Context	Material	Weight (g)	Count	Description	Artifact Number	
ST1	I (0-75)	plastic wrapper	0.1	1	clear plastic	KAL-001	
		Indeterminate metal	224	12		KAL-002	
		metal nails	53.5	10	very rusted, some appear to be square	KAL-003	
		whiteware	34.6	7	plain	KAL-004	
		porcelain	71.9	7	plain	KAL-005	
		porcelain	5.3	1	hand painted flower motif with gold paint	KAL-006	
		blackware	1	1		KAL-007	
		milk glass	1	1		KAL-008	
		various clear glass	112.8	9		KAL-009	
		clear window glass	25.6	8		KAL-010	
	basalt adze fragment	4.5	1	flake with fine polish on one face (3.1 x 2.5 x 0.6cm)	KAL-011		
	basalt flakes	10.8	6		KAL-012		
	II (75-85)	volcanic glass flake	0.4	1		KAL-013	
		echinoderm spine abrader	3.5	1		KAL-014	
		basalt adze fragment	5.9	1	flake with polish on two contiguous faces (3.8 x 2.6 x 0.6cm)	KAL-015	
		basalt flakes	150.9	26		KAL-016	
ST2	I (0-55)	clear plastic wrapper	0.1	1		KAL-017	
		plastic button	0.2	1	two holes	KAL-018	
		Indeterminate metal	3.9	10		KAL-019	
		various clear glass	94.1	8	includes soda bottle fragment	KAL-020	
		clear window glass	20	6		KAL-021	
		brown bottle glass	0.9	1		KAL-022	
		basalt adze fragment (?)	0.1	1	possible polish on one face (1.4 x 1.3 x 0.2cm)	KAL-023	
		basalt flakes	21.1	6		KAL-024	
		clear various glass	2.5	2		KAL-025	
		clear window glass	3.9	3		KAL-026	
ST3	I (0-35)	basalt flakes	19.2	8		KAL-027	
	II (35-45)	basalt flakes	2.4	2		KAL-028	
ST4	I (0-25)	flashlight bulb	2.1	1		KAL-029	
		various clear glass	19.6	4		KAL-030	
		clear window glass	1.3	1		KAL-031	
		brown bottle glass	1.3	1		KAL-032	
		basalt possible retouched flake	9.1	1		KAL-033	
		basalt flakes	42.3	8		KAL-034	
	II (25-45)	clear window glass	1.1	1		KAL-035	
		basalt flakes	14.4	5		KAL-036	
		various metal	405.9	16	includes pop tops	KAL-037	
		metal nails	25.2	4		KAL-038	
ST5	I (0-80)	knife (?) handle fragment	3.9	1	bone and metal	KAL-039	
		bone buttons	1	2	four holes	KAL-040	
		milk glass buttons	0.7	2	two and three holes	KAL-041	
		plastic button	0.6	1	four holes	KAL-042	
		puka shell	0.3	1	possible bead	KAL-043	
		porcelain wedding saki cup	44.5	1	gilded and decorated with a pair of cranes; "Made in Japan"	KAL-044	
		whiteware	0.7	1	cobalt blue	KAL-045	
		glass bottle with metal screw top	178.6	1	"Sloan's Liniment" bottle with original contents	KAL-046	
		various clear glass	115.9	11		KAL-047	
		clear glass lamp globe	24.8	1		KAL-048	
		molded glass cup fragment	39.2	1		KAL-049	
		olive glass	3.4	2		KAL-050	
		brown glass	36.8	7	some are heavily patinated	KAL-051	
		mammal bone	4.4	1	limb fragment of large mammal; metal sawed at two ends	KAL-052	
		basalt flakes	12.3	6		KAL-053	
		II (80-120)	basalt adze fragment	3.5	1	fine polish on one face	KAL-054
			basalt abrader	507	1	waterworn cobble with concave worn area	KAL-055
		ST6	I (0-15)	bone buttons	1.5	2	two and four holes
	Indeterminate metal			0.6	1		KAL-057
	light green glass			9.8	2		KAL-058
	olive glass			2.3	1	heavy patina	KAL-059
	clear window glass			7.3	3		KAL-060
	II (15-110)			Indeterminate metal	14.1	2	
			various clear glass	1.2	1		KAL-062
			olive glass	2.4	1		KAL-063
light green glass			5.3	2		KAL-064	
ST7	I (0-30)		basalt flakes	23.2	5		KAL-065
		metal wall hook	29.2	1		KAL-066	
		Indeterminate metal	40	8		KAL-067	
		metal nails	197.8	23	some are square	KAL-068	
		concrete				KAL-069	
		pumice stone	43.7	1	fragment of a ring shape	KAL-070	
		black plastic	1.1	1		KAL-071	
		black rubber	1.4	1		KAL-072	
plastic buttons	0.7	2	one brown, one white; four holes	KAL-073			

Table 5: Artifact Accession List, Site 671

Stratigraphic Unit	Context	Object	Weight (g)	Count	Description	Artifact Number		
		bone buttons	1.7	3	four holes	KAL-074		
		porcelain	14.7	9	plain	KAL-075		
		porcelain	9.6	4	cobalt blue	KAL-076		
		flower pot ceramic	20.3	1	orange	KAL-077		
		cobalt blue glass	0.6	1		KAL-078		
		green glass	16.9	6		KAL-079		
		aqua glass	65.5	7		KAL-080		
		various clear glass	56.6	15	included screw top bottle neck	KAL-081		
		clear window glass	76.9	14		KAL-082		
		basalt adze fragment	3.1	1	one face with polish (2.4 x 2.2 x 0.4cm)	KAL-083		
		basalt flake	0.9	1		KAL-084		
		II (30-60)	aqua glass	33.7	2		KAL-085	
			various clear glass	10.4	3		KAL-086	
			clear window glass	6.5	2		KAL-087	
			porcelain	3.7	1		KAL-088	
			basalt flakes	15.1	3	cobalt blue	KAL-089	
								KAL-089
		ST8	I (0-50)	metal nail	5.9	1		KAL-090
				clear window glass	9.4	5		KAL-091
milk glass	15.6			1		KAL-092		
black plastic	TR			1		KAL-093		
basalt flakes	78.6			13		KAL-094		
							KAL-095	
	II (50-90)	basalt flakes	28.3	4		KAL-095		
	ST9	I (0-58)	clear plastic wrapper	0.5	2		KAL-096	
metal nail			5.8	1		KAL-097		
indeterminate metal			2.5	1		KAL-098		
brown glass			1.9	2		KAL-099		
milk glass			2.1	1		KAL-100		
clear window glass			35.8	10		KAL-101		
various clear glass			14.1	6		KAL-102		
volcanic glass flake			3	1		KAL-103		
basalt flakes			54.4	3		KAL-104		
							KAL-105	
							KAL-106	
ST10	I (0-49)	"Pepsi" can	87.4	1		KAL-106		
		metal nails	30.4	5		KAL-107		
		Indeterminate metal	5	1		KAL-108		
		clear plastic wrapper	0.1	1		KAL-109		
		brown glass	11.3	1		KAL-110		
		various clear glass	3.1	5		KAL-111		
		clear window glass	8.6	1		KAL-112		
		porcelain	22.2	1	plain	KAL-113		
							KAL-114	
							KAL-115	
							KAL-116	
							KAL-117	
		ST11	I (0-44)	mammal bone	1.6	1	indeterminate large mammal; sectioned at one end with undetermined implement	KAL-114
basalt flakes	30			6		KAL-115		
rubber ring	1.9			1		KAL-116		
clear plastic wrapper	TR			1		KAL-117		
bone button	1.8			1	four holes	KAL-118		
porcelain	0.4			1	plain	KAL-119		
whiteware	6.4			1	hand painted delicate flowers: red, blue and green paint	KAL-120		
various clear glass	3.2			3		KAL-121		
clear window glass	10.8			4		KAL-122		
concrete						KAL-123		
mammal bone	10.1			1	indeterminate large mammal; metal sawed	KAL-124		
basalt flakes	64			13		KAL-125		
							KAL-126	
ST12	fill (0-40)			various metal	82.8	15	includes pop top	KAL-127
		bone button	0.6	1	two holes	KAL-128		
		various clear glass	1.7	2		KAL-129		
		glass marble	5.4	1		KAL-130		
		whiteware	2.5	1	plain	KAL-131		
		whiteware	7.7	1	blue paint, bamboo motif	KAL-132		
	I (40-100)	metal nails	36.6	2		KAL-133		
		clear window glass	0.6	1		KAL-134		
		basalt adze fragment	3	1	polish on one face	KAL-135		
		basalt adze fragment	0.9	1	polish on one face	KAL-136		
		basalt flakes	25.5	4		KAL-137		
ST13	I (0-60)	lead net sinker	33.8	1	six-sided, hole through center	KAL-138		
		indeterminate metal	4.2	1		KAL-139		
		metal nails	19.2	5	some are square	KAL-140		
		concrete				KAL-141		
		metal eye hook	0.9	1		KAL-142		
		large <i>puka</i> shell	0.9	1	possible bead	KAL-143		
		bone button	0.5	1	four holes	KAL-144		
		olive glass	1.4	1		KAL-145		
		various clear glass	9.3	5		KAL-146		

TR: Trace



Table 5: Artifact Accession List, Site 671

Stratigraphic Unit	Artifact Number	Object	Weight (g)	Count	Description	Artifact Number	
ST14	II (60-90)	clear glass mustard jar	101.1	1	mustard remaining inside	KAL-147	
		whiteware	1.6	1	green	KAL-148	
	I (0-100)	porcelain	18.8	3	plain	KAL-149	
		basalt flakes	98	15		KAL-150	
		basalt flakes	26.3	4		KAL-151	
		metal wall hook	43.1	1		KAL-152	
		Indeterminate metal	5.1	1		KAL-153	
		metal nails	16.7	5		KAL-154	
		bone buttons	1.3	2	four holes	KAL-155	
		various clear glass	29.7	6		KAL-156	
		clear window glass	7.9	4		KAL-157	
		whiteware	4.9	1	red transfer print with maker's mark "Harvest USA"	KAL-158	
		basalt adze fragment	2.9	1	polish on one face (2.1 x 1.6 x 0.6cm)	KAL-159	
		basalt adze fragment	2.8	1	polish on one face (2.6 x 1.7 x 0.7cm)	KAL-160	
		basalt adze fragment	1	1	polish on one face (2.0 x 1.8 x 0.2cm)	KAL-161	
		basalt flakes	60.8	17		KAL-162	
		ST15	I (0-20)	metal nails	72.7	3	
clear window glass	3			2		KAL-164	
II (20-40)	basalt flake		6.7	1		KAL-165	
ST16	I (0-45/70)	metal bolt	33.9	1		KAL-166	
		metal nails	10.2	3		KAL-167	
		indeterminate metal	0.6	1		KAL-168	
		bone button	0.5	1	four holes	KAL-169	
		clear window glass	36.7	7		KAL-170	
		basalt flakes	59.1	15		KAL-171	
		basalt adze fragment	1.8	1	polish on two contiguous faces square?	KAL-172	
	II (45-70)	metal nails	16.4	2		KAL-173	
	ST17	I (0-70)	white plastic	0.1	1		KAL-174
			clear plastic wrapper	TR	1		KAL-175
brown bottle glass			1.1	1		KAL-176	
basalt flakes			90.6	14		KAL-177	
clear plastic wrapper			0.1	2		KAL-178	
white plastic			0.3	2		KAL-179	
concrete						KAL-180	
ST18	Fill (0-15)	styrofoam	TR	1		KAL-181	
		indeterminate metal	28.2	8		KAL-182	
		metal nails	13.3	8	some are square	KAL-183	
		light green glass	0.4	2		KAL-184	
		various clear glass	49.4	8		KAL-185	
		clear window glass	0.8	1		KAL-186	
		soda bottle fragment	140	1	clear glass	KAL-187	
		metal nail	0.5	1		KAL-188	
		brown earthenware	116.7	1		KAL-189	
		Indeterminate metal	5.8	5		KAL-190	
	I (40-130)	metal nail	13.3	1		KAL-191	
		clear window glass	0.5	1		KAL-192	
		porcelain	15.8	1	blue paint	KAL-193	
		basalt flakes	4	2		KAL-194	
		metal file	126.5	1		KAL-195	
		Indeterminate metal	230.5	9		KAL-196	
		metal nails	56.2	16		KAL-197	
ST19	I (0-66)	whiteware	8.8	5		KAL-198	
		various clear glass	62.6	19		KAL-199	
		brown glass	8	2		KAL-200	
		clear window glass	86.6	23		KAL-201	
		mortar	2.6	1		KAL-202	
		indeterminate lead	9.4	1		KAL-203	
		metal fishhook	12.5	1		KAL-204	
		silver mercury dime	2.4	1	dated 1944	KAL-205	
		wheat penny	3.1	1	dated 1919?	KAL-206	
		porcelain saki cup	15.2	1	plain	KAL-207	
		porcelain	1.1	1	blue paint	KAL-208	
		porcelain	6.1	5	plain	KAL-209	
		milk glass	8	1		KAL-210	
		volcanic glass flake	0.5	1		KAL-211	
		basalt flakes	144.1	19		KAL-212	
		basalt flakes	12.5	3		KAL-213	
		ST20	I (0-58)	indeterminate metal	97	2	
metal nails	26			6	two look like coffin nails	KAL-215	
brown glass	8			4		KAL-216	
olive glass	1			2		KAL-217	
clear window glass	4.1			2		KAL-218	
whiteware	14.3			1	blue transfer print	KAL-219	
whiteware	13.9			1	hand painted, blue paint	KAL-220	

TR: Trace

Table 5: Artifact Accession List, Site 671

Site	Context	Object	Weight (g)	Count	Description	Artifact Number		
	II (58-70)	porcelain	0.3	1		KAL-221		
		basalt flakes	28.8	4		KAL-222		
ST21	I (0-82)	metal nail	6.2	1		KAL-223		
		metal nails	25.4	4	looks like coffin nails	KAL-224		
		various clear glass	2.2	4	some are square	KAL-225		
		brown glass	0.6	1		KAL-226		
		paint brush fibers?	TR				KAL-227	
		basalt flakes	132.1	29			KAL-228	
ST22	I (0-43)	indeterminate metal	0.4	1		KAL-229		
		brown glass	2.3	1		KAL-230		
		clear window glass	12.9	8		KAL-231		
ST23	I (0-70)	basalt flakes	44.3	6		KAL-232		
		indeterminate metal	7.2	5		KAL-233		
		metal nails	1.8	2		KAL-234		
		light green glass	4.6	3		KAL-235		
		various clear glass	4.6	9		KAL-236		
		clear window glass	206.1	4		KAL-237		
		basalt flakes	31	6		KAL-238		
ST24	Fill and L-1 (0-92)	indeterminate metal	53.2	7		KAL-239		
		metal nails	38.2	6		KAL-240		
		plastic	0.8	1		KAL-241		
		styrofoam	TR	1		KAL-242		
		concrete				KAL-243		
		various clear glass	86.4	12		KAL-244		
		basalt flakes	28.8	4		KAL-245		
		indeterminate metal	155.2	8		KAL-246		
		metal skeleton key	18.6	1		KAL-247		
		metal nails	51.9	6	some are square	KAL-248		
ST25	I (0-53)	yellowware	11.1	1	impressed flower design	KAL-249		
		blue edgeware	9.7	1	scalloped impressed line (1795-1845)	KAL-250		
		plastic button	0.1	1	four holes	KAL-251		
		aqua glass	53.5	3		KAL-252		
		various clear glass	0.4	2		KAL-253		
		green glass	14.1	1		KAL-254		
		olive glass	39.1	4	screw top bottle top	KAL-255		
		clear window glass	34.5	4		KAL-256		
		basalt adze fragment	0.1	1	polish on one face (1.4 x 0.9 x 0.2cm)	KAL-257		
		basalt flakes	75	23		KAL-258		
		basalt flakes	0.8	2		KAL-259		
		ST26	I (0-25)	metal nails	11.2	4		KAL-260
				aqua glass	1.2	1		KAL-261
				volcanic glass flakes	0.7	2		KAL-262
				basalt flakes	89.1	24		KAL-263
				basalt flakes	54	17		KAL-264
				indeterminate metal	3.6	2		KAL-265
ST27	I (0-54)	metal nails	19.9	2	square	KAL-266		
		various clear glass	8.5	7		KAL-267		
		clear window glass	4.5	3		KAL-268		
		clear plastic wrapper	TR	1		KAL-269		
		basalt flakes	62	10		KAL-270		
		clear window glass	0.8	1		KAL-271		
		basalt flakes	9	2		KAL-272		
		indeterminate metal	17.1	10		KAL-273		
		metal nails	14.7	5		KAL-274		
		olive glass	1.6	2		KAL-275		
ST28	I (0-50)	brown glass	0.2	1		KAL-276		
		various clear glass	2.1	1		KAL-277		
		clear window glass	5.5	2		KAL-278		
		stoneware	1.2	1	mottled brown	KAL-279		
		basalt flakes	28	11		KAL-280		
		lead net sinker	48.1	1		KAL-281		
		metal nails	69.3	4	some are square	KAL-282		
		clear window glass	6.9	2		KAL-283		
		basalt adze fragment	7.6	1	polish on two contiguous faces (4.9 x 1.9 x 1.8cm)	KAL-284		
		basalt flakes	54.1	16		KAL-285		
ST29	Fill and L-1 (0-40)	indeterminate metal	178.3	20		KAL-286		
		metal nails	14.3	6		KAL-287		
		various plastic wrappers	0.9	8		KAL-288		
		styrofoam	0.4	1		KAL-289		
		various plastic	4.8	5		KAL-290		
		various clear glass	17.6	5		KAL-291		
		green glass	0.7	1		KAL-292		
		brown glass	2.3	4		KAL-293		
		basalt flakes	27.4	2		KAL-294		

TR: Trace

Table 5: Artifact Accession List, Site 671

			Weight (g)	Count	Description	Artifact Number
Fill (25-55)	I (55-135)	Indeterminate metal	40.9	6		
		metal nails	44.5	8		
		various clear glass	137.3	1		
		brown glass	14.1	1		
		olive glass	1.3	1		
		wheat penny	3.1	1		
		large screw with bolts	586.5	1		dated 1935
	II (55-135)	Indeterminate metal	3	1		
		metal nails	11.9	2		
		various clear glass	1.1	3		
		light green glass	0.7	1		
		basalt flakes	161.1	12		
		porcelain saki cup	35	1		plain
		porcelain	11.8	1		blue transfer print with bamboo
		porcelain	5.4	1		light blue slip?
Trench 1	flower pot ceramic	40.8	1		bright orange/red	
	aqua glass	69.4	1		bottle neck	
	cobalt blue glass	12.9	1		bottle neck	
	olive glass	25.6	1			
	basalt adze fragment	9.4	1		cutting edge of a finely made adzelet (2.8 x 1.6 x 1.4cm)	
	basalt adze fragment	4.2	1		polish on two faces (2.7 x 1.8 x 0.9cm)	
	basalt flakes	41.6	3			

Table 6: Analysis of Recovered Vertebrate Faunal Remains, Site 671

	0-100	100-200	200-300	300-400	400-500	500-600	600-700	700-800	800-900	900-1000	1000-1500	1500-2000	2000-3000	3000-4000	4000-5000	5000-7500	7500-10000	10000+		
<b>Chondrichthyes/Orsteichthyes</b>																				
Shark/Ray			0.1															0.3		
Carangid														0.5						
Cirrhitid																				
Scarid			0.7		0.2															
Acanthurid			0.7					0.4		0.3			0.2							
Fish			0.2					0.9		0.3			0.2	0.3	TR	0.8		0.2		
<b>Amphibia</b>																				
Order Anura																				
<i>Bufo marinus</i>										0.6										
<b>Reptilia</b>																				
Order Testudinata																				
Family Cheloniidae																				
Sea Turtle					6.2								2.7	1.6						
<b>Aves</b>																				
Order Procellariiformes																				
Family Procellariidae																				
<i>Puffinus</i> sp.								0.4												
<i>Pterodroma phaeopygia</i>	0.4																			
Medium Procellariid	0.8																			
Order Galliformes																				
Family Phasianidae																				
<i>Gallus gallus</i>								0.5												
Small-to-Medium Galliform																				
Large Galliform													0.6							
Order and Family Indeterminate																				
Medium Bird									0.3				0.5							
Medium and/or Large Bird	0.5													0.2		0.2				
<b>Mammalia</b>																				
Order Rodentia																				
Family Muridae																				
<i>Rattus exulans</i>	0.2								0.2											
<i>Rattus norvegicus/R. rattus</i>																				
<i>Mus musculus</i>																				
Order Carnivora																				
Family Canidae																				
<i>Canis familiaris</i>	1.5	1.3	3.6	4.6		0.3							0.6	0.4						
Family Felidae																				
<i>Felis catus</i>						0.5														
Order Perissodactyla																				
Family Equidae																				
<i>Equus caballus</i>														1.3						
Order Artiodactyla																				
Family Suidae																				
<i>Sus scrofa</i>			5.4		1.6	4.0	11.8			0.4							37.6			
Family Bovidae																				
<i>Bos taurus</i>	9.6																			
Order and Family Indeterminate																				
Small Mammal																		1.0		
Small-to-Medium Mammal	1.9	1.4	TR	1.4	0.4	0.9			0.4				1.6	0.4	0.4	0.7				
Medium Mammal																				
Medium-to-Large Mammal	1.8			7.2	3.6				1.4											
Large Mammal					19.8								5.0							
<b>Class Indeterminate</b>																				
Order and Family Indeterminate																				
Small and/or Medium Vertebrate	0.3				0.5	0.3		0.2		0.2	0.3									
Medium Vertebrate																		0.3		
<b>TOTAL</b>	<b>14.8</b>	<b>4.9</b>	<b>3.6</b>	<b>19.5</b>	<b>24.2</b>	<b>0.9</b>	<b>10.0</b>	<b>4.0</b>	<b>13.8</b>	<b>2.3</b>	<b>1.0</b>	<b>0.9</b>	<b>0.6</b>	<b>0.5</b>	<b>12.4</b>	<b>2.8</b>	<b>38.2</b>	<b>1.2</b>	<b>1.3</b>	<b>1.2</b>

Weight measured in grams. TR: Trace (<0.1 gram)

Table 6: Analysis of Recovered Vertebrate Faunal Remains, Site 671

	11-12-8	12-23-8	12-24-8	12-25-8	12-26-8	12-27-8	12-28-8	12-29-8	12-30-8	1-6-9	1-13-9	1-20-9	1-27-9	2-3-9	2-10-9	2-17-9	2-24-9	3-3-9	3-10-9	3-17-9	3-24-9	3-31-9	TOTAL
Chondrichthyes/Osteichthyes																							
Shark/Ray																							
Carangid																							0.4
Cirrhid																							0.5
Scorid																							0.3
Acanthurid																							0.9
Fish		2.9	0.2		0.2	0.1				0.1		0.3	0.2	0.2	0.3	0.1						1.5	9.0
Amphibia																							
Order Anura																							
<i>Bufo marinus</i>		0.1																				0.5	2.3
Reptilia																							
Order Testudinata																							
Family Cheloniidae																							
Sea Turtle		0.6																				0.2	11.3
Aves																							
Order Procellariiformes																							
Family Procellariidae																							
<i>Puffinus</i> sp.																							0.4
<i>Pterodroma phaeopygia</i>																							0.4
Medium Procellariid																							1.7
Order Galliformes																							
Family Phasianidae																							
<i>Gallus gallus</i>																							0.5
Small-to-Medium Galliform																							0.6
Large Galliform																							0.6
Order and Family Indeterminate																							
Medium Bird						0.1																	0.2
Medium and/or Large Bird		0.3																				0.4	1.1
																						0.1	1.7
Mammalia																							
Order Rodentia																							
Family Muridae																							
<i>Rattus exulans</i>																						TR	0.4
<i>Rattus norvegicus/R. rattus</i>																						TR	TR
<i>Mus musculus</i>																						TR	TR
Order Carnivora																							
Family Canidae																							
<i>Canis familiaris</i>																							18.5
Family Felidae																							0.5
<i>Felis catus</i>																							0.5
Order Perissodactyla																							
Family Equidae																							
<i>Equus caballus</i>																							1.3
Order Artiodactyla																							
Family Suidae																							
<i>Sus scrofa</i>																							67.6
Family Bovidae																							0.4
<i>Bos taurus</i>																							9.6
Order and Family Indeterminate																							
Small Mammal																							1.0
Small-to-Medium Mammal		1.0	0.6	0.4																			23.7
Medium Mammal																							2.0
Medium-to-Large Mammal																							34.2
Large Mammal																							28.6
Class Indeterminate																							
Order and Family Indeterminate																							
Small and/or Medium Vertebrate		0.6	0.2	0.2																			5.1
Medium Vertebrate																							0.3
<b>TOTAL</b>		<b>2.6</b>	<b>4.0</b>	<b>0.8</b>	<b>5.3</b>	<b>0.2</b>	<b>6.5</b>	<b>7.4</b>	<b>5.2</b>	<b>6.9</b>	<b>2.3</b>	<b>14.6</b>	<b>2.4</b>	<b>2.2</b>	<b>0.8</b>	<b>0.4</b>	<b>1.3</b>	<b>TR</b>	<b>6.2</b>	<b>217.2</b>			

Weight measured in grams. TR: Trace (<0.1 gram)

# **APPENDIX 3**

## **BURIAL TREATMENT PLAN & FOLLOW-UP SUMMARY REPORT OF THE TREATMENT OF BURIALS**

**Bothman Single Family Residence – Final Environmental Assessment  
TMK (4) 5-3-03: 014**

**A PROPOSED BURIAL TREATMENT PLAN FOR A PROPERTY  
LOCATED AT TMK: 5-3-03: 14 IN KALIHIWAI AHUPUA'A,  
HANAIEI DISTRICT, ISLAND OF KAUA'I  
FEBRUARY 2002**

**Prepared for: Mr. Bob Bothman  
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**Prepared by: Archaeological Consultants of the Pacific, Inc.  
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email: [archaeologypacific@hawaii.rr.com](mailto:archaeologypacific@hawaii.rr.com)**

## Abstract

An Archaeological Inventory Survey with subsurface testing was conducted on the subject property described above on March 21<sup>st</sup> and July 11<sup>th</sup> through 16<sup>th</sup>, 2000. The purpose of those investigations was to determine if significant historic properties exist within the project limits and, if present, properly document and evaluate those sites. One site of significance to the interests of historic preservation was identified on the subject property, a habitation site, designated State Site number 50-30-03-671, at which at least six individuals were interred. Cultural deposits include both pre- and post-Contact components.

The investigations have determined that Site 50-30-03-671 is significant for its information content as well as having cultural significance. In order to help mitigate the effects of proposed development, the appropriate treatment of the burials identified during the current investigations will be required. The present landowner has requested that the individuals be consolidated into a single, appropriate location on the subject property where they would be secure and away from any potential further disturbances. The individuals will be disinterred following appropriate archaeological procedures, and will be reinterred in a single location and capped by a concrete lid to ensure their preservation. Details of the recommendations for burial treatment will be set forth in this document and will be presented for consideration before the Kaua'i/Ni'ihau Burial Council.



## Table of Contents

Abstract.....	i
Section 1: Introduction.....	1
Section 2: Environmental Setting .....	1
Section 3: Historic Background.....	5
Section 4: Descriptions of Subsurface Testing.....	9
Section 5: Site Description.....	11
Section 6: Burial Features.....	12
Section 7: Proposed Preservation Methods.....	15
References Cited .....	19
Appendix A: Burial Notices.....	A1
Appendix B: SHPD-DLNR Correspondence.....	B1

## List of Illustrations

Figure 1: Project Location on a Map of Kaua'i .....	2
Figure 2: Location of the Subject Property on a U.S.G.S. Topographic Map .....	3
Figure 3: Location of the Subject Property on a TMK Map.....	4
Figure 4: Kalihiwai Circa 1892.....	7
Figure 5: Top Plan of Excavations Conducted on the Subject Property.....	10
Figure 6: Proposed Burial Relocation Site on Subject Property.....	16

# A Proposed Burial Treatment Plan for a Property Located at TMK: 5-3-03:14 in Kalihiwai Ahupua'a, Hanalei District, Island of Kaua'i

## Section 1: Introduction

At the request of Mr. Robert Bothman, Archaeological Consultants of the Pacific, Inc. (ACP), presents recommendations for the treatment of human remains that have been discovered on his property. The subject property (TMK: 5-3-03:14) is located in the *ahupua'a* of Kalihiwai, current district of Hanalei, Island of Kaua'i (see Figure 1). Mr. Robert Bothman is currently the owner of this property in question.

## Section 2: Environmental Setting

The subject property (TMK: 5-3-03:14) is located in the *ahupua'a* of Kalihiwai, current district of Hanalei, Island of Kaua'i. The project area is located at geographic grid coordinates 159° 25' 50"W by 22° 13' 10"N and UTM (Universal Transverse Mercator) coordinates 2457050mN by 454800mE (see Figure 2). The property is bordered by Kalihiwai Road to the west, a lot with a private residence to the north, a steep hillside to the east, and an empty lot to the south (see Figure 3).

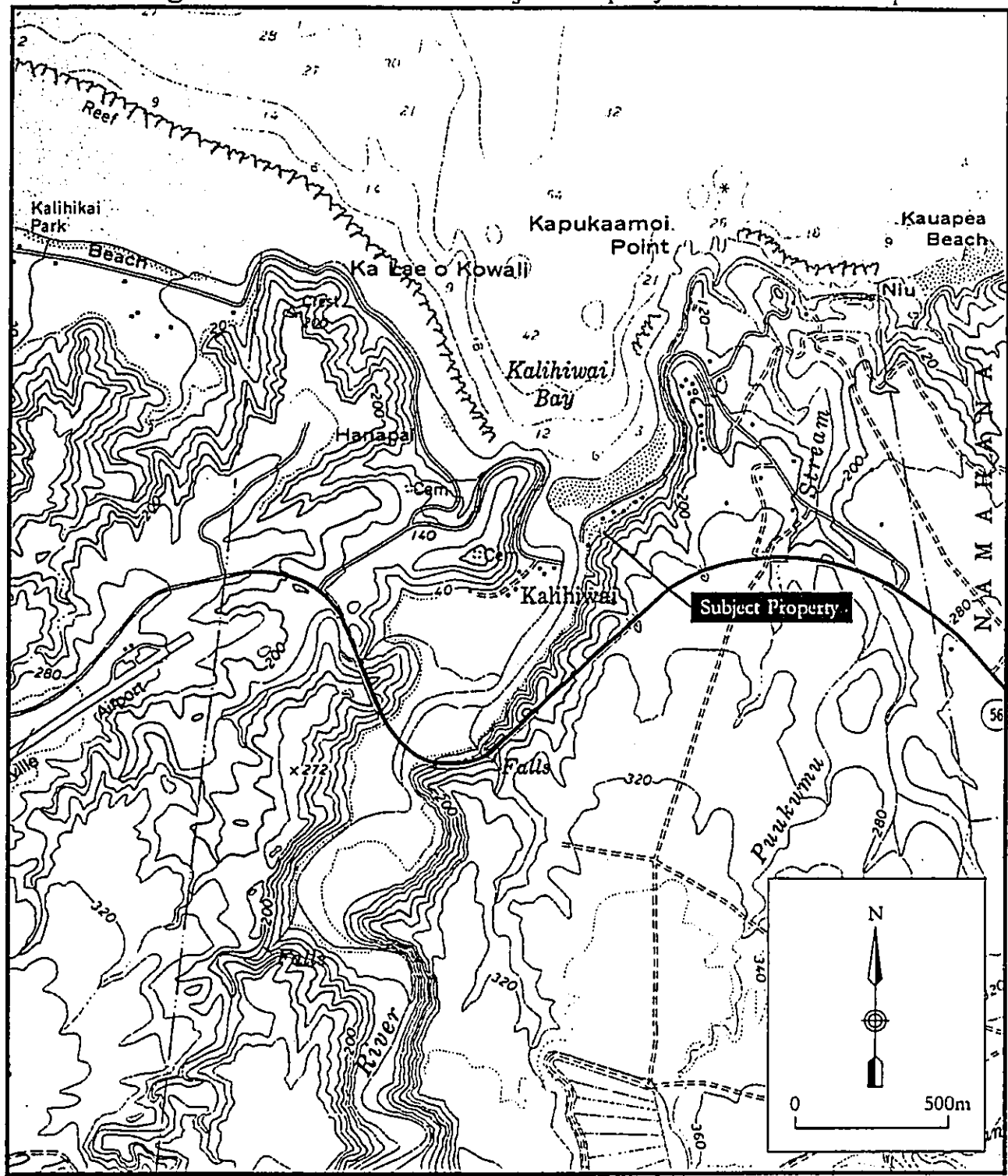
The current subject property is comprised of one parcel located on a coastal plain, approximately 60m from the ocean. The dimensions of Parcel 14 are 23 x 30 x 34 x 43m encompassing an area of approximately 0.37 acres. The property is mostly level with a slight rise toward the eastern end of the property. Vegetation on the parcel consists of mostly various grasses and weeds as well as a few coconut palms (*Cocos nucifera*), tropical almond trees (false *kamani*, *Terminalia catappa*), a java plum tree (*Eugenia cuminii*), heleconia (*Heleconia sp.*) and banana plants (*Musa sp.*) along the edges of the property.

Average annual rainfall ranges between 50 and 75 inches (Armstrong 1973). Foote *et al.* (1972) describe the soils in the area as beaches (BS). These soils consist "...mainly of light colored sands derived from coral and seashells" (Foote *et al.* 1972). The current investigations by ACP found that the soil on the property consists of soils similar to those described by Foote *et al.*, however an A-horizon consisting of dark grayish brown sandy loam is present above light colored sand. Refer to Section 5.1 for a more detailed description of the soils.



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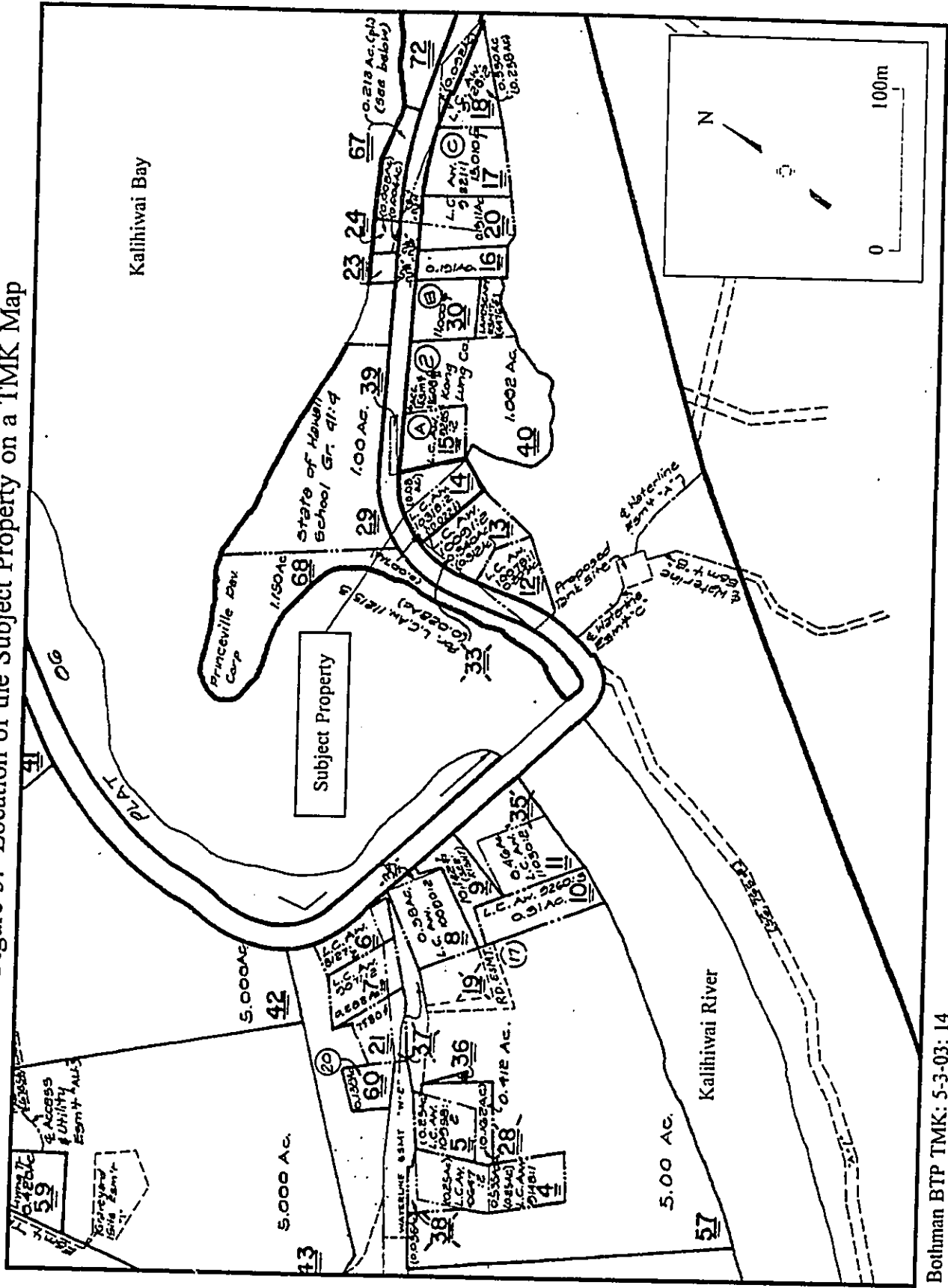
Figure 2: Location of the Subject Property on a U.S.G.S. Map



Bothman BTP TMK: 5-3-03: 14

Source: U.S.G.S. 7.5 Minute Series (Topographic) Hanalei Quadrangle 1983

Figure 3: Location of the Subject Property on a TMK Map



Bothman BTP TMK: 5-3-03: 14

Source: Dept. of Taxation, Tax Maps Branch 1936

### Section 3: Historic Background

The subject property is located in the *ahupua'a* of Kalihiwai, current district of Hanalei, traditional district of Halele'a. Kalihiwai Ahupua'a lies along the eastern edge of Halele'a District and lies between the *ahupua'a* of Kalihikai on the west and both Kilauea and Namahana on the east. Kalihiwai Stream meanders through the center of the *ahupua'a*. The name Kalihiwai stems from the words *kalihi*, or edge, and *wai*, or stream (Pukui *et al.* 1974:77).

