

ALAN M. ARAKAWA  
MAYOR

FILE COPY

NOV 08 2011



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**OFFICE OF THE MAYOR**  
COUNTY OF MAUI

October 21, 2011

Mr. Gary Hooser, Director  
Office of Environmental Quality Control  
State of Hawaii  
State Office Tower  
235 South Beretania Street, 7<sup>th</sup> Floor  
Honolulu, HI 96813-2437

RECEIVED  
11 OCT 27 AM 18  
OFFICE OF ENVIRONMENTAL  
QUALITY CONTROL

**Subject:** Final State Environmental Assessment/Finding of No Significant Impact  
Lanai Community Health Center, CDBG Project No. 08-4  
TMK: 4-9-006:011; Lanai City, Lanai Hawaii

Dear Mr. Hooser:

The County of Maui, Office of the Mayor, Community Development Block Grant (CDBG) Program Office has reviewed the Final State Environmental Assessment for the Lanai Community Health Center Facility project, CDBG Project No. 08-4, and has determined a Finding of No Significant Impact (FONSI). The required forms and documents will be submitted by Wilson Okamoto Corporation, the consultant for this project.

Please publish the notice of availability of the Final State EA in the November 8, 2011 issue of the Environmental Notice.

Should you have any questions, please call Ms. Hannah Matsumoto, CDBG Program Specialist at (808) 270-7213 or Mr. John Sakaguchi of Wilson Okamoto at (808) 946-2277.

Sincerely,

A handwritten signature in black ink, appearing to read "Alan M. Arakawa".

ALAN M. ARAKAWA  
Mayor, County of Maui

C: H. Matsumoto, CDBG  
J. Sakaguchi, Wilson Okamoto Corp.

**OEQC PUBLICATION FORM**

**Name of Project:** Lanai Community Health Center  
**Applicable Law:** Hawaii Revised Statutes Chapter 343  
**Type of Document:** Final Environmental Assessment  
**Island:** Lanai  
**District:** Lanai  
**TMK:** 4-9-006:011

RECEIVED

'11 OCT 27 10:19

OFFICE OF ENVIRONMENTAL  
QUALITY CONTROL

**Name of Applicant or Proposing Agency:**  
County of Maui  
Office of the Mayor Community Development Community Block Grant  
200 South High Street  
Wailuku, Maui, Hawaii 96793  
Contact and Phone: Hannah Matsumoto, (808)270-7213

**Approving Agency or Accepting Authority:**  
County of Maui  
Office of the Mayor Community Development Community Block Grant  
200 South High Street  
Wailuku, Maui, Hawaii 96793  
Contact and Phone: Hannah Matsumoto, (808)270-7213

**Send Comments To:**  
Wilson Okamoto Corporation  
1907 South Beretania Street, Suite 400  
Honolulu, Hawaii 96826  
John Sakaguchi, AICP, Project Manager (808) 946-2277

**Public Comment Deadline:** None

**Permits Required:**  
County of Maui

- Building Permit
- Grading Permit
- Sewer Connection

**Project Summary:**

The Lanai Community Health Center, a Federally qualified facility under the U.S. Department of Health and Human Service Health Resources and Services Administration, proposes to construct a replacement health care facility in Lanai City using funds provided through the U.S. Department of Housing and Urban Development Community Development Block Grant (CBDG) program. The Lanai Community Health Center project site is located west of Dole Park on the western portion of the parcel (Tax Map Key: 4-9-006:011) bounded by Houston Street on the north, Seventh Street on the east, Gay Street on the south, and Sixth Street on the west and occupies an area of approximately 25,067 square feet, or about 0.575 acres. The Lanai Community Health Center will be a single-story building about 6,800 feet. A total of 20 parking stalls will be provided on the project site.

## OEQC PUBLICATION FORM

In January 2009, the County of Maui Planning Department and the State of Hawaii Department of Land and Natural Resources State Historic Preservation Division issued a Draft National Register of Historic Places Registration Form for the Lanai City Business Country Town historic district, a 17 block area located in the center of Lanai City. The Draft National Register nomination is still under review. The project site is located within the Lanai City Business Country Town District. On June 17, 2010, the State Historic Preservation Division indicated that after examination of the plans and conferral with the Maui County Planning Office, the Historic Preservation Division's concurred that the project will "not affect historic properties.

The Lanai Community Health Center would provide accessible primary medical care, dental care, behavioral health services, prenatal, family planning, nutrition and preventive health education services open to the low- and moderate-income, uninsured and underinsured residents of Lanai.

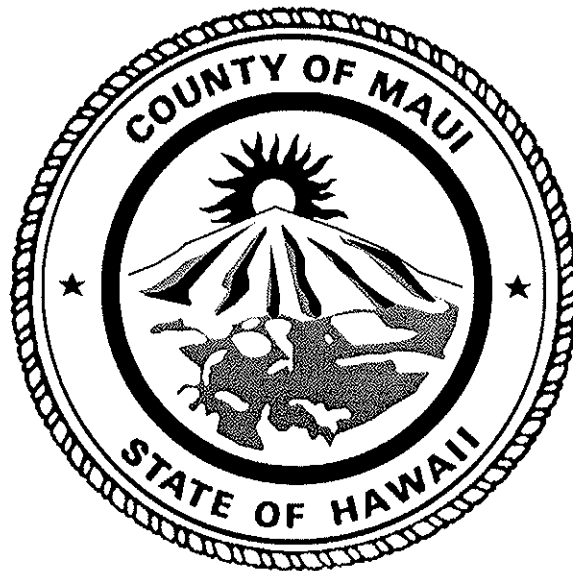
# FINAL ENVIRONMENTAL ASSESSMENT

## Lanai Community Health Center

CDBG Project No. 08-04

Lanai City, Lanai, Hawaii

TMK: 4-9-006: 011



Prepared for:

**County of Maui**  
Office of the Mayor  
Community Development Block Grant

Prepared by:

**Wilson Okamoto Corporation**

November 2011

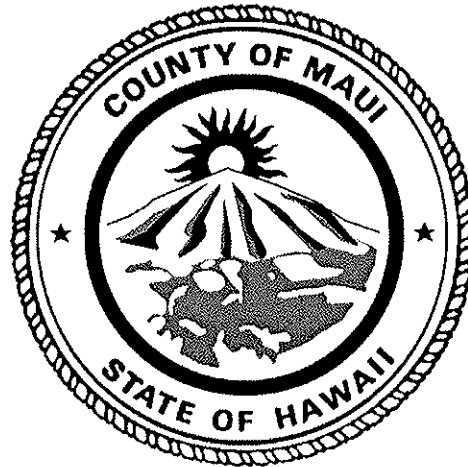
# **FINAL ENVIRONMENTAL ASSESSMENT**

## **LANAI COMMUNITY HEALTH CENTER**

**Tax Map Key: 4-9-006:011**

**Lanai City, Lanai, Hawaii**

**(CDBG Project No. 08-04)**



**Prepared for:**

**County of Maui**

**Office of Mayor**

**Community Development Block Grant**

**200 High Street**

**2145 Kaohu Street, Suite 201**

**Wailuku, Maui, Hawaii**

**Prepared by:**

**Wilson Okamoto Corporation**

**1907 South Beretania Street, Suite 400**

**Honolulu, Hawaii 96826**

**Under Contract to:**

**Architects Hawaii Ltd.**

**1001 Bishop Street, Suite 200**

**Honolulu, Hawaii 96813**

**November 2011**

---

**SUMMARY**

**Proposing Agency:** County of Maui  
Office of the Mayor Community Development Block Grant  
200 South High Street  
Wailuku, Maui, Hawaii 96793

**Accepting Agency:** County of Maui  
Office of the Mayor Community Development Block Grant  
200 South High Street  
Wailuku, Maui, Hawaii 96793

**EA Preparer:** Wilson Okamoto Corporation  
1907 South Beretania Street, Suite 400  
Honolulu, Hawaii 96826  
Contact: John L. Sakaguchi, AICP, Senior Planner  
Tel: 808.946.2277; Fax: 808.946.2253

**Project Location:** Lanai City, Lanai, Hawaii

**Recorded Fee Owner:** Castle and Cooke Resorts, LLC

**Tax Map Key:** TMK: 4-9-006:011

**Area:** 25,067.07 square feet (about 0.575 acres) approximately

**State Land Use Classification:** Urban

**County Zoning:** Business Country Town

**Proposed Action:** The Lanai Community Health Center, a Federally qualified facility under the U.S. Department of Health and Human Service Health Resources and Services Administration, proposes to construct a one-story approximately 6,800-square foot replacement health care facility with 12 public parking stalls in Lanai City on about 0.575 acres on a site bounded by Houston Street on the north, Sixth Street on the west, Gay Street on the south and the existing Lanai Art Center and Maui Community College facilities on the east, to provide accessible primary medical care, dental care, behavioral health services, prenatal, family planning, nutrition and preventive health education services open to the low-and moderate-income, uninsured and underinsured residents of Lanai.

**Impacts:** Construction activities are anticipated to have short-term noise, traffic, and air quality impacts in

the surrounding area during the construction period. Construction noise and air quality impacts will be minimized by compliance with applicable State Department of Health Rules. Construction will include removal of the three existing former dormitory structures currently on the project site. The three structures have been determined to be non-contributory to the National Register of Historic Places nomination prepared by the County of Maui Planning Department and which is currently under review. Once construction has been completed, no significant adverse environmental or community impacts in the surrounding area are anticipated.

**Parties Consulted During**

**Draft Environmental Assessment: Federal**

Department of the Army, US Army Engineer District  
US Fish and Wildlife Service  
US Dept. of Agriculture National Resources  
Conservation Services  
US Environmental Protection Agency

State of Hawaii

Department of Agriculture  
Dept of Business, Economic Development and  
Tourism, Office of Planning  
Department of Hawaiian Home Lands  
Department of Health  
Department of Health Office of Environmental  
Quality Control  
Department of Land and Natural Resources (DLNR)  
DLNR Historic Preservation, Division,  
Office of Hawaiian Affairs

County of Maui

Department of Environmental Management  
Department of Fire and Public Safety  
Planning Department  
Police Department  
Department of Public Works  
Department of Parks and Recreation  
Department of Transportation  
Department of Water Supply

Officials

Senator J. Kalani English  
Representative Mele Carroll  
Councilmember Sol P. Kahoolalahala

Other

Alu Like, Inc.

Maui Electric Company, Ltd.

Hawaiian Telecom

Oceanic Time Warner Cable

Castle & Cooke Resorts

Lanai Public Library



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TABLE OF CONTENTS

	<u>Page</u>
<b>SUMMARY .....</b>	<b>S-1</b>
<b>PREFACE.....</b>	<b>1</b>
<b>1. PROJECT LOCATION .....</b>	<b>1-1</b>
1.1 Project Location.....	1-1
1.2 Existing Conditions and Surrounding Uses .....	1-1
1.3 Lanai City Business Country Town Historic District Nomination.....	1-6
1.4 Lanai City Community Design Guidelines .....	1-9
<b>2. PROJECT DESCRIPTION.....</b>	<b>2-1</b>
2.1 Background .....	2-1
2.2 Purpose and Need.....	2-1
2.3 Proposed Improvements.....	2-2
2.3.1 Site Improvements .....	2-2
2.3.2 Health Center Building.....	2-4
2.3.3 Design Features .....	2-5
2.3.4 Site Infrastructure.....	2-6
2.3.5 Leadership in Energy & Environmental Design.....	2-7
2.4 Health Center Services.....	2-8
2.5 Health Center Operations .....	2-10
2.6 Project Hours.....	2-10
2.7 Project Schedule and Cost .....	2-11
<b>3. DESCRIPTION OF EXISTING ENVIRONMENT, IMPACTS AND MITIGATION MEASURES .....</b>	<b>3-1</b>
3.1 Geology and Topography .....	3-1
3.2 Soils.....	3-2
3.3 Slope and Erosion .....	3-3
3.4 Hydrology .....	3-4
3.4.1 Surface Waters .....	3-4
3.4.2 Groundwater .....	3-5

## TABLE OF CONTENTS

	<u>Page</u>
3.4.3 Coastal Waters.....	3-6
3.5 Flood Hazard.....	3-8
3.6 Flora and Fauna.....	3-8
3.7 Traffic and Parking.....	3-9
3.8 Noise Quality.....	3-12
3.9 Air Quality.....	3-13
3.10 Archaeological and Historical Resources.....	3-15
3.11 Cultural Impact Assessment.....	3-17
3.12 Socio-Economic Characteristics.....	3-18
3.13 Public Services and Facilities.....	3-20
3.13.1 Police.....	3-20
3.13.2 Fire.....	3-21
3.13.3 Medical.....	3-21
3.13.4 Schools.....	3-22
3.13.5 Recreation.....	3-22
3.13.6 Cultural Resources.....	3-23
3.14 Infrastructure.....	3-25
3.14.1 Water.....	3-25
3.14.2 Drainage.....	3-26
3.14.3 Wastewater.....	3-27
3.14.4 Electrical and Communication.....	3-28
3.14.5 Solid Waste.....	3-28
3.15 Visual Quality.....	3-29
3.16 Scenic and Open Space Resources.....	3-30
3.17 Federal Environmental Clearances.....	3-30
3.17.1 Archaeological and Historic Preservation Act of 1974 (16 USC Section 461).....	3-31
3.17.2 Clean Air Act (42 USC § 7506 (C)).....	3-31
3.17.3 Coastal Barrier Resources Act, (16 USC 1451).....	3-32
3.17.4 Coastal Zone Management Act (16 USC § 1456(C)(1)).....	3-32
3.17.5 Sole Source Aquifers (40 CFR 149).....	3-33
3.17.6 Endangered Species Act (16 USC 1536(A)(2) and (4)).....	3-33
3.17.7 Environmental Justice, Executive Order 12898.....	3-34

**TABLE OF CONTENTS**

	<b>Page</b>
3.17.8 Floodplain Management, Executive Order 11988 as amended by Executive Order 12148.....	3-35
3.17.9 Protection of Wetlands Executive Order 11990.....	3-35
3.17.10 Farmland Protection Policy Act (7 USC § 4202(8)).....	3-36
3.17.11 Unique Natural Features and Agricultural Lands.....	3-36
3.17.12 Fish and Wildlife Coordination Act (16 USC § 661-666).....	3-38
3.17.13 National Historic Preservation Act of 1966 (16 USC § 470 (F)).....	3-38
3.17.14 Wild and Scenic Rivers Act (16 USC 1271-1287).....	3-40
3.17.15 Fishery Conservation and Management, Magnuson-Stevens Fishery Conservation and Management Act (16 USC Sec. 1801).....	3-41
3.17.16 U.S. Department of Transportation Act Section 4 (F); (49 USC Section 303).....	3-42
3.17.17 Department of Army Section 10 of the Rivers and Harbors Act of 1899 (33 USC 403) and Federal Water Pollution Control Act (33 USC 1341).....	3-42
3.17.18 Airport Runway Clear Zone Disclosure (Section 58.6(d)).....	3-43
3.17.19 Noise Abatement and Control.....	3-44
3.17.20 Toxic/Hazardous/Radioactive Materials.....	3-44
3.17.21 Hazards and Nuisances including Site Safety.....	3-45
3.17.22 Siting of HUD-Assisted Projects Near Hazardous Operations.....	3-46
3.17.23 Commercial Facilities.....	3-48
3.17.24 Social Services.....	3-49
<b>4. RELATIONSHIP TO PLANS, POLICIES AND CONTROLS.....</b>	<b>4-1</b>
4.1 Hawaii State Plan.....	4-1
4.2 State Land Use District.....	4-2
4.3 State of Hawaii Department of Hawaiian Home Lands.....	4-2
4.4 County of Maui.....	4-2
4.4.1 County General Plan.....	4-2
4.4.2 Lanai Community Plan.....	4-3
4.4.3 Lanai City Community Design Guidelines.....	4-6

**TABLE OF CONTENTS**

	<u>Page</u>
4.4.4 County of Maui Zoning .....	4-7
4.4.5 Coastal Zone Management Objectives and Policies .....	4-7
<b>5. ALTERNATIVES TO THE PROPOSED ACTION .....</b>	<b>5-1</b>
5.1 No Action Alternative .....	5-1
5.2 Alternative Sites .....	5-1
5.3 Alternative Development Concepts .....	5-1
<b>6. DETERMINATION .....</b>	<b>6-1</b>
<b>7. PERMIT AND APPROVALS .....</b>	<b>7-1</b>
<b>8. CONSULTED PARTIES .....</b>	<b>8-1</b>
8.1 Pre-Assessment Consultation .....	8-1
8.2 Agencies and Organizations Consulted on the Draft EA .....	8-2
<b>9. REFERENCES .....</b>	<b>9-1</b>

**LIST OF FIGURES**

Figure 1.1 Project Location Map .....	1-2
Figure 1.2 Project Site Map .....	1-3
Figure 1.3 Tax Map Key .....	1-4
Figure 1.4 Project Site Photographs .....	1-5
Figure 1.5 Proposed Hawaii Register of Historic Places Lanai City Business Country Town Historic District .....	1-7
Figure 2.1 Project Site Plan .....	2-13
Figure 2.2 Floor Plan .....	2-15
Figure 2.3 East and West Elevation Plans .....	2-17
Figure 2.4 North and South Elevation Plans .....	2-19
Figure 4.1 Lanai Community Plan Land Use Map .....	4-5
Figure 4.2 County of Maui Zoning Map .....	4-8

**TABLE OF CONTENTS**

**Page**

**LIST OF TABLES**

Table 3-1            Demographic Characteristics: 2000..... 3-19

**LIST OF APPENDICES**

Appendix A    Pre-Assessment Consultation Letters

Appendix B    Summary of Archaeological Literature Review and Field Inspection  
Report for Proposed Lanai Health Center, Cultural Surveys Hawaii, Inc.,  
May 2010

Appendix C    Summary of Cultural Impact Assessment for Proposed Lanai Health  
Center, Cultural Surveys Hawaii, Inc., July 2011

Appendix D    Supporting Information

    D-1    FEMA, FIRM Map

    D-2    2008 Air Quality Data (State of Hawaii Annual Summary 2008 Air Quality  
Data, pg. 17)

    D-3    Sole Source Aquifer Designations in EPA, Region 9, June 2000

    D-4    Designated National Wild & Scenic Rivers List

    D-5    Airport Runway Clear Zone Map

    D-6    2004 Noise Exposure Map

    D-7    Hazardous Site Information

Appendix E    Draft Environmental Assessment Consultation Letters

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## **PREFACE**

The County of Maui, Office of the Mayor through the Community Development Block Grant (CDBG) program has issued a grant to the Lanai Community Health Center, a non-profit agency, to plan and design, the Lanai Community Health Center. CDBG is a Federal program of the US Department of Housing and Urban Development (HUD) and serves as the principal Federal program providing grants to state and local governments to devise innovative and constructive approaches to improve the physical, economic and social conditions in their communities which will benefit persons of low and moderate income. After construction, State of Hawaii funds will be used for the programs at of the Lanai Community Health Center.