Very little is known about pre-Contact or early post-Contact activities in this area of Kaua'i. Handy and Handy (1972:421) discuss *lo'i* cultivation in the *ahupua'a* of Kalihikai, Kalihiwai and Kilauea:

East of Hanalei are two small *ahupua'a*, Kalihi-kai and Kalihi-wai, both of which had quite extensive *lo'i* near the sea. There were *lo'i* back along main streams and side streams, but both valleys are shallow. Actually the stream flow from both valleys is diverted eastward to Kilauea, the adjacent *ahupua'a* in the *moku* of Ko'olau.

Also, a number of irrigation ditches were recorded in the 1850's stemming from Kalihiwai Stream (Earle 1978:35).

Early written accounts of the north shore of Kaua'i are few. Although Cook and Vancouver both sailed to Kaua'i in the late eighteenth century, their visits were limited to the southern shore. Kalihiwai Valley is mentioned, however, by Henry Whitney, who wrote in his "Hawaiian Guide Book" in 1875:

Just outside of Kilauea is the beautiful Kalihiwai valley, whose fertile lands are watered by the river of the same name. A short sail up the river, whose banks are shaded by large trees, a beautiful little cascade is disclosed, while further inland is another and still another, which though smaller, vie in beauty with many larger waterfalls (Whitney 1875 in Rosendahl 1990:4)

During the Great Mahele of 1848, the entire *ahupua'a* of Kalihiwai was awarded to William Lunalilo (LCA 8559-B). A total of twenty-four *kuleana* claims were awarded to individuals living within Kalihiwai. Native and foreign register and testimony indicate that these lands were used primarily for house lots and *lo'i*, with some *kula*. The LCAs often contained more than one *apana*, typically with differing land uses for each *apana* (Board of Commissioners to Quiet Land Titles 1846-1855).

An example of this is LCA 10318, of which *apana* 2 is located on a portion of the current subject property. This land was awarded to Nohomalie, and foreign testimony indicated that LCA 10318 was in two pieces (*apana*) containing one house lot (listed as *apana* 1) and four *lo'i* (listed as *apana* 2). The house lot is described as being bounded by Kalihiwai River, *pali*, and two house lots, which is in accordance with the surroundings of the subject property. The subject property also contains sandy soils, on which wet taro could not be produced. Figure 3 depicts *apana* 1 in an area further inland next to Kalihiwai River in a low marshy area, much more suited

to cultivation of *lo 'i*. An 1892 map by Monserrat also depicts a structure in the general location of the subject property (see Figure 4). Therefore, LCA 10318:2 on the subject property most certainly was the location of Nohomalie's house lot.

In the late nineteenth century, land use and demographics were changing throughout Kaua'i. According to Joesting:

By 1890 there were villages and hotels where once there had been no inhabitants at all, a reflection of how the centers of population were shifting. The places that had offered the most to Hawaiians - the sea to fish in, a stream to provide water for taro - these things became less important as the new commercial world took increasing control. Although some Hawaiians preferred the old life-style, many moved close to the plantation mill with the nearby company store, and their generally thinning numbers reduced old villages to fragments of what they had once been. ...Places like Anahola Valley, Moloaa, Kalihiwai, and Waipouli had previously been centers of population (Joesting 1984:249-250 in Rosendahl 1990:6).

As the Hawaiian people moved out of Kalihiwai, coffee, sugar, cattle and rice came in. Coffee was introduced in Kalihiwai in 1862 on lands belonging to Foreign Minister Robert C. Wyllie (McGerty and Spear 1999). Sugar production began in the area in the 1870's (Kennedy 1990:2). Evidence of cattle is indicated in Thrum, where it is said that Kaunonoli Heiau was destroyed by use as a cattle pen (Thrum 1907:42). The Kalihiwai flood plain was used extensively during the historic period for rice cultivation. Handy (1940:71) discusses the shift from *lo 'i* to rice in *The Hawaiian Planter*:

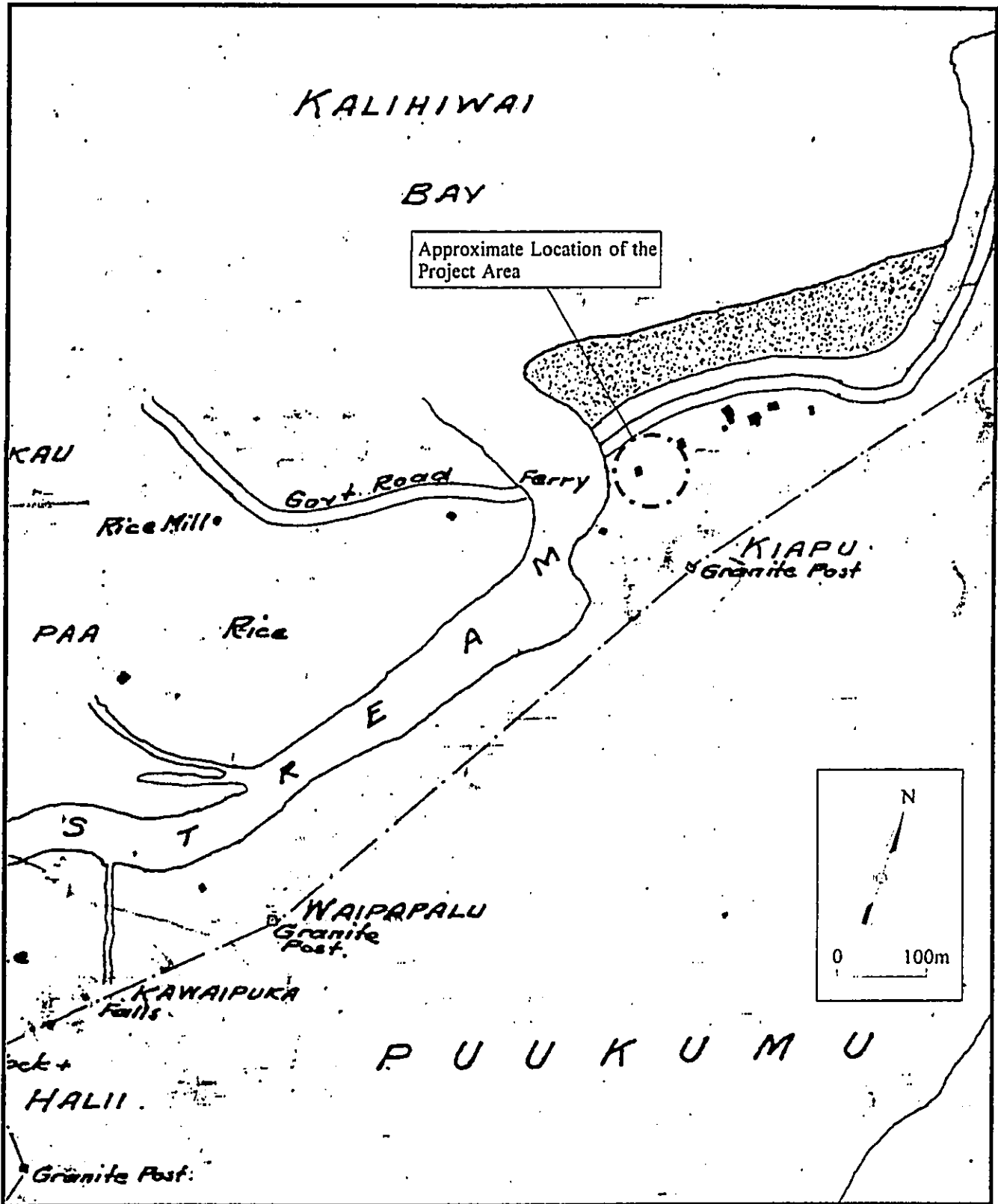
Kalihiwai has an extensive terrace area on the flatland through which Kalihiwai River meanders to the bay. This whole area is now planted in rice. Where the valley becomes narrower, a mile inland, there were small terraces. Two miles inland, and again 2.75 miles inland, in sharp bends of the river, there are small flatlands where wet taro was formerly grown. Just east of Kalihiwai Bay, Puulumu Stream flows in a shallow valley. A quarter of a mile below the road there is a small area of old terraces.

Monserrat's 1892 map depicts areas in Kalihiwai in which rice was cultivated. Flood plains along either side of the river were planted in rice (see Figure 4). Much of this plain was inundated in 1947 during a tsunami.

By the early historic period, Kalihiwai had become a center of population. Kalihiwai River provided a source for irrigation of *lo 'i*. Rainfall in the valley would have been sufficient for the growing of dry taro at higher elevations, without the need for extensive terracing. The LCA testimony supports this supposition, with claims for *kula* lands used for dry taro cultivation (Kennedy 1991). Research of LCA's also showed that house lots were primarily located near to the shore, and *lo 'i* along Kalihiwai River.

By the late 1800's the population in Kalihiwai had waned significantly, and the lands once utilized for *lo 'i* were replaced predominately by rice. The small number of houses depicted on Monserrat's 1892 map are located mostly along the coast (see Figure 4).

Figure 4: Kalihiwai Circa 1892



Bothman BTP TMK: 5-3-03: 14

Source: Monsarrat 1892 (Gov't Survey Reg. Map No. 1971)



As mentioned, a portion of the subject property contains LCA 10318. Foreign testimony indicated that LCA 10318 was in two pieces (*apana*) and contained one house lot and four *lo'i*. It is likely that the *apana* on the subject parcel is the one which contained the house lot. Indeed, as stated above and shown on an 1892 map depicted in Figure 4, the subject property was located in a general area utilized for habitation during the latter part of the nineteenth century. A small number of houses are depicted on this map in the vicinity of the subject property. Unfortunately, it could not be determined whether any of the houses depicted were actually on the subject property.

## Section 4: Descriptions of Subsurface Testing

### *Trenches*

In the initial field session five trenches were excavated on the subject property in areas of proposed construction. Trench 1 was excavated in two segments. The southeastern end of the trench measured 3.9m in length and was terminated upon encountering a human burial. Excavation of Trench 1 continued after a gap of three meters with the second segment reaching a length of 10m. Two layers of soil were encountered. Layer I consisted of a very dark grayish brown (10YR 3/2) sandy loam encountered from the ground surface to 50cmbs. Layer II was present below Layer I, and extended to the base of the excavations. The maximum depth of Trench 1 reached 250cmbs. Two burials (Features 671:A & B) were encountered during the excavation of this trench along with a concrete pad and an area of modern disturbance. Subsequent to the identification of human burials, four additional small trenches were expanded off the southwestern side of Trench 1 (see Figure 5).

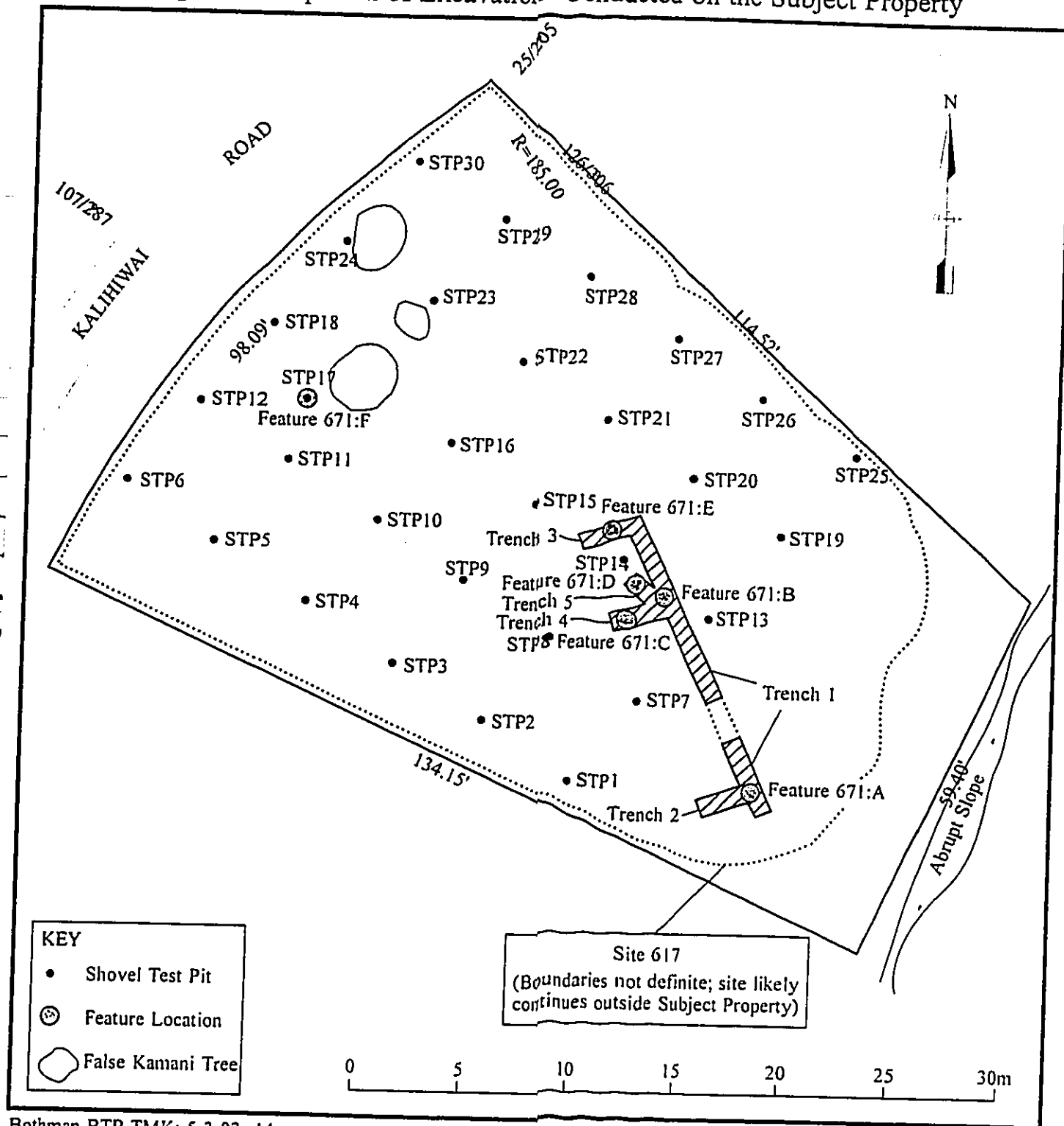
Similar soils were encountered during the subsequent excavations of Trenches 2, 3, 4 and 5. Three additional burials (Features 671:C, D & E) were encountered during these excavations. Feature 671:C was encountered in Trench 4, Feature 671:D in Trench 5, and Feature 671:E in Trench 3.

### *Shovel Test Pits*

In the second phase of testing it was determined that further mechanical testing was in appropriate due to the number of encountered human remains. Therefore, thirty hand-dug shovel test pits (STP) were excavated on the subject property within the portion of the parcel planned for construction, covering the majority of the parcel.

These STPs generally encountered similar stratigraphy as in the trenches. More areas of disturbance were encountered as well as one additional burial (Feature 671:F, in STP17). Historic and modern debris were mixed together with traditional materials. These materials were present primarily within the upper 60cm of soil, in Layer I. Only a small amount of traditional materials remained undisturbed below Layer I. Soils became increasingly disturbed with proximity to Kalihiwai Road, whereupon they became completely disturbed. A metal pipe was encountered running parallel with Kalihiwai Road in STPs 12 and 18. Only two shovel tests (STP1 and 26) contained a significant amount of traditional materials in an undisturbed context, both of which were located on opposite edges of the property.

Figure 5: Top Plan of Excavations Conducted on the Subject Property



Bothman BTP TMK: 5-3-03: 14

Source: Wagner Engineering Services, Inc. 2001

## Section 5: Site Description

Site 671 consisted of a subsurface habitation deposit with burials. The site was present across the entire parcel and likely extends outside the boundaries of the current subject property. The six features of Site 671 encountered during subsurface testing consist of six burials, one at each feature. *In situ* human remains encountered during subsurface testing were left in place in the ground. In addition, a cement pad/foundation and cultural deposits, which have been subjected to numerous modern disturbances, were identified. Each will be described separately below.

The earliest use of the subject property likely occurred during the late pre-Contact to early post-Contact period. A number of basalt flakes, adze fragments, a few abraders, and a variety of vertebrate and invertebrate remains related to Polynesian-style food consumption were present in addition to burials (at least one, and possibly as many as three or more) of a traditional style interment. Habitation may have been either temporary or permanent during this period.

By 1850, the subject property was utilized as a house lot occupied by the family of an individual named Nohomalie. Evidence of utilization during the nineteenth and twentieth centuries includes the presence of a concrete foundation, ceramics, glass, metal, etc., as well as at least one coffin burial (and possibly two or more additional ones). The occupation during this era contributed to the disruption of the previous stratigraphic sequence, as evidenced by the presence of a concrete slab lying directly atop a traditional style burial.

Modern man-made and natural disturbances are also present. Deep pits containing modern debris, a metal pipe, fill soils, etc., were encountered during subsurface testing. The 1957 hurricane which destroyed the bridge across Kalihiwai Stream as well as a number of buildings along Kalihiwai Road likely resulted in a significant amount of disturbance on the subject property due to high winds, high surf and flooding. These disturbances have significantly impacted the stratigraphy of Site 671, precluding the recovery of cultural evidence regarding the utilization of the property over time. The only significant undisturbed remnants being deeper buried features, mainly burials.

## Section 6: Burial Features

### *Feature 671:A*

Feature 671:A was encountered at the southeastern end of Trench 1. A burial pit and human remains representing one individual were encountered immediately below a concrete foundation. The remains were found to extend into the southwestern face of the trench. A small trench (Trench 2) was expanded to the southwest to expose the remainder of the burial. All but the cranial portion of the individual was exposed. The burial pit measured 40 by 90+cm in diameter and was present from 50 to 80cmbs extending immediately from the base of the concrete slab in (Layer I) and extending into Layer II. Osteological materials were present from 55 to 80cmbs. The remains appeared to have been previously disturbed as the legs and hands were in disarray, although the feet, vertebrae and arms appeared to be properly articulated. The individual appeared to have been in a flexed position. No cultural materials were found in direct association with the remains, although midden remains including fish bones, shell and basalt flakes were found scattered within the burial fill. These items were not collected. The traditional style of interment in a flexed position indicates that the individual was likely of Hawaiian ethnicity interred during the pre-Contact era.

### *Feature 671:B*

Human remains were encountered at a second location in Trench 1 along the southwestern face approximately 5m from the northwestern end of the trench. These remains were located approximately nine meters from Feature 671:A. A small trench, Trench 4, was expanded to the southwest to expose the remainder of the burial. Another burial, Feature 671:C, was encountered during the excavation Trench 4 less than two meters from Feature 671:B. Subsequently, Feature 671:B was found to extend in a more westerly direction. Another small trench (Trench 5) was excavated to the west. During the mechanical removal of soils in Trench 5, yet another burial, Feature 671:D, was encountered. ACP decided to cease excavation in this location, and the remainder of Feature 671:B was not exposed. The small exposed portion of the burial was found to contain the remains of a wooden coffin and feet, fibula and tibia of one individual, *in situ* from 80 to 90cmbs from the base of Layer I extending into Layer II. The burial pit measured approximately 80cm in width and was of undetermined length. The coffin was narrow, only 35cm wide and 20cm in height, from 80 to 100cmbs. No lid remained to the coffin, and as the human remains were left *in situ*, the depth and composition of the base of the coffin could not be determined.

Items which appeared to be coffin hardware were present including a copper rivet encased by preserved wood, and a rusted nail with a square head. Also present in the feature fill was a small amount of coral and a basalt flake with polish. Charcoal flecking was also noted in the soil above the burial. This may have been a result of the practice of burning Chinese paper money. None of these items were collected. While the presence of a coffin clearly dates the

burial within a post-Contact context, the only possible indication of ethnicity derives from the supposition of associated Chinese ritual burial practices.

#### *Feature 671:C*

Feature 671:C was encountered during the excavation of Trench 4. Human remains were present at 55cmbs (Layer II) in a pit of undetermined size which extended into the northwestern face of Trench 4. Osteological materials included a broken femur, patella, and pelvic and cranial fragments. The position of the skeleton could not be determined. Remains of only one individual were present. No cultural materials were found in association with the remains. With the absence of a coffin, it may be conjectured that the individual was of Hawaiian ethnicity and interred during the pre-Contact era.

#### *Feature 671:D*

A fourth individual (Feature 671:D) was found during the excavation Trench 5. These remains were quite shallow, only 50cmbs, at the interface of Layers I and II. No pit was identified. These remains appeared to be either on top of or immediately next to the unexposed remainder of Feature 671:B. The extent of this feature was not determined. Only longbone fragments were observed. If the remains were indeed located above Feature 671:B, the feature would then fall within the post-Contact era. Ethnicity and position were not determined. As the feature was not fully examined, no plan view or profile was created.

#### *Feature 671:E*

Feature 671:E was encountered during the excavation of Trench 3. Human remains including fibula, tibia and foot materials were disturbed from Layer II by the backhoe. The remains were recovered from the backdirt and placed back in the ground in the location from which they were disturbed. No pit was identified and the burial was not further examined. A button and what appeared to be coffin hardware were present in the backdirt, indicating that the feature may have been a coffin burial. If the feature was indeed a coffin burial, the individual would likely have been in an extended position and would date to the post-Contact era. Ethnicity was not determined. As this feature was not fully examined, no plan view or profile was created.

#### *Feature 671:F*

During the excavation of shovel test pits on the subject property, one burial was encountered. Feature 671:F was identified in the eastern half of STP17. A burial pit containing human osteological materials was present extending from the base of Layer I into Layer II. Ribs, vertebrae and pelvic remains were identified at 70cmbs extending into the east wall of the shovel test pit. The remains were semi-articulated, with some disruption of the articulation of the

vertebrae and ribs. This may have been either a result of modern disturbances, or due to bioturbation, as a large False Kamani tree is present immediately next to the burial. Layer II soils were identified beginning at 70cmbs outside the burial pit.

The burial was not further examined, and the position of the individual could not be determined. Although cultural materials were present in the soil above the burial, no cultural materials were found in direct association with the human remains. All human osteological materials were left in place. Given the absence of a coffin or coffin hardware, it is likely that the individual was interred during the pre-Contact era and was of Hawaiian ethnicity.

## Section 7: Proposed Preservation Methods

In summary, there are six previously identified individuals buried on the subject property. Four sets of remains cluster somewhat in the middle of the property with an additional set positioned, roughly, in the south section of the property and another in the west. There is evidence of previous disturbance to the property, and to some of the burial sites, most likely due to a combination of made-made and natural forces.

The present landowner, Mr. Bothman, respectfully requests that these scattered individuals be consolidated into a single, appropriate location on the subject property where they would be secure and away from any potential further disturbances.

In order to achieve this end several components are necessary to the process. To begin, notices of burial discovery were placed in three newspapers, The Honolulu Advertiser/Star Bulletin (legal ad), The Garden Isle and Ka Wai Ola o OHA (see Appendix A). Within the prescribed waiting period a number of interested individuals responded: Victoria Naehu, Kekoa (Jerry Painter), Kekoa and Manewa (Rochelle Kanei), Helen Kim, and Kupihea (Leilani Kaleohi). The Department of Land and Natural Resources, Burials Program is responsible for the verification of descendents claims.

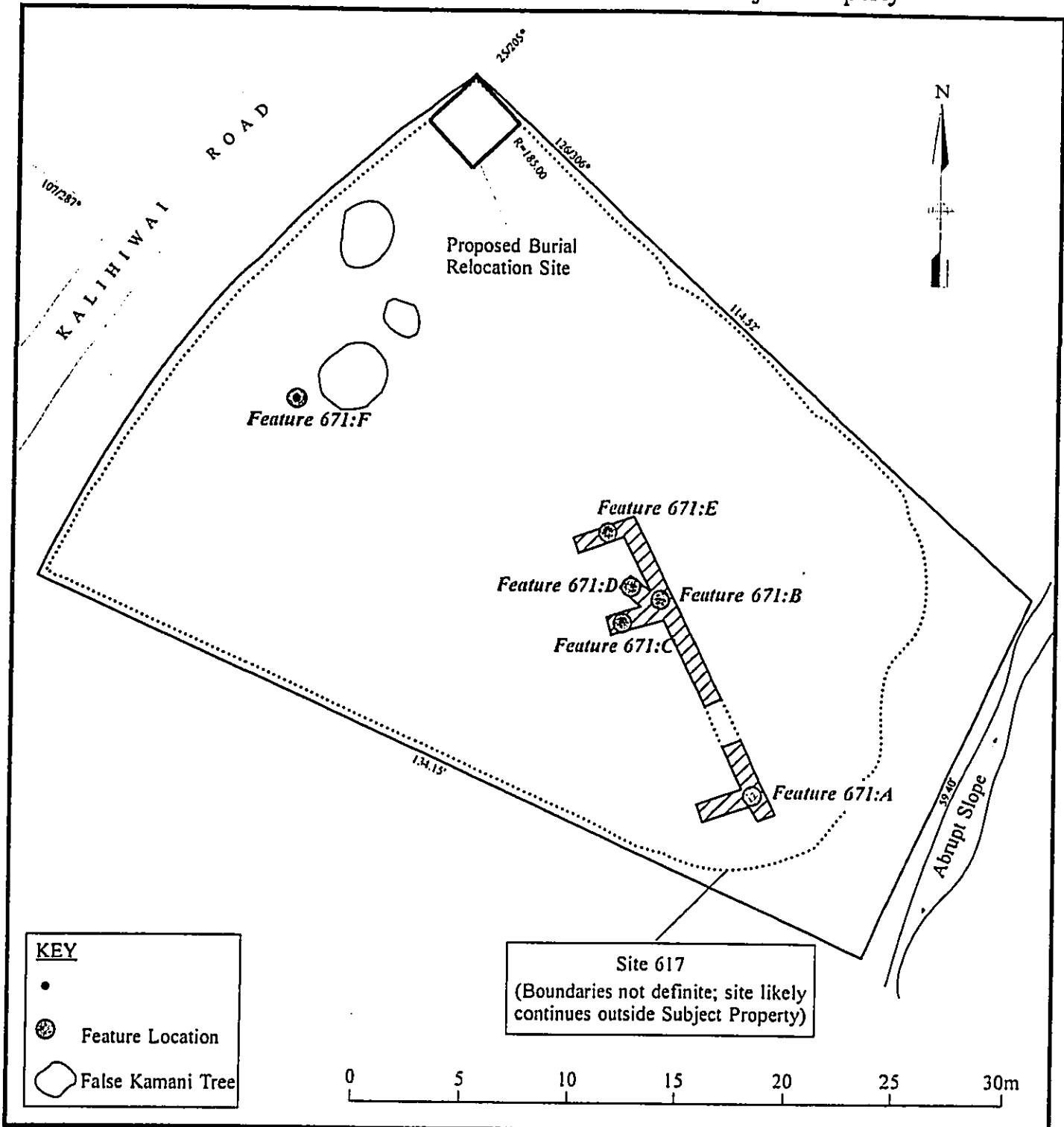
Next, the selection of the proposed reburial area must be determined and described. The landowner has suggested a plot located in the northeast section of the property (see Figure 6). This area has been archaeologically determined to be one that has been disturbed in the past so there is little likelihood of disturbing any additional burials during its construction. This plot will measure 3 meters by 3 meters and be 1.5 meters deep. The sides of this excavated area shall be lined with concrete. The bottom of the excavated area will remain unlined to allow for natural decomposition of the remains. After the remains are transferred, a concrete top or cap shall be placed over the excavated area. This cap must be designed to be removable. In the event inadvertent burials are discovered at some future time, a removable top would allow these remains to be reinterred in the same, secure area. The concrete surrounding the burial area shall act as the buffer in this case. The area above the burial area shall then be landscaped. Naturally, any disturbance to this area, either above or below ground, shall be prohibited.

Disinterment of the burials will be in accordance with standard archaeological procedures. Each burial feature will be excavated by hand and all soils sifted through one-eighth inch screen to ensure the retrieval of one hundred percent of the remains as well as any associated burial items. Plan views of each burial pit will be drawn to scale. The human remains will be placed in paper bags within cardboard boxes and will be remanded to the Kaua'i/Ni'ihau Burial Council.

Once the remains are in the possession of the Kaua'i/Ni'ihau Burial Council, two courses of action may then be followed: 1) the Burial Council may immediately reinter the individuals, or, 2) the Burial Council may curate the remains and reinter at a later date. The location and



Figure 6: Proposed Burial Relocation Site on Subject Property



Bothman BTP TMK: 5-3-03: 14

Source: Wagner Engineering Services, Inc. 2001

manner by which the human remains and any burial items will be curated will be subject to the discretion of the Kaua'i/Ni'ihau Burial Council.

The transference and reinterment shall take place under the supervision of a *Kahu* and with the assistance of any verified lineal descendant and/or member of the Kaua'i/Ni'ihau Burial Council. Methods of reinterment shall be at the discretion of the lineal descendants and/or the Kaua'i/Ni'ihau Burial Council, however if facsimile coffins (for those who were buried in coffins) and tapa (for the traditional burials) are the preferred methods, then the archaeologists can deliver the individuals packaged accordingly.

All six graves, as they exist today, are unmarked. To the best of our knowledge this was as they were intended to be by those who cared for the remains in times past. We propose to make the reinterment consistent with the original of intent and theme and leave these individuals in an unmarked plot. The location of the burial vault will, of course, be mapped and the location identified on a map that will be in the possession of the State of Hawaii Department of Land and Natural Resources, Historic Preservation Division. A copy of this map shall follow with the Covenant Conditions and Restrictions attached to the deed of this property.

Covenant Conditions and Restrictions on this property must disclose the presence of human burials, their location, and contain the following language:

WHEREAS, the State, through its Department of Land and Natural Resources, pursuant to section 6e is responsible for regulating the proper treatment of human skeletal remains over fifty years old, at any site other than a known, maintained, actively used cemetery; and WHEREAS, the parties desire to enter into this Agreement to leave *in situ*, the burial site containing the skeletal remains of an ancestral Hawaiian.

NOW THEREFORE, in consideration of the above and the terms and conditions contained herein, the parties agree as follows:

- Landowner agrees to allow a burial site containing the remains of ancestral Hawaiians to be left within a burial vault as described above, and at the described location on Landowners property.
- Landowner, upon recommendation from the Department of Land and Natural Resources and the Kaua'i/Ni'ihau Burial Council, agrees to maintain this area.
- Landowner agrees to provide identified descendants wishing to visit the burial site with a right of access at reasonable times and upon reasonable advanced notice, subject to the rules and policies of the landowner.
- Landowner covenants and agrees not to willfully disturb in any manner, or allow the disturbance of in any manner, the repose of the human skeletal remains interred at the property. The obligations imposed by these restrictive covenants shall be effective in perpetuity and shall be deemed to run as a binding servitude with the property, and shall extend to and be binding upon landowner, its successors and assigns.

- In the event Landowner learns that the human skeletal remains contained in the burial site, or any part thereof, are unearthed by natural causes or otherwise, the Landowner agrees to immediately notify the Department of Land and Natural Resources. The Landowner agrees not to handle the remains in any manner. The Department of Land and Natural Resources, upon recommendation of the Kaua'i/Ni'ihau Burial Council, shall take proper action to secure the remains in place.
- Both the Landowner and the Department of Land and Natural Resources shall comply with all local, state and federal laws concerning reinterment.
- IN WITNESS WHEREOF the STATE OF HAWAII, by its Board of Land and Natural Resources to be hereunto affixed and the parties hereto have caused this Agreement to be executed as of the day, month and the year first above written.

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**Appendix A: Burial Notices**

## Burial Notices



NOTICE IS HEREBY GIVEN that Archaeological Consultants of the Pacific, Inc., (ACP) represents Mr. Robert Bothman in an archaeological study of TMK: ( )5-3-03:14. At least seven unmarked burial sites have been previously identified on these parcels located in Kalihiwai ahupua'a, Hanalei district, island of Kaua'i.

Based on stylistic observations and informant testimony, it is believed that the remains are most likely Hawaiian and proper treatment shall occur in accordance with Chapter 6E of the Hawai'i Revised Statutes regarding burial sites. The decision whether to preserve in place or disinter and relocate the human remains shall be made by the Kaua'i Island Burial Council in concert with the wishes of lineal descendants.

The council is requesting descendants of Alahipa (LCA #11065), Heau (LCA #8127), Heke (LCA #8129), Kaina (LCA #907D), Katimāna (LCA #9128), Kea (LCA #9260), Kekaululu (LCA #9285), Kekoa (LCA #9148), Keoki (LCA #9281), Kikoi (LCA #9840), Kunihihihi (LCA #9262), Kupihea (LCA #9221), Lunahilo, W.C. (LCA #8559-B), Mahina (LCA #10075), Mainui (LCA #10072), Makuakane (LCA #10090), Manaka (LCA #10079), Manewa (LCA #10078), Mauele, I. (LCA #10091), Nāchu (LCA #10434), Nohomalie (LCA #10318), Pepeiaonui (LCA #10596), Pupu (LCA #10647), Sila (LCA #11030), Wahahua (LCA #10958), or families of Hawaiians who once lived in Kalihiwai Ahupua'a, Hanalei District, or who may have knowledge regarding these remains to immediately contact Kalā'au Wahiāni of the State Historic Preservation Division at 808-692-8015 or Debora Driscoll of ACP at 808-638-7442 to present information regarding appropriate treatment of the human remains. Individuals responding must be able to adequately demonstrate a family connection to the burials or the ahupua'a of Kalihiwai. ■

State of Hawaii  
County of Kauai

IN THE MATTER OF

Notice

AFFIDAVIT OF PUBLICATION

STATE OF HAWAII, }  
COUNTY OF KAUAI } ss.

Linda Jordan, being duly sworn, deposes and says, that she is an employee of "The Garden Island," a newspaper published in Lihue, County of Kauai, State of Hawaii; that the NOTICE in the above entitled matter of which the annexed is a true and correct printed copy, was published three times in "The Garden Island" aforesaid, commencing on the 7th day of March, 2001, and ending on the 11th day of March, 2001 (both days inclusive), on the 7, 8, & 11, 2001

this affiant is not a party to or in any way interested in the above entitled matter.

*Linda Jordan*

Subscribed and sworn to before me this 16<sup>th</sup> day of March A.D. 2001

*Howard M. Shimizu*

Notary Public, Fifth Judicial Circuit,  
State of Hawaii

HOWARD M. SHIMIZU NOTARY PUBLIC  
FIFTH JUDICIAL CIRCUIT STATE OF HAWAII  
MY COMMISSION EXPIRES JULY 3, 2003

NOTICE IS HEREBY GIVEN that Archaeological Consultants of the Pacific, Inc. (ACP) represents Mr. F. H. Bothman in an archaeological study of TMK# 05-3-03:14. At least seven unmarked burial sites have been previously identified on these parcels located in Kalihwai Ahupua'a, Hanalei District, Island of Kauai.

Based on archival observations and informant testimony, it is believed that the remains are most likely Hawaiian and proper treatment shall occur in accordance with Chapter 6E of the Hawaii Revised Statutes regarding burial sites. The decision whether to preserve in place or disinter and relocate the human remains shall be made by the Hawaii Island Burial Council in concert with the wishes of the next of kin.

The council is requesting DESCENDANTS of Alahipa (LCA #11065), Ie'au (LCA #8127), Heke (LCA #8129), Kaina (LCA #9071), Kaumana (LCA #9128), Kea (LCA #9260), Kekaululu (LCA #9285), Kekoa (LCA #9148), Keoki (LCA #9281), Kikoi (LCA #9840), Kunihihihi (LCA #9262), Kupihea (LCA #9221), Lunailo, W.C. (LCA #8559-B), Mahina (LCA #10075), Mainui (LCA #10072), Makuakane (LCA #10090), Mahaka (LCA #10079), Manewa (LCA #10078), Mauele, I. (LCA #10091), Naehu (LCA #10434), Nohomalie (LCA #10318), Pepelaonui (LCA #10596), Pupu (LCA #10647), Sila (LCA #11030), Wahahua (LCA #10958), or families of Hawaiians who once lived in Kalihwai Ahupua'a, Hanalei District, or who may have knowledge regarding these remains to immediately contact Ala'au Wahiiani of the State Historic Preservation Division at (808) 92-8015 or Debora Driscoll of ACP at (808) 638-7442 to present information regarding appropriate treatment of the human remains. Individuals responding must be able to adequately demonstrate a family connection to the burials or the ahupua'a of Kalihwai.

March 7, 8, & 11, 2001



# CORRECTION

THE PRECEDING DOCUMENT(S) HAS  
BEEN REPHOTOGRAPHED TO ASSURE  
LEGIBILITY  
SEE FRAME(S)  
IMMEDIATELY FOLLOWING

XEROX COPY WITH NON-REMOVABLE

State of Hawaii  
County of Kauai

IN THE MATTER OF

Notice

AFFIDAVIT OF PUBLICATION

STATE OF HAWAII,  
COUNTY OF KAUAI

ss.

Linda Jordan, being duly sworn,  
deposes and says, that she is an employee of "The Garden  
Island," a newspaper published in Lihue, County of Kauai,  
State of Hawaii; that the NOTICE in the above entitled matter  
of which the annexed is a true and correct printed copy, was  
published three times in "The Garden Island"  
aforesaid, commencing on the 7th day of  
March, 2001, and ending on the 11th  
day of March, 2001 (both days inclusive), on  
the 7, 8, & 11, 2001

NOTICE IS HEREBY GIVEN that Archaeological Consultants of the Pacific, Inc. (ACP) represents Mr. F. J. Bothman in an archaeological study of TMK (05-3-03:14. At least seven unmarked burial sites have been previously identified on these parcels located in Kalihiwai Ahupua'a, Hanalei District, Island of Kauai.

Based on aerial observations and informant testimony, it is believed that the remains are most likely Hawaiian and proper treatment shall occur in accordance with Chapter 6E of the Hawaii Revised Statutes regarding burial sites. The decision whether to preserve in place or disinter and relocate the human remains shall be made by the Hawaii Island Burial Council in concert with the wishes of the real descendants.

The council is requesting DESCENDANTS of Alahipa (LCA #11065), Ie'au (LCA #8127), Heke (LCA #8129), Kaina (LCA #9071), Kaumana (LCA #9128), Kea (LCA #9260), Kekauilulu (LCA #9285), O'koa (LCA #9148), Keoki (LCA #9281), Kikoi (LCA #9840), Sunihinihi (LCA #9262), Kupihea (LCA #9221), Lunaililo, W.C. (LCA #8559-B), Mahina (LCA #10075), Mainui (LCA #10072), Makuakane (LCA #10090), Mahaka (LCA #10079), Manewa (LCA #10078), Mauele, I. (LCA #10091), Na'ahu (LCA #10434), Nohomalie (LCA #10318), Pepelaonui (LCA #10596), Pupu (LCA #10647), Sii'a (LCA #11030), Wahahua (LCA #10958), or families of Hawaiians who once lived in Kalihiwai Ahupua'a, Hanalei District, or who may have knowledge regarding these remains to immediately contact Jala'au Wahlani of the State Historic Preservation Division at (808) 92-8015 or Debora Driscoll of ACP at (808) 638-7442 to present information regarding appropriate treatment of the human remains. Individuals responding must be able to adequately demonstrate a family connection to the burials or the ahupua'a of Kalihiwai.

March 7, 8, & 11, 2001)

this affiant is not a party to or in any way interested in the above entitled matter.

Linda Jordan

Subscribed and sworn to before me this  
16th day of March A.D. 2001

Howard M. Shiner  
Notary Public, Fifth Judicial Circuit,  
State of Hawaii

HOWARD M. SHINER NOTARY PUBLIC  
FIFTH JUDICIAL CIRCUIT STATE OF HAWAII  
MY COMMISSION EXPIRES JULY 3, 2003

DOCUMENT OF A...

IN THE MATTER OF

EMERGENCY NOTICE

**BURIAL NOTICE**  
 NOTICE IS HEREBY GIVEN that Archaeological Consultants of the Pacific, Inc. (ACP) represents Mr. Robert Bothman in an archaeological study of TMK: 05-3-03:14. At least seven unmarked burial sites have been previously identified on these parcels located in Kalihwai Ahupua'a, Hanalei District, Island of Kauai. Based on stylistic observations and informant testimony, it is believed that the remains are most likely Hawaiian and proper treatment shall occur in accordance with Chapter 6E of the Hawaii Revised Statutes regarding burial sites. The decision whether to preserve in place or disinter and relocate the human remains shall be made by the Hawaii Island Burial Council in concert with the wishes of lineal descendants.

The council is requesting DESCENDANTS of Aialapa (LCA #11065), Heau (LCA #8127), Heke (LCA #8129), Kalua (LCA #9071), Kawana (LCA #9128), Kea (LCA #9260), Kekaula (LCA #9285), Kekoa (LCA #9148), Keoni (LCA #9281), Kikoi (LCA #9840), Kuahihahi (LCA #9262), Kuphea (LCA #9221), Lunaillo, W.C. (LCA #8559-B), Mahina (LCA #10075), Maluul (LCA #10072), Makuakane (LCA #10090), Manaka (LCA #10079), Manewa (LCA #10078), Manele, L. (LCA #10093), Naehe (LCA #10434), Nohomale (LCA #10318), Pelelonui (LCA #10596), Pupu (LCA #10647), Sila (LCA #11030), Wahahu (LCA #10958), or families of Hawaiians who once lived in Kalihwai Ahupua'a, Hanalei District, or who may have knowledge regarding these remains to immediately contact Kala'au Wahilani of the State Historic Preservation Division at (808) 692-8015 or Debora Driscoll of ACP at (808) 638-7442 to present information regarding appropriate treatment of the human remains. Individuals responding must be able to adequately demonstrate a family connection to the burials or the ahupua'a of Kalihwai.

(Hon. Adv. Mar. 11, 2001) (A-977629)

AFFIDAVIT OF PUBLICATION

STATE OF HAWAII  
City and County of Honolulu

SS.

Valerie L Yanagihara *being duly sworn,*

deposes and says that she is a clerk, duly authorized to execute this affidavit of the HAWAII NEWSPAPER AGENCY LIMITED PARTNERSHIP, a partnership of GANNETT PACIFIC CORPORATION, publisher of the HONOLULU ADVERTISER, and LIBERTY NEWSPAPERS LIMITED PARTNERSHIP, publisher of the HONOLULU STAR-BULLETIN, that said newspapers are newspapers of general circulation in the state of Hawaii, and that the attached notice is a true notice as was published in the aforereferenced newspapers as follows:

The Honolulu Advertiser: \_\_\_\_\_ times, on \_\_\_\_\_

Honolulu Star-Bulletin: \_\_\_\_\_ times, on \_\_\_\_\_

Sunday edition of The Honolulu Advertiser: one times, on March 11, 2001

and that affiant is not a party to or in any way interested in the above entitled matter.

*[Signature]*

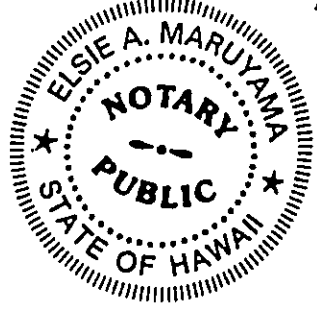
Subscribed and sworn to before me this 11th day of March A.D. 20 01

*[Signature]*

ELSIE A. MARUYAMA

Notary Public of the First Judicial Circuit  
State of Hawaii  
My commission expires

March 7, 2004



IN THE MATTER OF

BURIAL NOTICE

BURIAL NOTICE NOTICE IS HEREBY GIVEN that Archaeological Consultants of the Pacific, Inc., (ACP) represents Mr. Robert Bothman in an archaeological study of TMK: 05-3-03:14. At least seven unmarked burial sites have been previously identified on these parcels located in Kalihiwai Ahupua'a, Hanalei District, Island of Kauai. Based on stylistic observations and informant testimony, it is believed that the remains are most likely Hawaiian and proper treatment shall occur in accordance with Chapter 6E of the Hawaii Revised Statutes regarding burial sites. The decision whether to preserve in place or disinter and relocate the human remains shall be made by the Hawaii Island Burial Council in concert with the wishes of lineal descendants.

The council is requesting DESCENDANTS of Alahipa (LCA #11065), Heau (LCA #8127), Heke (LCA #8129), Kaina (LCA #9071), Kaumana (LCA #9128), Kea (LCA #9260), Kekaululu (LCA #9285), Kekoa (LCA #9148), Keoki (LCA #9281), Kikoi (LCA #9840), Kuhihialhi (LCA #9262), Kupihea (LCA #9221), Lunalilo, W.C. (LCA #8559-B), Mahina (LCA #10075), Maluul (LCA #10072), Makunakane (LCA #10090), Manaka (LCA #10079), Manewa (LCA #10078), Masele, I. (LCA #10091), Naehe (LCA #10434), Nohomalle (LCA #10318), Pepeiaonui (LCA #10596), Pupu (LCA #10647), Sili (LCA #11030), Wabahu (LCA #10958), or families of Hawaiians who once lived in Kalihiwai Ahupua'a, Hanalei District, or who may have knowledge regarding these remains to immediately contact Kala'au Wahilani of the State Historic Preservation Division at (808) 692-8015 or Debora Driscoll of ACP at (808) 638-7442 to present information regarding appropriate treatment of the human remains. Individuals responding must be able to adequately demonstrate a family connection to the burials or the ahupua'a of Kalihiwai.

(Hon. Adv.: Mar. 7, 8, 2001) (A-977400)

BURIAL NOTICE NOTICE IS HEREBY GIVEN that Archaeological Consultants of the Pacific, Inc., (ACP) represents Mr. Robert Bothman in an archaeological study of TMK: 05-3-03:14. At least seven unmarked burial sites have been previously identified on these parcels located in Kalihiwai Ahupua'a, Hanalei District, Island of Kauai.

Based on stylistic observations and informant testimony, it is believed that the remains are most likely Hawaiian and proper treatment shall occur in accordance with Chapter 6E of the Hawaii Revised Statutes regarding burial sites. The decision whether to preserve in place or disinter and relocate the human remains shall be made by the Hawaii Island Burial Council in concert with the wishes of lineal descendants.

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(Hon. S.-B.: Mar. 7, 8, 2001) (SB-977609)

AFFIDAVIT OF PUBLICATION

STATE OF HAWAII City and County of Honolulu

SS.

Valerie L Yanagihara being duly sworn,

deposes and says that she is a clerk, duly authorized to execute this affidavit of the HAWAII NEWSPAPER AGENCY LIMITED PARTNERSHIP, a partnership of GANNETT PACIFIC CORPORATION, publisher of the HONOLULU ADVERTISER, and LIBERTY NEWSPAPERS LIMITED PARTNERSHIP, publisher of the HONOLULU STAR-BULLETIN, that said newspapers are newspapers of general circulation in the state of Hawaii, and that the attached notice is a true notice as was published in the aforereferenced newspapers as follows:

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Sunday edition of The Honolulu Advertiser: times, on

and that affiant is not a party to or in any way interested in the above entitled matter.

[Handwritten signature]

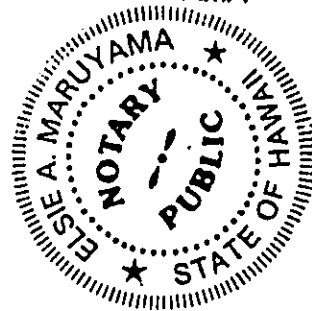
Subscribed and sworn to before me this 8th day of March A.D. 20 01

Elsie A. Maruyama

ELSIE A. MARUYAMA

Notary Public of the First Judicial Circuit State of Hawaii My commission expires

March 7, 2004



**Appendix B: SHPD-DLNR Correspondence**

BENJAMIN J. CAYETANO  
GOVERNOR OF HAWAII



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

DEPUTIES  
JANET E. KAWELO  
LINNEL NISHIOKA

STATE OF HAWAII

DEPARTMENT OF LAND AND NATURAL RESOURCES

HISTORIC PRESERVATION DIVISION  
Kakuhihewa Building, Room 555  
601 Kamokila Boulevard  
Kapolei, Hawaii 98707

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

March 27, 2001

Ms. Michelle Elmore  
ACP, Inc.  
59-624 Pupukea Road  
Haleiwa, Hawaii 96712

LOG NO: 26985 ✓  
DOC NO: 0102NM03

Dear Ms. Elmore:

**SUBJECT: Historic Preservation Review -- Revised Inventory Survey Report  
(Bothman), Kahiliwai, Hanalei, Kauai  
TMK: 5-3-03: 14**

---

Thank you for sending us this revised report (Elmore and Kennedy 2001. An Archaeological Inventory Survey Report for a Property Located at TMK: 5-3-03: 14 ... ACP ms). The revisions were made in response to our review letter of November 15, 2000.

The background section of this report is now acceptable. It indicates that the parcel was likely a houselot in the 1840s.

We now believe that the project area has been adequately surveyed, finding 1 historic site [671] - a subsurface habitation site with associated burials, which covers the entire parcel. Six burials were found, and it is quite likely that more are present in the parcel. The report now adequately describes and interprets the site. It is clear that the site has been extensively disturbed by modern activities, leaving only remnants of deposits and burials or damaged burials. Most of the burials are currently clustered near the center of the parcel, but that may be because that is where the major test trench was placed.

We agree that the site is significant for its information content and the burial features for their cultural significance. We agree that the habitation deposits is largely disturbed and seems to be "no longer significant" by-in-large, now that your firm has recorded the basic significant information on these deposits. Thus, the burials are the significant features of this site surviving today.

Your client will need to go before the Kaua'i/Ni'i'hau Islands Burial Council with a burial treatment proposal (and plan). Please contact our Burials Program staff for the information that the Council needs and to be placed on the agenda. You or your client can check with Kana'i Kapeliela, at 692-8037 to coordinate this process.

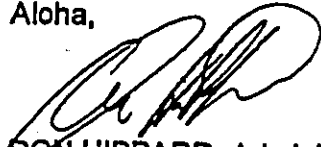
M. Elmore

2

We agree that construction activities will need to be monitored by a professional archaeologists in case additional burials are found. A brief monitoring plan (scopes of work) would need to be prepared for this work, and the burial treatment plan should also address treatment for any such burial finds.

If you have any questions, please call Nancy McMahon 742-7033.

Aloha,



DON HIBBARD, Administrator  
State Historic Preservation Division

NM:amk

c. KIBC



## ARCHAEOLOGICAL CONSULTANTS OF THE PACIFIC, INC.

JOSEPH KENNEDY  
Principal Archaeologist

December 9, 2002

Kana'i Kapeliela, Burial Specialist  
Department of Land and Natural Resources  
State Historic Preservation Division  
Kakuhihewa Building Room 555  
601 Kamokila Boulevard  
Kapolei, Hawai'i 96706

Dear Kana'i:

Please find enclosed a copy of our document entitled "Summary of the Treatment of Burials at Site 671 Located at TMK: 5-3-03:14 in Kalihiwai Ahupua'a, Hanalei District, Island of Kaua'i." We would like to thank you in advance for your consideration of this document. Please feel free to contact us if you have any questions.

Sincerely,

Michelle Elmore  
Archaeological Supervisor

cc: Mr. Robert Bothman  
Mr. Ben Welborn

---

59-624 Pupukea Road • Haleiwa, Hawaii 96712  
Telephone: (808) 638-7442 • Fax: (808) 638-0703  
E-mail: ArchaeologyPacific@mail.com or Kennedy@lava.net

Inventory Surveys • Data Recovery Studies • Monitoring • Burial Treatment Plans • Historical Studies  
Qualified Expert Witness Testimony • Preservation Plans • NAGPRA Studies • Traditional Cultural Property Studies



**SUMMARY OF THE TREATMENT OF BURIALS  
AT SITE 671 LOCATED AT TMK: 5-3-03:14  
IN KALIHUAI AHUPUA'A, HANAIEI DISTRICT,  
ISLAND OF KAUA'I  
DECEMBER 2002**

**Prepared for: Mr. Robert Bothman  
650 Quinn Ave.  
San Jose, CA. 95112**

**Prepared by: Archaeological Consultants of the Pacific, Inc.  
Michelle Elmore, B.A.  
Allan Cobb, B.S.  
Joseph Kennedy, M.A.  
59-624 Pupukea Road  
Haleiwa, Hawaii 96712**



**Inventory Reports • Data Recovery Reports • Research Design Documents • Monitoring • Due  
Diligence Work • Historical Studies • Cultural Studies • Burial Treatment Plans • Preservation  
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59-624 Pupukea Road Haleiwa, Hawaii 96712 Phone: 638-7442/Fax: 638-0703  
email: [archaeologypacific@hawaii.rr.com](mailto:archaeologypacific@hawaii.rr.com)**

## **Abstract**

The following report has been prepared concerning the treatment of burials previously identified and inadvertently discovered at Site 50-30-03-671 in Kalihiwai Ahupua'a, TMK: 5-3-03:14. During an Archaeological Inventory Survey in 2000, human remains were encountered. A Burial Treatment Plan was approved by the Kaua'i/Ni'ihau Island Burial Council which called for the relocation of those remains to a reinterment location on the same property. During the disinterment of those burials in June 2002, additional burials were inadvertently discovered. Upon direction from the Department of Land and Natural Resources-Burials Program, disinterment of all previously identified and inadvertently discovered burials was completed in October 2002.

All human remains were disinterred by Archaeological Consultant of the Pacific, Inc. (ACP) in accordance with the Department of Land and Natural Resources policies. These investigations have documented eight burial features at Site 671 including twelve individuals. Three of the individuals are presumed to date to the pre-Contact era, based upon the traditional styles of interment and lack of associated historic materials (i.e. coffin hardware, buttons, etc.). The remaining nine individuals date to the post-Contact period. Two of the post-Contact burial features contained more than one individual.

Reinterment will be coordinated between the Kaua'i/Ni'ihau Island Burial Council and the landowner, Mr. Robert Bothman.

## Table of Contents

Abstract .....	i
Section 1: Introduction and Summary of Previous Archaeological Investigations .....	1
Section 2: Environmental Setting.....	8
Section 3: Methodology and Proposed Preservation .....	8
Section 4: Summary of Findings During Disinterment.....	9
Section 5: Discussion .....	25
Conclusion.....	27
References Cited .....	28
Appendix A: Artifacts .....	A1

## List of Illustrations

Figure 1: Project Location on a Map of Kaua'i .....	2
Figure 2: Location of the Subject Property on a U.S.G.S. Map.....	3
Figure 3: Location of the Subject Property on a TMK Map .....	4
Figure 4: Top Plan of Inventory Survey Excavations.....	5
Figure 5: Top Plan of Burial Features and Reinterment Site .....	7
Figure 6: Plan View of Feature 671:A .....	11
Figure 7: Plan View of Feature 671:B .....	13
Figure 8: Plan View of Feature 671:C .....	15
Figure 9: Gin Bottle of Type Found in Association with Feature 671:C-3.....	16
Figure 10: Plan View of Feature 671:E.....	18
Figure 11: Plan View of Feature 671:F.....	20
Figure 12: Plan View of Feature 671:G .....	21
Figure 13: Plan View of Feature 671:H.....	23
Figure 14: Plan View of Feature 671:I.....	24
Figure 15: Kalihiwai Circa 1892.....	26

## List of Tables

Table 1: Summary of Archaeological Work .....	6
Table 2: Summary of Burial Features at Site 671 .....	10
Table 3: Inventory of Artifacts Found in Association with Burials.....	A1

# **Summary of the Treatment of Burials at Site 671 Located at TMK: 5-3-03:14 in Kalihiwai Ahupua‘a, Hanalei District, Island of Kaua‘i**

## **Section 1: Introduction and Summary of Previous Archaeological Investigations**

The following report is a summary of the treatment of burials at TMK: 5-3-03:14 in Kalihiwai Ahupua‘a, Hanalei District, Kaua‘i Island (see Figures 1, 2 and 3). Previously identified and inadvertently discovered burials were disinterred, which are planned to be relocated at a reinterment site in the north corner of the subject property as specified in the Burial Treatment Plan (Kennedy 2002).

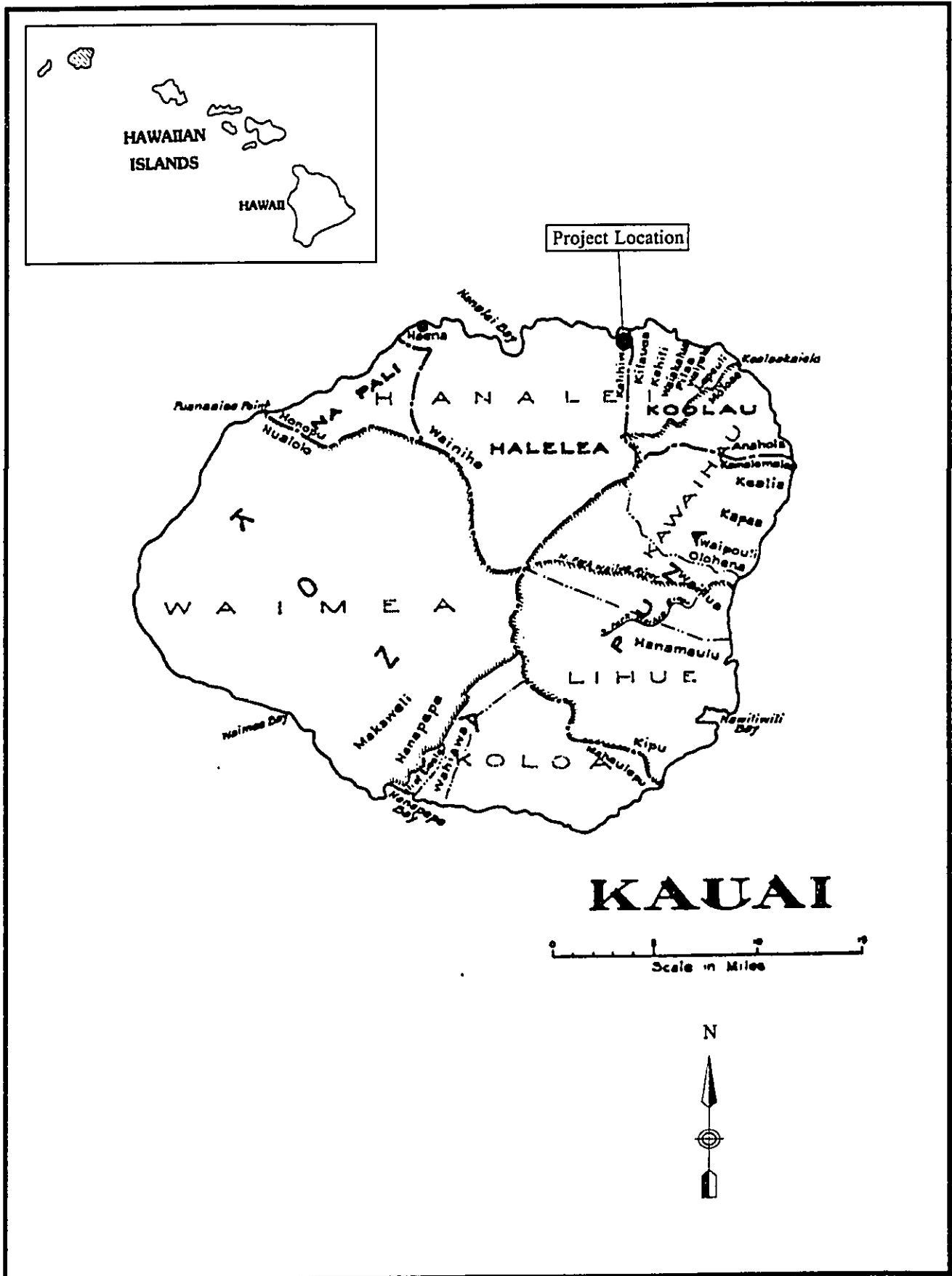
Initial archaeological investigations by ACP occurred on March 21<sup>st</sup>, 2000 during the first phase of an Archaeological Inventory Survey. Five trenches were mechanically excavated (see Figure 4). One site of significance to the interests of historic preservation was identified on the subject property, a habitation site, designated State Site number 50-30-03-671, with cultural deposits including both pre- and post-Contact components. Five burials (Features 671:A, B, C-2, D and E) were encountered at that time (Elmore and Kennedy 2001).

A second phase of Archaeological Inventory Survey testing was conducted July 11<sup>th</sup> through 16<sup>th</sup>, 2000 by ACP in order to determine the horizontal extent of burial features across the subject property. Thirty hand-dug shovel test pits (STP) were excavated within the portion of the parcel planned for construction, covering the majority of the parcel (see Figure 4). This second phase of testing identified one additional burial, Feature 671:F (ibid).

Archaeological Inventory Survey investigations determined that Site 671 was significant for its information content as well as having cultural significance. ACP recommended that a determination be made that future construction activities would have an “adverse effect” on significant historic properties under the Advisory Council Regulations, 36 CFR 800. In order to help mitigate the effects of proposed development, the appropriate treatment of the burials identified during Inventory Survey was required.

The landowner, Mr. Robert Bothman, requested that the individuals be consolidated into a single location in the north corner of the subject property where they would be secure and away from any potential further disturbances. Details of the recommendations for burial treatment were set forth in a Burial Treatment Plan (Kennedy 2002) approved by the Kaua‘i/Ni‘ihau Burial Council.

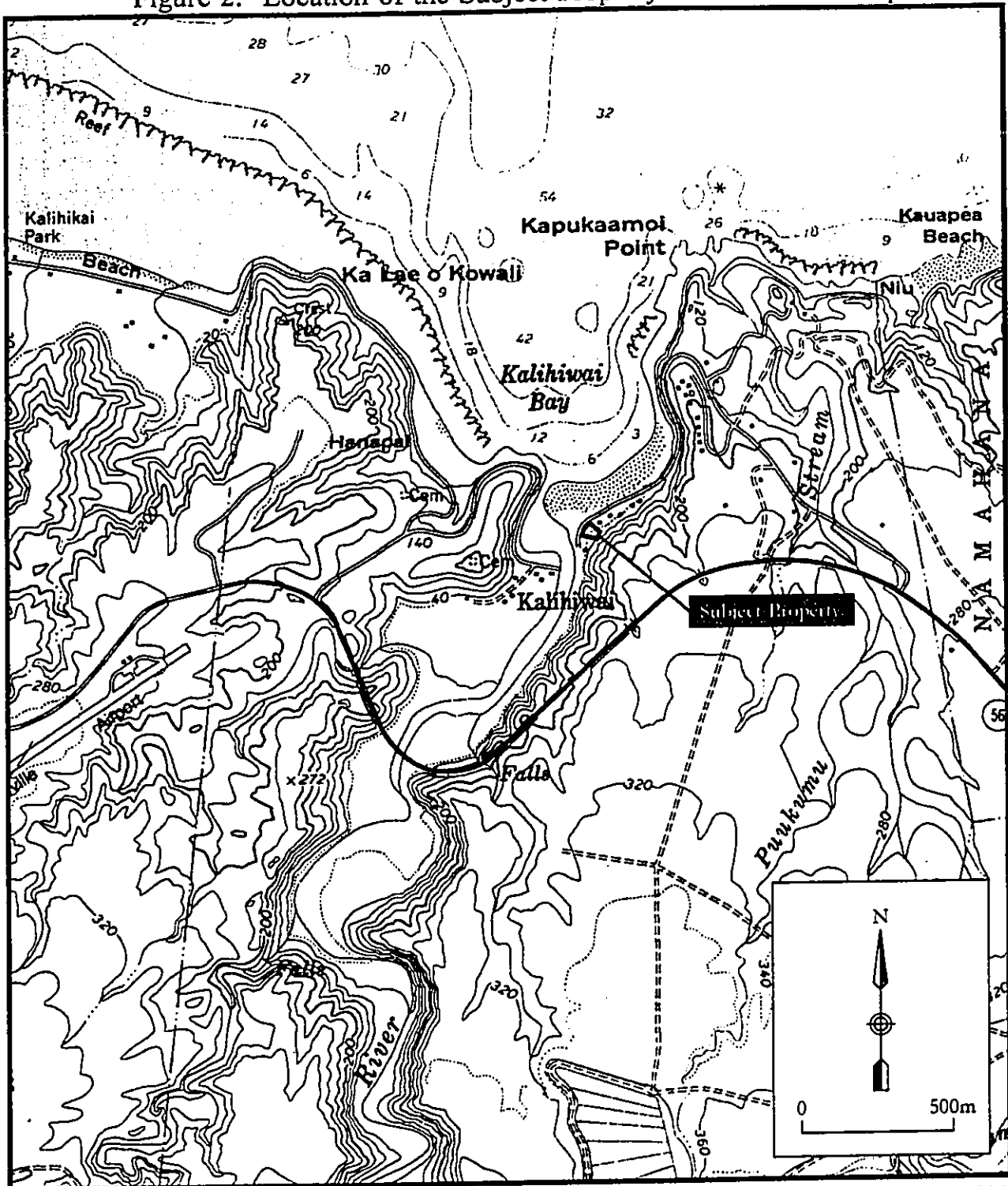
Figure 1: Project Location on a Map of Kauai



Kalihiwai TMK: 5-3-03: 14

Source: Spriggs and Tanaka 1988:xiv

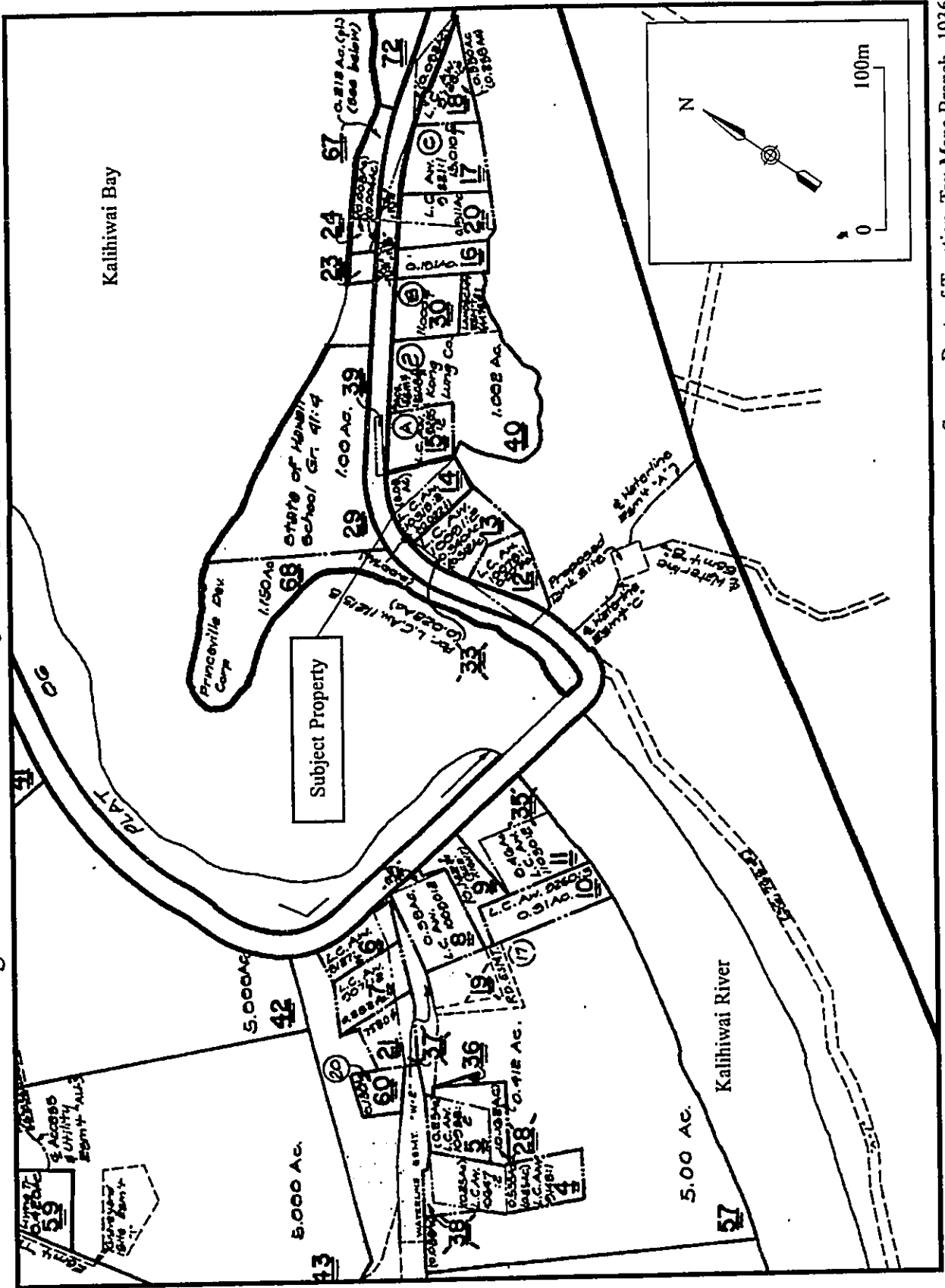
Figure 2: Location of the Subject Property on a U.S.G.S. Map



Kalihiwai TMK: 5-3-03:14

Source: U.S.G.S. 7.5 Minute Series (Topographic)  
Hanalei Quadrangle 1983

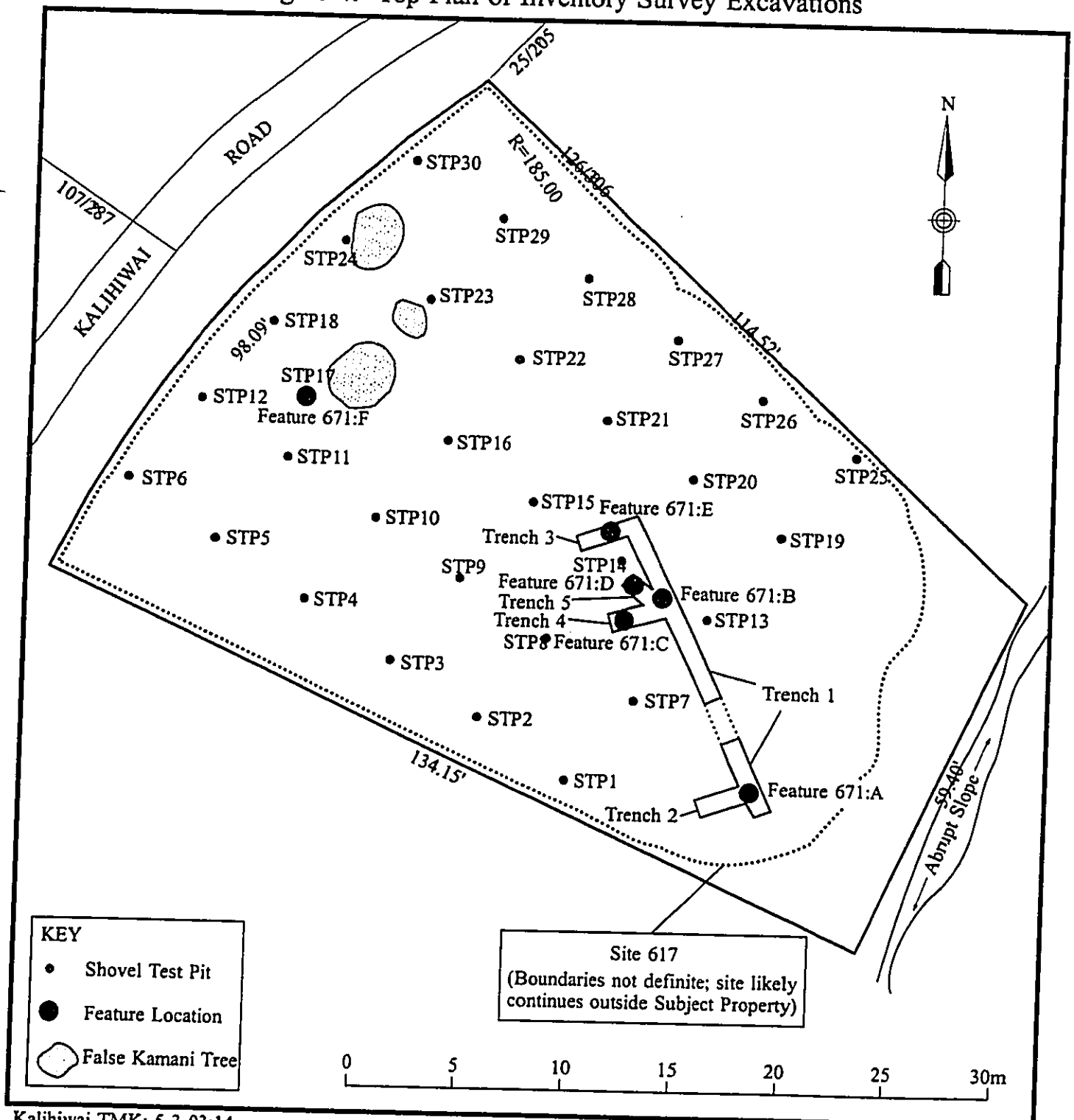
Figure 3: Location of the Subject Property on a TMK Map



Kalihiwai TMK: 5-3-03:14

Source: Dept. of Taxation, Tax Maps Branch 1936

Figure 4: Top Plan of Inventory Survey Excavations



Kalihiwai TMK: 5-3-03:14

Source: Wagner Engineering Services, Inc. 2001



Disinterment (Phase I) of the above previously identified burials began in June 2002. Six additional individuals (Features 671:C-1, C-3, C-4, G and H-1 and H-2) were inadvertently discovered on the property during the disinterment of previously identified individuals (see Figure 5). Two previously identified individuals (Features 671:A and C-2) and four inadvertently discovered individuals (Features 671: C-1, C-3, C-4 and G) were disinterred at that time. It was also determined at that time that Feature 671:D was in fact the same individual as Feature 671:B. Two burial features contained more than one individual (Features 671:C and H).