Chapter 343, HRS, as amended, Environmental Impact Statements, requires that a government agency or a private developer proposing to undertake a project consider the potential environmental impacts of the proposed project by preparing an assessment. Use of public funds for a project is among the criteria set forth in Chapter 343, HRS which requires preparation of an environmental assessment.

This Final Environmental Assessment was prepared pursuant to Chapter 343, Hawaii Revised Statutes (HRS), and Title 11, Chapter 200, Hawaii Administrative Rules (HAR), State of Hawaii Department of Health. The accepting agency for this Final Environmental Assessment is the County of Maui, Office of the Mayor, in conjunction with the use of federal and county funds for the Health Center project.

The information from this Environmental Assessment will be used to prepare documents required as part of 24 Code of Federal Regulations Part 58 regarding the U.S. Department of Housing and Urban Development (HUD) Community Development Block Grant (CDBG) program. The County of Maui CBDG office will issue a separate Environmental Assessment to meet their Federal environmental documentation rules and procedures. Relevant issues for that document are included in this Environmental Assessment.



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## **1. PROJECT LOCATION**

### **1.1 Project Location**

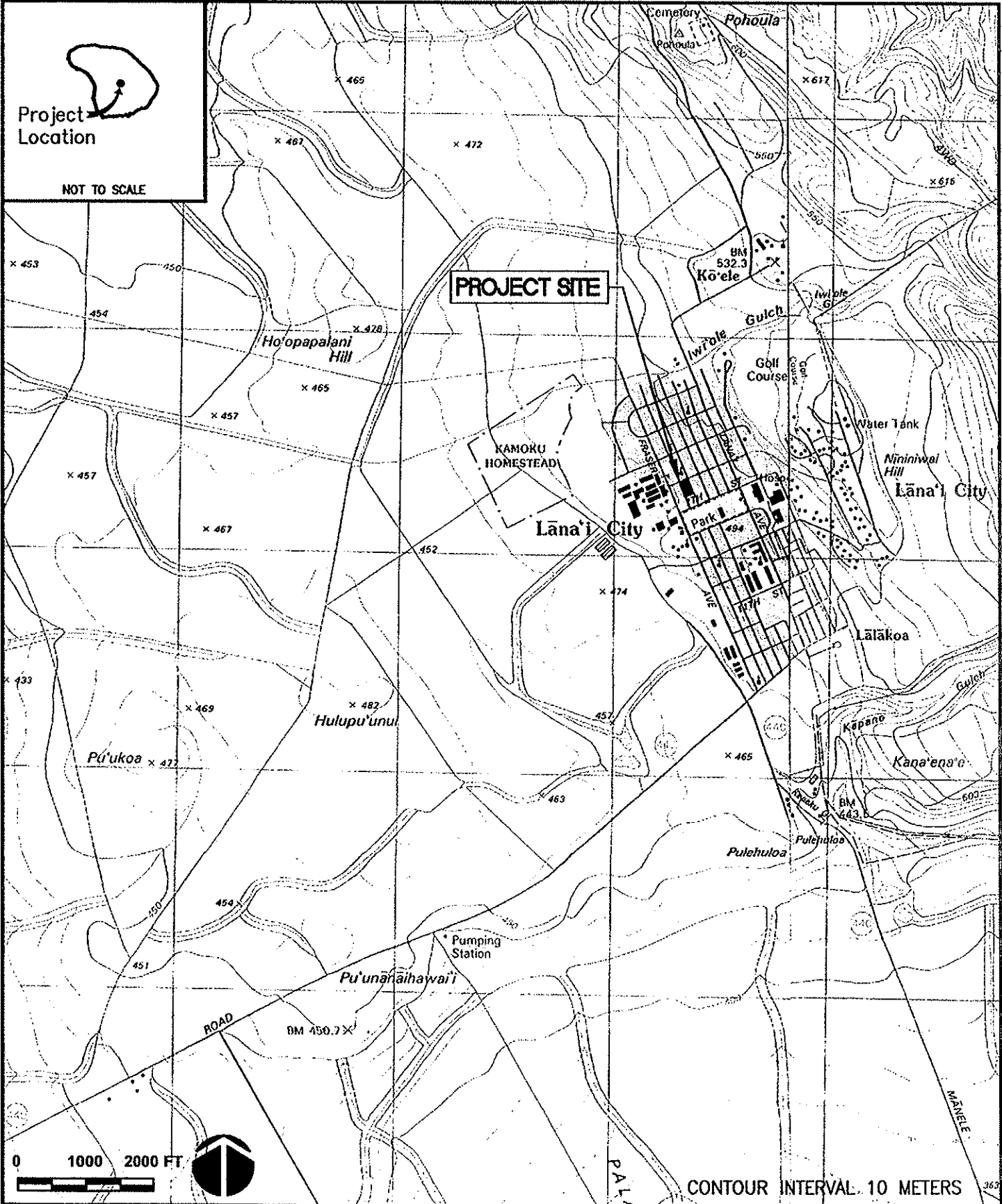
The Lanai Community Health Center project site is located in Lanai City, Lanai west of Dole Park on a parcel (Tax Map Key: 4-9-006:011) bounded by Houston Street on the north, Seventh Street on the east, Gay Street on the south, and Sixth Street on the west and occupies an area of approximately 42,857 square feet, or about 0.98 acres. The Lanai Community Health Center will use approximately 25,067.07 square feet (about 0.575 acres) of the western portion of the parcel for the new facility under a lease agreement with Castle & Cooke Resorts LLC which will retain ownership of the parcel. The Lanai Community Health Center will have an option to purchase the land. Figure 1.1 shows the project location map. Figure 1.2 shows the project site map. Figure 1.3 shows the tax map.

### **1.2 Existing Conditions and Surrounding Uses**

In 1923-1924, the project site was cleared for the construction of plantation houses built by construction crews led by contractor Kikuichi Honda (1923). In 1965, the project site was part of the last large scale residential construction project that was undertaken by Hawaiian Pineapple Company under the auspices of a subsidiary called Plantation Housing, Ltd. At that time, the project site was cleared of the plantation homes and construction included three dormitories buildings which were single-pile in depth with side facing gable roofs, plywood panel and batten exterior finishes, with louvered windows and solid core wood doors. Currently, two of the buildings have been abandoned with a portion of the third building serving as the current Lanai Community Health Center administration office and the other portion as the Lanai Art Center Activity room. These three existing buildings will be removed to construct the new facility. Figure 1.4 shows the project site photographs.

The eastern portion of the parcel along Seventh Street contains existing facilities occupied by the Lanai Art Center and Maui Community College, which will remain with no changes.

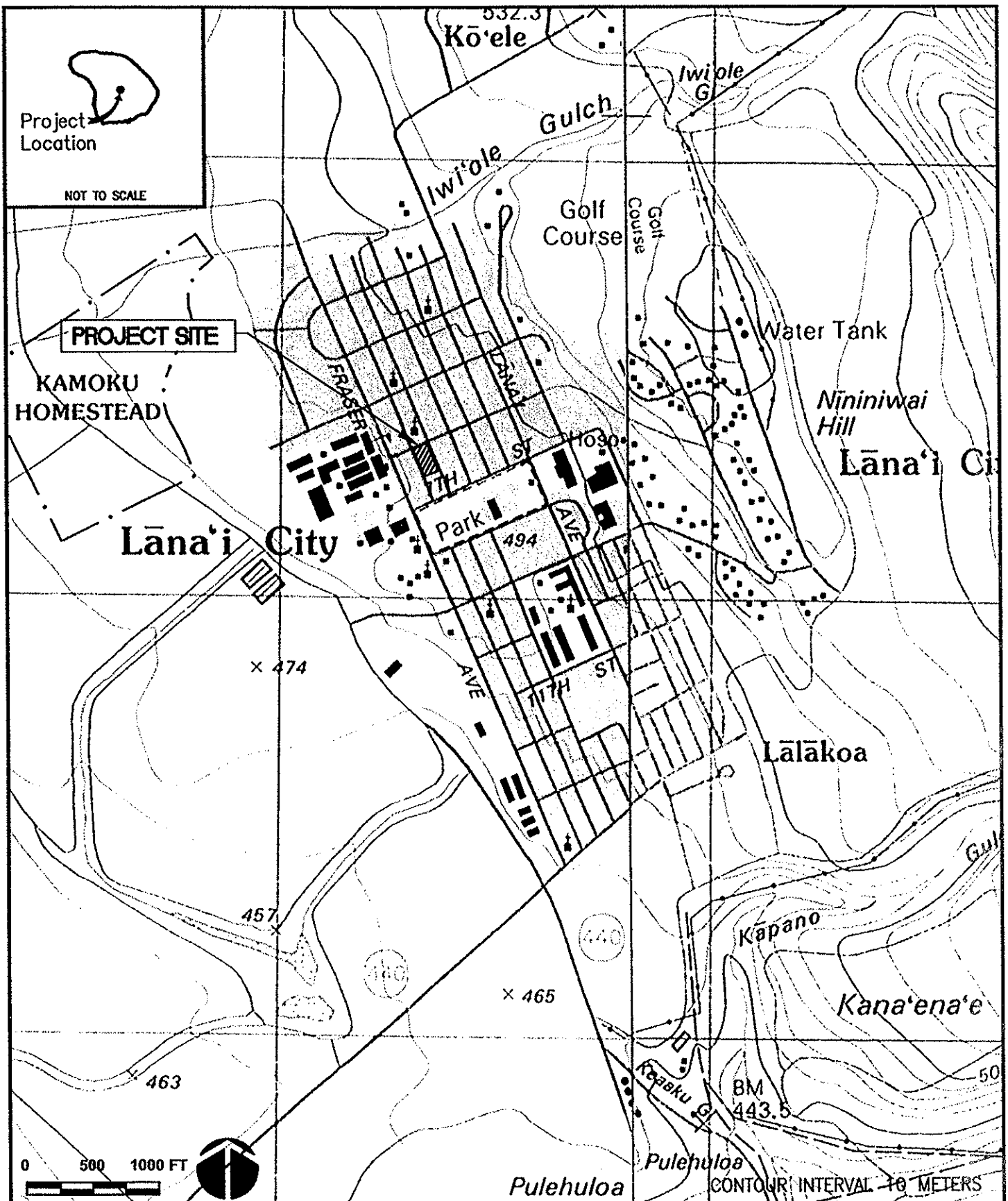
Sixth Street, Houston Street, and Gay Street all carry two travel lanes, one in each direction for vehicle travel. The posted speed limit on Sixth Street is 20 miles per hour. One of the abandoned dormitories has two access driveways onto Sixth Street. The



Lanai Community Health Center  
Lanai City, Lanai, Hawaii CBDG Project No. 08-04

**PROJECT LOCATION MAP**

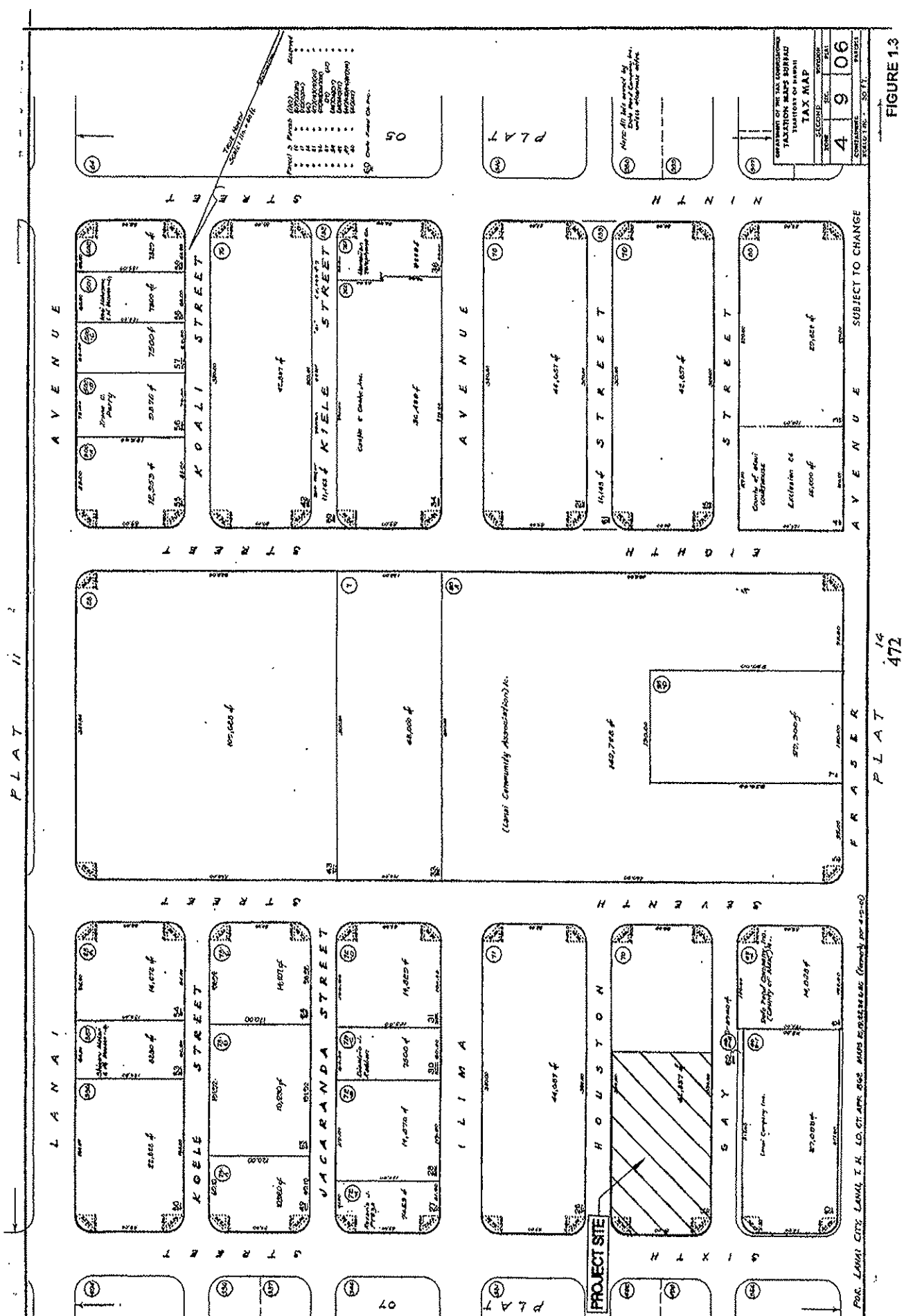
FIGURE  
**1.1**



Lanai Community Health Center  
 Lanai City, Lanai, Hawaii CBDG Project No. 08-04

**PROJECT SITE MAP**

FIGURE  
**1.2**



PLAT 11

FOR LANA CITY LANA I. H. LD. CT. APR. 02. MAPS 8038288E (Remedy for 41-00)

PRJ. NO. 4477  
 DATE: 14.01.2014  
 BY: J. B. ROSS

PLAT

AVENUE SUBJECT TO CHANGE

FORTNIGHT

LANA AVENUE

PLAT

472

PLAT

LANA AVENUE

PLAT

FIGURE 13

DEPARTMENT OF THE TAX COMMISSIONERS		TAX MAP	
BOOK	SHEET	DATE	SCALE
4	9	06	
CONTINUED TO SHEET		PREPARED BY	

Note: All lots owned by  
 LANA CITY

PLAT

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Existing Lanai Community Health Center on Lauhala Place



Existing Lanai Community Health Center View administration building



Sixth Street looking south - new Health Center site on left



Existing dormitory building on Sixth Street

**Figure 1.4 Project Site Photographs**

other abandoned dormitory has direct access to Gay Street. The Lanai Community Health Center administration office has access onto Houston Street.

The portions of the three streets adjacent project site, Sixth, Houston, and Gay, do not have curbs and sidewalks. With some exceptions, this condition prevails on most of the streets in Lanai City.

The topographic survey of the project site shows Houston Street on the north lies at an elevation of about 1,610 feet mean sea level (msl) and Gay Street on the south lies at about 1,608 feet msl, or about 2 feet lower than Houston Street.

Neighboring uses include single family residences to the west and business/commercial uses to the north and east. A modern two-story multi-family complex, Lanai City Apartments, and the Lanai Senior Center are located on the south along Gay Street. Commercial buildings in the area are all one story, generally small in scale, and were constructed during the planned development of Lanai City as a plantation town for the Hawaiian (later Dole) Pineapple Company.

Dole Park, located to the east of the project site, occupies approximately 6 acres and has mature pine trees along the perimeter. The Park establishes this area of Lanai City as the town center.

### **1.3 Lanai City Business Country Town Historic District Nomination**

In January 2009, the County of Maui Planning Department and the State of Hawaii Department of Land and Natural Resources State Historic Preservation Division issued a Draft National Register of Historic Places Registration Form for the Lanai City Business Country Town historic district, a 17 block area located in the center of Lanai City. The County of Maui has prepared such a nomination because Lanai City was one of only a limited number of planned communities in the State's history, has unique architecture, and represents the most intact plantation community remaining in Hawaii. At this time, the Draft National Register nomination is still under review. Figure 1.5 shows the Proposed Hawaii Register of Historic Places Lanai City Business Country Town Historic District.