Eight of the previously identified and inadvertently discovered individuals (Features 671:B, C-1, C-2, C-3, C-4, G, H-1 and H-2) were clustered within a small area towards the center of the property and dated to the post-Contact period (see Figure 5). The DLNR-BP requested additional testing around these features in order to better determine the horizontal extent of what appeared to represent a cemetery. In October 2002, an 8m x 8m area was excavated surrounding these features. One additional individual, Feature 671:I, was inadvertently discovered. Subsequently it was determined by the DLNR-BP that all remaining previously identified and inadvertently discovered individuals may be disinterred.

Disinterment (Phase II) of all remaining individuals (Features 671:B, E, F, H-1, H-2 and I) was completed in October 2002.

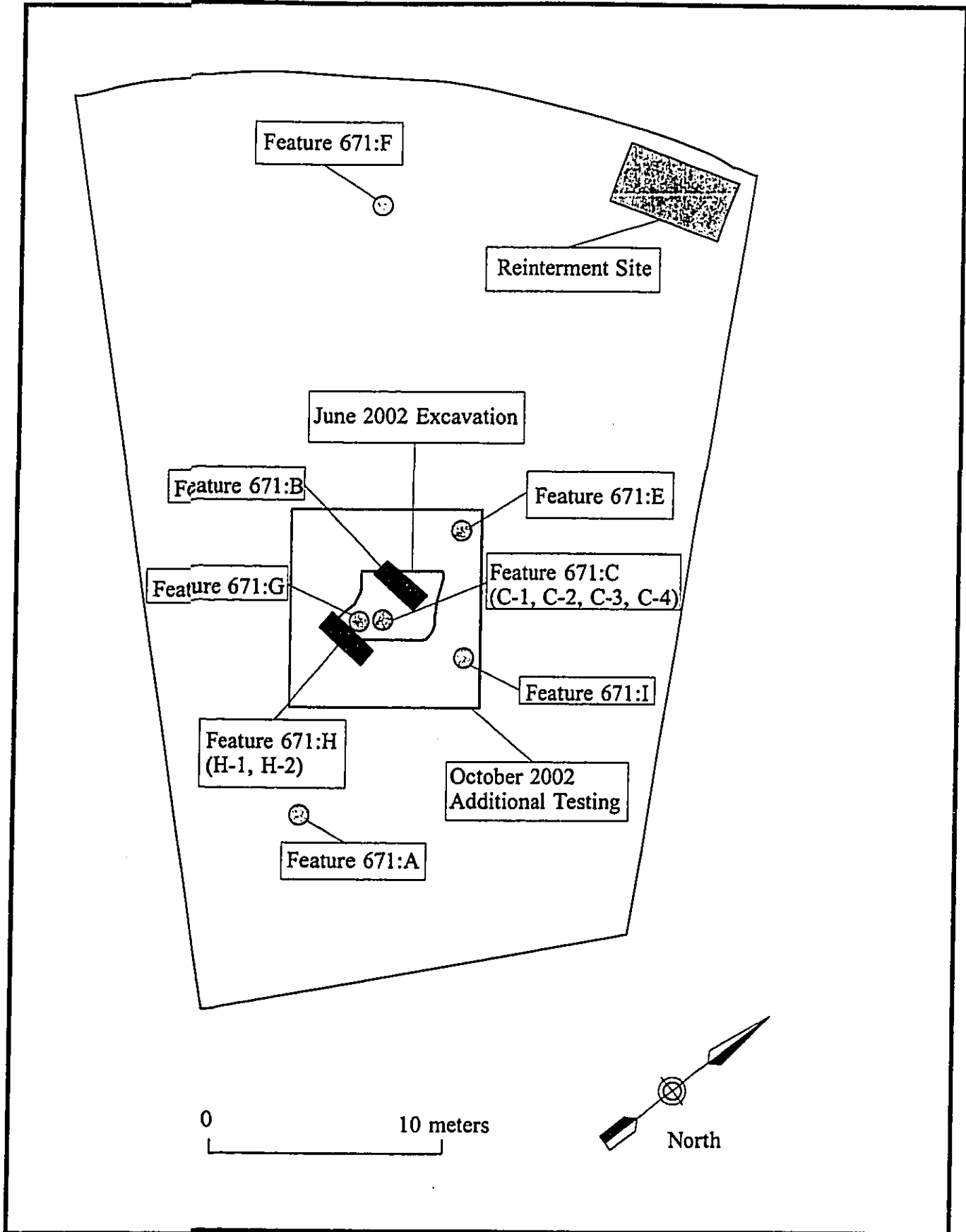
In summary, five previously identified individuals and seven inadvertently discovered individuals were found on the subject property during Archaeological Inventory Survey, testing and disinterment. All burials were disinterred and will be relocated in the north corner of the subject property.

**Table 1: Summary of Archaeological Work**

Phase of Work	Date	Burial Features Encountered
Inventory Survey (Phase I)	March 2000	671:A
		671:B
		671:C-2
		671:D*
		671:E
Inventory Survey (Phase II)	July 2000	671:F
Disinterment (Phase I)	June 2002	671:C-1
		671:C-3
		671:C-4
		671:G
		671:H-1
		671:H-2
Additional Testing	October 2002	671:I
Disinterment (Phase II)	October 2002	N/A

\*Determined to be the same individual as Feature 671:B

Figure 5: Top Plan of Burial Features and Reinterment Site



## Section 2: Environmental Setting

The subject property (TMK: 5-3-03:14) is located in the *ahupua'a* of Kalihiwai, current district of Hanalei, Island of Kaua'i. The project area is located at geographic grid coordinates 159° 25' 50"W by 22° 13' 10"N and UTM (Universal Transverse Mercator) coordinates 2457050mN by 454800mE (see Figure 2). The property is bordered by Kalihiwai Road along its northwestern border, a lot with a private residence to the northeast, a steep hillside to the southeast and an empty lot to the southwest (see Figure 3).

The current subject property is comprised of one parcel located on a coastal plain, approximately 60m from the ocean. The dimensions of Parcel 14 are roughly 23 x 30 x 34 x 43m encompassing an area of approximately 0.37 acres. The property is mostly level with a slight rise toward the eastern end of the property. Vegetation on the parcel consists of various grasses and weeds as well as a few coconut palms (*Cocos nucifera*), Tropical Almond trees (False Kamani, *Terminalia catappa*), a Java Plum tree (*Eugenia cuminii*), Heleconia (*Heleconia* sp.) and banana plants (*Musa* sp.) along the edges of the property.

Average annual rainfall ranges between 50 and 75 inches (Armstrong 1973). Foote *et al.* (1972) describe the soils in the area as beaches (BS). These soils consist "...mainly of light colored sands derived from coral and seashells" (Foote *et al.* 1972). The current investigations by ACP found that the soil on the property consists of soils similar to those described by Foote *et al.*, however an A-horizon consisting dark grayish brown sandy loam is present above light colored sand.

## Section 3: Methodology and Proposed Preservation

The archaeological treatment of the burials was under the supervision of the Principal Investigator, Joseph Kennedy, M.A.. Fieldwork was conducted in June and October of 2002. Fieldwork (Disinterment Phase I) was conducted by Field Supervisor Michelle Elmore, B.A., who was assisted by Allan Cobb, B.S. and Michael O'Shaughnessy, B.A. on June 3-15, 2002. Additional Testing and Disinterment Phase II was completed by Field Supervisor Allan Cobb, B.S., who was assisted by Patrick Sarvak, B.A. on October 7-10, and 11-18, 2002.

The present landowner, Mr. Bothman, respectfully requested that the scattered individuals be consolidated into a single, appropriate location on the subject property where they would be secure and away from any potential further disturbances. The landowner suggested a plot located in the north corner of the property (see Figure 5). This area has been archaeologically determined to be one that has been disturbed in the past so there would be little likelihood of disturbing any additional burials during its construction. This plot will measure 16 feet (ft) long by 8ft wide by 5.5ft deep. The sides of this excavated area shall be lined with concrete. The bottom of the excavated area will remain unlined to allow for natural decomposition of the remains. After the remains are transferred, a concrete top or cap shall be placed over the excavated area. This cap will be designed to be removable. In the event that

inadvertent burials are discovered at some future time, a removable top would allow these remains to be reinterred in the same, secure area. The concrete surrounding the burial area shall act as the buffer in this case. The area above the burial area shall then be landscaped. Any disturbance to this area, either above or below ground, shall be prohibited.

Disinterment of the burials was in accordance with standard archaeological procedures. Each burial feature was excavated by hand and all soils sifted through one-eighth inch screen to ensure the retrieval of one hundred percent of the remains as well as any associated burial items. Plan views and profiles of each burial feature were drawn to scale. The human remains and any associated artifacts were placed within labeled cardboard boxes and stored at Kilauea Mini Storage. The Kaua'i/Ni'ihau Burial Council will be responsible for reinterment.

The reinterment shall take place under the supervision of a *Kahu* and with the assistance of any verified lineal descendant and/or member of the Kaua'i/Ni'ihau Burial Council. Methods of reinterment include facsimile coffins (for those who were buried in coffins) and *kapa* and baskets (for the remaining burials).

The burial vault will be a landscaped unmarked plot. The location of the burial vault will, of course, be mapped and the location identified on a map that will be in the possession of the State of Hawaii Department of Land and Natural Resources, Historic Preservation Division. A copy of this map shall follow with the Covenant Conditions and Restrictions attached to the deed of this property.

## **Section 4: Summary of Findings During Disinterment**

In summary, the subject property contained numerous burials, some of which contained more than one individual. All individuals were disinterred during the current project (Disinterment Phases I and II). These included a total of 8 burials comprised of 12 individuals (3 pre-Contact burials containing 3 individuals; 5 post-Contact burials containing 9 individuals)(see Figure 5 and refer to Table 2). The individuals represent a variety of ages and include both males and females. Detailed descriptions of each of each individual are included below along with plan views and profiles. Refer to the profiles for soil descriptions. All artifacts are described in detail in Appendix A.

### ***Feature 671:A***

Feature 671:A was previously identified during the first phase of Inventory Survey investigations at the southeastern end of Trench 1. A burial pit with human remains representing one adult male were encountered immediately below a concrete foundation within Layer II. The remains were found to extend into the southwestern face of the trench. A small trench (Trench 2) was expanded to the southwest to expose the remainder of the burial. All but the cranial portion of the individual was exposed at that time.

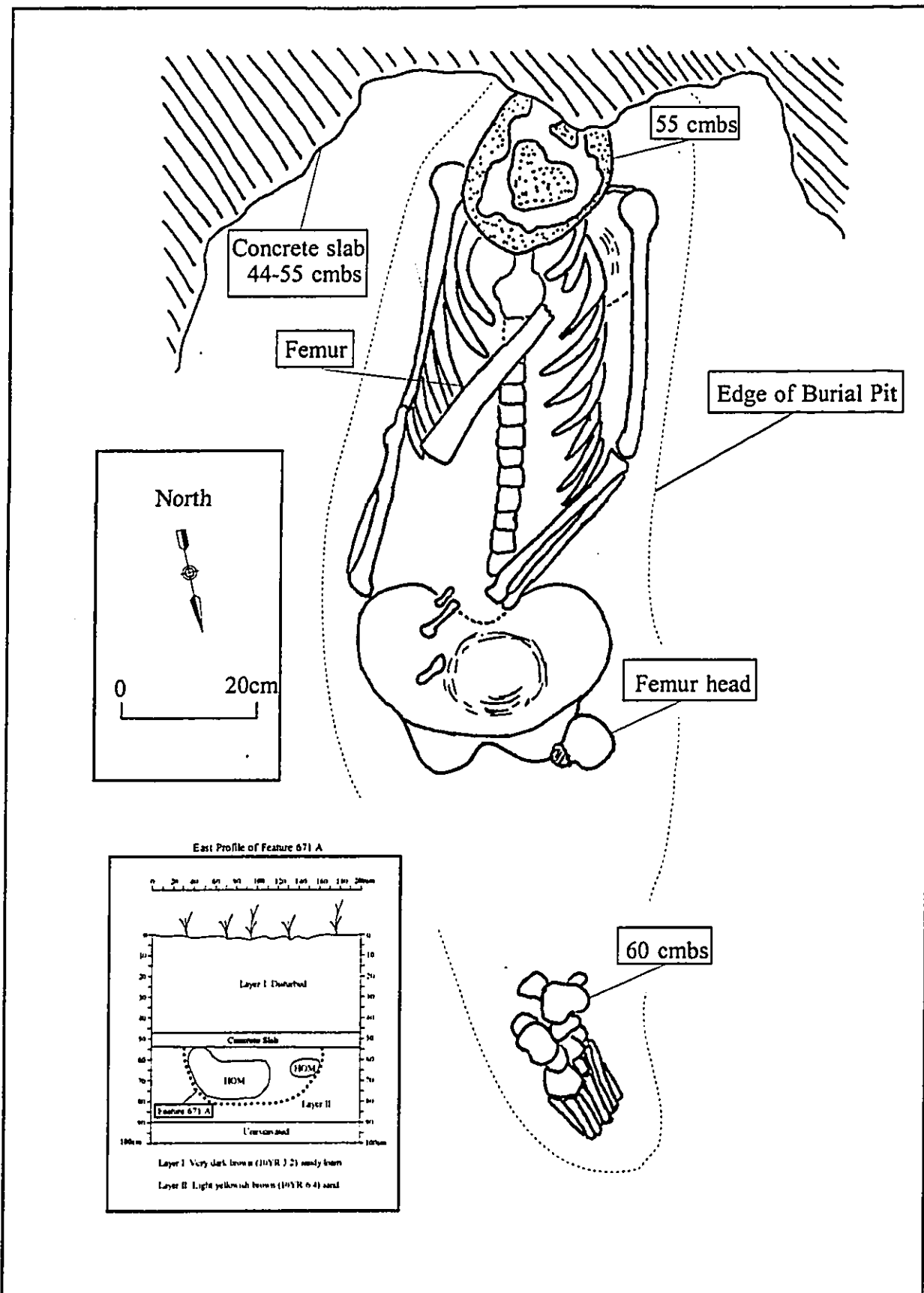
**Table 2: Summary of Burial Features at Site 671**

Feature	Time Period	Nature of Discovery	Age Determination	Gender	Comments
671:A	pre-Contact	Previously Identified	adult	male	small stature; semi-flexed; legs previously disturbed
671:B	post-Contact	Previously Identified	adult	indeterminate	individual in extended position inside coffin; button, basalt adze and a metal can associated with individual; previously disturbed (coffin lid missing)
671:C-1	post-Contact	Inadvertent Discovery	elderly	female	significant calcium loss throughout body, very arthritic; tightly flexed; in same pit with Features 671: C-2, C-3 and C-4
671:C-2	post-Contact	Previously Identified	adult	male	tightly flexed; previously disturbed; in same pit with Features 671:C-1, C-3 and C-4
671:C-3	post-Contact	Inadvertent Discovery	adult	female	glass bottle, scissors and shell buttons associated with individual; tightly flexed; previously disturbed; in same pit with Features 671:C-1, C-2 and C-4
671:C-4	post-Contact	Inadvertent Discovery	adult	male	octopus lure and bone handled knife associated with this individual; tightly flexed; in same pit with Features 671:C-1, C-2 and C-3
671:D*	NA	NA	NA	NA	NA
671:E	post-Contact	Previously Identified	adult	indeterminate	extended position; shell and metal buttons
671:F	pre-Contact	Previously Identified	adult	indeterminate	disarticulated remains; cranium and longbones missing
671:G	post-Contact	Inadvertent Discovery	adult	male	glass button associated with this individual; tightly flexed
671:H-1	post-Contact	Inadvertent Discovery	adult	female	small stature suggests the individual may be female; individual in extended position in coffin; hair comb, bead and metal rivets associated with individual; smaller coffin containing individual of Feature 671:H-2 is located within this feature
671:H-2	post-Contact	Inadvertent Discovery	child, approx. 4-5 years old	unknown	individual in extended position in small coffin (inside Feature 671:H-1 larger coffin); metal safety pin associated with individual
671:I	pre-Contact	Inadvertent Discovery	adult	male	tightly flexed; positioned face downward

\*Determined to be the same individual as Feature 671:B

Feature 671:A was re-identified and disinterred during Phase I of the current project. The burial pit was diffuse, measuring roughly 40cm by 120cm in diameter and was present from 50-80cmbs immediately below the base of the concrete slab and extending into Layer II. Osteological materials were present from 55-80cmbs spanning an area of 118cm x 32cm (see Figure 6). The feet and upper body were articulated. However, other portions of the body were previously disturbed. One previously broken femur was placed atop the upper body, and the remainder of the legs were scattered loose in the soil or missing. The hands were in disarray, and found scattered loose in the soil. The top of the cranium has also suffered prior disturbance.

Figure 6: Plan View of Feature 671:A



Kalihiwai TMK: 5-3-03:14

Source: Archaeological Consultants of the Pacific 2002

These disturbances likely occurred during the installation of the concrete slab located directly above the individual. The individual appeared to have been placed in a semi-flexed position, with the knees bent upwards and the head bent forward. No cultural materials were found in direct association with the remains, although midden remains including fish bones, shell and basalt flakes were found scattered within the burial fill. These items were not collected.

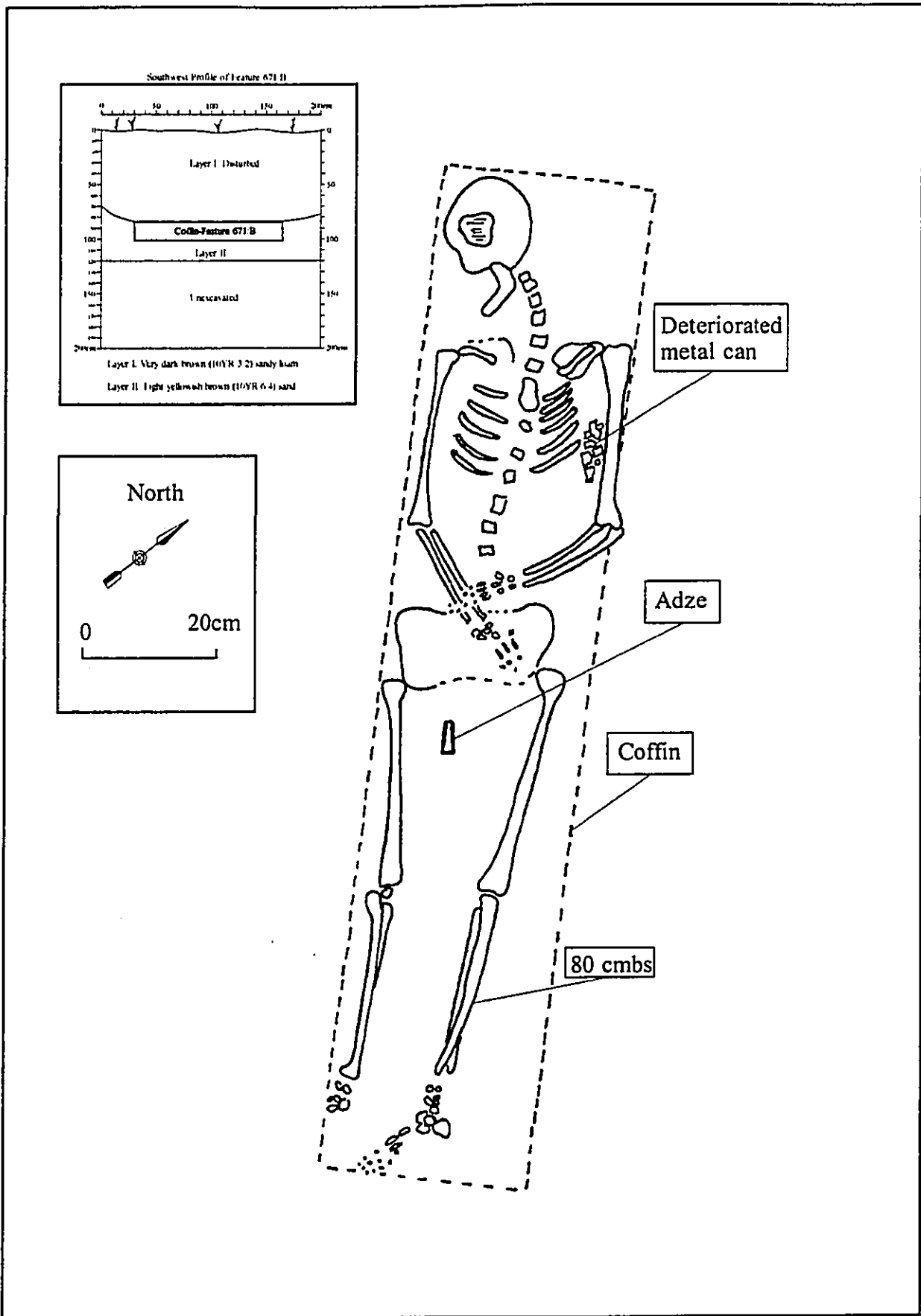
The traditional style of interment in a flexed position and the lack of post-Contact materials (such as coffin hardware and buttons) indicate that the individual was likely of Hawaiian ethnicity and interred during the pre-Contact period.

### ***Feature 671:B***

Feature B was previously identified during the first phase of Inventory Survey investigations in Trench 1. A small trench (Trench 4) was expanded to the southwest to expose the remainder of the burial. Another burial, Feature 671:C, was encountered during the excavation of Trench 4 less than two meters from Feature 671:B. Subsequently, Feature 671:B was found to extend in a more westerly direction. Another small trench (Trench 5) was excavated to the west. During the mechanical removal of soils in Trench 5, it was thought that yet another burial, Feature 671:D, was encountered. However, these were later confirmed to be additional remains of the individual in Feature 671:B (see below). At that time only a small portion of the individual was exposed. The burial was found to contain the remains of a wooden coffin and feet, fibula and tibia of one individual, *in situ* from 80 to 90cmbs from the base of Layer I extending into Layer II. The coffin was narrow, only 32cm wide and 20cm in height, from 80 to 100cmbs. No lid remained to the coffin, and as the human remains were left *in situ*, the depth and composition of the base of the coffin could not be determined. Items which appeared to be coffin hardware were present including a copper rivet encased by preserved wood, and a rusted nail with a square head. Also present in the feature fill was a small amount of coral and a basalt flake with polish. Charcoal flecking was also noted in the soil above the burial. It was conjectured during the Inventory Survey that this may have been a result of the practice of burning Chinese paper money. However, due to the considerable extent of disturbance to the property, which likely was the reason for the absence of the coffin lid, the charcoal flecking may not have been associated with the burial, but rather with the later disturbance.

Feature 671:B was re-identified and disinterred during Phase II of the current project (see Figure 7). During the current fieldwork (Phase I), it was discovered that the fragmentary human osteological material designated as Feature 671:D were actually additional remains from Feature 671:B. Therefore, Feature 671:D is considered to no longer represent that of a separate feature or individual. The complete remains of one adult individual were present in an extended position in the coffin. The coffin measured 150 x 32cm, from 80 to 100cmbs. The cranium was crushed so the gender of the individual could not be determined. Human osteological remains were present from 80-100cmbs covering an area of 149 x 32cm. A number of grave goods were found within the coffin. A small white, four-hole button was recovered from the sifted soils from around the chest. A small polished basalt adze was found between the legs. A metal can was

Figure 7: Plan View of Feature 671:B



Kalihiwai TMK: 5-3-03:14

Source: Archaeological Consultants of the Pacific 2002



found between the right arm and ribs. The metal can was badly deteriorated and could not be further identified. No burial pit was identified.

The presence of a coffin clearly dates the burial within a post-Contact context. Pending further examination by a qualified physical anthropologist, the ethnicity of the individual has not been determined.

### ***Feature C***

A portion of Feature 671:C was previously identified during the first phase of Inventory Survey investigations at Trench 4. Human remains (Feature 671:C-2) were present at 55cmbs (Layer II) in the northwestern face of Trench 4. Osteological materials included a broken femur, patella, pelvic and cranial fragments. As the feature was not completely exposed, the remains of only one individual were identified and the positioning could not be determined. In the process of disinterring Feature 671:C (Feature 671:C-2) during the current project (Phase I), three additional individuals were inadvertently discovered (Features 671:C-1, C-3, C-4). All four individuals were interred in one pit, apparently at the same time, as the individuals were positioned immediately next to yet not intrusive upon one another (see Figure 8). The burial pit was diffuse and its edges could not be distinguished. Human remains (including all four individuals) were present in an area of 42cm x 104cm from 46-74cmbs. All four individuals were disinterred separately during the current project (Phase I).

**Feature 671:C-1** was located in the easternmost portion of Feature 671:C. The complete remains of one individual, an elderly female, were tightly flexed extending beneath Feature 671:C-2, from 54-74cmbs in Layer II. The cranium was found tucked partly under the pelvis, and partly under the cranium of Feature 671:C-2. The osteological remains showed signs of significant calcium loss throughout body, apparently very arthritic. No burial items were found in direct association with this individual.

**Feature 671:C-2** was located atop Features 671:C-1, C-3 and C-4, from 46-54cmbs in Layer II. The nearly complete remains of a tightly flexed adult male were present. The top of the cranium was previously crushed, and partially missing due to previous disturbance. No burial items were found in direct association with this individual.

**Feature 671:C-3** was located in the northwest portion of Feature 671:C. The nearly complete remains of an adult female were tightly flexed extending below Feature 671:C-2 and partially atop Feature 671:C-4, from 54-74cmbs in Layer II. The uppermost portion of the individual extending out from under Feature 671:C-2 has been previously disturbed, and the cranium crushed. Some portions of the individual were disarticulated, such as the mandible which was found wedged among the longbones. A glass bottle, metal scissors and shell buttons were found in association with this individual. The bottle (broken) was a dark olive-brown gin bottle manufactured in the Netherlands, circa 1800-1850. An identical bottle is represented in Figure 9.

Figure 8: Plan View of Feature 671:C

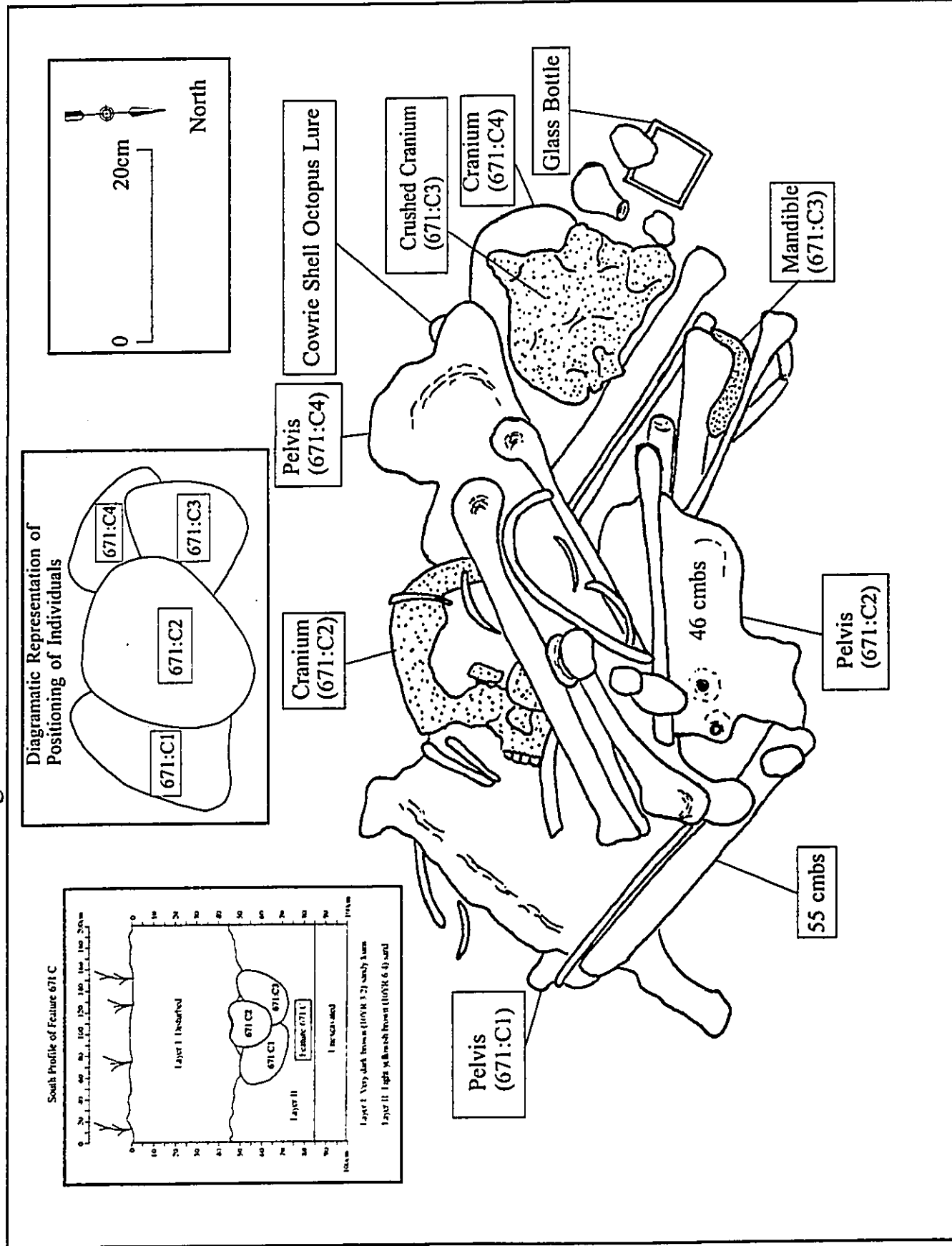


Figure 9: Gin Bottle of Type Found in Association with Feature 671:C-3

Note: This image is not of the bottle found in association with Feature 671:C-3 (artifact # KAL-321).

Artifact # KAL-321 was not photographed and was placed in a box along with the human remains from Feature 671:C-3



### Cosmopoliet Pictorial Case Gin Bottle circa. 1800-1850

Origin: Netherlands

Colour: Black / Olive Amber tint

Dimensions: Height 10.25in Shoulders 3.50 tapering to Base  
2.50in

Top: Applied lip

Base: Shallow base

Source: Discovered in Guyana

Condition: Excellent. Minor surface scuffing.

Special features: Tapered shape.  
Embossed COSMOPOLIT, J. J. MEIJERS and  
SCHIEDAM embossed around  
Picture: Dutchman in hat, rucksack, walking stick, shoulder pouch  
and gin bottle in extended drinking position.

**Feature 671:C-4** was located in the southwest portion of Feature 671:C. The nearly complete remains of a tightly flexed adult male were found extending below Features 671:C-2 and C-3, from 54-74cmbs in Layer II. A cowrie shell octopus lure with (machine?) drilled holes and a bone handled knife were found associated with this individual. The cowrie shell was found abutting the underside of the pelvis.

The individuals in Feature 671:C were all interred in a traditional style, tightly flexed, and placed immediately next to and atop one another. However, these individuals were determined to date to the post-Contact period, as post-Contact materials (including a glass bottle, shell buttons, a pair of scissors and a bone-handled metal knife as well as a cowrie shell octopus lure with possible machine drilled holes) were found directly associated with the remains. The glass bottle dated to AD 1800-1850, and therefore may indicate that the burial dates to a pre-Mahele context. Though the traditional style of interment in a flexed position suggests the individuals were of Hawaiian ethnicity, pending further examination by a qualified physical anthropologist, ethnicity has not been confirmed.

### ***Feature 671:E***

Feature 671:E was previously identified during the first phase of Inventory Survey in Trench 3. Human remains including fibula, tibia and foot materials were disturbed from Layer II by the backhoe. The remains were recovered from the backdirt and placed back in the ground in the location from which they were disturbed. No pit was identified and the burial was not further examined at that time. A button and what appeared to be coffin hardware were present in the backdirt, possibly indicating that the feature could have been a coffin burial, if those items were associated with the burial.

Feature 671:E was re-identified and disinterred during the Phase II of the current project (see Figure 10). This burial contained the remains of one adult individual. The remains were not in a coffin, though they were articulated in a fully extended position. No burial pit was discernable. Osteological materials were present from 94-109cmbs spanning an area of 160cm x 31cm. The cranium and mandible were crushed and the gender of the individual could not be determined. One small shell button and one large metal button were found among the remains. The shell button was recovered from the sift of soils surrounding the chest area, and the metal button was recovered from sift around the waist area.

Due to the presence of buttons, the feature dates to the post-Contact period. Pending further examination by a qualified physical anthropologist, the ethnicity of the individual has not been determined.

### ***Feature 671:F***

Feature 671:F was previously identified during the second phase of Inventory Survey in the eastern half of STP17. Human osteological materials were found extending from the base of Layer I into Layer II. Ribs, vertebrae and pelvic remains were identified at 70cmbs extending

Figure 10: Plan View of Feature 671:E

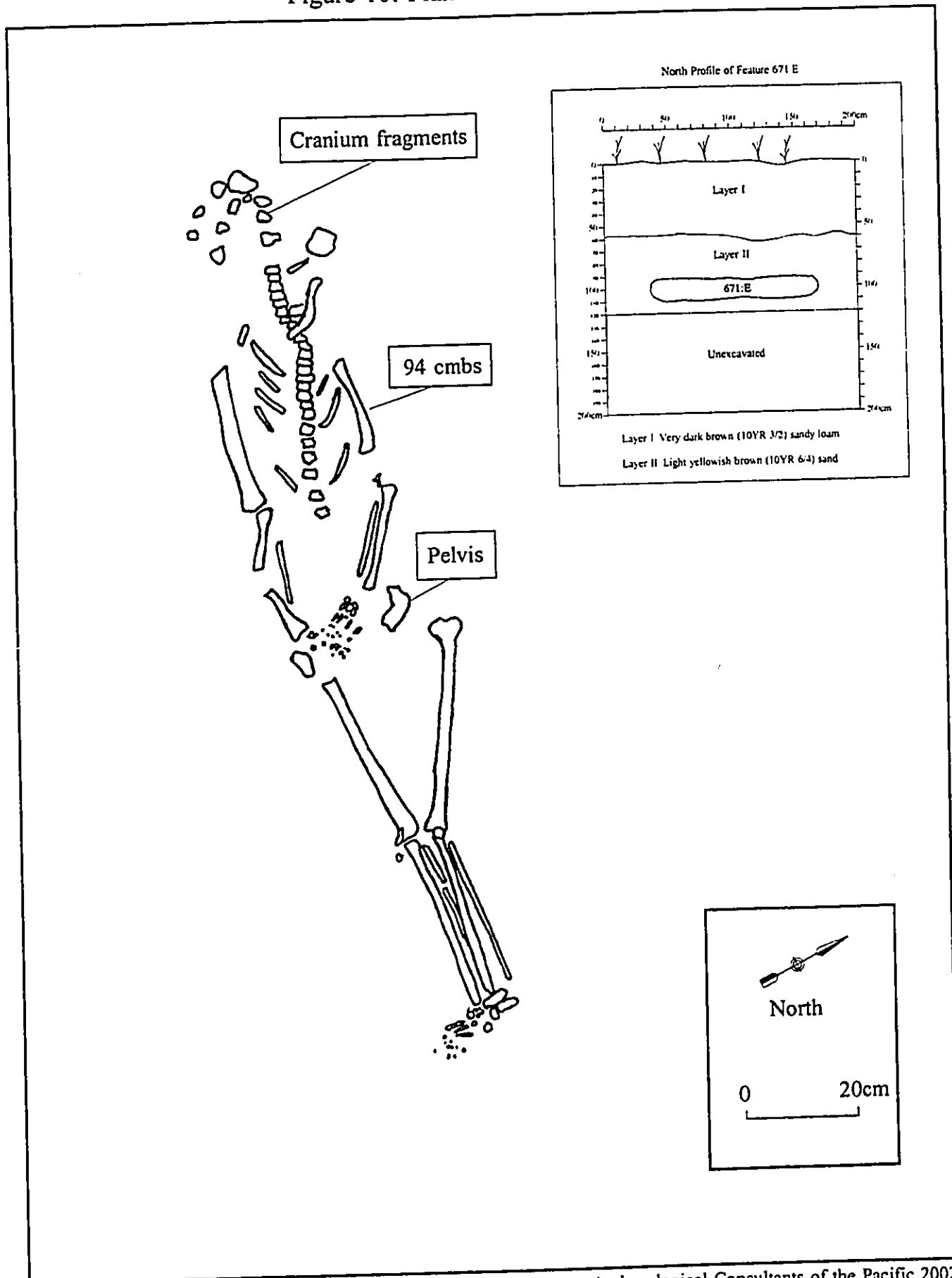
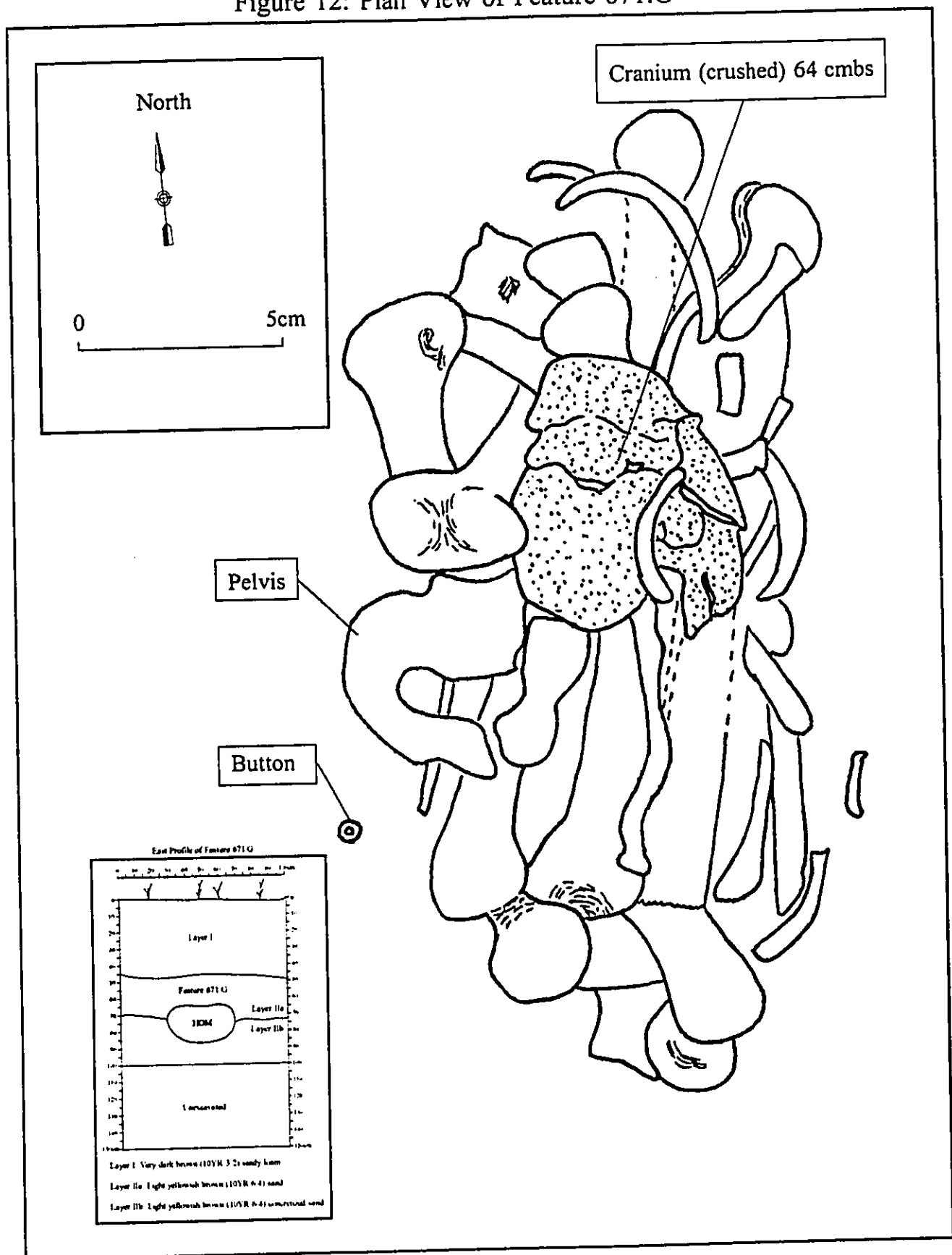


Figure 12: Plan View of Feature 671:G



Kalihiwai TMK: 5-3-03:14

Source: Archaeological Consultants of the Pacific 2002

remains of two individuals (including a small child placed atop an adult, Features 671:H-1 and H-2).

Feature 671:H was re-identified and disinterred during the second phase of the current project (see Figure 13). It was confirmed that this burial contained the remains of two individuals. One was an adult female and the other a child of undetermined gender. Both individuals appear to have been placed in one coffin. The child appeared to have been in a separate smaller coffin within the larger coffin with the adult female. The larger coffin measured 166cm x 34cm from 81-101cmbs. The child's coffin measured 88cm x 20cm from 86-96cmbs. The burial pit measured roughly 175cm x 39cm, from 50 to 108cmbs extending from the base of Layer I into Layer II.

The osteological remains of the adult, Feature 671:H-1, were fully articulated and in an extended position measuring 166cm x 38cm from 81-101cmbs. A number of grave goods were associated with the adult female. A horseshoe-shaped hair comb of undetermined material was on the cranium. A small, blue bead of undetermined material was found among the sifted soils from around the left chest area. At the feet, several very small metal rivets with a small amount of material (possibly leather) attached were recovered from the sifted soils.

The osteological remains of the child, Feature 671:H-2, were fully articulated and in an extended position measuring 19cm x 80cm from 86-96cmbs. The cranium, mandible, pelvis, ribs, and vertebrae were badly decomposed and the gender of the child could not be determined. A 3cm metal safety pin was found among the sifted soil from around the chest area of the child.

Due to the presence of coffins and other post-Contact items, this feature clearly dates to the post-Contact period. Pending further examination by a qualified physical anthropologist, the ethnicity of the individuals has not been determined.

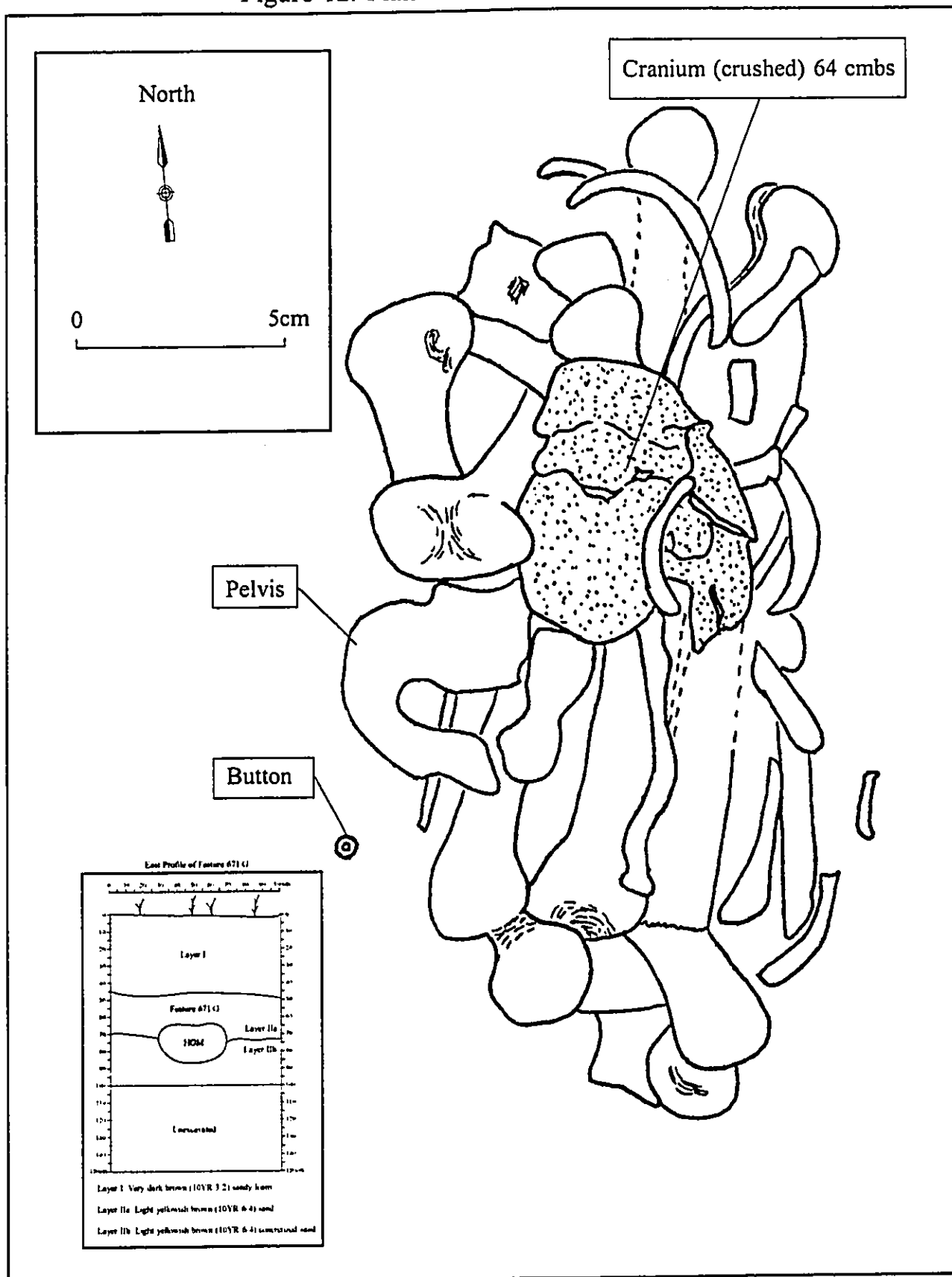
### ***Feature 671:I***

During Additional Testing, the remains of a single individual were inadvertently discovered near the eastern corner of the excavation approximately 3 meters east of Feature 671:C. No burial pit was identified. The osteological materials were present from 67-105cmbs covering an area of 39cm x 27cm in Layer II.

Feature 671:I was disinterred during Phase II of the current project (see Figure 14). The complete articulated remains of one individual, an adult male, were tightly flexed, facing downward. The cranium was tucked underneath the ribs. One small worked basalt flake was found among the remains.

Based upon a lack of post-Contact materials such as coffin hardware and buttons, and given that the individual was placed in a traditional flexed position, it is suggested that the individual was likely of Hawaiian ethnicity interred during the pre-Contact era.

Figure 12: Plan View of Feature 671:G



Kalihiwai TMK: 5-3-03:14

Source: Archaeological Consultants of the Pacific 2002



remains of two individuals (including a small child placed atop an adult, Features 671:H-1 and H-2).

Feature 671:H was re-identified and disinterred during the second phase of the current project (see Figure 13). It was confirmed that this burial contained the remains of two individuals. One was an adult female and the other a child of undetermined gender. Both individuals appear to have been placed in one coffin. The child appeared to have been in a separate smaller coffin within the larger coffin with the adult female. The larger coffin measured 166cm x 34cm from 81-101cmbs. The child's coffin measured 88cm x 20cm from 86-96cmbs. The burial pit measured roughly 175cm x 39cm, from 50 to 108cmbs extending from the base of Layer I into Layer II.

The osteological remains of the adult, **Feature 671:H-1**, were fully articulated and in an extended position measuring 166cm x 38cm from 81-101cmbs. A number of grave goods were associated with the adult female. A horseshoe-shaped hair comb of undetermined material was on the cranium. A small, blue bead of undetermined material was found among the sifted soils from around the left chest area. At the feet, several very small metal rivets with a small amount of material (possibly leather) attached were recovered from the sifted soils.

The osteological remains of the child, **Feature 671:H-2**, were fully articulated and in an extended position measuring 19cm x 80cm from 86-96cmbs. The cranium, mandible, pelvis, ribs, and vertebrae were badly decomposed and the gender of the child could not be determined. A 3cm metal safety pin was found among the sifted soil from around the chest area of the child.

Due to the presence of coffins and other post-Contact items, this feature clearly dates to the post-Contact period. Pending further examination by a qualified physical anthropologist, the ethnicity of the individuals has not been determined.

### ***Feature 671:I***

During Additional Testing, the remains of a single individual were inadvertently discovered near the eastern corner of the excavation approximately 3 meters east of Feature 671:C. No burial pit was identified. The osteological materials were present from 67-105cmbs covering an area of 39cm x 27cm in Layer II.

Feature 671:I was disinterred during Phase II of the current project (see Figure 14). The complete articulated remains of one individual, an adult male, were tightly flexed, facing downward. The cranium was tucked underneath the ribs. One small worked basalt flake was found among the remains.

Based upon a lack of post-Contact materials such as coffin hardware and buttons, and given that the individual was placed in a traditional flexed position, it is suggested that the individual was likely of Hawaiian ethnicity interred during the pre-Contact era.

Figure 13: Plan View of Feature 671:H

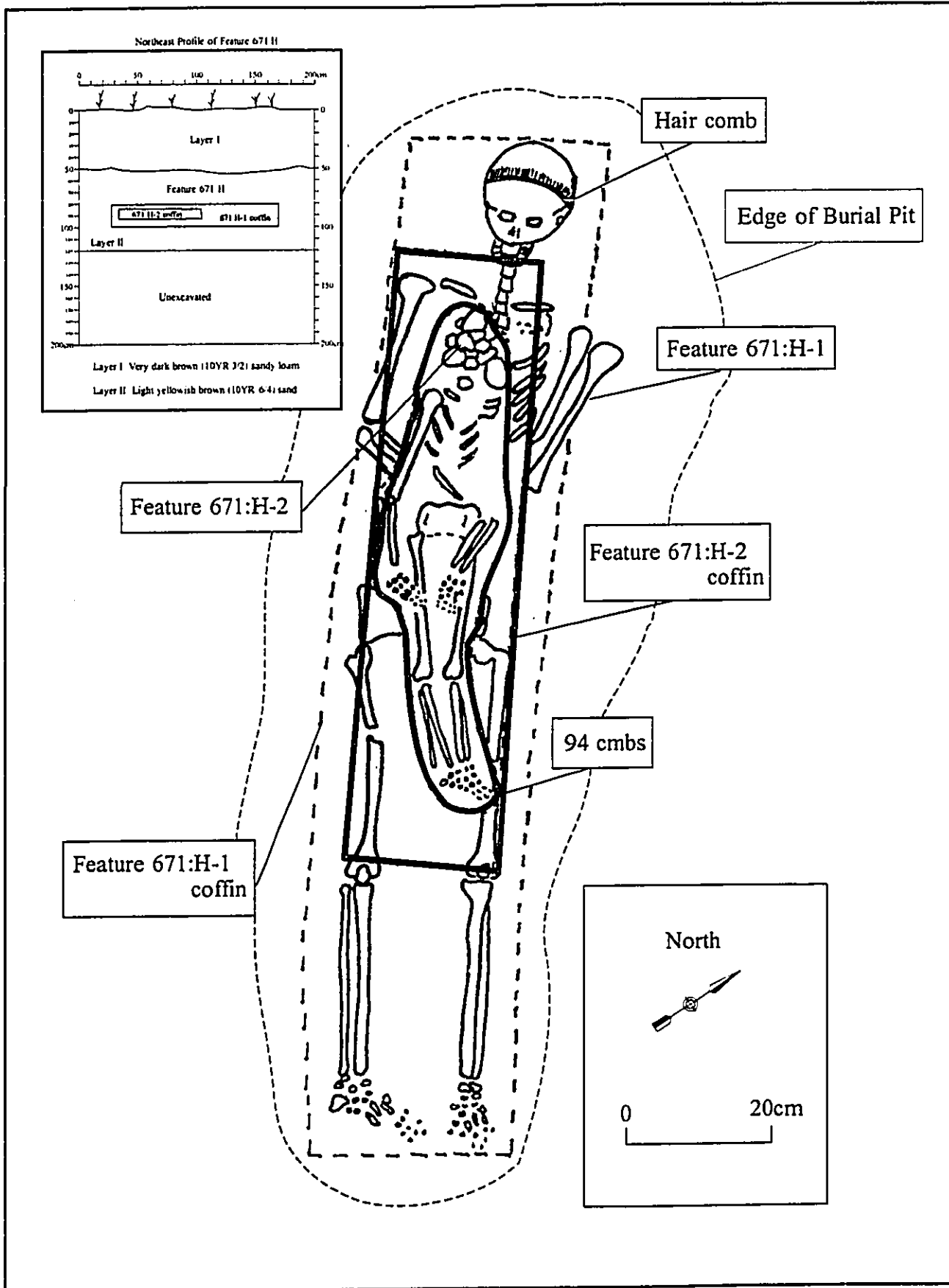
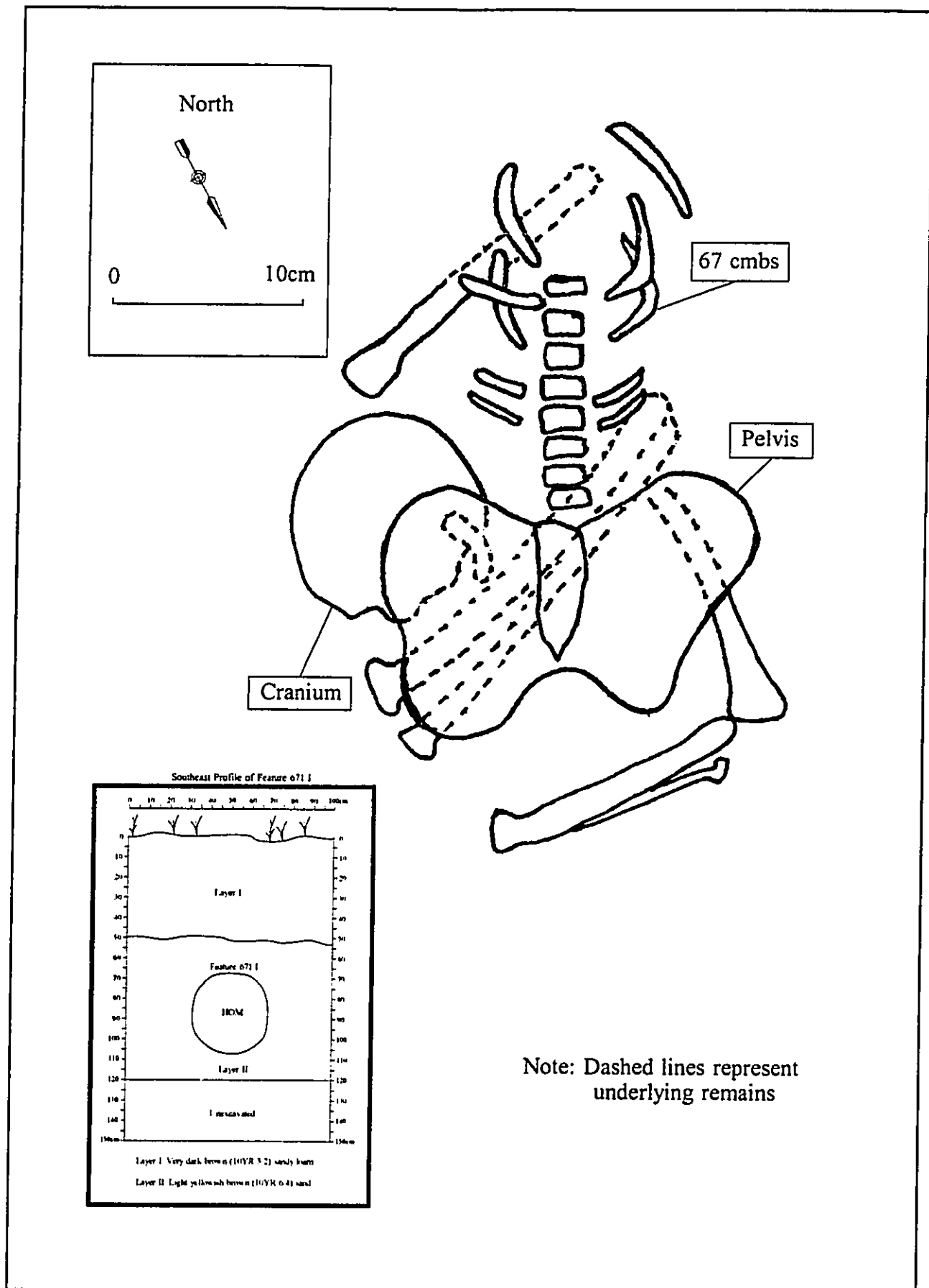


Figure 14: Plan View of Feature 671:I



## Section 5: Discussion

Numerous burials have been found on the current subject property, twelve individuals within a parcel encompassing only a little over a third of an acre. Three out of the twelve individuals are presumed to date to the pre-Contact period based upon the traditional manner of interment (flexed position), the lack of associated post-Contact materials (i.e. coffin hardware, buttons, etc.), and in one instance, evidence for the traditional practice of removal of cranium and long bones from the burial. The location of burials in a sand matrix is a setting known to have been traditionally used by the native population for interring the deceased.

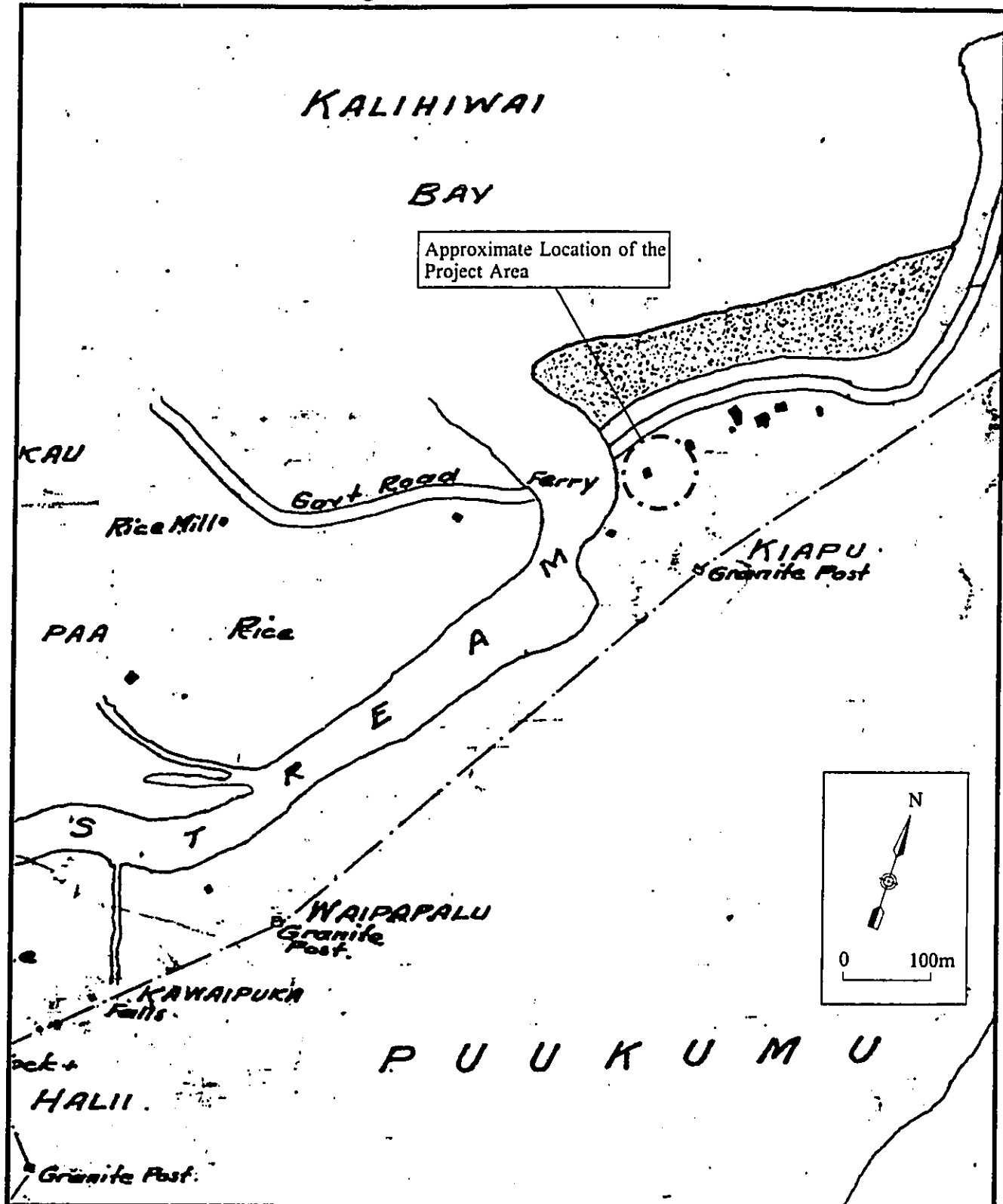
Nine out of the twelve individuals buried on the property were interred during the post-Contact period (associated with coffins and/or other post-Contact items such as buttons). This indicates a more substantial use of the property for burial purposes during that time (a period of less than 150 years) as compared to the span of several hundred years prior to Western Contact. LCA 10318:2 is located on a portion of the current subject property. This land was awarded to Nohomalie, and foreign testimony indicated that this LCA contained a house lot. A 1892 map by Monserrat depicts a structure in the general location of the subject property (see Figure 15), most likely that of Nohomalie's house lot. The Mahikoa Family later owned the property by the early 1900's. An association between the family of Nohomalie and the Mahikoa's could not be assessed. Features 671:B, C-1, C-2, C-3, C-4, E, G, H-1, H-2 may be associated with either Nohomalie and/or the Mahikoa's, though this could not be confirmed.

The post-Contact burial features on the subject property appear to represent a range in time of interment from early post-Contact to around the turn of the century. Five of the individuals interred during the post-Contact period were interred in a traditional manner (flexed position), while the remaining four were in extended positions (three of which were in coffins). The flexed individuals likely date to the early post-Contact period (1778-1850). The extended burials are clearly positioned in line with one another, suggesting a small, organized cemetery, perhaps intentionally placed in association with the above post-Contact traditional style burials. These individuals were also generally oriented in an east/west alignment (with the cranium at the west end, a common Judeo-Christian practice), reflecting an integration to western culture. This suggests that these individuals may have been interred during a later date range, possibly 1850-1920.

The presence of multiple burials (burials containing more than one individual) may be evidence of some disaster(s) such as pestilence. The populations on all the Hawaiian Islands decreased substantially (by approximately 50%) in the first fifty years after Western Contact as a result of introduced illnesses for which the Hawaiians had no immunity. Devaney, Kelly, Lee and Motteler (1982:8) discuss this dramatic change in demographics:

Depopulation during the early historical period of the Hawaiian Islands is not well documented, but several scholars have attempted assessments of the limited sources available. The Hawaiian historian and scholar, David Malo, wrote: "In the reign of Kamehameha, from the time I was born until I was nine the pestilence (*mai ahulau*) visited the Hawaiian Islands, and the majority (*ka pau nui ana*) of the people from Hawaii to Niihau died" (Mal0 1839:125). Lorenzo Adams expressed the opinion that Malo was probably not far off in estimating the loss of about

Figure 15: Kalihiwai Circa 1892



Kalihiwai TMK: 5-3-03:14

Source: Monsarrat 1892 (Gov't Survey Reg. Map No. 1971)

half of the population (Schmitt 1968:36). The epidemic took place some time between 1802 and 1807, probably around 1804 (ibid.). It was known as *ma'i 'oku'u* and was likened to bubonic plague, or cholera.

Populations continued to decline in the early 1800's, and into the latter half of the nineteenth century after the introduction of smallpox in 1853. As noted above, the traditional style of interment in flexed positions of the four individuals interred at the same time within the same pit at Feature 671:C in conjunction with Western-introduced material culture (including a gin bottle dating ca. 1800-1850) suggests that these are early post-Contact interments, and may have been victims of a newly introduced pestilence. Likewise, the woman and child buried in a coffin (Feature 671:H) may have suffered a latter introduced pestilence.

## Conclusion

The preceding report has been prepared concerning the treatment of burials previously identified and inadvertently discovered at Site 50-30-03-671 in Kalihiwai Ahupua'a, TMK: 5-3-03:14. These investigations have documented eight burial features at Site 671 including twelve individuals. Three of the individuals are presumed to date to the pre-Contact era, based upon the use of traditional styles of interment and lack of associated historic materials (i.e. coffin hardware, buttons, etc.). The remaining nine individuals date to the post-Contact period. Two of the post-Contact burial features contained more than one individual. All human remains were disinterred by Archaeological Consultant of the Pacific, Inc. in accordance with the Department of Land and Natural Resources policies.

Reinterment will be coordinated between the Kaua'i/Ni'ihau Island Burial Council and the landowner, Mr. Robert Bothman.

## References

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- Kennedy, J.  
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## Appendix A: Artifacts



**Table 3: Inventory of Artifacts Found in Association with Burials**

Feature	Object	Description	Artifact Number
671:B	coffin	redwood coffin with metal coffin hardware	KAL-317
	adze	small polished basalt adze, 4.5 x 2.2 x 1cm	KAL-318
	button	small white four-hole button	KAL-319
	metal can	badly deteriorated	KAL-320
671:C-3	glass bottle	dark olive-brown gin bottle, broken (parts of upper portion missing); embossed "J.J. MELCHERSwz, SCHIEDAM" with image of a man holding a walking stick and gin bottle; manufactured in Netherlands ca. 1800-1850 (see Figure 9 for image of an identical bottle)	KAL-321
	scissors	very rusted metal scissors	KAL-322
	shell button		KAL-323
	shell button		KAL-324
671:C-4	octopus lure	large cowrie shell portion of octopus lure with (machine?) drilled holes on top and portion of aperture removed on base	KAL-325
	bone handled knife	rusted metal blade with detached bone handle	KAL-326
671:E	shell button	small button	KAL-327
	metal button	large button	KAL-328
671:G	glass button		KAL-329
671:H-1	coffin	redwood coffin with metal coffin hardware	KAL-330
	hair comb	horseshoe-shaped, undetermined material	KAL-331
	metal rivets	several very small rivets with a small amount of material, possibly leather, attached	KAL-332
671:H-2	coffin	small redwood coffin with metal coffin hardware, 88 x 20cm	KAL-333
	metal safety pin	3cm in length	KAL-334
	blue bead	undetermined material	KAL-335
671:I	worked flake	small worked basalt flake	KAL-336

**NOTE: THESE MATERIALS WERE NOT COLLECTED. ALL MATERIALS LISTED ABOVE WERE PLACED IN BOXES ALONG WITH ASSOCIATED HUMAN REMAINS. THESE ITEMS WILL BE REINTERRED WITH THE ASSOCIATED INDIVIDUALS.**

# **APPENDIX 4**

## **CULTURAL IMPACT ASSESSMENT**

**A CULTURAL IMPACT ASSESSMENT FOR TMK: 5-3-03:14  
LOCATED IN KALIHIWAI AHUPUA'A, HANAIEI DISTRICT,  
ISLAND OF KAUA'I  
MAY 2002**

**Prepared for: Mr. Bob Bothman  
650 Quinn Ave.  
San Jose, CA. 95112**

**Prepared by: Archaeological Consultants of the Pacific, Inc.  
Michelle Elmore, B.A.  
Joseph Kennedy, M.A.  
59-624 Pupukea Road  
Haleiwa, Hawaii 96712**



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## Abstract

A Cultural Impact Assessment has been conducted for a property located at TMK: 5-3-03:14 in Kalihiwai on the Island of Kaua'i. The subject property is proposed for the construction of a private residence. The purpose of these investigations was to gather information about cultural practices and cultural features that may be affected by the proposed actions subject to Chapter 343, HRS, and to promote responsible decision making.

The current assessment took the form of a historic background study and community consultations. The historic background research addresses the land use history and previous archaeology conducted in Kalihiwai Ahupua'a. Community consultations addressed previous land use on the subject property and concerns of community members regarding the affect of the proposed construction on places of cultural or traditional importance.

As a result of the current study, recommendations regarding the impact of the proposed development on cultural practices and features associated with the project area have been made. Based upon an absence of objections by the cultural informants, no obstructions to the implementation of the proposed project are present concerning any areas of known cultural or traditional importance, providing that the individuals buried on the property remain on the parcel and be protected. The implementation of the Burial Treatment Plan, which calls for the individuals buried on the property to be placed in a single location on the same parcel that will be encased in concrete, is recommended to occur before commencement of any construction activities (Kennedy 2002). Additionally, given the possibility of encountering additional human remains during development on the subject property, it is recommended that a qualified archaeologist monitor any subsurface construction.

## Table of Contents

Abstract.....	i
Section 1: Introduction.....	1
Section 2: Environmental Setting.....	1
Section 3: Methodology.....	5
Section 4: Historic Background of Kalihiwai Ahupua'a.....	6
Section 5: Community Consultations .....	15
Ms. Linda Sproat.....	15
Mr. Chauncy Pa.....	21
Mr. Wendell Goo .....	21
Mr. Kahula Mahikoa.....	21
Ms. Pauline Mahikoa Hadama .....	22
Ms. Amy McGrail.....	22
Section 6: Discussion .....	23
Section 7: Summary and Recommendations .....	24
References Cited.....	25
Appendix A: "Hula o Makee".....	A1

## List of Illustrations

Figure 1: Project Location on a Map of Kaua'i.....	2
Figure 2: Location of the Subject Property on a U.S.G.S. Topographic Map .....	3
Figure 3: Location of the Subject Property on a TMK Map.....	4
Figure 4: Map of Northern Half of Kalihiwai Ahupua'a Depicting all LCA's for the Ahupua'a.....	8
Figure 5: Kalihiwai Circa 1892 .....	9
Figure 6: Earle's Irrigation Systems in Kalihiwai .....	12

## List of Tables

Table 1: Land Commission Awards in Kalihiwai Ahupua'a.....	10
Table 2: Summary of Earle's Irrigation Systems in Kalihiwai .....	13

# A Cultural Impact Assessment for TMK: 5-3-03:14 in Kalihiwai Ahupua'a, Hanalei District, Island of Kaua'i

## Section 1: Introduction

At the request of Mr. Robert Bothman, Archaeological Consultants of the Pacific, Inc. (ACP) has conducted a Cultural Impact Assessment for property at which a private residence has been proposed for construction. The subject property (TMK: 5-3-03:14) is located in the *ahupua'a* of Kalihiwai, current district of Hanalei, Island of Kaua'i (see Figure 1). The property is currently owned by Mr. Robert Bothman.

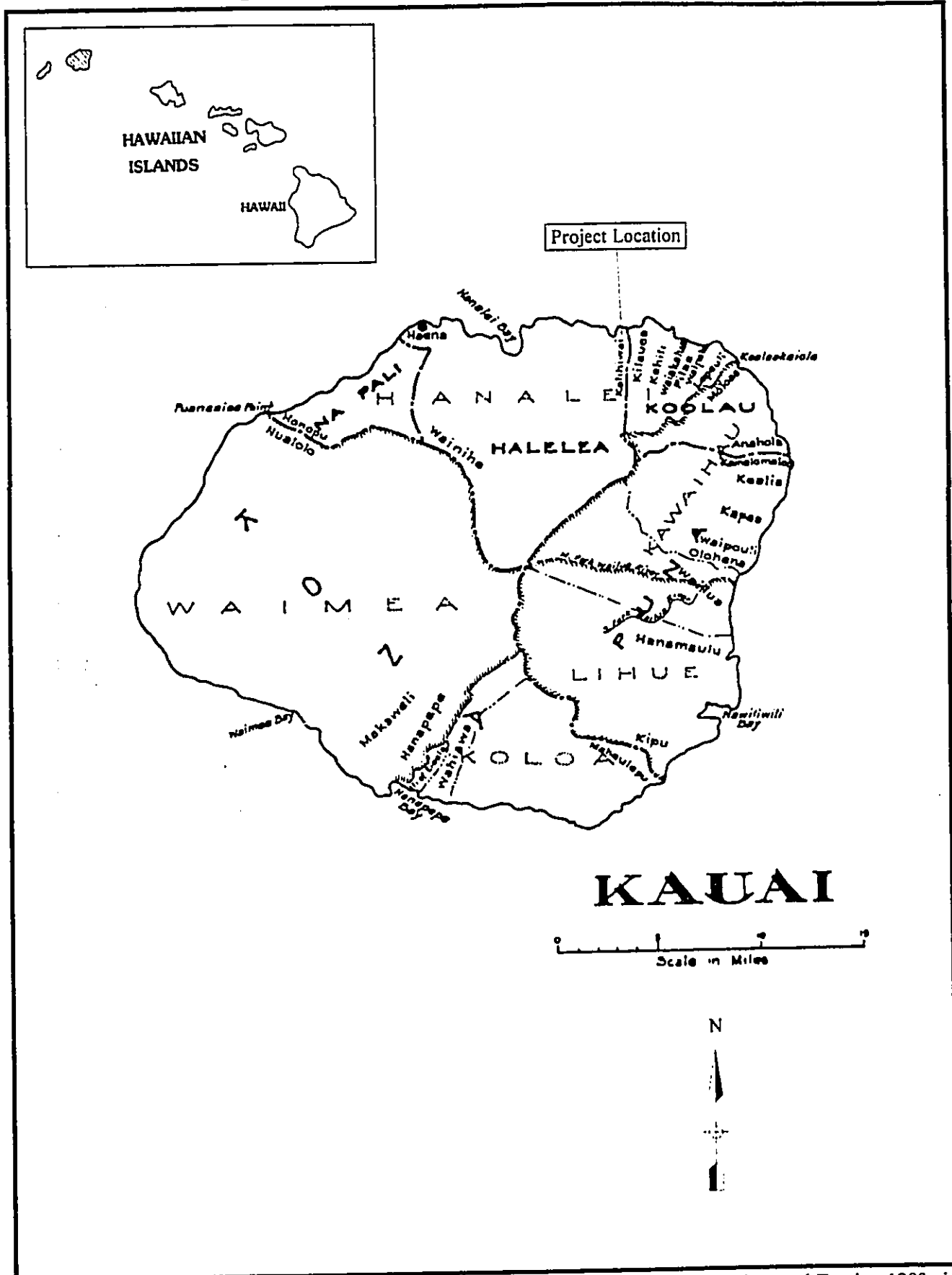
The purpose of these investigations was to perform the tasks and meet the requirements specified by Hawaii Revised Statutes 343 as administered by the office of Environmental Quality Control and as a part of the Environmental Assessment process. These investigations were conducted in an effort to promote and preserve cultural beliefs, practices and resources of native Hawaiians and other ethnic groups.