The Lanai Community Health Center project site is located on the western edge of the Lanai City Business Country Town (BCT) District. According to the Draft National

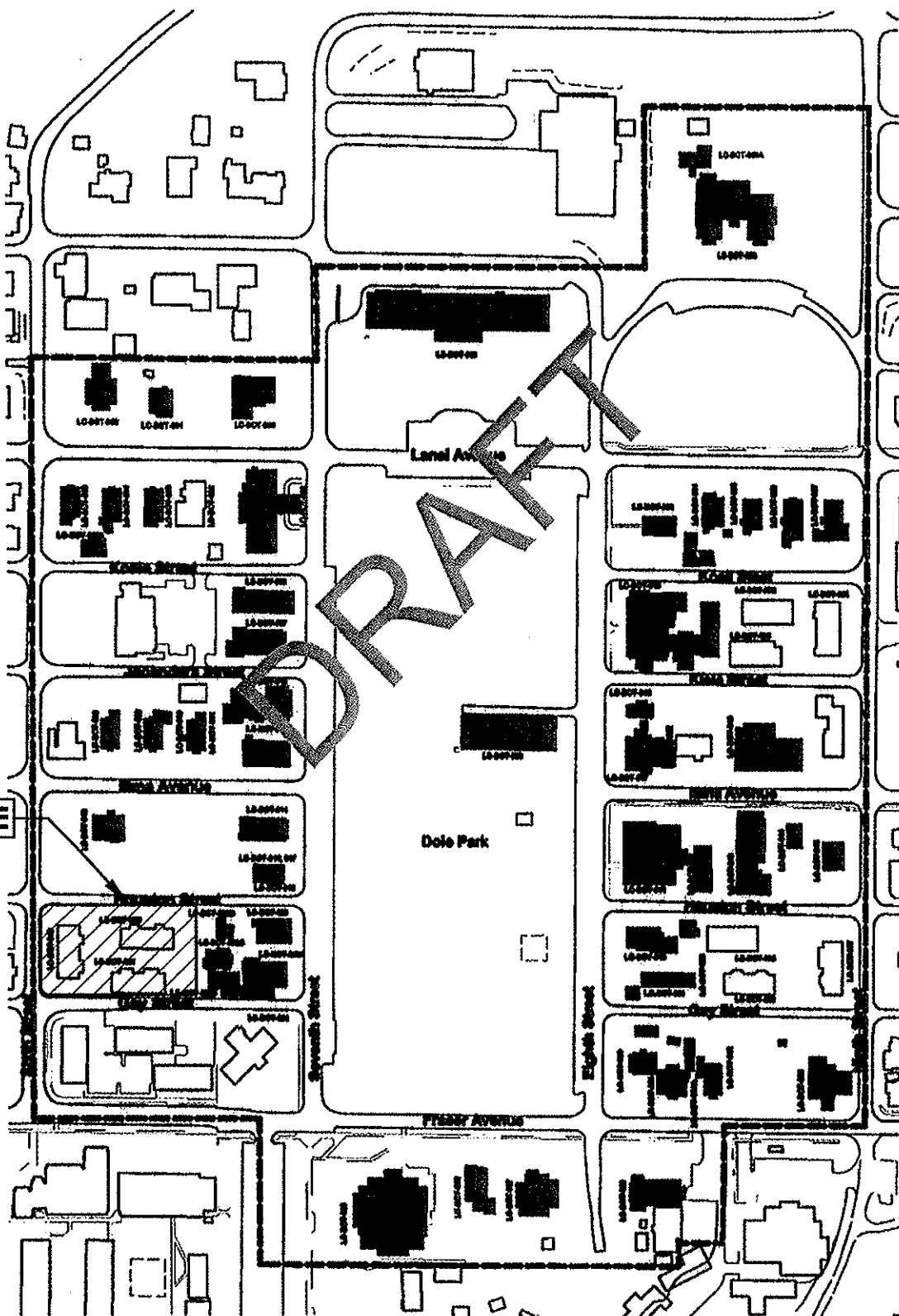
# NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

SOURCE: DRAFT NATIONAL REGISTER OF  
HISTORIC PLACES REGISTRATION FORM,  
JAN 2009

Section 8 Page 72

Lāna'i City BCT  
name of property

Maui, HI  
county and state



PROJECT SITE

DRAFT

### FIGURE 1.5

Figure 32. Proposed Hawai'i Register of Historic Places (HRHP) Lāna'i City Business Country Town (BCT) Historic District. Note: Contributing buildings are shaded and numbered.



Register nomination form, Lanai City was the first planned community in the Territory of Hawaii and a majority of it was built from 1923-1929 by Japanese contractors who had been hired by the Hawaiian Pineapple Company. The district encompasses 9.77 acres, or only a portion the area of the original town plat of 232 acres, and contains a group of buildings in Lanai City which form the commercial core of the last intact plantation town in Maui County, and one of the last in the State of Hawaii. Designed by engineer David E. Root, the Lanai City BCT historic district is the last extant example of "Garden City" and "Village" planning standards remaining in Maui County and is one of only two remaining in the State of Hawai'i. The other example is Hickam Field, Oahu which was designed by architects and engineers of the US Army Quartermaster Corps and built from 1935-1940.

The Lanai City BCT district includes dwellings which housed plantation workers, buildings which contained the island's early businesses and institutions, and former government buildings which are significant to the history of Maui County. The latter also functioned as the sites for temporary internment of a number of Japanese inhabitants of the town during World War II before they were sent to Sand Island on Oahu and then transferred to the U.S. mainland. Japanese from the outer islands appear to have been sent directly to this location and not to other internment sites on Oahu.

The buildings of the Lanai City BCT district comprise the physical remnants of the Lanai's unique early 20<sup>th</sup> Century history of commerce, industry, government, and labor relations which are significant to Maui County and to the State of Hawaii. At one time, the district was the home of some 3,000 former plantation workers and their families. It remains a home to their descendants still residing on Lanai.

The Lanai Community Health Center project site is located on the southwestern edge of the historic district. The Draft National Register form identifies the three existing buildings (334 Sixth Street; 622 Gay Street, and 624 Houston Street) on the project site as non-contributing buildings, which were constructed in 1965, or over 45 years ago, as among a total of 9 dormitories built by Plantation Housing Ltd.

The former dormitory buildings are single-pile in depth with side facing gable roofs, feature plywood panel and batten, tongue and groove exterior finishes, and are fenestrated with louvered windows and solid core wood doors. Each building consisted of four separate living units with each unit consisting of three rooms, a kitchen/living

area, one bedroom, and bathroom with sink, toilet, and shower. The kitchen stoves were electric and propane gas supplied from tanks was used for hot water heating. Each building is about 72 feet long by 24 feet wide, or approximately 1,728 square feet.

#### **1.4 Lanai City Community Design Guidelines**

In April 1997, the County of Maui Planning Department issued the *Lanai City Community Design Guidelines*. The purpose of the Guidelines was to document existing conditions and to establish an identifiable and unified urban design theme to be retained and carried on within Lanai City. The Lanai Design Guidelines specifically address the commercial uses within Lanai City. Since the Lanai Community Health Center project site is located within the area covered by the Guidelines, the facility and site will be designed according to the Guidelines.

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## **2. PROJECT DESCRIPTION**

### **2.1 Background**

The Lanai Community Health Center (LCHC), a Federally Qualified Health Center (FQHC) since September 2007, mission is to care for the community of Lanai. The Health Center takes care of the community with a focus on physical, mental, emotional, intellectual and spiritual welfare and by enriching and empowering lives to help build healthy families in a supportive environment.

The Health Center carries out its mission in three ways:

1. Providing health services (primary care, dental, and behavioral health) directly to the community;
2. Providing activities and services through partnerships with local organizations as well as the many off-island organizations reaching out to Lanai by serving as coordinator, advocate, resource, initiator, and convener; and
3. Working collaboratively to provide space for partners who can provide needed services for Lanai.

Due to the difficulty of locating providers on Lanai, the Health Center employs Honolulu and Neighbor Island nurse practitioners, a Honolulu Psychology fellow, a Maui nutritionist and a Honolulu registered dietitian to come to Lanai to provide medical services to Health Center patients. To maximize effort and minimize cost, each nurse practitioner is scheduled for at least two days at a time. The Health Center currently rents a house for their overnight stay. The nurse practitioners also provide telephone coverage on a 24-hour basis to handle patient calls when the Health Center is closed.

The Health Center is currently governed by a 10 member Board of Directors who each has substantial experience developing and administering appropriate systems necessary for effective health and social services.

### **2.2 Purpose and Need**

The existing Lanai Community Health Center consists of two sites in Lanai City which are about 0.6 miles apart. The existing Health Center clinical facility is located on Lauhala Place in a converted former one-story plantation home north of Dole Park. The existing Health Center contains a reception area and three examination/counseling rooms for clinical services or confidential counseling. The converted home, probably

constructed in the 1920's, encompasses about 900 square feet and was not designed to provide medical services and lacks sufficient space and supporting facilities to properly serve the residents of Lanai. The administrative office on Houston Street is a converted dormitory.

The purpose of the Lanai Community Health Center project is to construct a replacement health care facility designed for current medical-dental practices and procedures. The facility will be designed with sufficient space and supporting facilities to treat patients for primary medical care, dental care, behavioral health services, prenatal, family planning, nutrition and preventive health education services. These services will be open to the low- and moderate-income, uninsured, and underserved residents of Lanai.

The Health Center target population consists of those with incomes below 200% of the Federal poverty level, currently nearly 70% of the households. No one is turned away by the Health Center due to lack of funds for necessary care. The Health Center serves individuals of all ages, ethnicity, gender, and residency - old timers, part-timers, and newcomers.

## **2.3 Proposed Improvements**

### **2.3.1 Site Improvements**

The project site improvements will include two access driveways, two parking areas, walkways, emergency generator and landscaping constructed for the Health Center facility. Accessible ramps will be provided from the visitor parking area to the main front entrance of the Health Center which will face west to Sixth Street. A pedestrian walkway along the west side of the building will connect the parking area to the main front entrance. Figure 2.1 at the end of this section shows the project site plan.

The main public access to the Health Center facility will be on the west from Sixth Street which will have a two-way 24-foot wide driveway leading to a 12 stall at grade parking lot for visitors. A 6 stall at grade parking lot for employees and with a loading zone will be located east of the new building and will use two-way 24-foot wide driveway access from Gay Street. The driveways and parking areas will be constructed of asphaltic concrete pavement. The stalls will be 18 feet deep by 8-1/2 feet wide with 24 feet wide aisles. Wheel stops will be provided at all stalls. Accessible stalls will comply with handicap

parking requirements, including the required pavement slopes, and signage. Landscaping will be provided to screen the parking from the street and canopy trees will also be used to shade and screen the parking. See Figure 2.1.

An emergency generator will be placed on the northeastern corner of the project site. The generator will provide electrical power for emergency lighting, the mini laboratory and computers during power outages.

The site plan shows the front entry porch on the west side of the building will be set back about 41 feet from the property line on Sixth Street. The north and south walls of the building are set back approximately 11 feet from property lines on Houston and Gay Streets. Landscaping will be planted on the west, north and south sides of the Health Center building. These setbacks and the landscaping plantings follow the Lanai City Design Guidelines.

The County of Maui Code parking requirement is 1 space per 300 square feet for a medical facility. The total parking required is 18 spaces based on a 6,800–square foot building, exclusive of circulation areas. It is expected that many of the patients, as well as staff, would walk to the Health Center. Public parking along Dole Park is within 200 feet from the eastern end of the project site.

The Design Guidelines indicate the Lanai Community Plan calls for design standards which maintain the existing scale and street layout pattern. Further, the Guidelines state curbs and gutters exist in only a few areas in Lanai City, notably in the commercial district around Dole Park and that the character of much of Lanai City is not well-paved. Shoulders of most roads are unimproved, grass swales are used for drainage, and in the frequently wet weather, pedestrians walk in the street. The sidewalk master plan in the Guidelines shows no sidewalks on the three streets fronting the project site, Sixth Street, Gay and Houston Streets. The County of Maui Development Services Administration will determine the need for roadway widening lots along Sixth Street, Gay and Houston Streets.

The design plans show no curbs or sidewalks will be constructed along the three streets (Sixth, Houston, and Gay) adjacent to the project site. Also, there will be no changes to the existing street plan. As previously discussed, this will be consistent with the existing

conditions on these streets and the April 1997 County of Maui Lanai City Design Guidelines.

On June 23, 2010, as part of the Draft EA review, the County of Maui Police raised an issue of concern related to the parking lot with ingress and egress to Gay Street. As a result, the Health Center will designate the 6-stall parking lot with ingress and egress from Gay Street for employee and staff parking only. This will minimize the vehicle traffic from the parking lot to staff personnel only. Further, this will limit vehicle traffic to the hours of operations of the Health Center. This will reduce conflicts with other users of Gay Street.

### **2.3.2 Health Center Building**

The replacement Lanai Community Health Center will contain about 6,800 square feet of space in a "C" shaped single story structure which contain spaces for medical examination rooms, consultation rooms, a mini laboratory, and offices on one side; and dental specialty/examination rooms, X-ray area, mini laboratory and offices on the other. The facility will also contain space for administrative functions, conference and reception rooms, staff lounge, storage, and an activity multipurpose room which can be used for flu clinics, women, infants and children (WIC) program activities, health education events, Lanai Art Center activities and general activities. Figure 2.2 at the end of this section shows the floor plan.

The main entry to the building will be on the west facing Sixth Street. A handicap accessible ramp and stairway lead to the waiting room, which will have an open truss or open vaulted ceiling with ceiling fans (no air conditioning). A covered lanai at the entrance will also provide additional waiting space. The waiting room will have a secondary entrance from the courtyard that is adjacent to the eastern or rear parking lot. The reception area is centrally located and open to the waiting room and adjacent conference rooms.

The south wing (along Gay Street) will contain the medical examination rooms, procedure room, laboratories, provider offices, and other medical support spaces. The north wing (along Houston Street) will contain the dental specialty rooms, administration area, and an activity/multipurpose room. The waiting room, north and south wings will open to lanai that overlooks a landscaped courtyard.

The medical and dental/specialty departments will share the waiting, reception and support areas and will each have a medical assistant staging area and mini laboratory to share with their examination rooms.

The activity/multipurpose room will be located at the end of the north wing and will have a separate exterior entrance. The activity/multipurpose room will not have an interior connection to the remainder of the north wing. The multi-purpose room will be used for a variety of uses related to the Health Center, including for teaching, demonstrations, women, infant and children programs, and art therapy programs, and will also be available for use by the Lanai Art Center.

### **2.3.3 Design Features**

Lanai City, developed in the 1920's, is still an intact plantation town, not found on any of the other Hawaiian Islands. Most buildings in the proposed historic Business Country Town (BCT) district are plantation vernacular dwellings. The Health Center will be designed in keeping with the plantation vernacular and the April 1997 County of Maui Lanai City Community Design Guidelines.

Some of the architectural vocabulary for the Health Center is a hipped roof with 2-3 feet deep overhangs, raised floor, lanais on at least two facades for outdoor seating, and wood framed double hung windows.

The preliminary design shows the building will have exterior simulated wood or wooden siding with wooden posts and railings, wood window frames and muntins, and standing seam or corrugated metal roofing. The highest point on the roof will be about 25 feet above grade. The facility will be designed to be compatible with the "plantation home style" and existing buildings on the surrounding parcels and town buildings. The entire west side will be an open lanai and serve as the main entrance. Figures 2.3 and 2.4 at the end of this section show the building elevations.

In addition, the Health Center project design will be comply with Hawaii Revised Statutes, Chapter 105-50, Building Design to Consider Needs of Persons with Disabilities, and with the American with Disabilities Act Accessibility guidelines.

The Health Center project will also comply with Hawaii Revised Statutes, Maui County Code and rules and regulations, as applicable. Lastly, as applicable, the Health Center



project will comply with Hawaii Standard Specifications for Road and Bridge (2005) and Standard Details for Public Works (1984, amended).

No commercial kitchen facilities are part of the Health Center project.

The Health Center will use split air-conditioning systems with on-site drywells to dispose condensate. There will be no disposal of condensate to the County wastewater system.

#### **2.3.4 Site Infrastructure**

There are existing Lanai Water Company water mains running along Houston, Sixth and Gay Street. There are four 5/8-inch existing water meters servicing the site along Houston Street as well as four 5/8-inch existing water meters servicing the project site along Gay Street. The existing water meter servicing will be utilized of the Health Center.

Based on the fixture count, the anticipated water demand for the Health Center will be approximately 1,600 gallons per day. The landscape irrigation will be of about 360 gallons per day using a drip system. Using statewide standards, the anticipated demand would range from 3,450 - 5,880 gallons per day.

There are four existing fire hydrants around the project site for fire protection. These hydrants should be adequate for fire protection.

Potable water and fire protection laterals will be connected to Lanai Water Company lines. The location of the connections will be determined during the design of the facility.

There is an existing 8-inch sewer main along Houston Street, an existing 8-inch sewer main along Sixth Street, and an existing 8-inch sewer main along Gay Street. Where possible the existing sewer laterals on the project site will be utilized for sewer services to the Health Center. The sewer system within the building would likely utilize a gravity sewer system.

The design plans will need to show the existing property sewer service manholes near the property boundary and installation of a manhole, if needed.

Based on the anticipated water demand for the Health Center, the sewer demand will be approximately 1,600 gallons per day based on the fixture count for the Health Center. The wastewater will be routed to the Lanai Wastewater Reclamation Facility (LWRF) for treatment and disposal of the effluent. The LWRF is currently owned and operated by the County of Maui.

Currently, drainage sheet flows from Houston Street to Gay Street in a south-westerly direction to the corner of Gay and Sixth Streets. Other than surface runoff and roadway swales there are no existing drainage systems around the project site. The design drawings show the intent is to maintain the existing drainage patterns and drainage discharge points off the project site. Drainage will generally sheet flow from Houston Street towards Gay Street. The increased drainage from the project site will be detained on-site, utilizing landscaped areas along Gay Street as detention basins and swales within the site. The swales and basins would also function as bio-swales, which will capture the runoff and allow percolation to the subsurface. Use of bio-swales and basins would act to retain surface flows within the project site.

### **2.3.5 Leadership in Energy & Environmental Design**

Leadership in Energy & Environmental Design (LEED) is an internationally recognized green building certification system, providing third-party verification that a building or community was designed and built using strategies aimed at improving performance across all the metrics that matter most: energy savings, water efficiency, CO2 emissions reduction, improved indoor environmental quality, and stewardship of resources and sensitivity to their impacts.

Developed by the US Green Building Council (USGBC), LEED provides building owners and operators a concise framework for identifying and implementing practical and measurable green building design, construction, operations and maintenance solutions.