## Section 2: Environmental Setting

The subject property (TMK: 5-3-03:14) is located in the *ahupua'a* of Kalihiwai, current district of Hanalei, Island of Kaua'i. The project area is located at geographic grid coordinates 159° 25' 50"W by 22° 13' 10"N and UTM (Universal Transverse Mercator) coordinates 2457050mN by 454800mE (see Figure 2). The property is bordered by Kalihiwai Road along its western border, a lot with a private residence to the north, a steep hillside to the east and an empty lot to the south (see Figure 3).

The current subject property is comprised of one parcel located on a coastal plain, approximately 60 meters (m) from the ocean. The dimensions of Parcel 14 are 23m x 30m x 34m x 43m encompassing an area of approximately 0.37 acres. The property is mostly level with a slight rise toward the eastern end of the property. Vegetation on the parcel consists of various grasses and weeds as well as a few coconut palms (*Cocos nucifera*), tropical almond trees (false *kamani*, *Terminalia catappa*), a java plum tree (*Eugenia cerniui*), heleconia (*Heleconia* sp.) and banana plants (*Musa* sp.) along the edges of the property. Average annual rainfall ranges between 50 and 75 inches (Armstrong 1973). Foote, Hill, Nakamura and Stephens (1972) describe the soils in the area as beach sands (BS). These soils consist "...mainly of light colored sands derived from coral and seashells" (Foote et al. 1972).

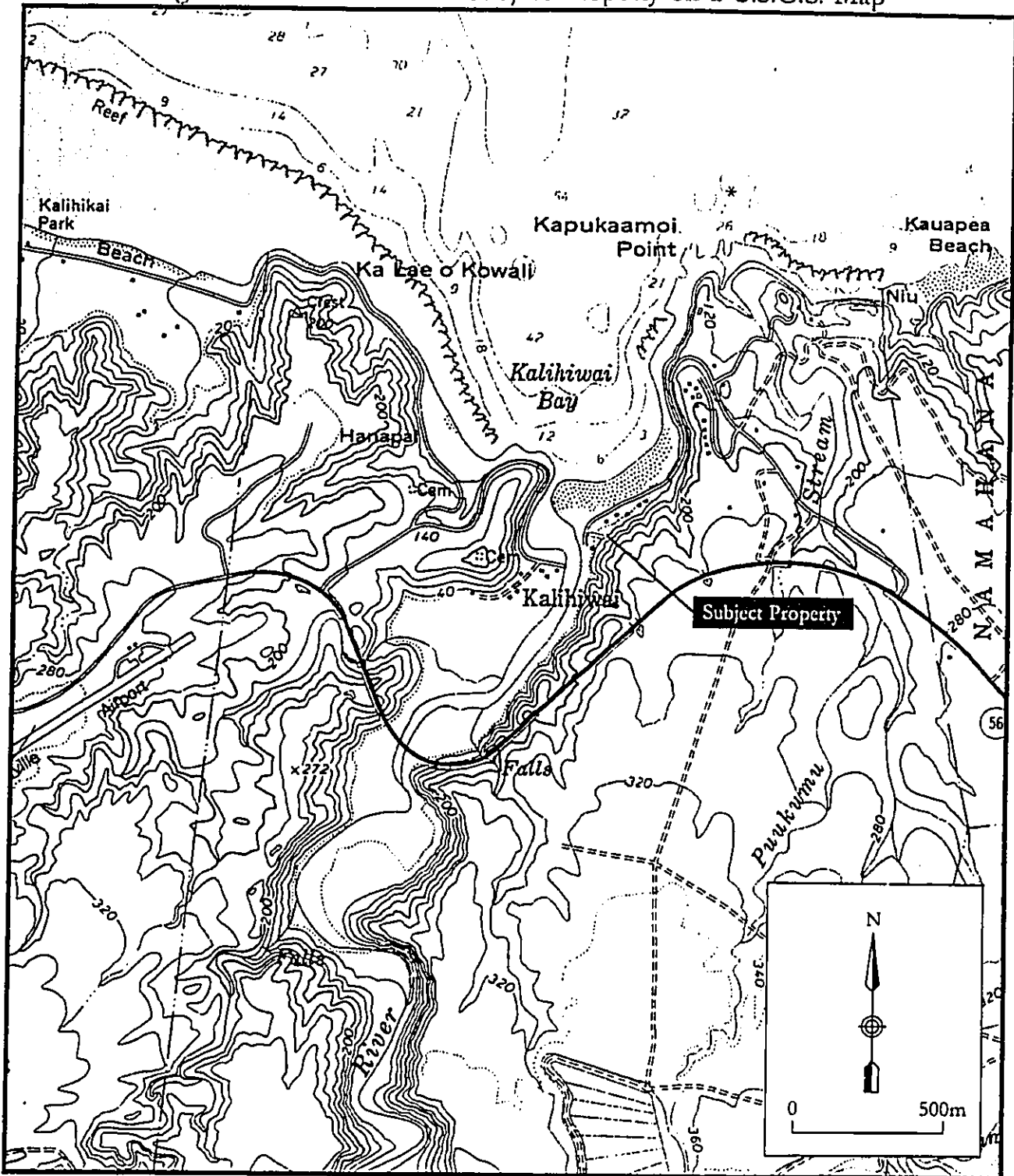
Figure 1: Project Location on a Map of Kauai



Kalihiwai TMK: 5-3-03: 14

Source: Spriggs and Tanaka 1988:xiv

Figure 2: Location of the Subject Property on a U.S.G.S. Map

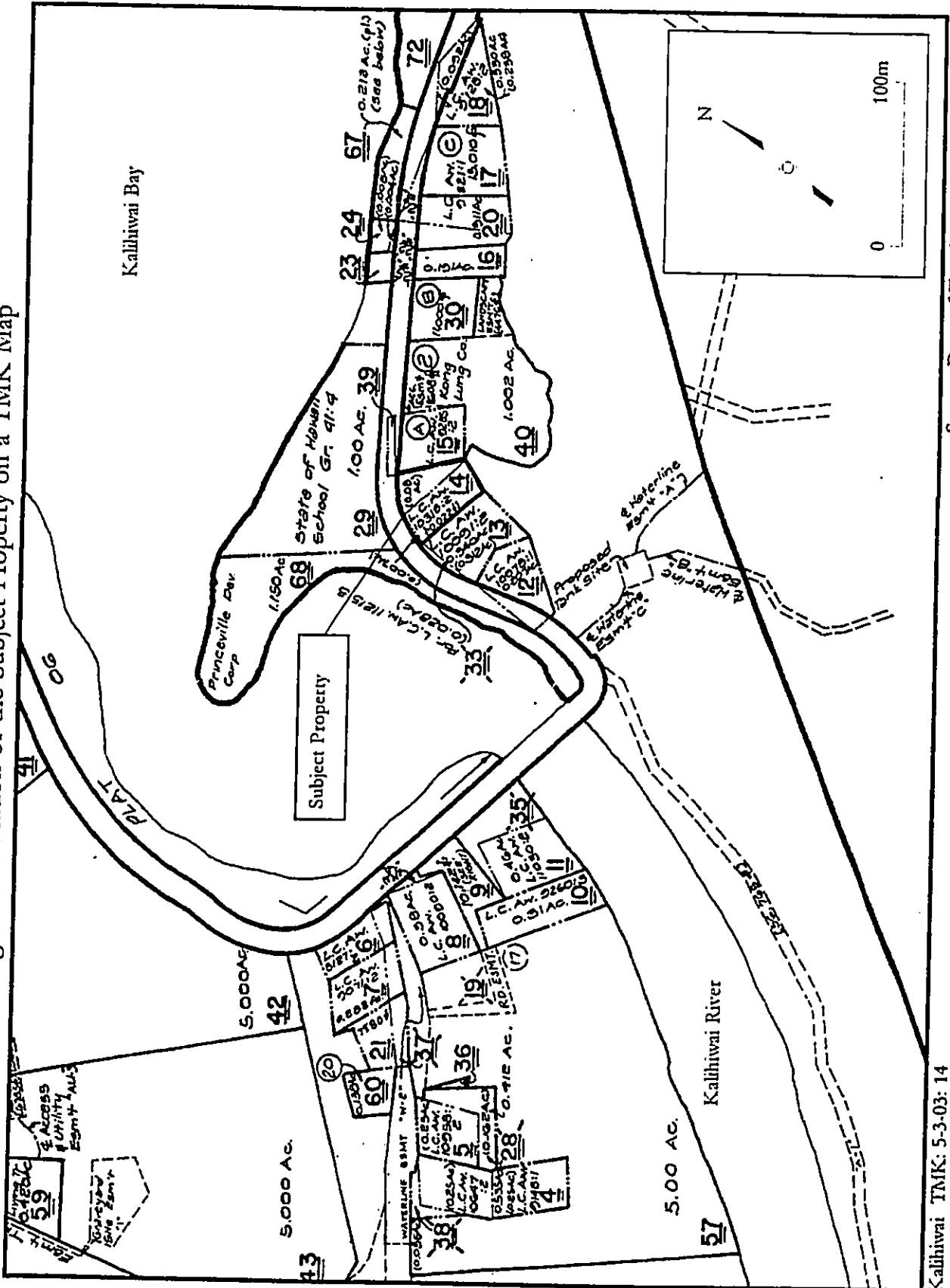


Kalihiwai TMK: 5-3-03: 14

Source: U.S.G.S. 7.5 Minute Series (Topographic)  
Hanalei Quadrangle 1983



Figure 3: Location of the Subject Property on a TMK Map



Kaliahivai TMK: 5-3-03: 14

Source: Dept. of Taxation, Tax Maps Branch 1936

### Section 3: Methodology

The current study was conducted in April of 2002. The project was conducted under the direction of the Principal Investigator, Joseph Kennedy, M.A.. Community consultations were conducted by Joseph Kennedy, M.A. and Michelle Elmore, B.A.. Report preparation was completed by Joseph Kennedy, M.A., Michelle Elmore, B.A., and Etsuko Yoshifuku, B.A..

Though the project area in question is comprised of a single parcel within Kalihiwai Ahupua'a, the geographical extent of inquiry for the current study includes the entire *ahupua'a* of Kalihiwai. Research of the historic background of Kalihiwai Ahupua'a was conducted including an examination of land use from earliest occupation to present day, as well as the previous archaeological investigations conducted in the *ahupua'a*. This research was conducted by means of researching historical texts and documents, such as *Heiau and Heiau Sites Throughout the Hawaiian Islands* (Thrum 1907), *The Hawaiian Planter* (Handy 1940), *Native Planters on Old Hawaii* (Handy and Handy 1972), *Place Names of Hawaii* (Pukui, Elbert and Mookini 1974), *Economic and Social Organization of a Complex Chieftdom: The Halele'a District, Kaula'i* (Earle 1978), and *Ruling Chiefs of Hawaii* (Kamakau 1992). Research regarding Land Commission Awards was conducted at the Hawaii State Archives. Information pertaining to the previous archaeological investigations was compiled from the Department of Land and Natural Resources State Historic Preservation Division library.

Individuals with knowledge concerning cultural resources, practices and beliefs in Kalihiwai as well as those knowledgeable of the area potentially affected by the proposed construction were identified and contacted, and willing individuals were consulted. Several individuals who grew up along the coast in Kalihiwai were contacted including Ms. Linda Sproat, Mr. Chauncy Pa and Mr. Wendell Goo. Several lineal descendants of the Mahikoa family which once lived on the subject property were also contacted, including Mr. Kahula Mahikoa, Ms. Pauline Mahikoa Hadama and Ms. Amy McGrail. Cultural consultations were conducted by phone and in person. Ms. Linda Sproat was contacted by phone and was interviewed in person on April 6, 2002. Mr. Chauncy Pa, Mr. Wendell Goo, Mr. Kahula Mahikoa and Ms. Pauline Mahikoa Hadama were contacted and interviewed by phone on April 7, 2002. Ms. Amy McGrail was contacted and interviewed by phone on April 8, 2002.

A list of interview questions was compiled for the cultural consultations. These included questions such as the informant's historical and geographical associations with the place in question, their knowledge of the area and how the proposed construction would affect or physically alter any place of cultural/traditional importance, or access to any such place. Careful notes were taken during the phone interviews. The interview with Ms. Sproat was recorded on audiocassette. Unfortunately, technical difficulties were experienced during this interview wherein portions of the interview did not get recorded or were indecipherable. However, supplemental notes were taken from which any missing information could be summarized. A complete transcription of this recording has been provided in this report. This report provides complete details of all cultural consultations.

## Section 4: Historic Background of Kalihiwai Ahupua'a

### *Land Use History*

The subject property is located in the *ahupua'a* of Kalihiwai, current district of Hanalei, traditional district of Halele'a. Kalihiwai Ahupua'a lies along the eastern edge of Halele'a District and lies between the *ahupua'a* of Kalihikai on the west and both Kilauea and Namahana on the east. Kalihiwai Stream meanders through the center of the *ahupua'a*. The name Kalihiwai stems from the words *kalihī*, or edge, and *wai*, or stream (Pukui et al. 1974:77).

Very little is known about pre-Contact or early post-Contact activities in this area of Kaua'i. Handy and Handy (1972:421) discuss *lo'i* cultivation in the *ahupua'a* of Kalihikai, Kalihiwai and Kilauea:

East of Hanalei are two small *ahupua'a*, Kalihī-kai and Kalihī-wai, both of which had quite extensive *lo'i* near the sea. There were *lo'i* back along main streams and side streams, but both valleys are shallow. Actually the stream flow from both valleys is diverted eastward to Kilauea, the adjacent *ahupua'a* in the *moku* of Ko'olau.

Also, a number of irrigation ditches were recorded in the 1850's stemming from Kalihiwai Stream (Earle 1978:35).

An historical figure is associated with Kalihiwai who ties into a significant episode in Hawaiian history. In 1809, Chief Kihei was sent by Kamehameha I as a messenger to Kaua'i to invite Kaumuali'i, king of Kaua'i, to visit O'ahu and ultimately succumb to Kamehameha's rule. Kamakau discusses this turn of events in *Ruling Chiefs of Hawaii* (1992:194-195):

Kamehameha... had given up on the thought of going to war with Ka-umu-ali'i, believing that he could secure annexation by peaceful means. He therefore sent one of the lesser chiefs, named Kihei, as his representative to invite Ka-umu-ali'i to come to Oahu to see Kamehameha and make a treaty of peace between the two. The messenger was received by Ka-umu-ali'i with great dignity and given lands and wives; he therefore never returned to report to Kamehameha.

Kaumuali'i made Kihei *konohiki* of Kalihiwai. Kihei later built a *heiau* in Kalihiwai, known as Kihei Heiau (Site 137), and "at his death its paving was removed and he was buried in his canoe in the enclosure" (Thrum 1907:42). According to Thrum (1907:42), this *heiau* was constructed with walls standing 8 feet in height. Bennett (1931) described its location as below a waterfall on the east side of Kalihiwai Valley.

In addition to Kihei Heiau, three other *heiau* are known to have existed in Kalihiwai, Kalahihi Heiau (Site 134), Kaunonoli Heiau (Site 135) and Kaihalulu Heiau (Site 136). Each of these were described by Thrum (1907:42). The foundation of Kalahihi Heiau (Site 134) was located on the west side of Kalihiwai valley. Thrum describes this as a *heiau* "...of pookanaka class. Foundations only remain, indicating it as of large size" (ibid).

Kaunonoli Heiau (Site 135) was noted to have been "destroyed years ago after use as a cattle pen" (ibid). State Historic Sites files describes its location as "...on the east bluff of Kalihiwai valley on a little mound near a bend in the Puukumu stream. No rocks now remaining."

Kaihalulu Heiau (Site 136) was "a small high walled heiau of Pookanaka class dedicated to Kane and Kanaloa. Destroyed years ago to help build a mill" (Thrum 1907:42). According to State Historic Sites files, this *heiau* is "said to have been located on the hill just inland from the government road, destroyed. A small high walled heiau of the Pookanaka class dedicated to Kane and Kaneloa used to build a mill."

Early written accounts of the north shore of Kaua'i are few. Although Cook and Vancouver both sailed to Kaua'i in the late eighteenth century, their visits were limited to the southern shore. Kalihiwai Valley is mentioned, however, by Henry Whitney, who wrote in his "Hawaiian Guide Book" in 1875:

Just outside of Kilauea is the beautiful Kalihiwai valley, whose fertile lands are watered by the river of the same name. A short sail up the river, whose banks are shaded by large trees, a beautiful little cascade is disclosed, while further inland is another and still another, which though smaller, vie in beauty with many larger waterfalls (Whitney 1875 in Rosendahl 1990:4)

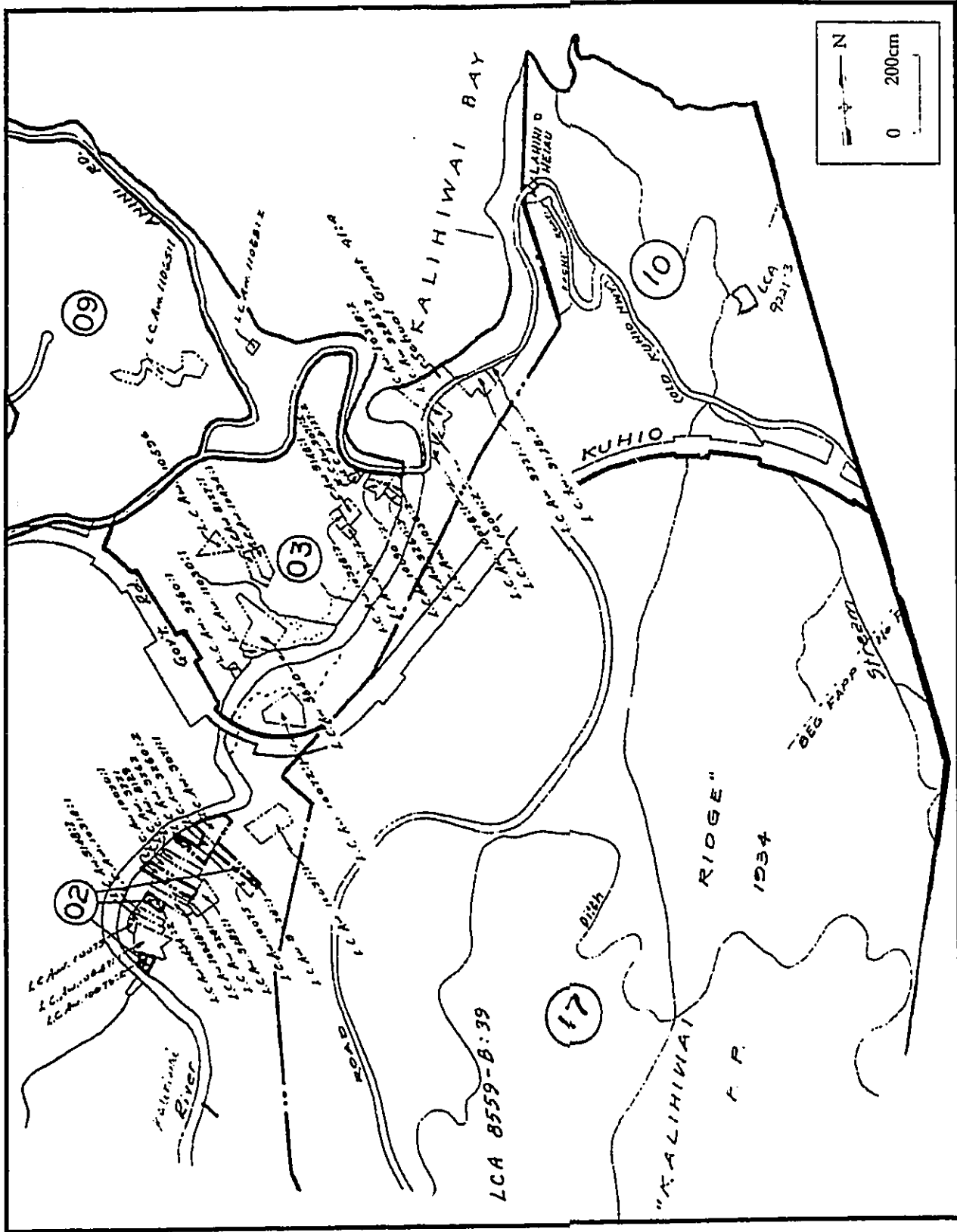
During the Great Mahele of 1848, the entire *ahupua'a* of Kalihiwai was awarded to William Lunailo (LCA 8559-B). A total of twenty-four *kuleana* claims were awarded to individuals living within Kalihiwai. Figure 4 depicts the location of all the LCA's for the *ahupua'a*, and the awardees and land uses are indicated on Table 1. Native and Foreign Register and Testimony indicate that these lands were used primarily for house lots and *lo'i*, with some *kula*. The LCA's often contained more than one *apana*, typically with differing land uses for each *apana* (Board of Commissioners to Quiet Land Titles 1846-1855). The *apana* numbers as listed in Foreign and Native Testimony apparently in many instances do not correspond with the *apana* numbers indicated on Figure 4. An example of this is LCA 10318, of which *apana* 2 is located on a portion of the current subject property. This land was awarded to Nohomalie, and foreign testimony indicated that LCA 10318 was in two pieces (*apana*) containing one house lot (listed as *apana* 1) and four *lo'i* (listed as *apana* 2). The house lot is described as being bounded by Kalihiwai River, *pali*, and two house lots, which is in accordance with the surroundings of the subject property. The subject property also contains sandy soils, on which *lo'i* could not be produced. Figure 4 depicts *apana* 1 in an area further inland next to Kalihiwai River in a low marshy area, much more suited to cultivation of *lo'i*. A 1892 map by Monserrat also depicts a structure in the general location of the subject property (see Figure 5). Therefore, LCA 10318:2 on the subject property most certainly was the location of Nohomalie's house lot.

Also of note, Kekaululu, wife of Chief Kihei (discussed above), was awarded LCA 9285 with several *apana* including a house lot, *lo'i* and *kula* lands (refer to Table 1). What is likely the house lot, *apana* 2, is located next to the current subject property, at TMK: 5-3-03:15 (see Figure 3).

In the late nineteenth century, land use and demographics were changing throughout Kaua'i. According to Joesting:

By 1890 there were villages and hotels where once there had been no inhabitants at all, a reflection of how the centers of population were shifting. The places that had offered the most to Hawaiians - the

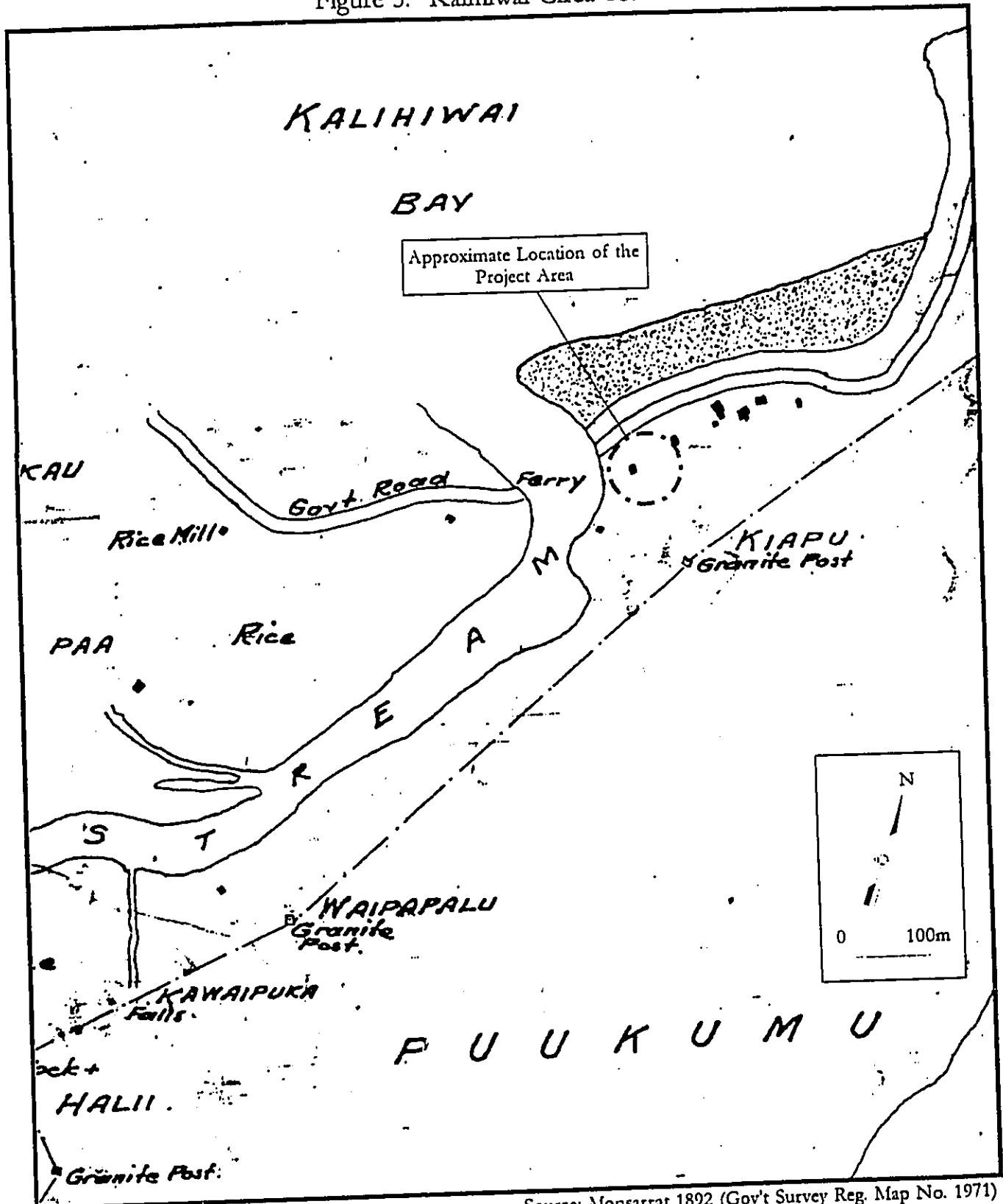
Figure 4: Map of Northern Half of Kalihiwai Ahupua'a Depicting all LCA's for the Ahupua'a



Source: Dept of Taxation, Tax Maps Branch 1932

Kalihiwai TMK: 5-3-03: 14

Figure 5: Kalihiwai Circa 1892



Kalihiwai TMK: 5-3-03: 14

Source: Monsarrat 1892 (Gov't Survey Reg. Map No. 1971)

sea to fish in, a stream to provide water for taro - these things became less important as the new commercial world took increasing control. Although some Hawaiians preferred the old life-style, many moved close to the plantation mill with the nearby company store, and their generally thinning numbers reduced old villages to fragments of what they had once been. ...Places like Anahola Valley, Moloaa, Kalihiwai, and Waipouli had previously been centers of population (Joesting 1984:249-250 in Rosendahl 1990:6).

As the Hawaiian people moved out of Kalihiwai, coffee, sugar, cattle and rice came in. Coffee was introduced in Kalihiwai in 1862 on lands belonging to Foreign Minister Robert C. Wyllie (McGerty and Spear 1999). Sugar production began in the area in the 1870's (Kennedy 1990:2).

Table 1: Land Commission Awards in Kalihiwai Ahupua'a

Award Number	Number of Apana	Awardee	Land Use (Based on Foreign and Native Testimony)	Comments
8559-B	1	Lunalilo, W.C.		Encompasses entire ahupua'a
8127	3	Heau	1: house lot 2: 4 lo'i, kula 3: 1 lo'i, kula	Apana numbers likely do not correspond to TMK map
8129	1	Heke	lo'i	
9071	2	Kaina		Likely use for 1: lo'i and 2: house lot
9128	2	Kaumana	1: house lot 2: 5 lo'i, kula	Apana numbers likely do not correspond to TMK map
9148	2	Kekoa	1: house lot 2: 4 lo'i	
9221	3	Kupuhea	1: house lot 2: 5 lo'i 3: 15 kula	
9260	3	Kea	house lot and 2 lo'i	Likely use for 1: lo'i, 2: lo'i and 3: house lot
9262	1	Kunihinihi	5 lo'i	
9281	1	Keoki	lo'i	
9285	5	Kekaululu	1: house lot 2: kula 3: lo'i 4: lo'i 5: lo'i	Apana numbers likely do not correspond to TMK map
9840	1	Kikoi	house lot, 2 lo'i, kula	
10072	1	Mainui	house lot, lo'i, kula	
10075	1	Mahina	lo'i	
10078	2	Manewa	1: house lot 2: lo'i	
10079	1	Manaka		Likely use for lo'i
10090	2	Makuakane	1: house lot 2: 4 lo'i	Apana numbers likely do not correspond to TMK map
10091	2	Mauele, I.	1: house lot 2: lo'i and kula	Apana numbers likely do not correspond to TMK map
10318	2	Nohomalie	1: house lot 2: 4 lo'i	Apana numbers likely do not correspond to TMK map
10434	2	Naeahu	1: lo'i 2: lo'i	
10596	1	Pepeiaonui	5 lo'i, kula	
10647	2	Pupu	1: house lot 2: 10 lo'i, kula	Apana numbers likely do not correspond to TMK map
10958	2	Wahahua	1: house lot 2: 5 lo'i	Apana numbers likely do not correspond to TMK map
11030	2	Sila	1: house lot 2: 1 lo'i, kula	
11065	3	Alahipa		Likely use for 1: lo'i and 2: house lot
9051*	1	Kaina		

\*Claim not awarded

Evidence of cattle is indicated in Thrum, where it is said that Kaunonoli Heiau was destroyed by use as a cattle pen (Thrum 1907:42). The Kalihiwai flood plain was used extensively during the historic period for rice cultivation. Handy (1940:71) discusses the shift from *lo'i* to rice in *The Hawaiian Planter*:

Kalihiwai has an extensive terrace area on the flatland through which Kalihiwai River meanders to the bay. This whole area is now planted in rice. Where the valley becomes narrower, a mile inland, there were small terraces. Two miles inland, and again 2.75 miles inland, in sharp bends of the river, there are small flatlands where wet taro was formerly grown. Just east of Kalihiwai Bay, Puulumu Stream flows in a shallow valley. A quarter of a mile below the road there is a small area of old terraces.

Monserrat's 1892 map depicts areas in Kalihiwai in which rice was cultivated. From this it can be seen that the flood plains along either side of the river were planted in rice (see Figure 5).

Much of this plain was inundated by two major tsunamis in 1946 and 1957. The once thriving community along the coast in Kalihiwai was devastated by these events, and numerous homes and stores were destroyed.

### *Previous Archaeology*

A small number of archaeological investigations have been conducted in Kalihiwai Ahupua'a. Thrum (1907) was the first to record archaeological sites in Kalihiwai, including Kalahihi Heiau (Site 134), Kaunonoli Heiau (Site 135), Kaihalulu Heiau (Site 136) and Kihei Heiau (Site 137), discussed above.

Earle (1978), in his study of the Halele'a district provides a description of the *ahupua'a* of Kalihiwai:

...extensive alluvial areas in large bends of main stream and at the confluence of the main and side streams. Coral reefs. No modern taro farming is found in Kalihiwai and recent land uses have apparently destroyed all archaeological remains of traditional agriculture systems in the lower valley areas. In 1850, several irrigation systems were active in the lower valley and on both of the independent streams.

Seven separate irrigation systems (Systems 38-44) were designated in Kalihiwai by Earle which correspond to LCA claims for *lo'i* during the Great Mahele (see Figure 6 and compare with Figure 4). Table 2 (taken from Tables 7.2 and 7.3 in Earle 1978:124-125) summarizes the extent of these systems. Of particular note, System 38 is substantially large, only second largest in net area in comparison with other irrigation systems throughout the entire district of Halelelea (44 systems total)(Earle 1978). This system also contained the second greatest net number of farmers in comparison with other irrigation systems throughout the entire district of Halelelea (ibid).

Formal archaeological surveys were not conducted in Kalihiwai until 1989. In April of 1989, Rosendahl conducted an archaeological Inventory Survey at ten house sites in the northern portion of Kalihiwai Valley, west of Kalihiwai River, near Kalihiwai Bay. With the exception of one house



Figure 6: Earle's Irrigation Systems  
in Kalihiwai



source: Earle 1978, Map 2

site, all had been recently bulldozed and grubbed of all vegetation (Rosendahl 1989:1). No surface or subsurface archaeological fieldwork was recommended.

In 1990, Archaeological Consultants of Hawaii, Inc., (ACH) performed a Reconnaissance Survey of property in Kalihiwai Valley five kilometers from the coast. No surface features were found. The property had been extensively cultivated in sugarcane, and it was hypothesized that any surface features which might have once been present would probably have been destroyed (Kennedy 1990). ACH conducted further archaeological investigations of this property in 1991 during an Inventory Survey (Kennedy 1991). One site (Site 50-30-03-6007) was located on the banks of Kalihiholo Stream which consisted of a crudely constructed agricultural terrace. Test excavations produced no cultural materials.

Table 2: Summary of Earle's Irrigation Systems in Kalihiwai

Earle's System Number	LCA Numbers	Type	Source	Length in Meters of Irrigation Ditch		Area in Hectares of Irrigation System		Number of Barriers on Irrigation System	
				Total	Initial Segment	Net	Gross	Net	Gross
38	8129; 9071:1; 9128:1; 9148:2; 9221:2; 9260:2; 9262; 9281; 9285:1; 10075; 10078:2; 10079; 10090:1; 10091:1; 10318:1; 10434:2; 10647:1; 10958:1	Alluvial Terrace	Main Stream	565	15	4.98	7.48	18	23-31
39	10072	Alluvial Terrace	Side/Tributary Stream	25	25	0.44	0.44	1	1
40	9260:1; 9840:1; 11030:1	Alluvial Terrace	Main Stream	415	235	1.32	1.32	3	5
41	10596	Alluvial Terrace	Side/Tributary Stream	60	60	0.34	0.34	1	2
42	8127:1; 10434:1	Alluvial Terrace	Side/Tributary Stream	135	135	0.52	0.52	2	3
43	11065	Alluvial Bottom	Small Independent Stream	0	0	0.80	0.80	1	1
44	9221:3	Alluvial Terrace	Small Independent Stream	85	85	0.37	0.37	1	1

source: Earle 1978:124-125.

Also in 1990, Rosendahl conducted a study further upland in Kalihiwai Ahupua'a. No archaeological features were identified.

An archaeological Inventory Survey was conducted in 1992 on an upland property in both Kalihiwai and Namahana Ahupua'a (Hammatt and Chiogioji 1992). No sites were identified during this investigation.

More recently, an archaeological Inventory Survey was conducted by Scientific Consultant Services, Inc. on a coastal property in Kalihiwai and Kalihikai Ahupua'a (McGerty and Spear 1999). Inventory Survey and testing revealed no surface or subsurface archaeological sites on the property.

In 2000, ACP conducted an archaeological Inventory Survey on a 560-acre property at the Guava Kai Plantation (Moore, Elmore and Kennedy 2001). Two sites were identified during the investigation. Site 2060 was comprised of a historic dam complex which dates to early in the expansion of the Kilauea Sugar Plantation Co.. Site 2060 was recommended for preservation. Site 2061 consists of a set of soil backed, stone faced terraces with associated stones utilized for lithic production. A carbon sample was obtained from one of the terraces that was found to date to AD 1487-1702 (two sigma).

Also in 2000, an archaeological Inventory Survey was conducted on the current subject property by ACP (Elmore and Kennedy 2001). One site of significance to the interests of historic preservation was identified on the subject property, a habitation site, designated State Site number 50-30-03-671, at which at least six individuals were interred. Cultural deposits and burials include both pre- and post-Contact components. Recommendations were made for the preparation of a Burial Treatment Plan and Archaeological Monitoring. A Burial Treatment Plan has been prepared which calls for the placement of all burials in a single location which will be encased in concrete (Kennedy 2002).

Overall, historical documentation conducted within the *ahupua'a* of Kalihiwai has determined that the area was actively utilized in pre-Contact times. After Western contact the population tended

to shift away from traditional agricultural systems towards modern systems that caused massive disturbances to the land and any archaeological remains that may have been present.

### *Settlement Patterns*

Settlement patterns for the Hawaiian Islands suggest that occupation initially occurred in coastal areas (Green 1980 in Rosendahl 1990:6). Kalihiwai Bay and Valley offered a perennial river, large areas of fertile alluvial and colluvial soils, and various offshore reef environments which supported a variety of marine resources (Rosendahl 1990).

Expansion of pre-Contact settlement within Kalihiwai was probably concentrated within the river valley and/or coastal areas, with the upland forest used for the collection of various raw materials (Rosendahl 1990). Religious activities, as evidenced by the remains of several *heiau*, probably took place just inland from the coast.

By the early historic period, Kalihiwai had become a center of population. Kalihiwai River provided a source for irrigation of *lo'i*. Rainfall in the valley would have been sufficient for the growing of dry taro at higher elevations, without the need for extensive terracing. The LCA testimony supports this supposition, with claims for *kula* lands used for dry taro cultivation. Research of LCA's also showed that house lots were primarily located near the shore, and *lo'i* along Kalihiwai River.

By the late 1800's the population in Kalihiwai had waned significantly, and the lands once utilized for *lo'i* were replaced predominately by rice. The small number of houses depicted on Monserrat's 1892 map are located mostly along the coast (see Figure 5). Following in the mid-1900's, two devastating tsunamis caused yet another decline in population as many homes were destroyed.

## Section 5: Community Consultations

Several individuals were consulted regarding their knowledge and concerns about the affect of the proposed construction on cultural practices and features associated with the project area. Interviews with these individuals were conducted by phone and in person. Maps were presented to the informants depicting the limits of the project area. Information gathered from each individual along with their concerns is discussed below.

### Ms. Linda Sproat

Ms. Linda Sproat expressed her knowledge of and association with the project area and Kalihiwai Ahupua'a. Ms. Sproat, who is of Hawaiian-Chinese descent, grew up a few houses down from the subject property and is very familiar with that property. She knew members of the Mahikoa family, who owned the land at the time, and gave names of Mahikoa family members and a neighbor who are still living. She used to play and "tromp" through the property on a regular basis as a child. She does not remember there being a house on the property when she was a child, though she was aware that one had been there previously. She had been told to stay away from the back portion of the property because there were graves there. However, she does not remember there being any surface indicators such as headstones, or how many, or who was buried there. Any such indicators, as well as the house, may have been washed away in 1946 by the first of two major tsunamis (the second was in 1957) which devastated Kalihiwai. Most homes in Kalihiwai were lost during that time. A fishpond was once located on the back of the property which was fed by a ditch carrying water draining from the hillside. The fishpond was probably filled in as a result of the 1946 tsunami. She recounted two interesting stories which have connections with Kalihiwai. One relates to the presence of a large Hawaiian village located far into the interior of Kalihiwai. The other was a story concerning the events of the 1946 tsunami in connection with her family. Another story was told which is associated with a member of the Mahikoa family (which formerly owned the subject property) who, according to Ms. Sproat, authored the famous song, "Hula o Makee." The lyrics and translation of this song may be found in Appendix A.

With regards to the proposed construction having any adverse effects on places of traditional or cultural importance, Ms. Sproat did not object to the development of the property *per se*. However, she expressed a concern that the human remains which are present on the subject property be treated with care and respect. Aside from issues of places of traditional or cultural importance, she also expressed a concern that if the property was developed into an ostentatious home simply to be sold as an investment, that this would be unfair to the *kama'aina* who have lived in the neighborhood for their entire lives, as it would drive up the property taxes to the point where the cost of living would be too high for them to continue living there.

*Transcription of Interview with Ms. Linda Sproat*

*(Note: A portion of the interview was not included on audio-cassette due to technical difficulties. Information obtained from notes compiled during the interview has been included in brackets.)*

Name: Linda Ku'ualoha Akana Sproat  
Address: 3083 Kaohe Road, Kalihiwai  
Birthdate: March 16, 1940  
Birthplace: Waimea, Kaua'i  
Ethnicity: Hawaiian-Chinese  
Historical and Geographical Association with the area:

LS: "I would walk by there everyday when I went to school. Uncle Bob Mahikoa and Auntie Grace Mahikoa were great friends of ours. We went to the same church. He taught me in school. They lived in Kilauea, and then they moved to Hanalei over here after Uncle Bob retired. I am really familiar with the property, I used to tromp through there all the time. But when I remember it, the house was already gone from the '46 tsunami, I believe it was. But we all knew that there was a cemetery there because we were told many, many times by my grandfather [to stay away from that area]. [There was also a fishpond on the property.]"

ME: "*Now the property we surveyed was this [pointing to TMK: 5-3-03:14]. And this is the property where the house and the fishpond and the cemetery were all located?*"

LS: "Yes. I used to live right here on this property [on the opposite side of Kalihiwai River]. My grandfather had his boat, his net house and his boat house and that property for many, many years. And after the '57 tsunami we picked up from the houses that were our houses that were lost [during the 1957 tsunami] and we built a house on here which we now moved down here. And we lived over there for about three years on this property [TMK: 5-3-03:30]."

ME: "*And when was that?*"

LS: "From 1957 to a little over 1961."

ME: "*Where was the fishpond located on the property?*"

LS: "[The fishpond was located in the back portion of the property. The water which fed the fishpond] well maybe not now because it's dry, and it falls out of the hill there and they dug a trench [in the back] from Uncle Billy's place [on the property neighboring to the south]."

ME: "*Did they grow anything on that property?*"

LS: "That I don't know."

ME: "*So the Mahikoas actually lived on that property [subject property]?*"

LS: "Yeah, the older Mahikoas, not the younger ones because most of them left...and they all grew up, they went over to school and never came back."

ME: "Are there any other families that lived on the property?"

LS: "No, I don't know, because I am younger."

ME: "So the cemetery wasn't associated with a church or anything before that?"

LS: "I don't know, you know, because I'm kind of young compared to all this other stuff. I know there are other families in Kalihiwai who have cemeteries in their yard."

ME: "Do you know who specifically, which family members are buried in the cemetery?"

LS: "No I don't, because that was before my time."

ME: "Who of the Mahikoas could we get in touch with?"

LS: "O.K., right now, I know Butch Mahikoa. He lives on O'ahu, I believe. But he had a son that lives at Koolau over here named Kahula Mahikoa. And Kahula was, I think they lived in Hanalei on their family property over here for a while, but his father would probably know. And in fact there's an older Mahikoa, I don't know what her last name is [by marriage], but Kahula can tell you what her name is. She lives in Koloa, and her name is Pauline. And in fact, she works, she volunteers at the museum in Lihue. So she's Uncle Bob's daughter, and Butchie is Uncle Bob's grandson, but Uncle Bob and Auntie Grace raised Butchie. So Pauline would probably have the family history and I'm not sure her brother Reena (?) who is older who used to live in Honolulu and may still be living and he may also have information about who was there. But I'm sure Pauline might know."

ME: "And maybe I could track her down through the museum?"

LS: "Yeah, track her down through the museum. I cannot think of her name right now but I think she's the only Pauline who works there but she lives in Koloa and if you tell them you're looking for Pauline Mahikoa, they could probably help you find her. And then I think Kahula, her nephew, is listed in the phone book. And he lives right up at Ko'olau past Kilauea."

ME: "Now, do you recall on this property, do you remember there being any headstones?"

LS: "No, I don't remember any headstones, because like I said this is after the '46 tsunami because I was only six when the tsunami hit. So when we were running around in the bushes over there, it was after the tsunami. So there may have been, but, you know, the tsunami may have washed it all away, mainly because of all the trees and stuff that got washed around. [It was] at that point that the fishponds got covered over."

ME: "Would you happen to know when the most recent grave was? No one was buried after the 1946 tsunami?"

LS: "No, not that I know of, unless it was ashes and somebody buried them there. But not that I recall."

ME: "Would you happen to know if any of the remains have been moved?"

LS: "Not that I saw, not that I observed, I mean during my lifetime, I didn't see any of them being moved. Because the property after the, as I remember it, after the tidal wave, it just became overgrown. And they had a lot of *laua'e* growing in there, and so and little trees and coconut trees, some are still there. It was really beautiful. And every time we would have parties and stuff that's where we would go pick up [*laua'e*] over at that property. So we tromped around in there a lot."

ME: "*And the house that was on there on the property...*"

LS: "I cannot remember very well, you know, because I was really little. But like I said, Pauline could probably tell you all the information. She may even have pictures you know. Because they moved to Kilauea and they lived in Kilauea, so..." [Many of the residents of Kalihiwai lost their family photographs during the tsunami, but since Pauline was not living there, there is a greater chance that there could be surviving photographs.]

ME: "*And the tsunami took out that house?*"

LS: "I think so, I'm not absolutely positive, in '46, because when I was little and going by, walking by there was a house I used to go play. And there was a sweet shop next to that place [across the street], and at one point we had two more stores over there. We had three gas stations and two stores before the '46 tsunami."

ME: "*And then the tsunami just devastated...*"

LS: "Yeah, we lost five lives there."

ME: "*In Kalihiwai?*"

LS: "Yeah, in Kalihiwai. Oh, I know who might still be living... his family is the one who had the sweet shop over here [TMK: 5-3-03:29]. O.K., so they lived right across there. He grew up with my dad over there. Now, his name is Henry Lum, I think... I can go home and get his phone number and you can call him up."

ME: "*So you wouldn't happen to know if those particular graves were in a particular alignment?*"

LS: "No that kind of stuff, when I was, by the time I was tromping around over there, they kept telling us, 'Don't go there, there's graves over there.' But there were no headstones and no nothing, because, you know, that was after the tsunami. Henry Lum might know, you know what I mean? Or Pauline. She might even have pictures of it, you know."

ME: "*Now, these black dots are where we found human remains. And the ones in this vicinity are the ones that had coffins with them. And these two we think are probably pre-Contact. They didn't seem to fit in with, you know, no coffin, fetal position, that kind of thing. The area that you were told where the cemetery was, was it the back half?*"

LS: "Yeah, it was more in the back."

ME: "*And not, say maybe the house was in the front?*"

LS: "Yeah, I have no idea, but they did tell us, that's why when we walked to the back they kept telling us 'Watch where you're walking, that's all graves back there.' We used to hang out in the front, but we would wander in the back sometimes. Actually the Hawaiians, they usually put their cemetery in the back, you know."

ME: "Now this particular property during the Great Mahele in 1848 was awarded to a man named Nohomalie. Are you familiar with that name?"

LS: "I'm not absolutely positive, but I think I just met a Nohomalie. She told me, she works at the charter school on the Big Island and in Honolulu, and they took a field trip of kids to the charter school of the Native Americans. But I will, it just happened that she is friends of our daughter on O'ahu and ... when you asked she said "my grandmother was born and raised in Kalihiwai" and that name sounds familiar, Nohomalie."

ME: "Do you know of any particular legends or noteworthy history in Kalihiwai Ahupua'a or that particular area?"

LS: "Well, I know only something really interesting about that, Mrs. Mahikoa. My grandma told me, Grandma Mahikoa... there was a ship, Kealia Plantation was doing sugar at that time. And the people from Kilauea and Kalihiwai would go into town, and one day they were all going to town and this sugar boat that came to pick up sugar from Kealia Sugar, which is when you go down the Kealia Hill out in that area on the ocean there, had come to pick up sugar and got stuck on the reef. [There is] a rather well known song called "Hula o Makee." It just happened that day that my grandma went over the hill and came up on that hill over there and they saw the ship stuck in there. And Mrs. Mahikoa was there, too, and she sat on the hill and they all sat and watched trying to see how they were gonna get it off. Because, as I understand it, one of the famous Hawaiian steersmen from the North Shore here, [tried] to see if he couldn't steer the boat off the reef. They spent a good portion of the day there, and then my grandma continued on. And the next day when they came over to Kahiliwai, [she said] that she [Mrs. Mahikoa] wrote a song about the day there, about the boat and so forth. And they still have not identified the composer. It still says composer unknown. And there was, according to my grandma, my grandma had a really beautiful voice, and so did Auntie Grace Mahikoa.

"Now, as far as legends are concerned, when I was young, and my Auntie Loretta is still living, so this might be a little bit...[she told me that] up Kalihiwai River, way up in the top, is a big Hawaiian Village. And many years ago, when the Roman Catholics first brought their church, the Roman Catholic Father who was up here wanted to, had heard about it and all these Hawaiian stories, and my Grandpa took he and my Auntie Loretta... she still lives on O'ahu, but he didn't allow her to go the whole way up to where the community was, he made her stay down because Hawaiians don't bring their females, you know... Then the priest walked up there all the way up to there. I've never been up there I don't know where it is but I understand that it's really quite an archaeological park and he knew where it was. And it's above when you come to Kalihiwai and you look at that waterfall, it's not that waterfall, you have to go further up the river. I don't know how far up it is, but there's a whole village up there and also a *heiau*, I believe, too. But I don't know, my Auntie could probably tell you."

ME: "Do you know of any heiau or shrines or anything that were ever on that property?"

LS: "On that property? No, I don't."



*[Ms. Sproat also recounted a story that unfortunately did not get included on the audio tape. This was a story concerning the events of the 1946 tsunami in connection with her family. According to Ms. Sproat, when her father became aware of the coming of a tidal wave, as the water in the Bay was being sucked out to sea, he was on the west side of Kilauea River, and his fishing boat was resting on land on the opposite side of the river. Coming from a family of fishermen, their livelihood was dependant upon their fishing boat. Knowing that the boat would be destroyed by the wave if it was not quickly moved up the river, he dove into the river, swam across to the other side, flipped over the boat by himself and pushed it into the river. He was worried that the boat would be smashed into the bridge if he didn't make it past the bridge before the wave hit, but he made it past in the nick of time and rode the wave inland. The wave was so high that he was above the telephone poles. Several people were swept up by the wave and he pulled them into his boat. At one point he heard a familiar voice calling for help. He saw it was his mother, and she was wrapped up in barbed wire. He pulled her into the boat as well, saving her life. Once the wave began to recede, he rode the wave back down, being careful to not get caught up in the trees. Thus, not only was the boat and his family's livelihood saved, but several lives as well.]*

### Concerns Regarding the Proposed Construction:

ME: *"This Burial Treatment Plan that we've written, we wrote this before we realized there was a known cemetery there. And in this plan we have suggested that the remains be put into a single location on the property where they won't be disturbed. They'll be in a concrete lined block that's going to be capped with concrete and then landscaped above it. That's the current plan."*

LS: *"[That's] generally what they do."*

ME: *"Do you have any objections to that? Do you see any problems..."*

LS: *"No, I think it's a good idea, it's not my [family], but I don't think I would, but I think... I would put it further back, only because, well, I don't know. I was just thinking that, you know it would be less opportunity for people to fiddle with it if you have it away from the main road over there. And, that's my only statement. But you know, if they take good care [that's really what is most important]."*

ME: *"Do you feel that development in general of this property would have any kind of adverse effect on a place of cultural or traditional importance?"*

LS: *"No, I don't think it would... When they excavated [on a separate property in Haena, TMK: 5-9-2:34], even after they did the survey... [they found] many, many more, you know remains and stuff and people were... they stored all the bones over here and we took care of them because all kinds of stuff, so I think that if they do... that they really ought to take into consideration what that place was really used for before. They had to break all the concrete up [from the floor of the house, after it was discovered what had happened] and get it out because they were just throwing them [human remains] all around, it was really horrible. One of the boys was, when he came home with this amulet that he took off one of the bones, and you know [what I was thinking was] 'you dummy!' Anyway, so... put them [human remains on the subject property] all in one place and take care of them."*

*[Ms. Sproat also expressed an additional concern which was not recorded on audiotape. She was concerned that if the property was developed as a luxury home and then sold subsequently, this would drive up the property taxes for the neighborhood, making it difficult for the kama'aina in that area to afford to live there.]*

### Mr. Chauncy Pa

Mr. Chauncy Pa conveyed his knowledge of and association with the current subject property. Mr. Pa grew up on the property neighboring to the west, TMK: 5-3-03:13, and still lives in Kalihiwai today. He remembers being on the property as a child before the 1946 tsunami. There was no house on the subject property at that time and the property was overgrown, but he recalled that there were at least two graves in the center of the parcel. They consisted of small earthen mounds lined with stones painted white. At that time, the property was still owned by the Mahikoa family. He knew Bob and Grace Mahikoa and their son Paki, all of whom are deceased. He recalled a descendant of the Mahikoa family in Koloa who he believed was still living, but could not remember her name. Regarding the proposed construction having any adverse effects on cultural practices and features (i.e., burials) associated with the project area, Mr. Pa indicated "It's not for me to say."

### Mr. Wendell Goo

Mr. Wendell Goo related his knowledge of and association with the subject property. Mr. Goo was raised one lot away from the Mahikoa property, and now lives in Kilauea. He recalls playing on the property as a child from as early as the early 1940's. He does not remember there being a house or any graves on the property at that time. There were numerous coconut trees on the property, and he remembers climbing them.

### Mr. Kahula Mahikoa

Mr. Kahula Mahikoa, who lives on Kaua'i, is a lineal descendant of the Mahikoa family which formerly owned the subject property. His father, Butch Mahikoa, who lives on O'ahu, was visiting at that time. Mr. Kahula Mahikoa was not very familiar with the property, and indicated that his father was not very familiar with it either. When told that there were burials on the property, he indicated that he could not be certain whether the individuals were of the Mahikoa family. He suggested that his great aunt, Ms. Pauline Mahikoa Hadama, would have more information regarding the subject property. (Ms. Hadama is the lineal descendant of whom Ms. Sproat and Mr. Pa were referring.)

## Ms. Pauline Mahikoa Hadama

Ms. Hadama expressed her knowledge of and association with the project area. Though she grew up in Kilauea, she used to visit the subject property regularly as a child until 1928 when her grandfather died. She was six years old at that time, and her grandfather had owned the property. The property was passed on to Ms. Hadama's father's sister, and then to the sister's daughter, Ms. Amy McGrail, who lives on O'ahu. After 1928, she only visited the property infrequently, when passing through to Hanalei. She thought she remembered a house on the property which stood two stories high, though she commented that her father had once told her that it had only been a one-story home, though it was not clear when that house was present. She recalled what she referred to as a "little mountain" in the back part of the property before the cliff, which she was told to stay away from, though she was never told why. She could not remember how tall the "mountain" was, and suggested that it may have been between 8 and 10 feet high. She was unaware of there being any burials on the property until two years ago (after the burials were identified during the archaeological Inventory Survey by ACP) when Michael Ching contacted her to ask her about them. In retrospect, she wondered if the "little mountain" was associated with the burials. Kalihikai was thriving when she was a child, but all was washed away by the tsunami. She indicated that her cousin, Ms. Amy McGrail, who once owned the property, might know more about the property. With regards to the proposed development having an adverse affect upon the burials on the subject property, she indicated that moving the remains to a single location before developing the property would be fine, that it "would be wonderful to leave it there" as they would be "happier there" (remaining on the same property).

## Ms. Amy McGrail

Ms. Amy McGrail (b. 1920), who formerly owned the subject property and now lives on O'ahu, conveyed her knowledge of and association with the property. Ms. McGrail received the property in Kalihikai from her mother. Her mother received it from her husband, George Mahikoa, after he passed away. George Mahikoa is buried in Kapa'a. Ms. McGrail has been visiting the property periodically since the 1930's. She never lived there, and as long as she can remember there was no house on the property. The family never even camped there, but instead stayed in the hotel during their visits. She also mentioned how much the children enjoyed going there. She was unaware that there were any graves on the property and there were no surface indications, even when her sons began clearing the property in the 1970's. She does not know who is buried on the property, but recognizes her lineal descendant status and asked for the right to make a decision on deposition. With regards to the proposed construction having any adverse effects, her primary concern was that the individuals buried on the property should remain on the property. Her other concern was that the burials be protected. When informed of the current Burial Treatment Plan which recommends that the burials be moved to a single location on the subject property which will be protected by a concrete encasement, Ms. McGrail was very pleased.

## Section 6: Discussion

During the cultural consultations, conflicting information was obtained concerning the presence of burials and a house on the current subject property. The only individuals who had prior knowledge [preceding to the archaeological Inventory Survey] of the presence of burials on the property were Ms. Sproat and Mr. Pa. Only Mr. Pa had specific information regarding those burials. This would seem curious, given that the two most senior persons interviewed, Ms. Hadama and Ms. McGrail, both of whom are in their 80's and are likely lineal descendants of the individuals buried there, had no knowledge of their existence. This would seem especially anomalous given that Ms. McGrail once owned the property. However, their lack of knowledge of this matter is likely due to the fact that neither of them ever lived on the property, and their memories of it are primarily from when they were small children. Likewise, given the substantial number of years which have passed since their childhood, their memories may have faded. Ms. Sproat and Mr. Pa had a much more intimate familiarity with the property, having grown up in that area and played on the property on a regular basis. Ms. Sproat did not have specific information about the burials (i.e., surface indicators and number of burials), because as she noted during her interview, she did not have clear memories of the property before the 1946 tsunami, which apparently obliterated the surface indicators of the burials mentioned by Mr. Pa. Though Mr. Goo also grew up in the area and played on the property, he was not aware of the presence of graves. This may simply have resulted in a general lack of knowledge about the property for unknown reasons.

The only individuals consulted who seemed to think that they remembered a house on the subject property were Ms. Sproat and Ms. Hadama. Ms. Sproat thought she might have remembered a house on the property that may have been destroyed by the 1946 tsunami. However, her memories on that matter were admittedly unclear. Ms. Hadama thought she remembered a two-story house, though she indicated that her father told her that her memory was incorrect, that there had been a one-story house there. However, it was not clear when that house was actually present on the property. Given Mr. Pa's clear memories of the property in the early 1940's, before the 1946 tsunami which destroyed several homes in the area, most likely the house was not present at that time. It is also likely that the house was not present during the 1920's, given Ms. McGrail's clearer memories of visiting the property as a child, as she was certain that there was no house there during her lifetime and remembered that her family stayed in a hotel during those visits. As Ms. Hadama's father referred to the presence of a one-story house on the property, it would seem likely that the house was extant during his lifetime, prior to the 1920's.

## Section 7: Summary and Recommendations

### *Summary*

From the historic background of Kalihiwai Ahupua'a, it can be seen that a diverse history has occurred in this area. This began with the earliest use of littoral resources, the extensive settlement and production of taro in Kalihiwai Valley, and the construction of several *heiau*, including one built by Chief Kihei (emissary of Kamehameha I to the king of Kaua'i during Kamehameha's efforts to gain control of Kaua'i). This was followed in the post-Contact period by the growth of coffee, sugar, cattle and rice production in the 1800's and the occurrence of two devastating tsunami during the 1900's.

During the course of interviewing knowledgeable individuals, information regarding areas of cultural and traditional importance in the vicinity of the project area and in Kalihiwai Ahupua'a was obtained. Ms. Sproat's discourse related primarily to her memories of the subject property from when she was a child, along with stories relating to an ancient Hawaiian village in Kalihiwai Valley, the events of the 1946 tsunami, and the writing of the song "Hula o Makee." Mr. Pa revealed specific information regarding burials located on the subject property as he recalled from when he was a child (before the 1946 tsunami). Mr. Goo's knowledge of the subject property consisted of his personal memories of playing on the property as a child. Mr. Mahikoa, having little knowledge of the subject property, deferred to his great aunt, Ms. Hadama, with regards to specific information about the property. Ms. Hadama conveyed her lineal association with the former owners of the property along with her early childhood recollections of the property and the surrounding area. Ms. McGrail explained how she formerly owned the subject property, and her early childhood memories of the property.

With regards to the proposed construction having any adverse effects on places of traditional or cultural importance, Ms. Sproat's main concern was that the human remains on the subject property be treated with care and respect, though she also expressed a concern that if the property is sold after development that the property taxes for the neighborhood would be raised unfairly. Mr. Pa had no comments on the matter. Mr. Mahikoa deferred comment to Ms. Hadama. Ms. Hadama expressed her wishes that the individuals buried on the property remain on the same parcel. Similarly, Ms. McGrail, who recognizes her role as a lineal descendant of individuals buried on the property, asked that they remain on the property and be protected.

### *Recommendations*

Based upon an absence of objections by the cultural informants, no obstructions to the implementation of the proposed project are present with regards to any areas of known cultural or traditional importance, providing that the individuals buried on the property remain on the parcel and be protected. Archaeological Inventory Survey investigations have already been completed, and no additional archaeological investigations were recommended (Elmore and Kennedy 2001).

The implementation of the Burial Treatment Plan, which calls for the individuals buried on the property to be placed in a single location on the parcel that will be encased in concrete, is recommended to occur before commencement of any construction activities (Kennedy 2002). Additionally, given the possibility of encountering additional human remains during development on the subject property, it is recommended that a qualified archaeologist monitor any subsurface construction activities.

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**Appendix A: "Hula o Makee"**



## “Hula o Makee”

Elbert and Mahoe (1970:55) provide the lyrics, translation and description to the song “Hula o Makee” which was discussed by Ms. Sproat (refer to Section 5):

The *Makee* was a ship named for a rancher of the same name. The *Makee* went on the reef at Kapa‘a, Kauai, and was found by the ship *Malulani*. *Makee* here represents a girl who has deserted her lover, *Malulani*, who is looking for her. *Hiram* was an officer of the ship. ‘*Ie‘ie* is the channel between Kauai and Oahu.

### HULA O MAKEE

‘Auhea iho nei la ‘o Makee?  
A ka *Malulani* la e huli hele nei.

Aia aku nei kahi i Kapa‘a  
Ka waiho kapakahi i ka ‘āpapa.

‘O ke kani honehona a ke oeo  
A e ha‘i mai ana la i ka lono.

‘O ka hola ‘umi ia o ke aumoe  
Kā‘alo *Malulani* mawaho pono.

Kū mai *Hailama* pa‘a i ka hoe  
I mua a i hope ke kulana nei.

Ākea ka moana nou e *Makee*,  
Ma ke kai holuholu o ka ‘*Ie‘ie*.

Ha‘ina ‘ia mai ana ka puana:  
‘Auhea iho nei la ‘o *Makee*?

### THE MAKEE HULA

Where is the *Makee*?  
The *Malulani* looks everywhere.

There she is at Kapa‘a  
Keeled over on the reef.

Softly sounds the whistle  
Telling the news.

Ten o’clock at night  
The *Malulani* passes by.

*Hiram* stands and grasps the paddle  
Careening bow to stern.

Broad is your ocean, O *Makee*,  
And the swaying seas of ‘*Ie‘ie*.

Tell the refrain:  
Where is the *Makee*?

# **APPENDIX 5**

## **DOCUMENTATION OF PRE-ASSESSMENT CONSULTATION**

**Bothman Single Family Residence – Final Environmental Assessment  
TMK (4) 5-3-03: 014**

## **ENTITIES CONSULTED IN PREPARING DRAFT ENVIRONMENTAL ASSESSMENT**

The following agencies and affected parties have been consulted and given an opportunity to review and comment upon the proposed project in the preparation of this Draft Environmental Assessment (see accompanying documentation):

### **FEDERAL**

- No agencies contacted

### **STATE**

- Office of Environmental Quality Control (OEQC)
- State Department of Health
- DLNR, Division of Aquatic Resources
- DLNR, Division of Forestry and Wildlife
- DLNR, State Historic Preservation Division

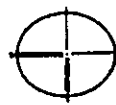
### **COUNTY**

- County Planning Department
- Department of Public Works, Engineering Division
- Department of Public Works, Building Division
- Department of Water

### **COMMUNITY GROUPS, ADJACENT PROPERTY OWNERS, ETC.**

- Kilauea Neighborhood Association
- Sierra Club, Kauai Chapter
- Gaylord Kaonohi, Neighboring Property Owner
- William Akana, Neighboring Property Owner

# SAMPLE LETTER



Wagner Engineering Services, Inc.  
Box 851 Hanalei, HI 96714 808-826-7258 FAX: 808-826-7745

December 1st, 1999

Mr. Don Hibbard  
Director, Historic Preservation Program  
DLNR, State Historic Preservation Division  
Kakuhihewa Building, Room 555  
601 Kamokila Blvd.  
Kapolei, HI 96707

Re: **TMK 5-3-03: 14**  
**Bothman Single Family Residence CDUA & Draft Environmental Assessment**  
**Pre-Assessment Consultation from Impacted Entities**

Dear Mr. Hibbard,

In compliance with the State of Hawaii's Environmental Impact Statement Law (HRS 343), we are notifying you of the proposed development of a single family residence on Tax Map Key 5-3-03: 14, which is located on Kalihiwai Road near Kalihiwai Beach on the Island of Kauai, Hawaii.

The identified parcel is owned by Mr. and Mrs. Robert Bothman. The lot is located within a Limited Subzone of the Conservation District. Proposed development upon the parcel triggers the Conservation District Use Application (CDUA) process, a component of which is the preparation of an Environmental Assessment (EA). The EA is used to evaluate the possible environmental effects of the proposed action and to determine whether or not an Environmental Impact Statement (EIS) is required.

The applicants, Mr. and Mrs. Bothman, have contracted with Wagner Engineering Services to carry out the environmental review process on their behalf. It is the responsibility of the project applicant, to solicit comments from agencies, community groups, concerned citizens, and other affected parties within the relevant community prior to the submittal of a Draft EA. Therefore, if you would like to comment upon the proposed action, please submit your remarks for inclusion in the Draft EA by no later than Monday, January 3<sup>rd</sup>, 2000. Please reference the "Bothman Single Family Residence CDUA" and send your written comments to:

Wagner Engineering Services  
P.O. Box 851  
Hanalei, HI 96714

We will exercise due diligence in responding to your concerns. The State's Department of Land and Natural Resources (DLNR) is the accepting and approving agency with jurisdiction over the CDUA process. It is anticipated that a CDUA and Draft EA will be submitted to the DLNR for filing in January of 2000. Notice will then be posted in the Office of Environmental Quality Control's (OEQC) Bulletin. At that time, the EA and CDUA will be available at the Princeville State Library for public review and response (or the documents may be reviewed at the OEQC).

If you have any questions, please do not hesitate to contact our offices. Thank you very much for your timely attention to this matter.

Sincerely,

Ronald J. Wagner P.E., L.S.

cc: Robert Bothman, Conrad Schmidt, Nancy McMahan

BENJAMIN J. CAYETANO  
GOVERNOR OF HAWAII



TIMOTHY E. JOHNS, CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE MANAGEMENT

DEPUTIES  
JANET E. KAWALO  
LHNEL NISHIOKA

STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES

HISTORIC PRESERVATION DIVISION  
Kakuhikewa Building, Room 555  
601 Kamokila Boulevard  
Kapolei, Hawaii 96707

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

January 25, 2000

Mr. Ron Wagner  
Wagner Engineering Services  
P.O. Box 851  
Hanalei, Hawaii 96714

LOG NO: 24634 ✓  
DOC NO: 9912NM10

Dear Mr. Wagner:


SUBJECT: Historic Preservation Review -- Due Diligence for CDUA  
and DEA For Bothman Single Family residence  
TMK: 5-3-03: 14, Kalihiwai, Hanalei, Kauai

Thank you for the opportunity to comment. No completed archaeological inventory surveys have been conducted on the parcel. Burials and archaeological deposits have been found in nearby parcels. Given this information, it seems likely that historic sites may be present on this parcel. Thus, we recommend that archaeologist inventory survey be conducted by a qualified archaeologist. The findings with proposed mitigation proposals for any significant historic sites should be submitted in report format for our Division's review.

Typically, if the report is acceptable and the mitigation proposals, then we will recommend that the mitigation work be required as conditions to any approved permit. If burials are discovered, a burial treatment plan will need to be prepared and reviewed by the Kaua'i Island Burial Council.

If you have any questions, please call Nancy McMahon 742-7033.

Aloha,

  
DON HIBBARD, Administrator  
State Historic Preservation Division

NM:amk

2143

**DEPARTMENT OF WATER**  
County of Kauai

*"Water has no Substitute - Conserve It!"*

December 20, 1999

Mr. Ron Wagner  
Wagner Engineering Services, Inc.  
Box 851  
Hanalei, HI 96714

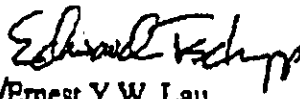
Dear Mr. Wagner:

**Subject: Bothman Single Family Residence CDUA & Draft Environmental Assessment, Pre-Assessment Consultation from Impacted Entities, TMK:5-3-3:14, Kalihiwai Road, Kalihiwai, Kauai**

We have no objections to the CDUA and Draft Environmental Assessment for the proposed development of a single family residence on parcel 14.

If you have any questions, please call Edward Doi at 245-5417.

Sincerely,

  
for Ernest Y.W. Lau  
Manager and Chief Engineer

ED  
Bothman/ester.ed

2163

BENJAMIN J. DAYITANO  
GOVERNOR OF HAWAII



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:

December 13, 1999

99-249/epo

Mr. Ronald J. Wagner, P.E., L.S.  
Wagner Engineering Services, Inc.  
Box 851  
Hanalei, Hawaii 96714

Dear Mr. Wagner:

Subject: Pre-Assessment Consultation  
Bothman Single Family Residence CDUA  
Kalihwai Road  
Kauai, Hawaii  
TMK: 5-3-3: 14

Thank you for allowing us to comment on the subject project. We would like the following items addressed in the Draft Environmental Assessment.

1. Wastewater treatment and disposal.
2. Erosion control practices or measures to be taken during construction activities in order to protect near shore waters.

Sincerely,

GARY GILL  
Deputy Director for  
Environmental Health

# **APPENDIX 6**

## **ARCHAEOLOGICAL MONITORING PLAN To Be Implemented During Construction**



**AN ARCHAEOLOGICAL MONITORING PLAN FOR  
SITE 50-30-03-671 LOCATED AT TMK: 5-3-03: 14  
IN KALIHIWAI AHUPUA'A, HANAIEI DISTRICT,  
ISLAND OF KAUAI**

**MARCH 2003**

**Prepared for: Mr. Robert Bothman  
650 Quinn Ave.  
San Jose, CA. 95112**

**Prepared by: Archaeological Consultants of the Pacific, Inc.  
Michelle Elmore, B.A.  
Joseph Kennedy, M.A.  
59-624 Pupukea Road  
Haleiwa, Hawaii 96712**



*Inventory Reports • Data Recovery Reports • Research Design Documents • Monitoring • Due  
Diligence Work • Historical Studies • Cultural Studies • Burial Treatment Plans • Preservation  
Plans • Interpretive Reconstructions • Restorations • Qualified Expert Witness Testimony*  
59-624 Pupukea Road Haleiwa, Hawaii 96712 Phone: 638-7442/Fax: 638-0703  
email: [archaeologypacific@hawaii.rr.com](mailto:archaeologypacific@hawaii.rr.com)

## **Abstract**

The following Archaeological Monitoring Plan addresses cultural preservation concerns related to Site 50-30-03-671 at TMK: 5-3-03: 14 in Kalihiwai Ahupua'a, Hanalei District, Kaua'i Island. Site 671 consists of a habitation site with burials. Because an archaeological site of significance to the interests of historic preservation has been previously found on the subject property, archaeological monitoring has been required for any subsurface construction activities. This plan describes the environmental setting of the project area, summarizes the proposed construction activities, discusses the kinds of archaeological remains or historic properties which may be found during construction, and details the methodology of the treatment of these potential findings.

## Table of Contents

Abstract .....	i
Section 1: Introduction.....	1
Section 2: Environmental Setting .....	1
Section 3: Proposed Construction Plans .....	5
Section 4: Summary of Previous Archaeological Investigations.....	5
Summary of Site 671 .....	10
Burials at Site 671 .....	10
Section 5: Expected Finds.....	12
Section 6: Methodology of Archaeological Monitoring.....	12
Section 7: Conclusion .....	14
References Cited.....	14

## List of Figures

Figure 1: Project Location on a Map of Kaua'i .....	2
Figure 2: Location of the Subject Property on a U.S.G.S. Map .....	3
Figure 3: Location of the Subject Property on a TMK Map.....	4
Figure 4: Top Plan of Inventory Survey Excavations.....	6
Figure 5: Top Plan of Burial Features and Reinterment Site.....	8

## List of Tables

Table 1: Summary of Archaeological Work.....	5
Table 2: Summary of Burial Features at Site 671 .....	9

# **An Archaeological Monitoring Plan for Site 50-30-03-671 Located at TMK: 5-3-03: 14 in Kalihiwai Ahupua'a, Hanalei District, Island of Kaua'i**

## **Section 1: Introduction**

At the request of Mr. Robert Bothman, Archaeological Consultants of the Pacific, Inc. (ACP) has prepared this plan for the archaeological monitoring of subsurface construction activities associated with the construction of a private residence. The subject property (TMK: 5-3-03: 14) is located in the *ahupua'a* of Kalihiwai, current district of Hanalei, Island of Kaua'i (see Figure 1 and 2). Mr. Robert Bothman is currently the owner of this property in question.