The Health Center project will be submitted to the USGBC for LEED certification under Building Design & Construction. A primary goal of the Health Center project is to create a healthy environment for patients and staff. Sustainable design practices such as minimizing use of potable water through low flow plumbing fixtures, solar water heating, landscaping with native and adapted plantings, storm water control through bioswales and underground retention system, use of Forest Stewardship Council Certified wood, promoting use of alternative transportation, using materials with recycled content, using

regional materials, maximizing daylight and views, all lighting on sensor control, naturally ventilated rooms where appropriate, use of low emitting materials such as paints, adhesives, sealants, individual air condition controls for thermal comfort, enhanced building commissioning, green housekeeping products, and purchasing of EnergyStar medical, dental and office equipment, are some of the practices to be implemented for the Health Center.

#### **2.4 Health Center Services**

Services currently include primary care and preventive health services, communicable disease testing, dental, mental health services, pre-natal services, counseling and treatment, insurance eligibility, and medical "enabling" services, such as outreach, case management, and language interpretation. The Health Center has also implemented a contract with a 340B pharmacy that provides Center patients with their prescribed medications at very low cost, especially important to diabetes mellitus and cardiovascular disease patients due to the many and continuing medicines required to treat these diseases.

The Health Center has taken a leadership role in the provision of Women, Infants and Children (WIC) services for the residents of Lanai. The WIC program provides needed nutritional food supplements for pregnant women, newborns, post-partum mothers and children under the age of 5 in a culturally and linguistically appropriate manner for eligible clients in Lanai. WIC services are provided six times a month, and include:

- Nutritional education and counseling;
- Breastfeeding instruction and support; and
- Food instrument issuance.

Other nutritional services for WIC clients include:

- Weight control reduction
- Assessment and counseling to reduce the risks of diabetes, high blood pressure, and heart disease.

WIC clients will also receive comprehensive assessment and referrals for other health related issues to other community providers, including:

- Domestic violence;
- Substance abuse;
- Smoking cessation;
- Transport services within the Health Center service area; and

- Translation assistance.

WIC clients are income eligible pregnant, breastfeeding and non-breastfeeding post partum women, infants and children under five years of age who are found to be at nutritional risk. The Health Center program currently is serving approximately 100 clients per month.

The Health Center and Straub Clinic are the only sources of primary care by a medical provider on the Lanai. Straub Clinic is owned by Hawaii Pacific Health, a hospital corporation headquartered on Oahu. Straub Clinic is staffed by two family practice physicians, who are also responsible for emergency room management for the Lanai Community Hospital,

The Straub Clinic employs no nurses and does not include the support staff, such as case managers. In the past, Straub has primarily served the large number of privately insured individuals employed by the two luxury hotels on Lanai. Straub is not in a position to serve large numbers of uninsured and/or Medicaid for long periods of time and often refers these patients to the Health Center.

The Health Center and Straub Clinic currently work cooperatively, and plan to continue to do so in the future. The Health Center offers critical specialty services on island -- which Straub Clinic does not. Straub Clinic sends their patients to the Health Center for these specialty services. Since Straub Clinic usually does not have female providers, Straub Clinic often sends its female patients to the Health Center for their pap smears.

In addition to the services Health Center provides that Straub does not provide, the Health Center will continue to complement Straub and offer the residents of Lanai a choice in where to obtain care.

The Health Center will provide its staff for its services, including lab services and dental x-ray (the only type of x-ray services the Health Center plans to provide). Both the Health Center and Straub Clinic currently use the Lanai Hospital for its routine, non-dental x-rays -- and plans to continue to do so in the future. A community the size of Lanai cannot support more than one x-ray facility at this time, and the Health Center is being careful not to duplicate such costly services.

In addition to x-rays, the Health Center has been using Lanai Hospital for blood draws. Recently, the Hospital asked the Health Center to find an alternate method for its blood draws as blood draws for the Health Center patients were placing a burden on their one phlebotomist and this work does not provide the Hospital with any financial benefit. Towards that end, the Health Center is already in the process training its staff to do their own blood draws, and plans to continue to provide this service internally once the new facility is constructed.

In terms of Medicare staffing regulations, as an ambulatory practice, the Health Center is not under any such staffing regulations. All tests are CLIA Waived approved and the Health Center maintains proper licensure for CLIA Waived testing. As previously discussed, staffing at the Health Center will be established to meet the needs of the community.

**2.5 Health Center Operations**

The Health Center will have a total of 23 full time and part time employees who will be employed by the Center. Generally, on a daily basis, a total of 10 employees will be at the Health Center, including nurse practitioners, medical assistants, other medical/dental specialists, and related administrative personnel. The Health Center has developed a network of nurse practitioners, a nutritionist and a registered dietitian, and psychologists and a dentist to provide their services. The employees will include Lanai residents and those who will commute from other off-Lanai islands.

The Health Center anticipates about 8,500 patient visits per years, or approximately 20 to 30 patient visits per day.

**2.6 Project Hours**

The Health Center will be open 6 days per week, or total of 56.5 hours per week, with the following hours:

Monday-Wednesday-Friday	9:00 am to 7:30 pm; 10.5 hours per day
Tuesday-Thursday	8:00 am to 5:00 pm 9 hours per day
Saturday	8:00 am to 3:00 pm 7 hours per day

## **2.7 Project Schedule and Cost**

Construction of the Health Center will proceed when funding for the project has been secured. At this time, no date has been determined for start of construction. Approximately 9-12 months would be required to complete the construction.

The preliminary construction cost for the Health Center is approximately \$4.8 million.

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LANAI  
COMMUNITY  
HEALTH CENTER  
TMK: 4-9-006/1, LOT A  
LANAI CITY, HAWAII 96763

SITE PLAN

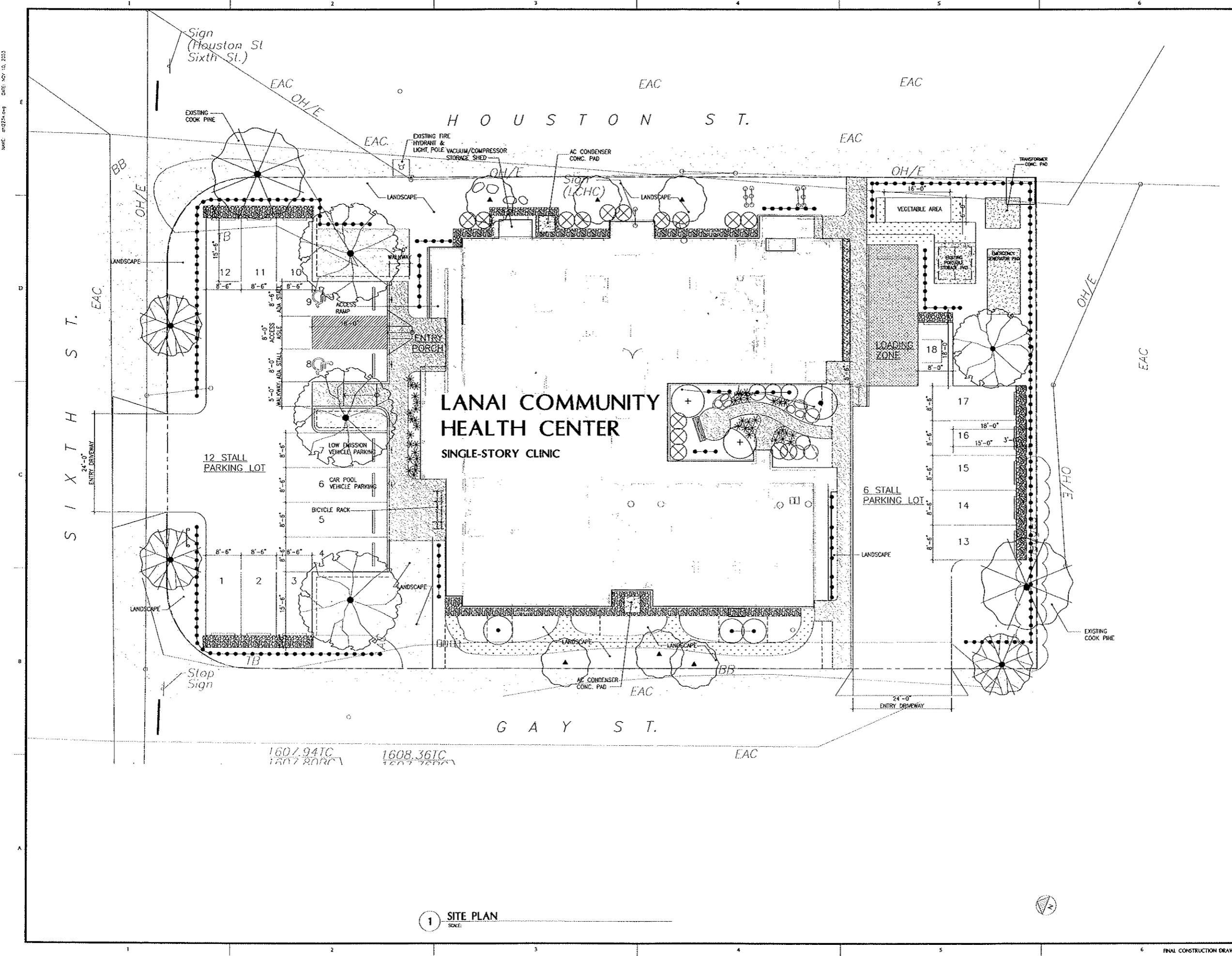
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This work was prepared by me or under my supervision and construction of this project will be under my observation. (Description of construction as defined in Chapter 16-115 Subchapter 4, Definitions of the Hawaii Administrative Rules: Professional Engineer, Architect, Surveyor, and Landscape Architect.)  
DATE: 04/30/2012


06/30/2010 PERMIT ISSUANCE  
PROJECT NO: 5933.001  
CAB. DWG FILE: AS-101 SP  
DRAWN BY:  
DATE: JUNE 30, 2010  
DRAWING NO:

FIGURE 2.1



1 SITE PLAN  
SCALE:



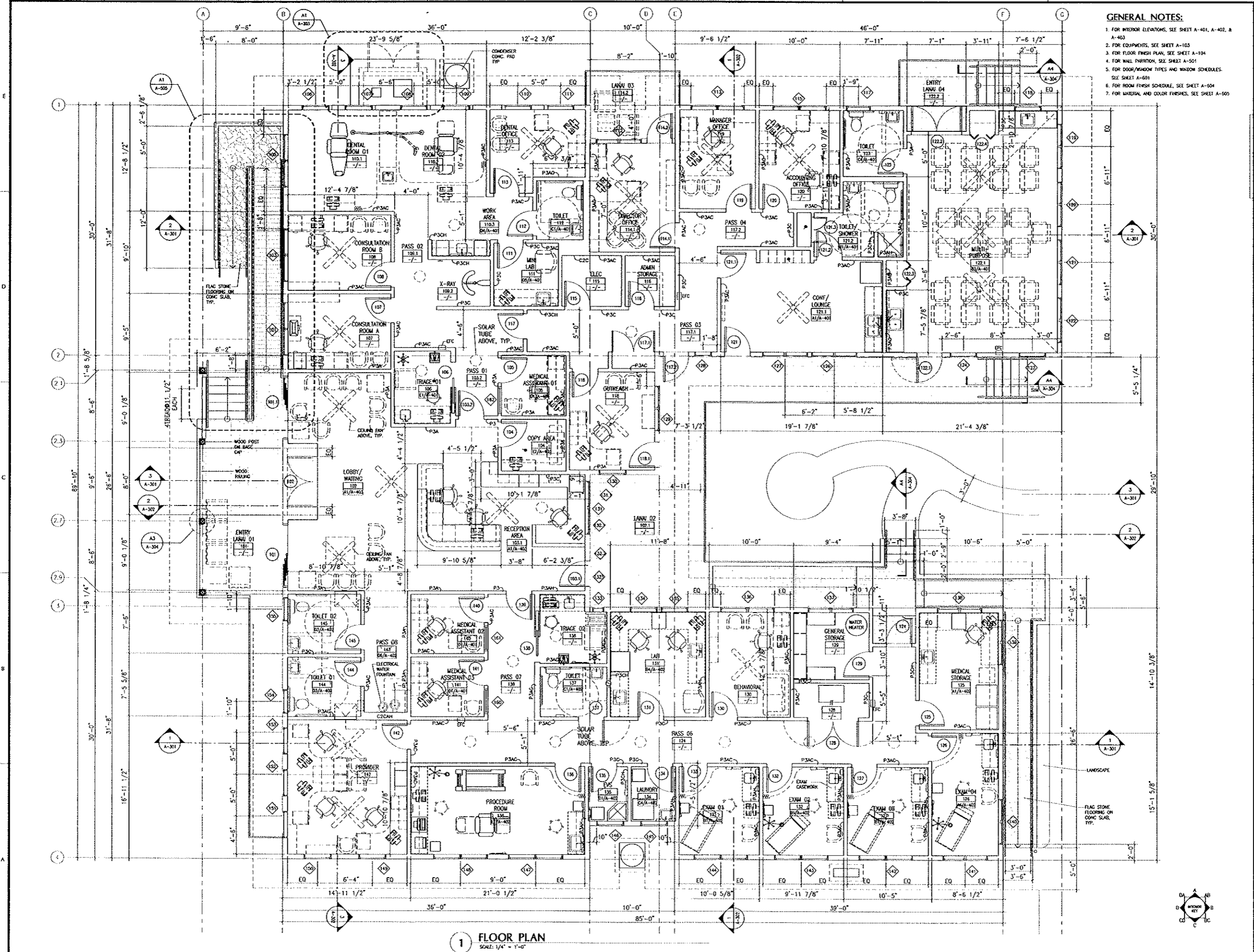
NAME: 062324.dwg DATE: NOV 10, 2010



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**LANAI COMMUNITY HEALTH CENTER**  
TAK 4-9-06/1, LOT A  
LANAI CITY, HAWAII 96763

- GENERAL NOTES:**
1. FOR INTERIOR ELEVATIONS, SEE SHEET A-401, A-402, & A-403
  2. FOR EQUIPMENTS, SEE SHEET A-103
  3. FOR FLOOR FINISH PLAN, SEE SHEET A-104
  4. FOR WALL PARTITION, SEE SHEET A-501
  5. FOR DOOR/WINDOW TYPES AND WINDOW SCHEDULES, SEE SHEET A-601
  6. FOR ROOM FINISH SCHEDULE, SEE SHEET A-604
  7. FOR MATERIAL AND COLOR FINISHES, SEE SHEET A-600



**1 FLOOR PLAN**  
SCALE: 1/4" = 1'-0"

**FLOOR PLAN**  
1/4"=1'-0"



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DATE: 04/30/2012  
BY: [Signature]  
CHECKED BY: [Signature]  
DATE: 05/04/2012

06/30/2010	PERMIT ISSUANCE
PROJECT NO.	5933.001
CAD FILE	A-101
DRAWN BY	
CHECKED BY	JUNE 30, 2010
DRAWING NO.	

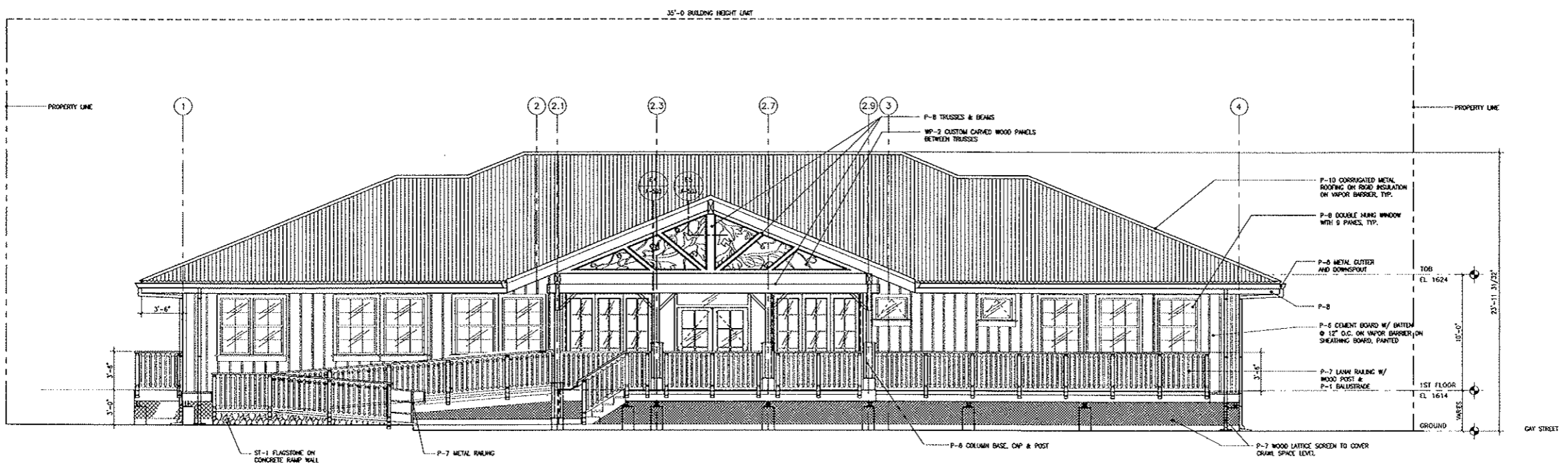
**FIGURE 2.2**

EXTERIOR PREMANUFACTURED FINISHES				EXTERIOR/MISCELLANEOUS FINISHES							
CODE	DESCRIPTION	MANUFACTURER	PATTERN/STYLE/COLOR	CODE	DESCRIPTION	MANUFACTURER	PATTERN/STYLE/COLOR	CODE	DESCRIPTION	MANUFACTURER	PATTERN/STYLE/COLOR
PF-3	EXTERIOR DECKING	TREX	TRANSCEND, FIRE PYT, SQUARE EDGE BOARD	P-1	RAILING BALUSTRADES	BENJAMIN MOORE	OC-95 NAVAJO WHITE	P-10	CORRUGATED METAL ROOF	HFM CUSTOM METAL ROOFING	KELLY GREEN
ST-1	FLAG STONE	DALTILE	MONKOLIAN SPRING, FLAGSTONE PATTERN- NATURAL CLEFT GAUGED, S781	P-2	WOOD PANEL CEILING	BENJAMIN MOORE	OC-112 COTTON BALLS	C-1	CONCRETE- ADA RAMP	-	NATURAL- RAKED TEXTURE
WP-2	EXTERIOR WOOD PANEL	HALE TROPICAL LIVING	CUSTOM CARVED WOOD PANEL WITH P-1 PAINT	P-6	CEMENT BOARD	PITTSBURGH PAINTS	TO MATCH PITTSBURGH PAINTS 117-5 EVENING GLOW	M-1	METAL GRATE- ADA RAMP	FIBERGRATE	AQUAGRATE, GRAY
				P-7	METAL RAILING	-	TO MATCH PITTSBURGH PAINTS 303-7 PEACOCK GREEN				
				P-8	WINDOW FRAMES AND DOORS	JELDOWEN	KYMAR COATING TO MATCH PPG 326-6 NUTMEG				
					TRUSSES & COLLARS	PITTSBURGH PAINTS	326-6 NUTMEG				
					GUTTERS & DOWNSPOUTS	-	FACTORY FINISHED TO MATCH PPG 326-6 NUTMEG				