The archaeological monitoring of the proposed construction activities will ensure the protection of significant historic properties that exist on the subject property and help mitigate the effect of construction activities on sites that may be encountered.

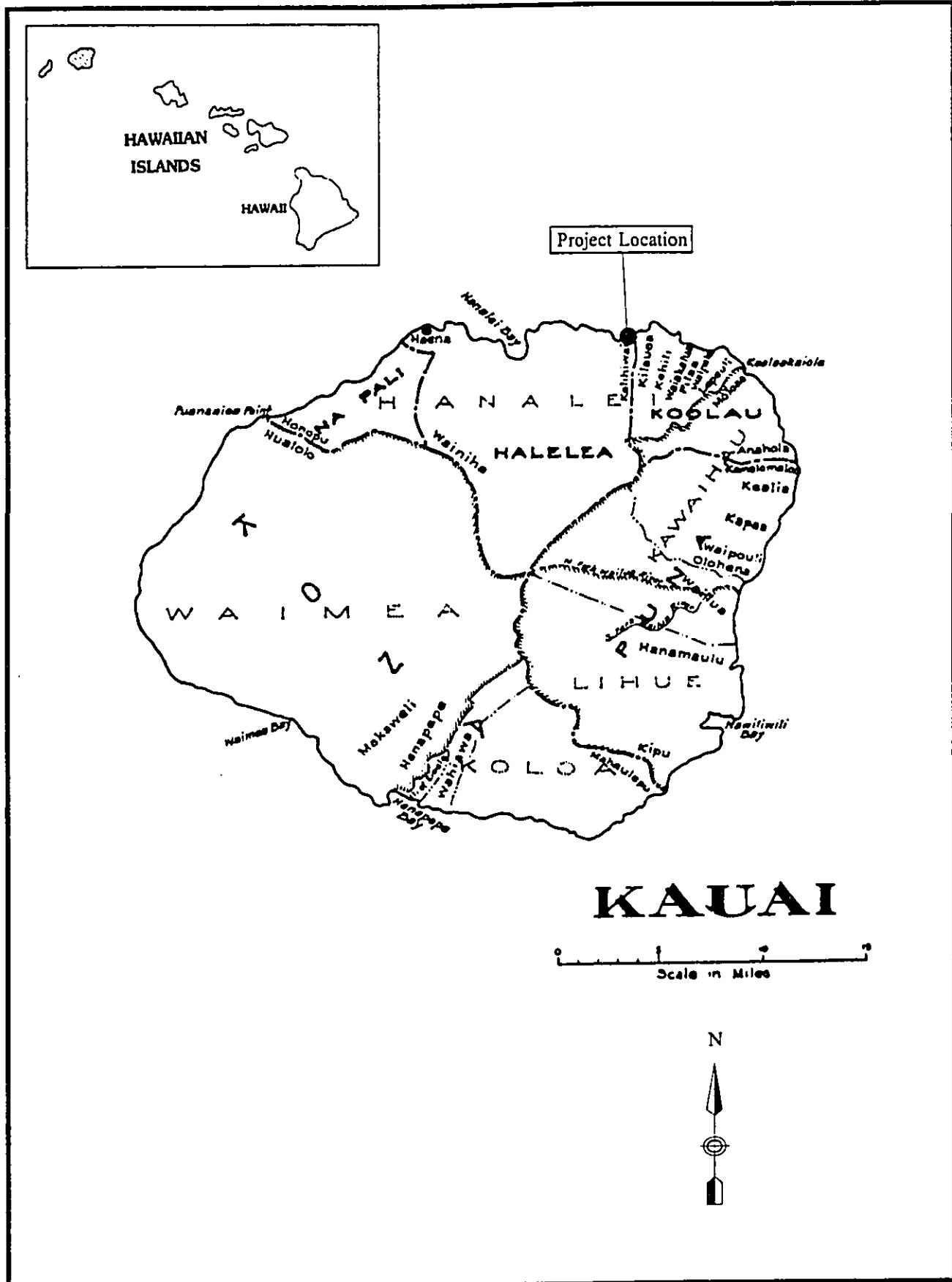
## **Section 2: Environmental Setting**

The subject property (TMK: 5-3-03: 14) is located in Kalihiwai Ahupua'a, Hanalei District, Kaua'i Island. The project area is located at geographic grid coordinates 159° 25' 50"W by 22° 13' 10"N and UTM (Universal Transverse Mercator) coordinates 2457050mN by 454800mE. The property is bordered by Kalihiwai Road to the west, a lot with a private residence to the north, a steep hillside to the east, and an empty lot to the south (see Figure 3).

The current subject property is comprised of one parcel located on a coastal plain, approximately 60m from the ocean. The dimensions of Parcel 14 are 23 x 30 x 34 x 43m encompassing an area of approximately 0.37 acres. The property is mostly level with a slight rise toward the eastern end of the property. Vegetation on the parcel consists of mostly various grasses and weeds as well as a few coconut palms (*Cocos nucifera*), tropical almond trees (false *kamani*, *Terminalia catappa*), a java plum tree (*Eugenia cumini*), heleconia (*Heleconia* sp.) and banana plants (*Musa* sp.) along the edges of the property.

Average annual rainfall ranges between 50 and 75 inches (Armstrong 1973). Foote *et al.* (1972) describe the soils in the area as beaches (BS). These soils consist

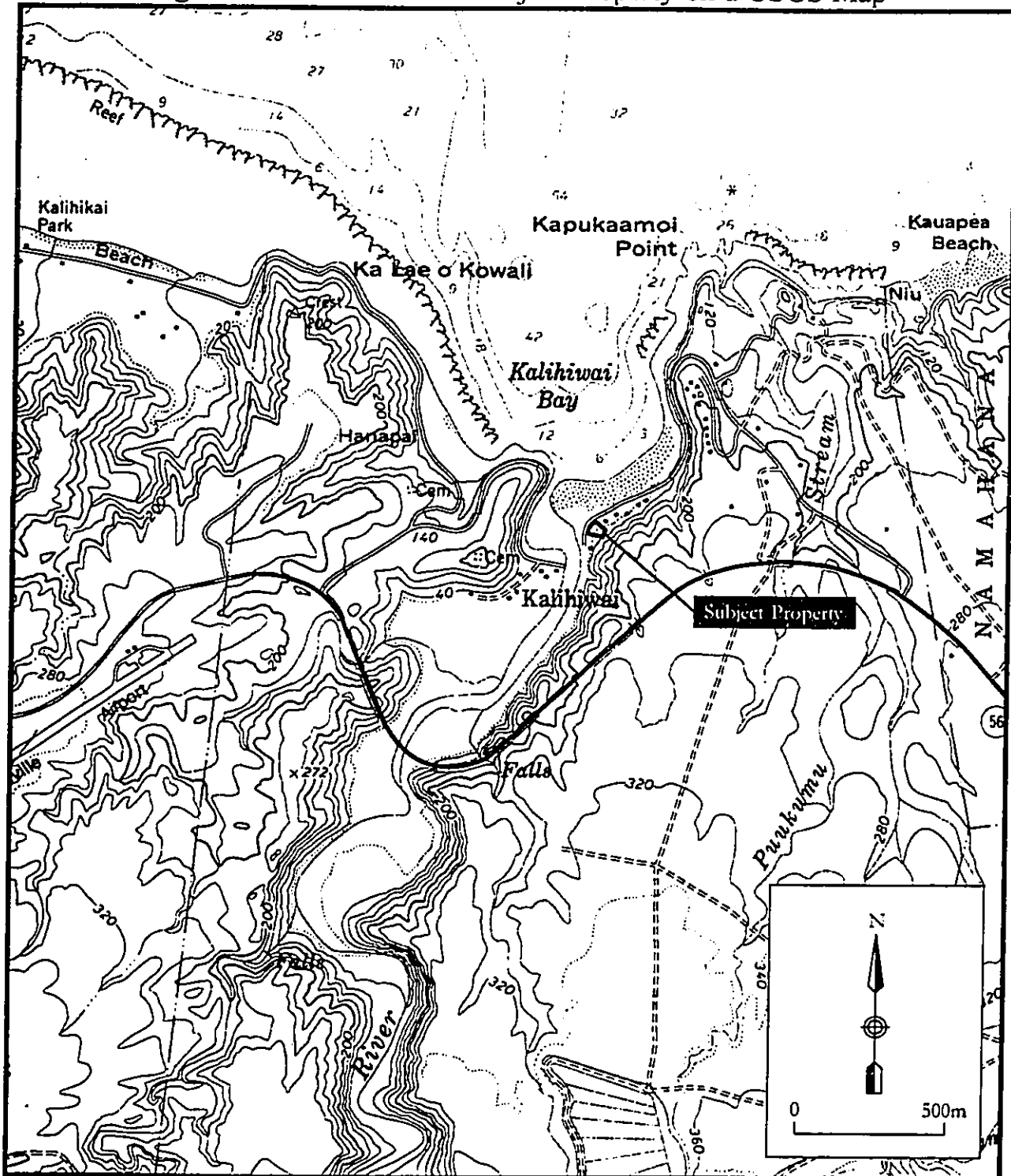
Figure 1: Project Location on a Map of Kauai'i



Kalihiwai TMK: 5-3-03: 14

source: Spriggs and Tanaka 1988:xiv

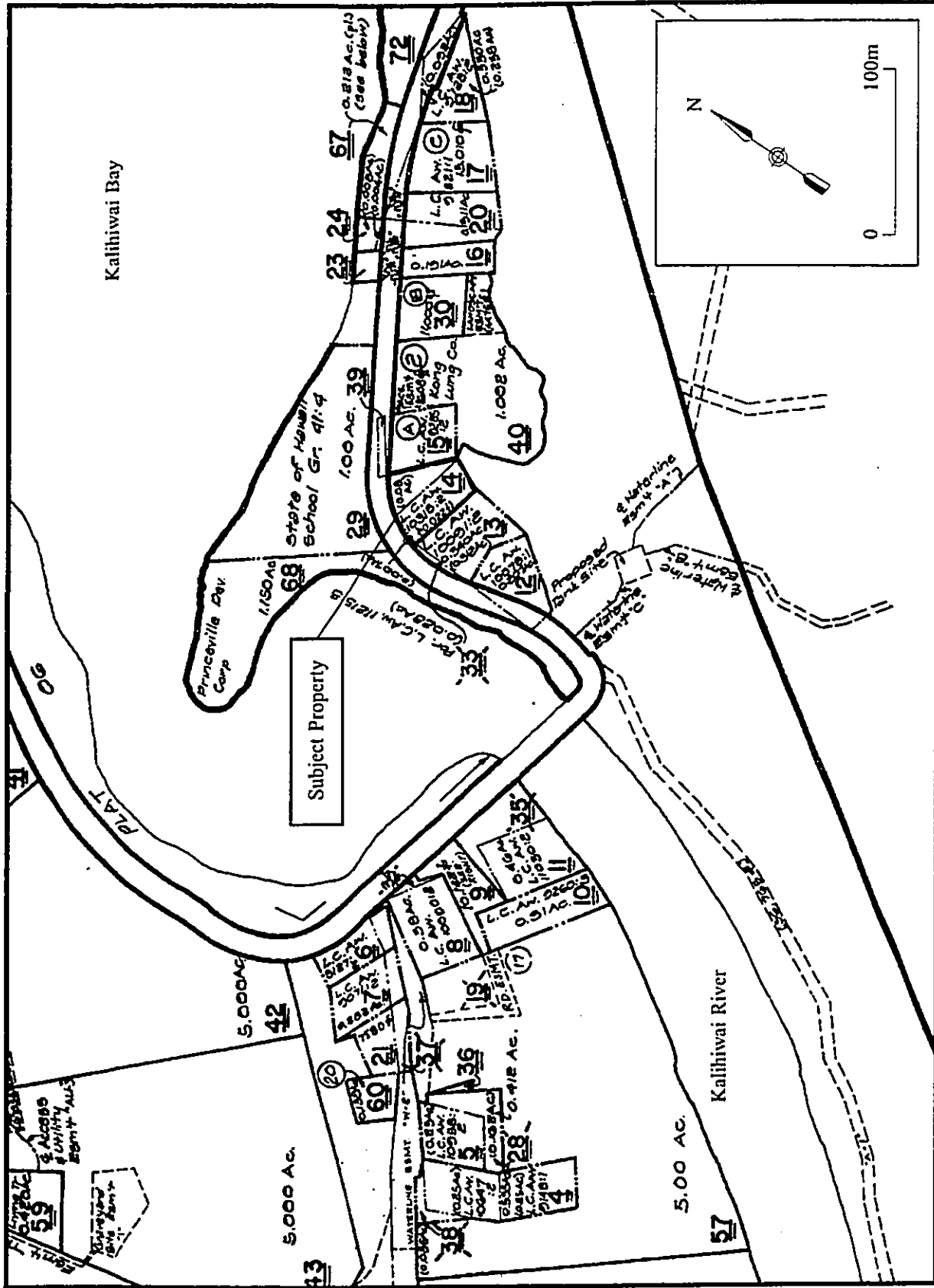
Figure 2: Location of the Subject Property on a USGS Map



Kalihiwai TMK: 5-3-03: 14

source: U.S.G.S. 7.5 Minute Series (Topographic)  
Hanalei Quadrangle 1983

Figure 3: Location of the Subject Property on a TMK Map



Kalihiwai TMK: 5-3-03: 14

source: Dept. of Taxation, Tax Maps Branch 1936

“...mainly of light colored sands derived from coral and seashells” (Foote *et al.* 1972). The current investigations by ACP found that the soil on the property consists of soils similar to those described by Foote *et al.*, however an A-horizon consisting of dark grayish brown sandy loam is present above light colored sand. Refer to Section 5.1 for a more detailed description of the soils.

### Section 3: Proposed Construction Plans

The proposed construction for the subject property will consist of the building of a private single family dwelling. Detailed plans regarding the construction have not been finalized.

### Section 4: Summary of Previous Archaeological Investigations

Archaeological investigations on the subject property have been conducted by ACP consisting of two phases of Inventory Survey, two phases of burial disinterment and additional testing (refer to Table 1). Initial archaeological investigations occurred on March 21<sup>st</sup>, 2000 during the first phase of an Archaeological Inventory Survey. Five trenches were mechanically excavated (see Figure 4). One site of significance to the interests of historic preservation was identified on the subject property, a habitation site, designated State Site number 50-30-03-671, with disturbed subsurface cultural deposits including both pre- and post-Contact components. Five burials (Features 671:A, B, C-2, D and E) were encountered at that time (Elmore and Kennedy 2001).

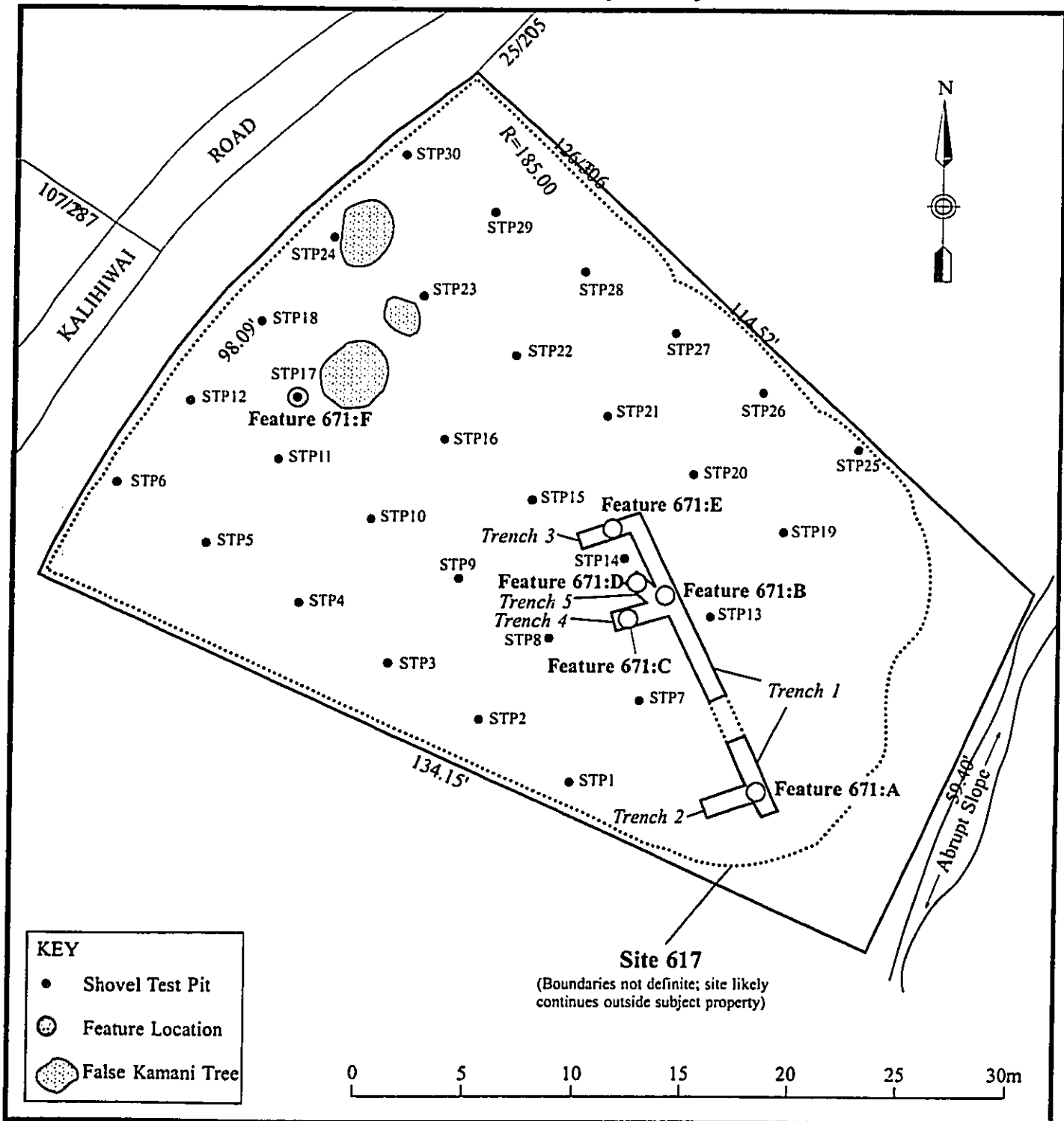
**Table 1: Summary of Archaeological Work**

Phase of Work	Date	Burial Features Encountered
Inventory Survey (Phase I)	March 2000	671:A 671:B 671:C-2 671:D* 671:E
Inventory Survey (Phase II)	July 2000	671:F
Disinterment (Phase I)	June 2002	671:C-1 671:C-3 671:C-4 671:G 671:H-1 671:H-2
Additional Testing	October 2002	671:I
Disinterment (Phase II)	October 2002	N/A

\*Determined to be the same individual as Feature 671:B



Figure 4: Top Plan of Inventory Survey Excavations



Kalihiwai TMK: 5-3-03: 14

source: Wagner Engineering Services, Inc. 2001

A second phase of Archaeological Inventory Survey testing was conducted July 11<sup>th</sup> through 16<sup>th</sup>, 2000 in order to determine the horizontal extent of burial features across the subject property. Thirty hand-dug shovel test pits (STP) were excavated within the portion of the parcel planned for construction, covering the majority of the parcel (see Figure 4). This second phase of testing identified one additional burial, Feature 671:F (ibid). Figure 4 depicts the locations of all excavations and features encountered during Inventory Survey.

Archaeological Inventory Survey investigations determined that Site 671 was significant for its information content as well as having cultural significance. ACP recommended that a determination be made that future construction activities would have an "adverse effect" on significant historic properties under the Advisory Council Regulations, 36 CFR 800. In order to help mitigate the effects of proposed development, the appropriate treatment of the burials identified during Inventory Survey was required.

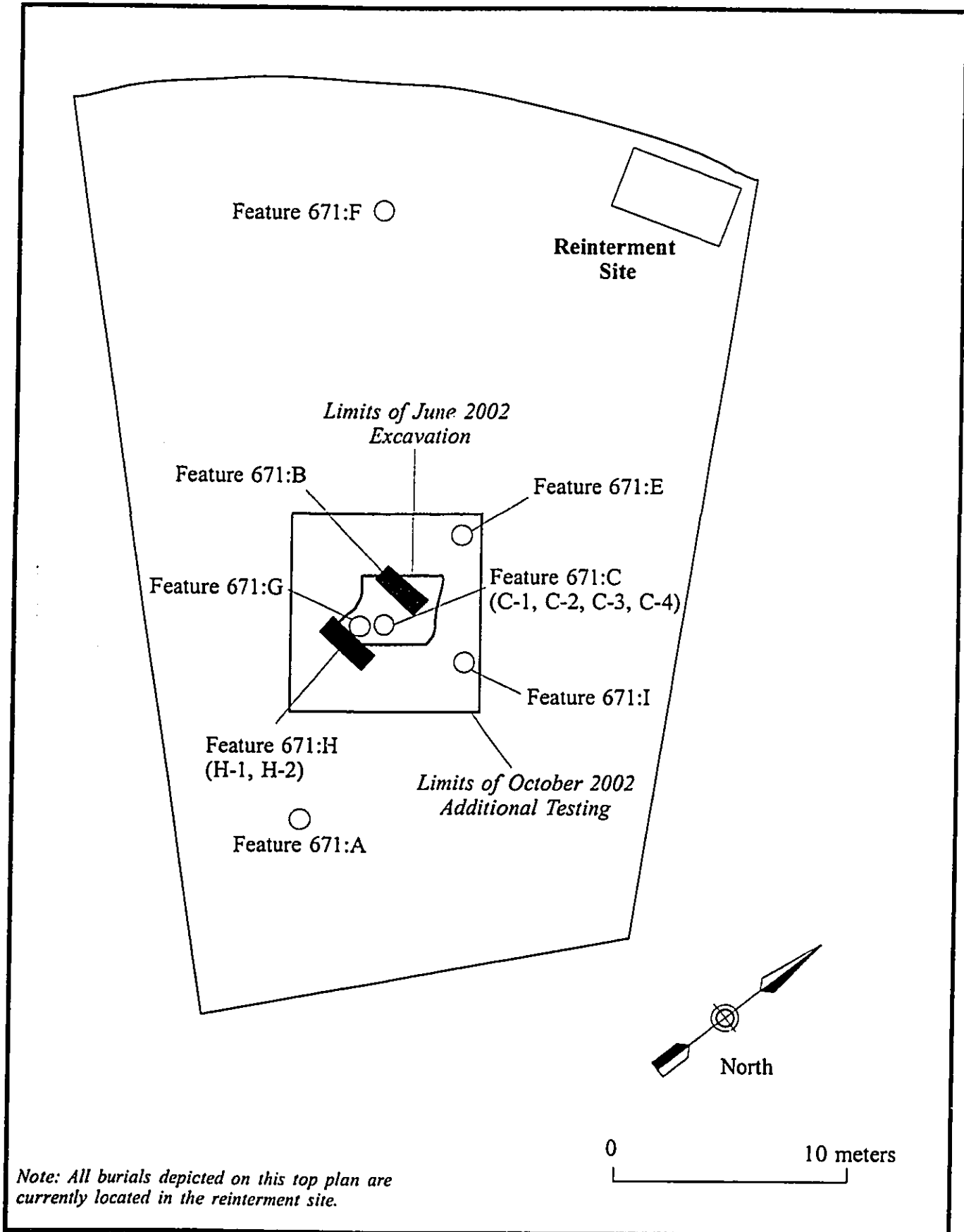
The landowner, Mr. Robert Bothman, requested that the individuals be consolidated into a single location in the north corner of the subject property where they would be secure and away from any potential further disturbances. Details of the recommendations for burial treatment were set forth in a Burial Treatment Plan (Kennedy 2002) approved by the Kauhā'i/Ni'ihau Burial Council.

Disinterment (Phase I) of the above previously identified burials began in June 2002. Six additional individuals (Features 671:C-1, C-3, C-4, G and H-1 and H-2) were inadvertently discovered on the property during the disinterment of previously identified individuals (see Figure 5). Two previously identified individuals (Features 671:A and C-2) and four inadvertently discovered individuals (Features 671: C-1, C-3, C-4 and G) were disinterred at that time. It was also determined at that time that Feature 671:D was in fact the same individual as Feature 671:B. Two burial features contained more than one individual (Features 671:C and H) (Elmore, Cobb and Kennedy 2002).

Eight of the previously identified and inadvertently discovered individuals (Features 671:B, C-1, C-2, C-3, C-4, G, H-1 and H-2) were clustered within a small area towards the center of the property and dated to the post-Contact period (see Figure 5). The DLNR-BP requested additional testing around these features in order to better determine the horizontal extent of what appeared to represent a cemetery. In October 2002, an 8m x 8m area was excavated surrounding these features. One additional individual, Feature 671:I, was inadvertently discovered. Subsequently it was determined by the DLNR-BP that all remaining previously identified and inadvertently discovered individuals may be disinterred.

Disinterment (Phase II) of all remaining individuals (Features 671:B, E, F, H-1, H-2 and I) was completed in October 2002. All burials encountered on the subject property are summarized in Table 2. Figure 5 shows the locations of all burial features, the area of additional testing, and the burial relocation site.

Figure 5: Top Plan of Burial Features and Reinterment Site



*Note: All burials depicted on this top plan are currently located in the reinterment site.*

**Table 2: Summary of Burial Features at Site 671**

Feature	Time Period	Nature of Discovery	Age Determination	Gender	Comments
671:A	pre-Contact	Previously Identified	adult	male	small stature; semi-flexed; legs previously disturbed
671:B	post-Contact	Previously Identified	adult	indeterminate	individual in extended position inside coffin; button, basalt adze and a metal can associated with individual; previously disturbed (coffin lid missing)
671:C-1	post-Contact	Inadvertent Discovery	elderly	female	significant calcium loss throughout body, very arthritic; tightly flexed; in same pit with Features 671: C-2, C-3 and C-4
671:C-2	post-Contact	Previously Identified	adult	male	tightly flexed; previously disturbed; in same pit with Features 671:C-1, C-3 and C-4
671:C-3	post-Contact	Inadvertent Discovery	adult	female	glass bottle, scissors and shell buttons associated with individual; tightly flexed; previously disturbed; in same pit with Features 671:C-1, C-2 and C-4
671:C-4	post-Contact	Inadvertent Discovery	adult	male	octopus lure and bone handled knife associated with this individual; tightly flexed; in same pit with Features 671:C-1, C-2 and C-3
671:D*	NA	NA	NA	NA	NA
671:E	post-Contact	Previously Identified	adult	indeterminate	extended position; shell and metal buttons
671:F	pre-Contact	Previously Identified	adult	indeterminate	disarticulated remains; cranium and longbones missing
671:G	post-Contact	Inadvertent Discovery	adult	male	glass button associated with this individual; tightly flexed
671:H-1	post-Contact	Inadvertent Discovery	adult	female	small stature suggests the individual may be female; individual in extended position in coffin; hair comb, bead and metal rivets associated with individual; smaller coffin containing individual of Feature 671:H-2 is located within this feature
671:H-2	post-Contact	Inadvertent Discovery	child, approx. 4-5 years old	unknown	individual in extended position in small coffin (inside Feature 671:H-1 larger coffin); metal safety pin associated with individual
671:I	pre-Contact	Inadvertent Discovery	adult	male	tightly flexed; positioned face downward

\*Determined to be the same individual as Feature 671:B

In summary, a habitation site along with five previously identified individuals and seven inadvertently discovered individuals were found on the subject property during Archaeological Inventory Survey, testing and disinterment. Archaeological investigations revealed that Site 671 was present across the entire parcel and likely extends outside the boundaries of the current subject property. In addition, a cement pad/foundation and cultural deposits, which have been subjected to numerous modern disturbances, were identified. All burials were disinterred and have been relocated in the north corner of the subject property.

### ***Summary of Site 671***

The earliest use of the Site 671 likely occurred during the late pre-Contact to early post-Contact period. A number of basalt flakes, adze fragments, a few abraders, and a variety of vertebrate and invertebrate remains related to Polynesian-style food consumption were present in addition to burials in a traditional style of interment. Habitation may have been either temporary or permanent during this period.

By 1850, a portion of the subject property was utilized as a house lot, LCA 10318:2, occupied by the family of an individual named Nohomalie. A 1892 map by Monserrat depicts a structure in the general location of the subject property (refer to Elmore, Cobb and Kennedy 2002, Figure 15), most likely that of Nohomalie's house lot. The Mahikoa Family later owned the property by the early 1900's. An association between the family of Nohomalie and the Mahikoa's could not be assessed. Evidence of utilization during the nineteenth and twentieth centuries includes the presence of a concrete foundation, ceramics, glass, metal, etc., as well as burials containing post-Contact materials and/or coffins. The occupation during this era contributed to the disruption of the previous stratigraphic sequence, as evidenced by the presence of a concrete slab lying directly atop a traditional style burial.

Modern man-made and natural disturbances are also present. Deep pits containing modern debris, a metal pipe, fill soils, etc., were encountered during subsurface testing. The 1957 hurricane which destroyed the bridge across Kalihiwai Stream as well as a number of buildings along Kalihiwai Road likely resulted in a significant amount of disturbance on the subject property due to high winds, high surf and flooding. These disturbances have significantly impacted the stratigraphy of Site 671, precluding the recovery of cultural evidence regarding the utilization of the property over time. The only significant undisturbed remnants being that of more deeply buried features, such as burials.

### ***Burials at Site 671***

Numerous burials have been found on the current subject property, including twelve individuals within a parcel encompassing only a little over a third of an acre. Three out of the twelve individuals are presumed to date to the pre-Contact period based

upon the traditional manner of interment (flexed position), the lack of associated post-Contact materials (i.e. coffin hardware, buttons, etc.), and in one instance, evidence for the traditional practice of removal of cranium and long bones from the burial. The location of burials in a sand matrix is a setting known to have been traditionally used by the native population for interring the deceased.

Nine out of the twelve individuals buried on the property were interred during the post-Contact period (associated with coffins and/or other post-Contact items such as buttons). This indicates a more substantial use of the property for burial purposes during that time (a period of less than 150 years) as compared to the span of several hundred years prior to Western Contact. Features 671:B, C-1, C-2, C-3, C-4, E, G, H-1, H-2 may be associated with either the family of Nohomalie and/or the Mahikoa's, though this could not be confirmed.

The post-Contact burial features on the subject property appear to represent a range in time of interment from early post-Contact to around the turn of the century. Five of the individuals interred during the post-Contact period were interred in a traditional manner (flexed position), while the remaining four were in extended positions (three of which were in coffins). The flexed individuals likely date to the early post-Contact period (1778-1850). The extended burials are clearly positioned in line with one another, suggesting a small, organized cemetery, perhaps intentionally placed in association with the above post-Contact traditional style burials. These individuals were also generally oriented in an east/west alignment (with the cranium at the west end, a common Judeo-Christian practice), reflecting an integration to western culture. This suggests that these individuals may have been interred during a later date range, possibly 1850-1920.

The presence of multiple burials (burials containing more than one individual) may be evidence of some disaster(s) such as pestilence. The populations on all the Hawaiian Islands decreased substantially (by approximately 50%) in the first fifty years after Western Contact as a result of introduced illnesses for which the Hawaiians had no immunity. Devaney, Kelly, Lee and Motteler (1982:8) discuss this dramatic change in demographics:

Depopulation during the early historical period of the Hawaiian Islands is not well documented, but several scholars have attempted assessments of the limited sources available. The Hawaiian historian and scholar, David Malo, wrote: "In the reign of Kamehameha, from the time I was born until I was nine the pestilence (*mai ahulau*) visited the Hawaiian Islands, and the majority (*ka pau nui ana*) of the people from Hawaii to Niihau died" (Malo 1839:125). Lorenzo Adams expressed the opinion that Malo was probably not far off in estimating the loss of about half of the population (Schmitt 1968:36). The epidemic took place some time between 1802 and 1807, probably around 1804 (*ibid.*). It was known as *ma'i 'oku'u* and was likened to bubonic plague, or cholera.

Populations continued to decline in the early 1800's, and into the latter half of the nineteenth century after the introduction of smallpox in 1853. As noted above, the traditional style of interment in flexed positions of the four individuals interred at the same time within the same pit at Feature 671:C in conjunction with Western-introduced

material culture (including a gin bottle dating ca. 1800-1850) suggests that these are early post-Contact interments, and may have been victims of a newly introduced pestilence. Likewise, the woman and child buried in a coffin (Feature 671:H) may have suffered a latter introduced pestilence.

## **Section 5: Expected Finds**

Previous investigations on the subject property have identified the presence of Site 671, a habitation site with burials. The habitation deposit was found to cover the majority of the parcel (generally extending from the ground surface to 50 centimeters below surface), and consequently is expected to be re-encountered during monitoring. While it was noted that much of this deposit has been subject to disturbance, intact subsurface features such as post holes and fire pits may be encountered in association with the cultural deposit. The presence of traditional material culture such as basalt flakes, adze fragments, abraders, and a variety of vertebrate and invertebrate remains related to Polynesian-style food consumption are anticipated. Post-Contact items including metal, glass, ceramics, etc. are also expected to be encountered.

Twelve burials have been previously identified and inadvertently discovered at Site 671, all of which have been relocated to a reinterment site in the northeast corner of the property. As discussed above, nine out of the twelve individuals dated to the post-Contact period and were clustered in a central area, and additional testing took place in order to delineate the extent of the cluster. For this reason, additional burials from this era are not as likely to be found, and not in such large numbers. However, the subject property is located in a coastal area containing sandy soils, a setting known to have been traditionally used for the interment of the deceased, and additional traditional style interments may be present at any location on the subject property which has not been previously tested.

## **Section 6: Methodology of Archaeological Monitoring**

Archaeological monitoring of the subject property will be under the supervision of the Principle Investigator Joseph Kennedy, M.A.. Prior to the commencement of subsurface construction activities, the monitoring archaeologist will conduct a coordination meeting with the construction crew in order to brief the team on the expected finds and plans for monitoring. The archaeologist shall emphasize that all historic finds, including objects such as bottles, are the property of the landowner and may not be taken or otherwise disposed of without the written consent of the landowner and the State Historic Preservation Division. At this time it will be made clear that the archaeologist must be on site for all major ground disturbance activities (including all excavations greater than one foot below the present ground surface). On-call monitoring

may take place during the remaining ground disturbing activities (less than one foot deep). In the event that significant historic sites are encountered, the monitoring archaeologist has the authority to halt construction in the immediate vicinity of the find until the proper authorities are notified and/or proper mitigation measures are undertaken. Construction activities may shift to other areas of the subject property in this event.

The treatment of possible sites encountered is dependent upon the feature type. If human burials are encountered they will be considered inadvertent finds and will be treated in accordance with Chapter 6E-43.6, Hawaii Revised Statutes. All work in the immediate area of the burial will be ceased, and construction may continue at a separate location. The proper personnel at the Department of Land and Natural Resources, State Historic Preservation Division and State Burials Program will be notified and their recommendations implemented.

In the event that significant archaeological (non-burial) properties are encountered during the course of monitoring, all construction activities in the immediate area shall be temporarily halted. The monitor shall initially record the deposits, so context is clear and significance proposals can be made. The monitor shall then notify the State Historic Preservation Division, contacting that Division's Archaeology Branch to discuss the context and agree upon the find's significance. If the find includes a human burial, that Division's Burial Sites Program will also be notified. Mitigation needs (as appropriate) for non-burial sites will be discussed and resolved with the Archaeology Branch, and treatment of burials will be discussed and resolved with the Burial Sites Program.

For non-burial finds consultation with the SHPD Archaeology Branch will be initiated to determine an appropriate mitigation program, including but not limited to the selection of sorted samples of charcoal, collection of bulk samples of midden material, and standard documentation (i.e., scale maps and stratigraphic profiles, photographs, detailed descriptions, and interpretation).

During archaeological monitoring, the field monitor will visually inspect all excavations and rake through excavated materials in order to identify any possible cultural materials. Profiles of the stratigraphy encountered and soil samples from each strata identified will be taken. All cultural materials of possible significance will be collected, bagged and labeled with the appropriate excavation information. All samples and field notes will be on file at the ACP office located at 59-624 Pupukea Road, Hale'iwa, Hawai'i.

Laboratory work will include the identification of vertebrate faunal remains, invertebrate faunal remains, culturally derived floral remains and artifacts. The results of these identifications will be tabulated for presentation and a complete report concerning the monitoring activities, including possible finds, will be prepared. All materials collected will be curated at the ACP office located at the address stated above.



## Section 7: Conclusion

An Archaeological Monitoring Plan has been prepared for TMK: 5-3-03: 14 in Kalihiwai Ahupua'a, Hanalei District, Kaua'i Island. This plan has briefly summarized the currently planned construction endeavors, discussed the expected finds for the subject property and provided details concerning the methodology of archaeological monitoring for subsurface construction activities.

Subsurface deposits related to Site 671, such as human burials, may be found during monitoring. For this reason, all major ground disturbing construction activities in which excavations exceed one foot below present ground surface will require on site monitoring. On-call monitoring will take place for all remaining excavations which are less than one foot below present ground surface.

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