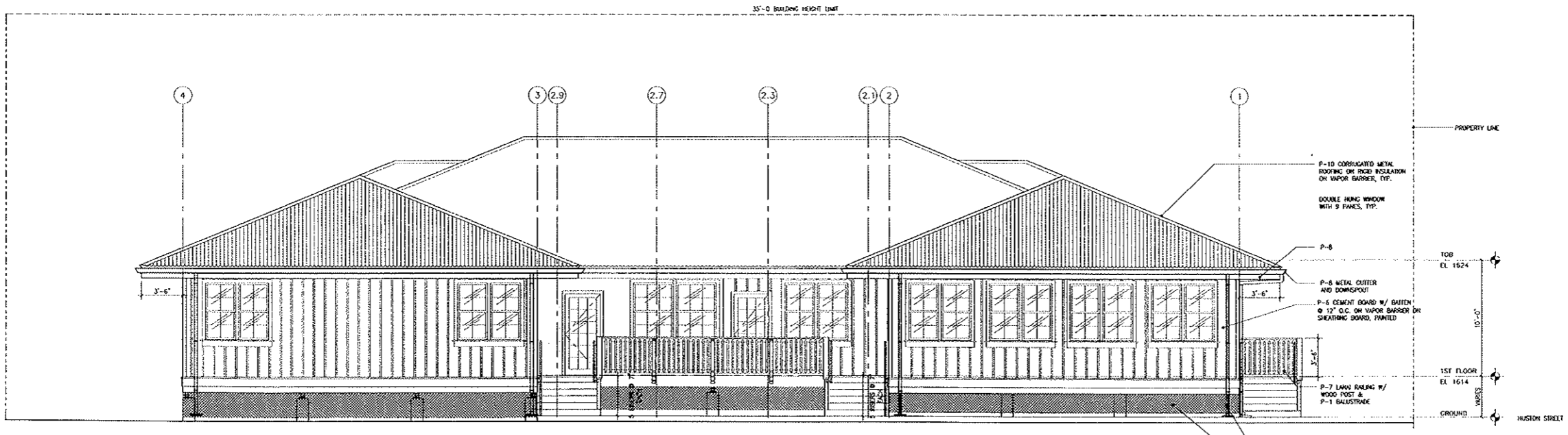


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**LANAI COMMUNITY HEALTH CENTER**  
 TWC: 4-9-0067, LOT A  
 LANAI CITY, HAWAII 96763



**1 WEST ELEVATION**  
 SCALE: 1/4" = 1'-0"



**2 EAST ELEVATION**  
 SCALE: 1/4" = 1'-0"

**BUILDING ELEVATIONS**  
 1/4"=1'-0"



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DATE: 06/30/2010  
 PROJECT NO: 5933.001  
 DRAWING NO: A-201.dwg

DATE	JUNE 30, 2010
DRAWING NO	A-201.dwg

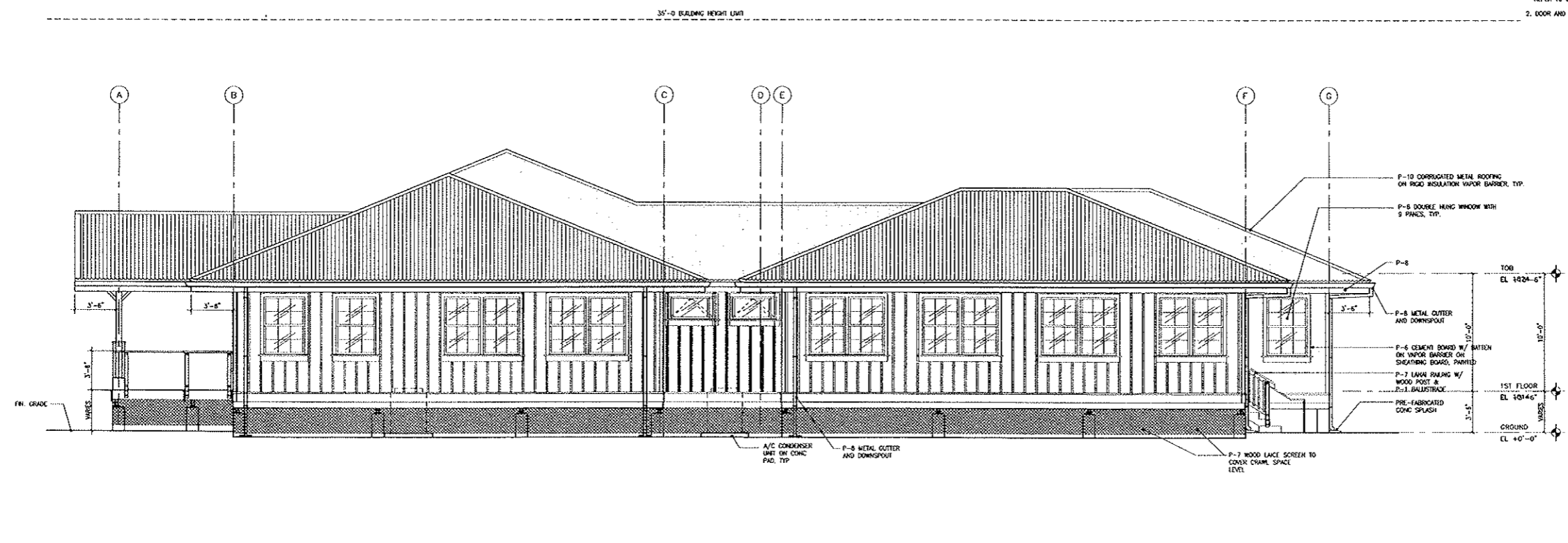
06/30/2010 PERMIT ISSUANCE  
 PROJECT NO: 5933.001  
 DRAWING NO: A-201.dwg

**FIGURE 2.3**

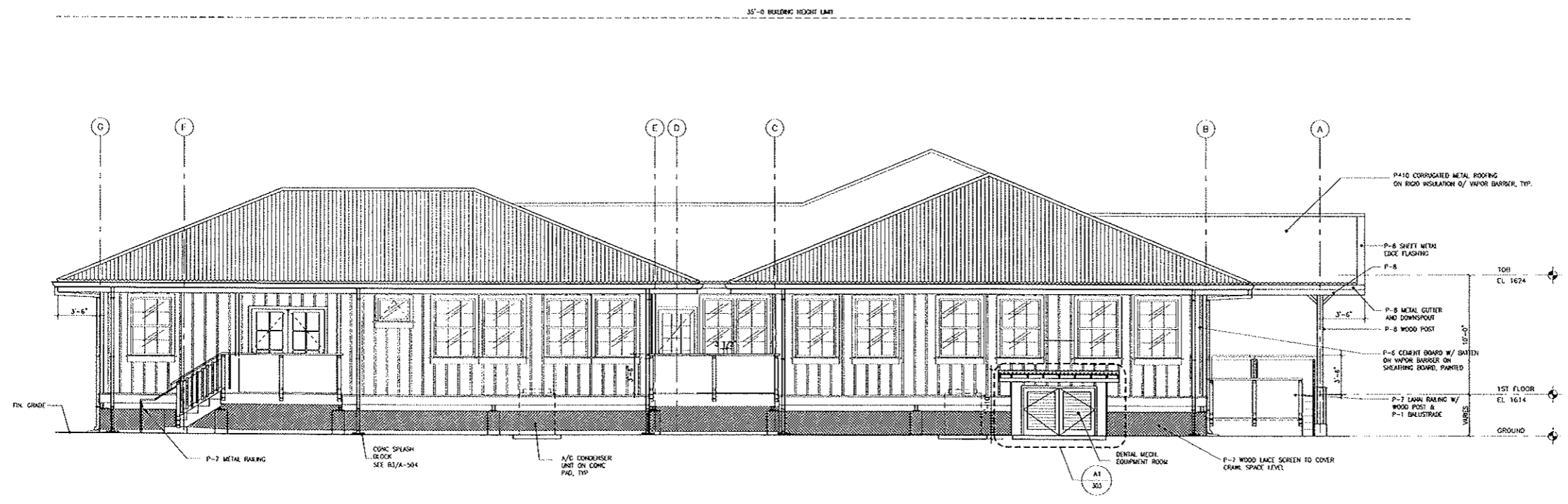
- GENERAL NOTES:**
- FOR EXTERIOR MATERIAL AND COLOR FINISHES, REFER TO EXTERIOR FINISH SCHEDULE SHI A-201
  - DOOR AND WINDOW SCHEDULES, REFER TO SHI A-501

NAME: 082324-04g DATE: NOV 10, 2010

GENERAL NOTES:  
 1. FOR EXTERIOR MATERIAL AND COLOR FINISHES, REFER TO EXTERIOR FINISH SCHEDULE SHIT A-201  
 2. DOOR AND WINDOW SCHEDULES, REFER TO SHIT A-601



1 SOUTH ELEVATION  
 SCALE: 1/4" = 1'-0"



2 NORTH ELEVATION  
 SCALE: 1/4" = 1'-0"

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**LANAI COMMUNITY HEALTH CENTER**  
 TRAC 4-9-0061, LOT A  
 LANAI CITY, HAWAII 96743

ELEVATIONS  
 1/4"=1'-0"



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 DATE: 04/30/2010  
 06/30/2010 PERMIT ISSUANCE

PROJECT NO: 5933.001  
 CAD: GKG, EXT: A-202.dwg  
 DRAWN BY:  
 DATE: JUNE 30, 2010  
 DRAWING NO:

FIGURE 2.4

### **3. DESCRIPTION of EXISTING ENVIRONMENT, IMPACTS and MITIGATION MEASURES**

#### **3.1 Geology and Topography**

Lanai is a shield volcano built by eruptions at the summit and along three rift zones more than 1.20 to 1.46 million years ago. The principal rift zone trends northwestward as a broad ridge, and is responsible for the conspicuous elongation of the island in that direction. A less conspicuous bulge on the southern side of the island is a result of building on the southwest rift zone. The summit of the shield collapsed to form a caldera from which a shallow graben, bordered by an echelon of step faults, extends south-southeast toward Manele Bay. Numerous dikes exposed in the sea cliff indicate that this Manele graben lies along another rift zone.

The caldera was largely, but not completely filled by lava flows, and the present Palawai Basin is a remnant of the caldera. Just to the west, Miki Basin (with an average diameter of about 0.9 miles) is a nearly filled pit crater. The top of the ridge between them is about 140 feet above the floor of the Palawai Basin. On the south side, the floor of Palawai Basin merges with that of the Manele graben, through which the last lava flows in the caldera overflowed onto the outer slope of the volcano. On the northeastern side, Palawai Basin is bordered by a steep slope about 492 feet high, beyond which lies a nearly level bench of about 0.9 miles wide. The thick, massive character of the lava flows in this bench indicates that it is a part of the floor of the filled caldera. Beyond the bench, another steep slope rises to Lanaihale Summit (3,316 feet altitude). Southwest of the Lanaihale Summit, at an elevation of 1,000 to 2,000 feet, is the Central Plateau of Lanai.

#### **Impacts and Mitigation Measures**

No significant impact on the geology or overall topography of the project site is anticipated during the construction of the Health Center facilities. Construction of the Health Center project will require grading activities and excavation for building foundations and utilities. This will disturb surface and subsurface soils and displace the soils with on-grade slab foundation and footings. However, this disturbance will typically be to depths of 3 to 3½ feet or less which will not adversely affect the soils and geology of the project site and surrounding area. Graded and excavated areas will be built over, paved over, or backfilled and landscaped. To achieve required elevations for proper drainage, grading within the project slight will slightly alter the existing topography.

Over the years various codes have been developed to provide standards related to design of structures to prevent damage during earthquake events. These codes now include international codes addressing the design and installation of building systems through requirements emphasizing performance. This has resulted in issuance the *International Building Code* which is designed to meet these needs through model code regulations that safeguard the public health and safety in all communities, large and small. This comprehensive building code establishes minimum regulations for building systems using prescriptive and performance-related provisions. It is founded on broad-based principles that make possible the use of new materials and new building designs.

The first draft of the *International Building Code (IBC)* was prepared in 1997. Since then, there have been revisions to the IBC. The County of Maui currently uses the 2006 version of the IBC.

The IBC states, every structure, and portion thereof, shall as a minimum be designed and constructed to resist the effects of earthquake motions and assigned a Seismic Design Category. Seismic design categories are used to determine permissible structural systems, limitations on height and irregularity, those components of the structure that must be designed for seismic resistance, and the types of lateral force analysis that must be performed.

Each structure shall be assigned a seismic use group and a corresponding occupancy importance factor. The Health Center would be classified as Seismic Use Group II defined as structures the failure of which would result in a substantial public hazard due to occupancy or use.

The Lanai Health Center will be designed and constructed to meet the requirements of latest version of the IBC. This will ensure that Lanai Health Center can meet the seismic loadings established by the IBC and that the geological conditions at the project site do not adversely affect the building and facilities.

### **3.2 Soils**

The *Soil Survey of Islands of Kauai, Oahu, Maui, Lanai, and Molokai* prepared by the U.S. Department of Agriculture Soil Conservation Service (now Natural Resources Conservation Service) shows the soils on the project site consist of solely of Waihuna

clay, 0 to 3 percent slopes (WoA), the most extensive soil in the Waihuna series. This soil consists of well drained and moderately well drained soils on alluvial fans and in depressions on the Islands of Lanai and Molokai. These soils formed in old, fine-textured alluvium. They are nearly level to moderately steep. Elevations are mainly between 1,000 and 2,000 feet, but they range from 400 to 2,000 feet.

In a representative profile the surface layer, about 18 inches thick, is dark-brown, very sticky and very plastic clay. The next layer, 40 to more than 50 inches thick is dark-brown, very sticky and very plastic clay and silty clay that has subangular blocky structure. Permeability is moderately slow. Runoff is slow and the erosion hazard is no more than slight. The available water capacity is about 1.8 inches per foot of soil.

### **Impacts and Mitigation Measures**

Excavation and grading activities associated with construction at the project site will be regulated by the County of Maui's grading ordinance. Typical mitigation measures include use of silt fences and sediment rolls around the perimeter of the project site, appropriate stockpiling of materials on-site to prevent runoff; and, establishing landscaping as early as possible on completed areas. These measures affect a relatively small area of soil disturbance will minimize the potential for siltation of drainage facilities.

No significant impacts on soils at the project site are anticipated with the construction and operation of the Health Center project.

### **3.3 Slope and Erosion**

As previously discussed, soils on the project site show permeability is moderately slow. Runoff is slow and the erosion hazard is no more than slight. The topographic survey of the project site shows Houston Street on the north lies at an elevation of about 1610 feet mean sea level (msl) and Gay Street on the south lies at about 1608 feet msl, or about 2 feet lower than Houston Street.

### **Impacts and Mitigation Measure**

The relatively slight slope or gradient (2 feet) of the project site shows erosion can be controlled during construction and after development of the Health Center. During construction, erosion at the project site will be controlled through the use of silt fences

and sediment rolls around the perimeter. This will act to contain surface flows and minimize erosion at off site areas.

The design drawings show the intent is to maintain the existing drainage patterns and drainage discharge points off the project site. The Health Center drainage will generally sheet flow from Houston Street towards Gay Street. The increased drainage from the project site will be detained on-site, utilizing landscaped areas along Gay Street as detention basins and swales within the site. The swales and basins would also function as bio-swales which will capture the runoff and allow percolation to the subsurface. Use of bio-swales and basins would act to retain surface flows within the project site. These measures will minimize erosion at surrounding areas.

### **3.4 Hydrology**

#### **3.4.1 Surface Waters**

According to the U.S. Department of the Interior Geological Survey (USGS) topographic map, there are no natural surface water resources traversing the project site. In addition, the project site and surrounding areas have been cleared and improved for residential and other urban uses and show no evidence of a wetlands.

The closest streams are Iwiolo/Paliamano Gulch located approximately 0.3 miles to the north and Kapano Gulch Stream located about 0.72 miles to the south. In addition, irrigation channels are located approximately 0.25 miles west and southwest of the project site.

#### **Impacts and Mitigation Measures**

There are no natural surface water sources on the project site. During construction, silt fences will be erected so there will be no discharges from the project site directed to waters of the U.S. or waters of the State of Hawaii. Further, as the project site and surrounding areas are not identified as wetlands, there would be no affect on wetlands.

No significant impacts to surface waters located near in the vicinity of the project site are anticipated as a result of the Health Center project. Storm runoff from the project site during site preparation will be controlled in compliance with Chapter 20.08 of the Maui County Code regarding Soil Erosion and Sedimentation Control. Grading operations will also comply with HAR, Title 11, Chapter 54 and 55 regarding Water Quality Standards

and Water Pollution Control, respectively. Temporary erosion control measures will be used during construction to prevent runoff to nearby areas. These mitigation measures include placement of a silt fence around the perimeter of the construction area to prevent surface runoff into adjacent areas. These measures will contain surface flows within the project site during the construction period. In addition, the contract specifications state that the contractor needs to implement best management practices during the construction to minimize runoff from the project site.

The area of soil disturbance within the project site will be less than 1-acre. Discharge of stormwater from the project site is controlled by National Pollutant Discharge Elimination System (NPDES) permit administered by the State of Hawaii Department of Health.

Although the closest stream to the project site is Iwiolo/Paliamano Gulch located approximately 0.3 miles to the north, topographic maps show the area around Lanai City slopes to the southwest. A tributary of Iwiolo/Paliamano Gulch is located about 6,000 feet (1.13 miles) southwest at an elevation of approximately 1,510 feet msl, or about 100 below the elevation of the project site.

The inland streams on Lanai are classified as Class 2 Inland on the Water Quality Standards Map of the Islands of Molokai, Lanai, and Kahoolawe, October 1967 issued by the Office of Environmental Planning, Hawaii Department of Health. At this time, a NPDES permit does not appear warranted.

Dewatering and hydrotesting are controlled by separate NPDES permits, should they be needed.

#### **3.4.2 Groundwater**

The Health Center project site overlies the Central Aquifer Sector and is within the Leeward Aquifer System (50102). The total sustainable yield of the Central Aquifer Sector is 6 million gallons per day (MGD) and 3 MGD for the Leeward Aquifer (CWRM Map, 2008). Groundwater in the Leeward aquifer is high level fresh water in dike compartments. Based on its groundwater status code, the aquifer is currently used as a source of drinking water, irreplaceable and highly vulnerable to contamination (Mink and Lau, 1993).



The project site is located mauka of the underground injection control (UIC) line (DOH Map, 1999). Aquifers mauka of the UIC are considered a drinking water source. The State of Hawaii Department of Health Safe Drinking Water Branch administers the Underground Injection Control (UIC) program which serves to protect the quality of Hawaii's underground sources of drinking water from chemical, physical, radioactive, and biological contamination that could originate from injection well activity.

In addition, the island of Lanai is not designated as a groundwater management area (CWRM Map, 2005).

As part of the pre-assessment consultation for this Draft EA, on March 9, 2010, the County of Maui Department of Water Supply (DWS) indicated that the Lanai Water Company Leeward Well 8 and Windward Well 6 as the water sources for the Health Center project. Appendix A shows the DWS letter.

### **Impacts and Mitigation Measures**

Construction of the Health Center will include trenching for the underground utility lines and excavation for the footing and foundation of the building. The subsurface disturbance for these activities should not extend lower than 3 to 5 feet below the surrounding grade. This should not create significant adverse impacts to groundwater underlying the project site during construction of the facility. Construction activities are not likely to introduce to, nor release materials which could adversely affect groundwater, including groundwater sources for domestic use.

Based on fixture count in the building, the anticipated water demand for the Health Center will be approximately 1,600 gallons per day. The landscape irrigation will be of about 360 gallons per day using a drip system. Using the statewide system standards, the anticipated demand would range from 3,450 - 5,880 gallons per day. This level of water usage will not create an adverse impact to the groundwater sources on Lanai.

#### **3.4.3 Coastal Waters**

The project site is centrally located on the island of Lanai. The coastal waters surrounding Lanai are classified as "AA marine waters" by the State DOH Administrative Rules, Title 11, Chapter 54 Water Quality Standards. Class AA marine waters are recognized by the State DOH with the objective that "these waters remain in their natural pristine state as nearly as possible with an absolute minimum of pollution or alteration of

water quality from any human-caused source or actions. To the extent practicable, the wilderness character of these areas shall be protected.”

According to U.S. Fish & Wildlife Service John H. Chaffee Coastal Barrier Resources System website, Hawaii has no areas within the Coastal Barrier Resources System.

**Impacts and Mitigation Measures**

During construction, storm runoff has the potential to carry sediment into nearby streams due to erosion of exposed soils. Storm runoff from the project site will be controlled in compliance with the County of Maui’s grading and erosion control ordinance and the State of Hawaii Department of Health rules related to NPDES. Excavation and grading activities associated with construction at the project site will be regulated by the County’s grading and ordinance. Typical mitigation measures include: silt fences or sediment fiber rolls along the perimeter of the project site; appropriately stockpiling materials on-site to prevent runoff; building over, or establishing landscaping as early as possible on disturbed soils to minimize length of exposure.

The grading and erosion control plans will be submitted to the County of Maui Department of Public Works as part of the building permit approval. The plans will include best management practices (BMPs) such as use of silt fences and sediment fiber rolls around the project site to contain runoff. Since the contractor will employ approved measures to prevent silt runoff from construction areas along with complying with other related permit conditions, impacts on coastal waters and water quality should not be significant.

The project site is located in Lanai City and lies about 24,000 feet (4.5 miles) from the nearest coast line. The coastal waters surrounding Lanai are classified as marine “AA”. According to State of Hawaii Department of Health Title 11 Hawaii Administrative Rules Chapter 54 Water Quality Standards class AA waters are that the waters remain in their natural pristine state as nearly as possible with an absolute minimum of pollution or alteration of water quality from any human-caused source or actions. Based on the distance of the coast and the measures to control surface runoff, no significant impacts on coastal waters are anticipated as a result of the Health Center project.

### **3.5 Flood Hazard**

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM). Community Panel Number 1500030500E (revised September 25, 2009) the project site is within Zone X, "other areas determined to be outside the 0.2% annual chance floodplain" (See Appendix D-1). There are no flood hazards associated with the Health Center project site. Further, the project site is not located in the area designated as a tsunami evacuation zone.

As part of the pre-assessment consultation for this Draft EA, on February 9, 2010, the State of Hawaii Department of Land and Natural Resources (DLNR) Engineering Division confirmed the project site is located in Zone X and that the Flood Insurance Program does not have any regulations for developments in Zone X. Appendix A shows the DLNR letter.

### **Impacts and Mitigation Measures**

The preliminary plans show the finished floor for the Health Center will be at elevation 1615 feet mean sea level (msl). As previously discussed, the elevations on the project site range from about 1610 msl on the north to approximately 1608 feet msl on the south. Thus, the floor of the building will be about 5 to 6 feet above the elevation of the site. This would ensure surface flows from storm events will not create a flood hazard to the Health Center.

Further, as discussed, drainage on the project site will generally sheet flow from Houston Street towards Gay Street. The increased drainage from the project site will be detained on-site, utilizing landscaped areas along Gay Street as detention basins and swales within the project site. The swales and basins would also function as bio-swales. Based on this, no significant impacts related to flooding are anticipated.

### **3.6 Flora and Fauna**

No Federally protected, threatened or endangered species of plants or animals are known to inhabit the project site or immediate vicinity. Existing flora within the project site includes non native species of pine trees, grass, hibiscus, and weeds generally found in Lanai City.

Vegetation within Lanai City is dominated by plantings of Cook pine trees and Norfolk pine trees. These trees were introduced in the 1920's by naturalist George Munro,

when the Palawai Basin began to be cultivated in pineapple and the master plan for housing the pineapple plantation laborers involved the layout for Lanai City (Cultural Surveys Hawaii, April 2010). Most all other vegetation in the region is imported landscape and ornamental, with various non-native plant species.

Faunal species that may be present at the project site include common introduced bird species such as sparrows, doves, mynah, and cardinal; introduced domestic mammals such as dogs, cats, rats, and mice; and common introduced lizards and insect species.

### **Impacts and Mitigation Measures**

Construction of the Health Center project will require removal of the surface vegetation from the project site and grading for construction of the Health Center facility. Removal of the surface vegetation will not create an adverse impact to the flora of the project site. Redevelopment of the project site will replace existing landscaping with new landscaping.

The grasses on the project site does not include habitat normally used by birds. Nor do the grasses produce seeds which would serve as food for birds. Thus, the project site does not serve as a feeding and foraging habitat to attract birds. Thus, loss of vegetation would not adversely affect the bird population in the area of the project site or any USFWS or DLNR listed or candidate threatened or endangered species.

The project site contains no listed or candidate threatened or endangered botanical species as set forth by the USFWS. Thus, construction of the Lanai Health Center will not have an adverse impact to threatened or endangered botanical species.

### **3.7 Traffic and Parking**

The roadway system in Lanai City is a grid layout. Roadways oriented in an east/west direction are generally identified by a numerical designation, while roadways oriented in a north/south direction are identified by place names. The project site is located at bounded by Houston Street, Gay Street, Seventh Street and Sixth Street. Streets are maintained by the County of Maui Department of Public Works.

The main public access to the new facility will be from Sixth Street which will have two-way driveway leading to a 12 stall parking lot for visitors. A 6 stall parking lot with a

loading zone for staff personnel/visitors will be located east of the new building and will use access from Gay Street.

### **Impacts and Mitigation Measures**

Traffic impacts related to construction activities will occur while equipment and materials are moved to the project site. However, this traffic will be short-term occurring during the 9 to 12 month construction period. This should not create long-term adverse effects to traffic on adjacent roadways.

In August 2009, the Lanai High and Elementary School Master Plan Environmental Assessment (EA) was issued. As part of the EA, a traffic analysis was conducted on nearby streets. The traffic analysis was conducted based on current enrollment of 640 students and project enrollment of 780 students 2034.

The August 2009 report states field investigations were conducted on October 1-2, 2008, and consisted of manual turning movement count surveys along Fraser Avenue and 5th Street in the vicinity of the High and Elementary School. The manual turning movement count surveys were conducted between the morning commuter peak hours of 6:30 am to 8:30 am, and the afternoon commuter peak hours of 3:30 pm and 5:30 pm at 7 intersections, which included Fraser Avenue and Sixth Street and Fraser Avenue and Seventh Street.

The August 2009 report showed the highway capacity analysis was performed based upon procedures presented in the "Highway Capacity Manual", Transportation Research Board, 2000, and the "Highway Capacity Software", developed by the Federal Highway Administration. The analysis is based on the concept of Level of Service (LOS). LOS is a quantitative and qualitative assessment of traffic operations. Levels of Service are defined by LOS "A" through "F"; LOS "A" representing ideal or free-flow traffic operating conditions and LOS "F" unacceptable or potentially congested traffic operating conditions.

The traffic analysis showed peak hour of traffic in the vicinity the high and elementary school occurs between 7:00 am and 8:00 am and in the afternoon, the PM commuter peak hour of traffic generally between the hours of 3:30 pm and 4:30 pm at 7 intersections, including at the intersection of Fraser Avenue and Sixth Street, the location closest to the Health Center.

The traffic analysis was based on these peak hour time periods to identify the traffic impacts resulting from the Lanai High and Elementary School project. At the intersection with Sixth Street, Fraser Avenue carries 47 vehicles northbound and 104 vehicles southbound during the AM peak hour of traffic. During the PM peak hour, traffic volumes are higher with 145 vehicles traveling northbound and 124 vehicles traveling southbound. The critical traffic movement on the Fraser Avenue approach is the southbound left-turn and through traffic movements which operate at LOS "A" during the morning peak period. The afternoon peak hour also operated at LOS "A" at this intersection.

The traffic analysis also included future conditions, or after the High and Elementary School enrollment had increased from 640 to 780 students. This future condition showed the Fraser Avenue and Sixth Street intersection would continue to operate at LOS "A".

Once construction has been completed, traffic in the area will be affected by vehicle trips to Health Center. As previously discussed, the Health Center anticipates about 20 to 30 patient visits per day and about 10 employees traveling to the project site. Since many of these trips would not be occurring in the peak traffic periods and the nearby streets would continue to operate at LOS "A", the Health Center would not create an adverse effect to traffic on nearby streets.

In December 2009, the County of Maui Department of Housing and Human Concerns issued the Final Environmental Assessment for the Lanai Senior Center project located on Seventh Street and Gay Street. The County is proposing to construct a replacement facility on the same site as the existing facility at Seventh and Gay Streets. This location places the western boundary of the Senior Center at the eastern boundary of Health Center on Gay Street.

The Senior Center Final EA stated, a variance to the County's off-street parking requirements will be requested. Since there is no off-street parking currently provided on-site for the existing Senior Center, there should be no change to exiting conditions when the Senior Center is completed. Thus, traffic from the Senior Center will not conflict with the Health Center.

The County of Maui Department of Transportation does not operate the Maui Bus on Lanai. However social services transportation is provided on Lanai through Maui Economic Opportunity (MEO). The Health Center will work with MEO to identify a suitable bus stop which could be used by users of the Health Center.

As previously discussed, as part of the Draft EA review, the County of Maui Police raised an issue of concern related to the parking lot which has ingress and egress to Gay Street. The concern was related vehicle traffic conflicts between the Health Center and the Lanai City apartments which has two driveways with ingress and egress to Gay Street. Further, there was concern related to traffic from the Senior Center which has an access route on Gay Street. As a result, the Health Center has designated the 6-stall parking lot with ingress and egress from Gay Street for employee and staff parking only. This will minimize the vehicle traffic from the parking lot to staff personnel only. Further, this will limit vehicle traffic to the hours of operations of the Health Center and reduce conflicts with other users of Gay Street.

A traffic control plan will be required for work within the County right-of-way.

### **3.8 Noise Quality**

The County of Maui zoning for project site is B-CT Business Country Town District. Based on State of Hawaii Department of Health, Title 11, Hawaii Administrative Rules (HAR), Chapter 46 Community Noise Control, the project site would be considered zoning district Class B in which the maximum permissible sound level is 60 dBA between the hours of 7:00 am and 10:00 pm. The project site is bordered by single family housing and commercial/business uses. Predominant sources of noise include vehicles traveling along nearby roadways.

#### **Impacts and Mitigation Measures**

Construction-related activities will temporarily increase ambient noise levels within the vicinity of the work area. Actual noise levels produced would depend on the methods employed throughout construction. Earthmoving equipment such as bulldozers and diesel-powered trucks would probably be the loudest equipment used during construction. Typical ranges of construction equipment noise vary between 70 and 95 dBA.

Noise from construction will be unavoidable during the entire construction period. The various construction phases of the project may generate significant amounts of noise, which may impact nearby residences and businesses.

Construction noise impacts will be mitigated somewhat by compliance with provisions of the State Department of Health (DOH) Administrative Rules, Title 11, Chapter 46, "Community Noise Control". Heavy vehicles required for construction must comply with Title 11, Chapter 42 and "Vehicular Noise Control for Oahu". It shall be the contractor's responsibility to minimize noise by properly maintaining noise mufflers and other noise-attenuating equipment, and to maintain noise levels within regulator limits. Typically, the construction work would occur during daytime hours (7:00 am to 3:30 pm) Mondays through Fridays. If the construction work is expected to cause excessive noise, the contractor will be responsible for obtaining a noise variance according to Chapter 46 and complying with conditions attached to the permit.

In the long-term the Health Center project will not generate significant noise nor additional traffic as discussed in Section 3.7. Hence, any increase in traffic-related noise will also not be significant.

See also Section 3.17.18, Noise Abatement & Control.

### **3.9 Air Quality**

The Department of Health, Clean Air Branch, monitors ambient air in the State of Hawaii for various gaseous and particulate pollutants. The U.S. Environmental Protection Agency (EPA) has set national ambient air quality standards (NAAQS) for six criteria pollutants: carbon monoxide, nitrogen dioxide, sulfur dioxide, lead, ozone, and particulate matter (PM10 and PM2.5). Hawaii has also established a state ambient air standard for hydrogen sulfide. The DOH maintains fourteen (14) monitoring stations throughout the State. The purpose of the statewide monitoring network is to measure ambient air concentrations of these pollutants and ensure that these air quality standards are met.

The State Department of Health (DOH) does not have an air monitoring station on the island of Lanai. Air quality in the general area is considered good. There are no significant sources of industrial pollution and agricultural activities that would generate airborne pollutants. Fugitive dust is a common source of pollution in areas undergoing



construction or awaiting constructions without maintenance of any kind. While there is no air quality monitoring station on the Lanai, air quality is assumed to be in compliance with state and federal standards. The State Department of Health prepares an annual report containing five-year trends based on annual averages for particulates, sulfur dioxide and nitrogen dioxide and annual averages of daily maximum 1-hour and 8-hour values recorded for carbon monoxide, and annual averages for daily maximum 8-hour values recorded for ozone concentrations. The 2008 Annual Summary Hawaii Air Quality Data (August 2009), reported averages were well below both federal standard, as well as the more stringent state standards (see Appendix D-2). In 2008, the State of Hawaii was in attainment of all NAAQS (DOH, August 2009).

### **Impacts and Mitigation Measures**

Potential short-term adverse air-quality impacts during the construction phase include: 1) generation of fugitive dust from vehicle movements and soil excavation; and 2) exhaust emissions from on-site construction equipment and from construction workers' vehicles traveling to and from the project site. These adverse impacts will be short-term during the period of construction.

During construction, activities such as clearing, grubbing, grading, and excavation at the project site will generate dust while vehicles and equipment will produce exhaust emissions. Dust control measures stipulated by Department of Health Administrative Rules, Title 11, Chapter 60, "Air Pollution Control" regulations will be employed, as appropriate, during construction and may include:

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

- Limiting the areas that are disturbed at any given time;
- Applying chemical soil stabilizers, mulching, or using wind screens;
- Establishing a road cleaning or tire washing program to reduce fugitive dust emissions from trucks using paved roadways in or around the project site; and
- Establishing landscaping early in the construction schedule to control dust.

Emissions from construction equipment, trucks and commuting construction workers are not anticipated to significantly impact ambient air quality. No air pollutants that may be generated at the project site are anticipated to exceed federal or State ambient air quality standards in the vicinity. Slow-moving construction vehicles, however, can disrupt peak hour traffic, increasing congestion and resulting in vehicular emissions. Traffic congestion and resulting emissions will be mitigated by transporting slower construction equipment during off-peak traffic hours.

In the long-term, operation of the Health Center will have no significant impact on air quality in the vicinity of the project site because there are no activities or other point sources associated with the Health Center that would be emitting significant air pollutants. The Health Center project will not generate significant additional traffic, as discussed in Section 3.7. Hence, any increase in traffic-related emissions will also not be significant.

Lastly, national trends show substantial overall reductions in emissions due to stricter engine and fuel regulations issued by U.S. Environmental Protection Agency. The stricter engine regulation and the higher mileage requirement for vehicles and the resultant reduction in emissions has resulted in an improvement in air quality in most areas.

### **3.10 Archaeological and Historical Resources**

Cultural Surveys Hawaii (CSH) conducted an archaeological literature review and field inspection of the project site. The report is included as Appendix B.

A review of the historic documentation indicates that Lanai City, in Kamoku Ahupuaa, was extensively developed for residential use and commercial pineapple cultivation beginning in the early 1920's. Construction of utility installation would have been

contributed to the high level of disturbance of this current project area. Construction would have included roads, driveways, water line and sewer line installation. In addition, gardening and landscaping also contributed to the surface disturbance of the project area. The high level of disturbance in this area has probably obliterated any surface evidence that the native Hawaiian inhabitants of these upland slopes might have left behind.

However, based on the number of traditional cultural historic properties previously recorded in the upper basin and upper plateau region, in addition to historic properties identified in the region of Kihamanienie and Koele, it is possible that excavation and construction in the project site will occur in an area where subsurface traditional pre-contact or historic cultural deposits and buried structure remnants may be present.

The project site is located within the original layout of Lanai City. It appears from a review of historic photographs that, it was not previously cultivated in pineapple. Soil stratigraphy in such areas may consist of modern fill material overlaying undisturbed regional soils, indicating that undisturbed cultural deposits may exist in scattered pockets. Such subsurface deposits may include indigenous and post-contact cultural material remains, remnants of structural remains, and, possibly human burials.

The three small multi-family housing units on the project site were built in 1965, or 45 years ago. The three buildings were among a total of 9 dormitories built by Plantation Housing Ltd. At present, two of the buildings have been abandoned and the third is currently being used for the Lanai Community Health Center administration office and for the Lanai Art Center. The buildings were renovated in the past but the specific time periods were not known. The three existing buildings on the project site are “non-contributing” features or structures within the context of the proposed historic district of Lanai City Business Country Town. These structures will be removed to construct the new Lanai Community Health Center.

During the field survey, no other surface indications of historic-era constructions or traditional cultural material remains were observed during the present field inspection.

As part of the consultation process for this EA, the State of Hawaii Department of Land and Natural Resources (DLNR) State Historic Preservation Division (SHPD) replied that the project site has been previously disturbed and as such the History and Culture

Branch does not anticipate any burials or other related sites in the area. Further, the SHPD noted that there is probably be no impact to traditional Hawaiian cultural practices for at least since Lanai City was built in the 1920's. (See Appendices A and E).

The SHPD also stated the project site is located in Lanai Town Square and its boundaries are currently under consideration and review for nomination to the National Historic Register.

### **Impacts and Mitigation Measures**

Based on the historic records and surface field inspection, it is recommended that precautionary monitoring during grading of the project and excavation for foundations and footings of the planned facility and utility connections. Subsurface deposits may include indigenous and post contact cultural material remains, and remnants of structural remains, and possibly human burials.

The construction documents will include that in the event historic properties, including iwi kupuna are encountered during construction, work will stop in the immediate area, the location secured, and SHPD contacted for further directions.

On June 30, 2010, as part of the Draft EA review, the State Historic Preservation Division determined (LOG NO. 2010.2190, DOC No. 1006RS 16) that the proposed project would have "no effect on historic properties". This determination was also reiterated in the Division's letter dated June 17, 2010 (LOG NO: 2010.2353/DOC NO: 1006RS47) which also indicated that after examination of the plans and conferral with the Maui County Planning Office, the Historic Preservation Division's concurs that the project will "not affect historic properties." See Appendix E.

### **3.11 Cultural Impact Assessment**

House Bill No. 2895 H.D.1 was approved by the Governor on April 26, 2000 as Act 50 which amended Chapter 343 Hawaii Revised Statutes to require a cultural impact assessment be included in the preparation of an Environmental Assessment.

### **Impacts and Mitigation Measures**

A Cultural Impact Assessment/Study (CIS) was undertaken to gather information about traditional cultural practices, ethnic cultural practices, and pre-historic and historic cultural remains that might be affected by the Health Center project. Appendix C shows a summary of the Cultural Impact study. The complete report is on file with the County

of Maui CBDG office, the State Historic Preservation Division office, and the Office of Environmental Quality Control.

The Cultural Impact Assessment indicated, throughout the consultation process the Lanai community identified their need for and support of the Lanai Community Health Center. The new location and facilities were viewed as necessary improvements to the islands overall health care services. There will be no adverse impacts to cultural resources or traditional cultural practices by the Health Center project, to the contrary, the project is viewed as an enhancement this community.

The Cultural Impact Assessment recommended that the Lanai community remain informed about the status and timelines regarding construction of the Health Center.

### **3.12 Socio-Economic Characteristics**

According to the 2000 census, the island of Lanai had a resident population of 3,164 people, an increase of 31.8% from the 1990 census. In 2000, there were approximately 1,584 people in the labor force for the island of Lanai. The average per capita income for the island is \$18,668, compared to the State average of \$21,525. Approximately 661 or 43.9% of the total jobs are in the service industry. Of these, approximately 6.6% are accounted for in the construction and manufacturing industries (See Table 3-1).

#### **Impacts and Mitigation Measures**

In the short term, the construction expenditures will confer some positive benefits to the local economy. This would include creation of some construction and construction support jobs, and State and County Tax revenue associated with construction expenditures. Residents or businesses will not be permanently displaced by construction of Health Center. The Lanai Art Center will use the activity room on the north wing of the Health Center for their needs. This will ensure that the Lanai Art Center will not be adversely affected.

Lanai Health Center (7th Street/Lanai Street) and Lanai Public Library (Fraser Street) are located less than a quarter mile from the project site. The Health Center will not impact these services.

In the long-term, the Health Center will address the growing need for medical and social services on Lanai, especially for the population which is uninsured and underinsured.

TABLE 3-1: DEMOGRAPHIC CHARACTERISTICS: 2000

Subject	Lanai City CDP*		State of Hawaii	
	Number	Percent	Number	Percent
<b>Total population</b>	<b>3,164</b>	<b>100</b>	<b>1,211,537</b>	<b>100</b>
<b>AGE</b>				
Under 5 Years	220	7.0	78,163	6.5
5 – 19 years	725	22.9	249,088	20.6
20 – 64 years	1,762	55.7	723,685	59.7
65 years and over	457	14.4	160,601	13.3
Median age (years)	36.7	--	36.2	--
<b>RACE</b>				
White	419	13.2	294,102	24.3
Black or African American	4	0.1	22,003	1.8
American Indian and Alaska Native	12	0.4	3,535	0.3
Asian	1,838	58.1	503,868	41.6
Native Hawaiian and other Pacific Islander	222	7.0	113,539	9.4
Two or more races	659	20.8	259,343	21.4
Other	10	0.3	15,147	1.3
<b>HOUSEHOLD (BY TYPE)</b>				
<b>Total Households</b>	<b>1,148</b>	<b>100</b>	<b>403,240</b>	<b>100</b>
Family households (families)	797	69.4	287,068	71.2
With own children under 18 years	401	34.9	129,322	32.1
Married-couple family	617	53.7	216,077	53.6
With own children under 18 years	288	25.1	96,758	24.0
Female householder, no husband present	114	9.9	49,923	12.4
With own children under 18 years	67	5.8	23,619	5.9
Non – families households	351	30.6	116,172	28.8
Householder living alone	295	25.7	88,153	21.9
Householder 65 years and over	101	8.8	28,565	7.1
Average persons per household	2.75	--	2.92	--
<b>HOUSING OCCUPANCY AND TENURE</b>				
<b>Total Housing Units</b>	<b>1,343</b>	<b>100</b>	<b>460,542</b>	<b>100</b>
Occupied units	1,148	85.5	403,240	87.6
By owner	571	49.7	227,888	56.5
By renter	577	50.3	175,352	43.5
Vacant units	195	14.5	57,302	12.4
Homeownership rate (%)	49.7	--	56.5	--
<b>SOCIAL CHARACTERISTICS</b>				
Population 25 years and over	<b>2,061</b>	<b>100</b>	<b>802,477</b>	<b>100</b>
High school graduate or higher	1,430	69.4	687,666	84.6
Bachelor's degree or higher	340	16.5	210,041	26.2
Civilian veterans (civilian pop. 18 yrs. & older)	229	9.9	120,587	13.7
Disability status (pop. 21 to 64 years)	329	19.2	118,555	17.7
Foreign born	982	30.8	212,229	17.5

<b>TABLE 3-1: DEMOGRAPHIC CHARACTERISTICS: 2000 (continued)</b>				
<b>Subject</b>	<b>Lanai City CDP*</b>		<b>State of Hawaii</b>	
	<b>Number</b>	<b>Percent</b>	<b>Number</b>	<b>Percent</b>
<b>Total population</b>	<b>3,164</b>	<b>100</b>	<b>1,211,537</b>	<b>100</b>
<b>ECONOMIC CHARACTERISTICS (1999)</b>				
In labor force (pop. 16 & over)	<b>1,584</b>	<b>65.9</b>	<b>612,831</b>	<b>64.5</b>
Median household income (dollars)	43,271	--	49,820	--
Median family income (dollars)	49,209	--	56,961	--
Per capita income (dollars)	18,668	--	21,525	--
Families below poverty level	68	8.5	22,101	7.6
Individuals below poverty level	300	9.5	126,154	10.7

Source: U.S. Census Bureau \*Census Designated Place

### 3.13 Public Services and Facilities

#### 3.13.1 Police

The Lanai Police Station is located at the intersection of Eighth Street and Fraser Avenue. Approximately nine (9) officers are assigned to the station. One to two officers are assigned to patrol during the day (Gerald Park, August 2009).

#### Impacts and Mitigation Measures

In the short-term, the Health Center project will have construction-related impacts such as dust emissions, noise, and construction-related traffic that may elicit complaints received by the Police Department. In the long-term, the Health Center will increase the demand for police services due to the marginal increase related to patient residents visits.

On February 28, 2010, as part of the pre-assessment consultation for this Draft EA, the Maui Police Department noted no adverse impacts were noted for the Health Center. See Appendix A.

As previously discussed, in response to concern of the Police Department, the Health Center will designate the 6-stall parking lot with ingress and egress from Gay Street for employee and staff parking only. This will minimize the vehicle traffic from the parking lot to staff personnel only. Further, this will limit vehicle traffic to the hours of operations of the Health Center, and reduce conflicts with other users of Gay Street.

As previously discussed, in response to concern of the Police Department, the Health Center will designate the 6-stall parking lot with ingress and egress from Gay Street for employee and staff parking only. This will minimize the vehicle traffic from the parking lot to staff personnel only. Further, this will limit vehicle traffic to the hours of operations of the Health Center, and reduce conflicts with other users of Gay Street.

### **3.13.2 Fire**

The Lanai Fire Station is located at on Fraser Avenue. The station is staffed with approximately 21 men and 7 personnel are on duty 24 hours a day. The station is equipped with a fire apparatus and a tanker. A second apparatus is posted to the station for back up should an off-island fire company be summoned to Lanai (Gerald Park, August 2009).

Firefighters provide first response to emergency calls but not ambulance service. Ambulance service is provided by American Medial Response from their office on 13th Street.

### **Impacts and Mitigation Measures**

By including installation of a fire sprinkler system in the Health Center facility to meet current building codes, the project is anticipated to improve fire protection within the project site and reduce potential demand for fire fighting services.

### **3.13.3 Medical**

Lanai Community Hospital, a State hospital, is the only major medical facility on the island. It is located near Seventh Street north of Lanai Avenue in Lanai City. The 14-bed facility contains 4 acute care and 10 long-term care bed and provides acute and long-term medical care, as well as 24-hour emergency medical service.

In addition, Straub Clinic, a for-profit facility, operates a clinic adjacent to the Hospital. There are two resident Straub Clinic and Hospital physicians who serve both facilities. The hospital staff consists of a nursing director, X-ray technician, laboratory technician, and six registered nurses. Straub Clinic services include:

- Diagnosis and treatment of illness and injury for infants, children, adolescents, and adults
- Periodic physical examinations and preventive health maintenance
- Pre-marital and gynecological examinations



- Minor surgical procedure
- Well-baby and well-child services
- Selected specialty consultations available in: cardiology, dermatology, obstetrics/gynecology, ophthalmology, orthopedics, pediatrics, physical therapy, and nephrology

### **Impacts and Mitigation Measures**

As previously discussed, the Health Center services will include primary care and preventive health services, communicable disease testing, dental, mental health services, pre-natal services, counseling and treatment, insurance eligibility, and medical "enabling" services, such as outreach, case management, and language interpretation. Pharmacy services are contracted through a Molokai pharmacy to provide patients with their prescribed medications at very low cost, especially important to diabetes mellitus and cardiovascular disease patients due to the many and continuing medicines required to treat these diseases.

The Health Center will not be providing services which compete with Lanai Community Hospital or Straub Clinic. Based on this, the Health Center will not have adverse effects on the other medical services on Lanai. Further, since the Health Center is intended to provide services related to include primary care and preventive health services, communicable disease testing, dental, mental health services, pre-natal services, counseling and treatment, insurance eligibility, and medical "enabling" services, such as outreach, case management, and language interpretation. The Health Center will not create need for additional services.

#### **3.13.4 Schools**

Lanai High and Elementary School is one of four public schools comprising the Hana-Lahainaluna-Lanai-Molokai Complex Area. Enrollment for the 2008–2009 school year was 559 students (Hawaii DOE, November 2009). Staffing includes a principal, vice-principal, counselors, athletic director, and 46 full time teachers.

### **Impacts and Mitigation Measures**

The Health Center employees will continue to be either residents of Lanai or residents of other islands who travel to Lanai to provide medical services. The children of these Lanai employees are likely already enrolled at the school. Thus, no significant impacts

on educational services or facilities are anticipated as a result of the Health Center project.

### **3.13.5 Recreation**

Public parks and recreational facilities in the County of Maui are administered and maintained by the Department of Parks and Recreation (DPR). DPR parks and facilities in Lanai City include the Lanai Community Center, the Lanai Gym and Tennis Courts, the Lanai Little League Field, Lanai Park and Tennis Courts, and Lanai Softball Field (County of Maui website, May 21, 2010).

Dole Park is a privately owned and maintained recreational facility located nearby the project site. Dole Park, also known as Lanai City Commercial Square, was built when the plantation village was established and serves as the center of recreational activities with a pavilion, picnic tables, and community center.

### **Impacts and Mitigation Measures**

In the short-term, the Health Center project will have construction-related impacts such as dust emissions, noise, and construction-related traffic that may impact nearby recreational facilities. In the long-term, no significant impacts on recreational facilities are anticipated as a result of the Health Center. In addition, since the Health Center will provide services to existing residents on Lanai, operation of the Health Center will not create additional need or adverse impacts to recreational facilities on Lanai.

As part of the Draft EA review, the County of Maui Department of Parks & Recreation did not comments regarding the Health Center project.

### **3.13.6 Cultural Resources**

Cultural resources on Lanai are primarily located in Lanai City. The cultural resources vary from those oriented toward active participation to those directed toward a more passive experience. Specific resources include the Lanai Art Center, the Lanai Senior Center, the Carroll Gallery, and the recently opened Lanai Culture & Heritage Center.

The Lanai Art Center, a non-profit organization, is currently located in three buildings along Seventh and Houston Streets, the Art Center fronting Seventh Street and an old warehouse behind the Art Center. The Art Center office, the third building, occupies the southern end of the Health Center administration building on Houston Street. The Art

Center will relocate some of its activities an existing vacant building nearby about one block to the north on Ilima Street, between Sixth and Seventh Streets.

The Lanai Art Center hosts a wide range of art classes and performing arts programs, and also sells the work of Lanai's resident artists. The Art Center had its origins in the 1980s, during the time of resort construction. At that time, the resort owners contracted artist John Wullbrandt to coordinate the development of "local" touches in the art of the two resorts.

In 2004, Castle & Cooke leased the building located at the intersection of Seventh and Koele Streets to the Mike Carroll Gallery. The new gallery features the work of Mike Carroll and many other Lanai artists.

The Lanai Culture & Heritage Center opened in January 2010 in a portion of the Old Dole Administration building located on Lanai Avenue between Seventh and Eighth Streets. The Culture & Heritage Center occupies about 1,200 square feet and focuses on the history of Lanai during the period from A.D. 1000, when the first Hawaiians settled on Lanai, to the end of the plantation era nearly 1,000 years later.

The Culture & Heritage Center states its mission is "to inspire people to be informed, thoughtful and active stewards of Lanai's heritage by preserving, interpreting and celebrating its natural history, Hawaiian traditions, diverse cultures, and ranching and plantation era histories:"

The Center sponsors outreach programs for Lanai students and offers walking tours of Lanai City. The Center is developing a brochure for self-guided walks along the mile-long Kapihaa Village Interpretive Trail, which spotlights the remnants of homes, agricultural fields, ceremonial sites and more, than 60 other archaeological features near Hulopoe Bay on the southern coast of Lanai.

### **Impacts and Mitigation Measures**

The Health Center will provide services primarily to existing residents on Lanai, although some of the staff health providers will be commuting to Lanai to provide their services. Since the primary users of the Health Center are residents already on Lanai, construction and operation of the Health Center will not create additional need or adverse impacts to the cultural resources on Lanai.

The Art Center will relocate some of its activities an existing vacant building nearby about one block to the north on Ilima Street, between Sixth and Seventh Streets. In addition, as previously discussed, the activity/multipurpose room located at the end of the north wing of the Health Center will be available for use by the Lanai Art Center. Since this activity/multipurpose room will have its own separate exterior entrance, it can be used when the remainder of the Health Center is closed. The new location and accessibility to the activity/multipurpose room will ensure that there will be no adverse effects to the Art Center activities from construction of the Health Center.

### **3.14 Infrastructure**

#### **3.14.1 Water**

The Lanai Water Company, Inc. privately owns the domestic water system servicing Lanai City, including the project site. The water for Lanai City is primarily drawn from Well 6 and stored in a 2 million gallon reservoir. From the reservoir, water gravity flows through a system of various sized water mains.

Potable water and fire protection laterals will be connected to Lanai Water Company lines located in Houston, Sixth, and Gay Streets. The location of the connections will be determined during the design of the facility.

#### **Impacts and Mitigation Measures**

During design and construction, close coordination will be maintained with the County Department of Water and the Lanai Water Company to ensure that the water system will not be adversely impacted and to minimize interruption of water service to adjacent areas.

The anticipated water demand is 1,600 gallons per day based on the fixture count for the Health Center. The landscape irrigation would be about 360 gallons per day using a drip system. The anticipated demand using statewide system standards would range from 3,450 - 5,880 gallons per day. This level of demand should not create adverse impacts to the potable water system or to the water sources.

The County will coordinate with the Department of Water and State DLNR to incorporate the project into the County's Water Use and Development Plan and State's Water Projects Plan.

As previously discussed the Health Center project will be submitted to the US Green Building Council for LEED certification under Building Design & Construction, (See Section 2.3.5). To reduce the demand on potable water resources, water efficient fixtures will be installed and water efficient practices implemented, if appropriate.

### **3.14.2 Drainage**

Currently, drainage sheet flows from Houston Street to Gay Street in a south-westerly direction to the corner of Gay and Sixth Streets. Other than surface runoff and roadway swales there are no existing drainage systems around the project site.

The Drainage Master for Lanai City (February 2005) shows the existing drainage system for Lanai City consists of swales, basins, and drain lines along the roadways. The Lanai City drainage system was generally designed to convey most of the large flows via surface swales and roadways and smaller flows via underground drain lines. The Lanai School system, one of three separate systems which provide drainage for the multi-family and single family parcels in the Lanai City, serves the single family residences between 5<sup>th</sup> Avenue and the Park. The system empties to an existing drainage way that flows south then turns west towards Iwiole Gulch via an existing interceptor ditch.

### **Impacts and Mitigation Measures**

The design drawings show the intent is to maintain the existing drainage patterns and drainage discharge points off the project site. The Health Center drainage will generally sheet flow from Houston Street towards Gay Street. The increased drainage from the project site will be detained on-site, utilizing landscaped areas along Gay Street as detention basins and swales within the site. The swales and basins would also function as bio-swales which will capture the runoff and allow percolation to the subsurface. Use of bio-swales and basins would act to retain surface flows within the project site.

The drainage design criteria used for the Health Center is based on the "Rules for the Design of Storm Drainage Facilities in the County of Maui". The hydrologic criteria used for the design is based on a 50-year, 1-hour storm event.

All discharges related to the Health Center construction or operation activities, whether or not National Pollutant Discharge Elimination System (NPDES) permit coverage and/or Section 401 Water Quality Certification are required, must comply with the State of Hawaii Water Quality Standards as set forth in Hawaii Administrative Rules Title 11

Chapter 54, Water Quality Standards. Noncompliance with water quality requirements contained in HAR, Chapter II-54, and/or permitting requirements, specified in HAR, Chapter II-55, may be subject to penalties of \$25,000 per day per violation.

### **3.14.3 Wastewater**

The project site is serviced by the Lanai Wastewater Reclamation Facility (WWRF), which is owned and operated by the County of Maui, Department of Environmental Management. Existing 8-inch wastewater lines are located along Houston Street, Gay Street, Sixth Street and Seventh Street. The wastewater laterals from the project site will be connected to the County's existing wastewater systems.

#### **Impacts and Mitigation Measures**

During design and construction, close coordination will be maintained with the County to ensure that the wastewater system will not be adversely impacted and minimize interruption of wastewater service to adjacent areas. Based on the anticipated water demand for the Health Center, the sewer demand will be approximately 1,600 gallons per day based on fixture counts.

On April 12, 2010, as part of the pre-assessment consultation for this Draft EA, the County of Maui Department of Environmental Management, stated although wastewater system capacity is currently available, the wastewater system capacity cannot be ensured until issuance of the building permit. On July 2, 2010, the Department of Environmental Management comments on the Draft EA and noted, although wastewater system capacity is currently available as of 7/2/2010, the developer should be informed that wastewater system capacity cannot be ensured until the issuance of the building permit. The Department of Environmental Management also stated wastewater contribution calculations will be required before the building permit is issued. Also, the Department of Environmental Management stated the Health Center will not be required to pay assessment fees at this time. See Appendix A and E.

As previously discussed, the Health Center will use split air-conditioning systems with on-site drywells to dispose condensate. Thus, since there will be no disposal of condensate to the County wastewater system, there will be no adverse effects to the County wastewater system.

At this time, Lanai City does not have a system to use recycled water for irrigation and other non-potable uses.

#### **3.14.4 Electrical and Communication**

Electrical and communication services are provided by Maui Electric Company (MECO), Hawaiian Telecom and Time Warner Cable.

#### **Impacts and Mitigation Measures**

Electrical and communication services will continue to be provided by MECO, Hawaiian Telecom and Time Warner Cable, respectively. Improvements to the electrical distribution system along the adjacent roadways and within the project site will be required and coordinated with MECO.

#### **3.14.5 Solid Waste**

Refuse services for residential uses are provided by the County of Maui. A private service collects and disposes of solid waste for commercial uses. Currently, the existing Health Center disposes solid waste in on-site refuse containers which are picked once a week by the private service. Typically, the Health Center disposes about one or two 35-gallon containers each week. The Health Center takes bio-hazardous materials to the Lanai Community Hospital for pick up and disposal.

Solid waste is disposed in the County of Maui Lanai Landfill located about 4 miles southwest of Lanai City. In February 2009, the County of Maui issued the *Integrated Solid Waste Management Plan ("ISWMP")* to provide a comprehensive plan for solid waste management in the County. As part to the ISWMP, information on solid waste collection and disposal for Lanai shows that, in 2005, a total of 6,439 tons of solid waste was generated, 1,401 tons (21.8%) was recycled, and 5,038 tons was disposed at the landfill.

#### **Impacts and Mitigation Measures**

The Health Center contract documents will include that the contractor should undertake waste reduction and recycle of construction related waste including foundation and slab framing materials, all types of construction material packaging and packing materials.

The design drawings also show areas of the Health Center building have been designed to include spaces to hold solid waste materials which can be recycled.

The County ISWMP shows solid waste generation rate factors for residential and commercial users and total municipal solid waste and solid waste disposed in landfills. For Lanai, the ISWMP shows commercial waste generation of 1.63 tons per employee per year including recycled material. Based on about 10 full time employees at the replacement Health Center, a total of about 16.3 tons per year of solid waste would be generated and about 3.26 tons recycled leaving about 13.04 tons per year to be disposed in the landfill. This would represent about 0.26% of the total of 5,038 tons estimated for disposal in the Lanai landfill in 2015. The ISWMP also states the typical office worker would probably generate about 50% of the total commercial generation factor. Based on this analysis, the Health Center would generate between 6.25 to 13.04 tons per year, or about 0.13% to 0.26% of the solid waste disposed in the Lanai landfill. Thus, the Health Center would not create an adverse impact to solid waste on Lanai.

### **3.15 Visual Quality**

As previously discussed, Lanai City is the last extant example of "Garden City" and "Village" planning standards remaining in Maui County and is one of only two remaining in the State of Hawaii. The residential structures in Lanai City are typically three-bay, three- to four-pile, one-story buildings with side-gabled roofs, rear shed additions, and full-length front porches or "lanai" which were enclosed on the ends by wood side walls and fenestrated with windows. Use of the porch appears to have been exclusive to Lanai and employed to reduce the effects of the trade winds.

This visual character of the buildings and the grid street pattern absence of curbs and sidewalks in most areas provide Lanai City with unique visual quality and character not found in other areas of Hawaii. This character is found in the uses surrounding the project site, except for the modern two-story multi-family complex on the south side of the project site adjacent on Gay Street.

### **Impacts and Mitigation Measures**

As previously discussed, the preliminary design shows the single story Health Center building will have exterior simulated wood or wooden siding with wooden posts and railings, wood window frames and muntins, and standing seam or corrugated metal roofing. The highest point on the roof will be about 25 feet above grade. The facility will be designed to be compatible with the "plantation home style" and existing buildings on the surrounding parcels and town buildings. The entire west side of the building will be an open lanai.



These design characteristics, including use of the lanai, will ensure the building blends with the existing buildings in Lanai City and fits within the surrounding built environment of Lanai City. The absence of curbs and sidewalks along the perimeter of the Health Center will also ensure the facility is compatible with other areas of Lanai City and with Lanai City design guide.

### **3.16 Scenic and Open Space Resources**

The project site is currently occupied with three existing former dormitory buildings which will be removed for construction of the Health Center. The surrounding lands are also occupied by existing uses, including single family residences, a two-story multi-family complex, and a community college facility serving Lanai. The project site and surrounding area would not be considered part of a scenic view corridor.

The Dole Park, the main open space area of Lanai City, is located about 200 east of the project site. The Maui Community College facilities are located between the Health Center and Dole Park.

### **Impacts and Mitigation Measures**

As previously discussed, the preliminary design shows the single story building will have exterior simulated wood or wooden siding with wooden posts and railings, wood window frames and muntins, and standing seam or corrugated metal roofing. The highest point on the roof will be about 25 feet above grade. The facility will be designed to be compatible with the "plantation home style" and existing buildings on the surrounding parcels and town buildings. The Health Center will not have significant impacts on scenic and open space resources.

The Health Center is intended to service existing residents of Lanai. Thus, the Health Center would not create a need to provide open space resources.

### **3.17 Federal Environmental Clearances**

The Health Center will use funds provided by US Department of Housing and Urban Development (HUD) through the County of Maui Office of the Mayor Community Development Block Grant program. The following sub-sections address the Health Center's relationship to other Federal authorities.

**3.17.1 Archaeological and Historic Preservation Act of 1974 (16 USC Section 461)**

The declaration of national policy set forth in 16 USC 461 states, "It is declared that it is a national policy to preserve for public use historic sites, buildings, and objects of national significance for the inspiration and benefit of the people of the United States. "

Based on the historic records and surface field inspection it is recommended that precautionary monitoring during grading of the project and excavation for foundations and footings of the planned facility and utility connections. Subsurface deposits may include indigenous and post contact cultural material remains, and remnants of structural remains, and possibly human burials. Refer to section 3.10 for additional information.

The Health Center design and contract documents will include, in the event that human remains are identified during the course of excavation, all work in the immediate area should be stopped, the location secured, and the State of Hawaii Department of Land and Natural Resources State Historic Preservation Division (SHPD) contacted for further directions.

**3.17.2 Clean Air Act (42 USC § 7506 (C))**

Among the purposes of the Clean Air Act was (1) to protect and enhance the quality of the Nation's air resources so as to promote the public health and welfare and the productive capacity of its population; (2) to initiate and accelerate a national research and development program to achieve the prevention and control of air pollution; (3) to provide technical and financial assistance to State and local governments in connection with the development and execution of their air pollution prevention and control programs; and (4) to encourage and assist the development and operation of regional air pollution prevention and control programs.

As discussed in Section 3.9, air quality in the project area is characterized by low level of residential and business/commercial development and industrial facilities. In 2008, the State of Hawaii was in attainment of all NAAQS (DOH, August 2009). See Appendix D-2.

Grading and excavation will be required for construction and construction activities must comply with the Department of Health Air Pollution Control rules with respect to fugitive dust during construction.

Emissions from the construction vehicles will slightly degrade air quality for the short period of time they are in operation. However, all applicable emission and ambient air quality standards will continue to be met. Consequently, no adverse health effects from this source are anticipated.

### **3.17.3 Coastal Barrier Resources Act, (16 USC 1451)**

In 1982, the US Congress passed the Coastal Barrier Resources Act (CBRA) (16 USC 3501) which established the John H. Chafee Coastal Barrier Resources System (CBRS), comprised of undeveloped coastal barriers along the Atlantic, Gulf, and Great Lakes coasts. The law encourages the conservation of hurricane prone, biologically rich coastal barriers by restricting Federal expenditures that encourage development, such as Federal flood insurance through the National Flood Insurance Program.

The Coastal Barrier Resources Reauthorization Act of 2000 reauthorized the Coastal Barrier Resources Act (CBRA) and directed the U.S. Fish and Wildlife Service to complete a Digital Mapping Pilot Project that includes digitally produced draft maps for up to 75 John H. Chafee Coastal Barrier Resources System (CBRS) areas and a report to Congress that describes the feasibility and costs for completing digital maps for all CBRS areas.

The purpose of the CBRA is to minimize the loss of human life, wasteful expenditure of Federal revenues, and the damage to fish, wildlife, and other natural resources associated with the coastal barriers along the Atlantic and Gulf coasts and along the Great Lakes by restricting future Federal expenditures and financial assistance which have the effect of encouraging development along coastal barriers.

According to U.S. Fish & Wildlife Service John H. Chaffee Coastal Barrier Resources System website, Hawaii has no areas within the Coastal Barrier Resources System.

### **3.17.4 Coastal Zone Management Act (16 USC § 1456(C)(1))**

In 1972, the U.S. Congress enacted the Federal Coastal Zone Management Act to ensure that each Federal agency undertaking an activity within or outside the coastal

zone that affects any land or water use or natural resource of the coastal zone shall be carried out in a manner which is consistent to the maximum extent practicable with the enforceable policies of approved State management programs. Each Federal agency carrying out an activity subject to the Act shall provide a consistency determination to the relevant State agency designated under section 1455(d)(6) of this title at the earliest practicable time.

In 1977, Hawaii enacted Chapter 205A, HRS, Hawaii Coastal Zone Management (CZM) Program. The CZM area encompasses the entire state, including all marine waters seaward to the extent of the state's police power and management authority, including the 12-mile U.S. territorial sea and all archipelagic waters.

The Health Center project site is centrally located on the island of Lanai, in Lanai City. The Health Center project is not located within the County SMA and will not significantly impact shoreline and coastal resources. The Health Center project is consistent with CZM objectives and is further discussed in Section 4.2.4.

On June 24, 2004, the State of Hawaii Department of Business and Economic Development & Tourism Office of Planning notified the US Department of Housing and Urban Development (HUD), Hawaii State Field Office (Ref No. P-10520), that the Office of Planning will no longer review any HUD assistance programs, including Community Development Block Grants and that applicants for HUD assistance are no longer required to obtain CZM federal consistency approval for HUD assisted activities.

### **3.17.5 Sole Source Aquifers (40 CFR 149)**

The EPA's Sole Source Aquifer (SSA) Program was established under Section 1424(e) of the Safe Drinking Water Act (SDWA). Since 1977, it has been used to help prevent contamination of groundwater from federally-funded projects.

Sole source aquifers have been identified for only the islands of Oahu and Molokai. The Island of Lanai and the project site are not located within the EPA-designated sole source aquifer (see Appendix D-3).

### **3.17.6 Endangered Species Act (16 USC 1536(A)(2) and (4))**

The Endangered Species Act (16 USC Section 1531-1544, as amended) provides broad protection for species of fish, wildlife, and plants that are listed as threatened or

endangered in the U.S. or elsewhere. The Act mandates that Federal agencies seek to conserve endangered and threatened species and use their authorities in furtherance of the Act's purposes. Provisions are made for listing species, as well as for recovery plans and the designation of critical habitat for listed species.

16 USC Section 1536, Interagency Cooperation, states each Federal agency shall, in consultation with and with the assistance of the Secretary, insure that any action authorized, funded, or carried out by such agency (an "agency action") is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined by the Secretary, after consultation as appropriate with affected States, to be critical, unless such agency has been granted an exemption for such action.

As discussed in Section 3.6, there are no plant or animal species currently listed or proposed for listing as endangered or threatened species at the project site. According to the US Fish and Wildlife Service, there are four areas identified as critical habitat for threatened plant species on the island of Lanai. The critical habitats are located outside of Lanai City, several miles north and south of Lanai City.

### **3.17.7 Environmental Justice, Executive Order 12898**

Executive Order 12898, Environmental Justice, was signed on February 11, 1994. The intent of Executive Order 12898 (full title Federal Actions to Address Environmental Justice to Minority and Low Income Populations) is to avoid disproportionately high adverse human health or environmental effects of projects on minority and low income populations. Executive Order 12898 also requires Federal agencies ensure that minority and low income communities have adequate access to public information related to health and the environment.

The lands and properties surrounding the Health Center project site will not be subject to adverse environmental effects during construction or operation of the Health Center. Thus, based on these considerations, the Health Center project will not result in a disproportionately high adverse human health or environmental effect on minority and low income populations.

### **3.17.8 Floodplain Management, Executive Order 11988 as amended by Executive Order 12148**

Executive Order 11988, Floodplain Management, dated May 24, 1977 requires Federal agencies to take action to reduce the risk of flood loss, restore the natural and beneficial values of floodplains, and minimize the impacts of floods on human safety, health, and welfare. Executive Order 12148, July 20, 1979, amended Executive Order 11988. The main feature of the amendment added that agencies with responsibilities for Federal real estate properties and facilities shall, at a minimum, require the construction of Federal structures and facilities to be in accordance with the criteria of the National Flood Insurance Program.

As discussed in Section 3.5, there are no flood hazards associated with the Health Center project site. According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM). Community Panel Number 1500030500E (revised September 25, 2009) the project site is within Zone X, "other areas determined to be outside the 0.2% annual chance floodplain" (see Appendix D-1). There are no flood hazards associated with the Health Center project site. Further, the project site is not located in the area designated as a tsunami evacuation zone.

As part of the pre-assessment consultation for this Draft EA, on February 9, 2010, the State of Hawaii Department of Land and Natural Resources (DLNR) Engineering Division confirmed the project site is located in Zone X and that the Flood Insurance Program does not have any regulations for developments in Zone X. Appendix A shows the DLNR letter.

### **3.17.9 Protection of Wetlands Executive Order 11990**

Executive Order 11990, Protection of Wetlands, dated 1977 requires Federal agencies to avoid, preserve, or mitigate effects of new construction projects on lands which have been designated wetlands.

The project site has been used for urban purposes, housing, since the 1920s and currently contains two abandoned structures which were dormitories and a third former dormitory currently used as an administration building by the Lanai Community Health Center and for the Lanai Art Center. The remaining portion of the project site has planted and naturally occurring grass. The project site shows no potential wetland

characteristics related to vegetation, and contains no hydrology indicators (occasional flooding), and no hydric soils.

As discussed in Section 3.4, there are no surface water resources on the project site nor any characteristics related to wetlands

#### **3.17.10 Farmland Protection Policy Act (7 USC § 4202(8))**

The U.S. Congress adopted the Farmland Protection Policy Act (FPPA) (Public Law 97-98) on December 22, 1981. The U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) has national leadership for administering the FPPA. The effective date of the FPPA rule (part 658 of Title 7 of the Code of Federal Regulations) is August 6, 1984.

The stated purposes of the FPPA are to:

- Minimize the extent to which Federal programs contribute to the unnecessary and irreversible conversion of farmland to nonagricultural uses.
- Assure that Federal programs are administered in a manner that, to the extent practicable, will be compatible with State, unit of local government, and private programs and policies to protect farmland.

“Farmland”, as used in the FPPA, includes prime farmland, unique farmland, and land of statewide or local importance. “Farmland” subject to FPPA requirements does not have to be currently used for cropland.

As discussed in Section 3.1, the Health Center project site is classified as “existing urban development”. Since the Health Center project site is not classified as “prime” agricultural lands, the Health Center project is in compliance with the FPPA.

#### **3.17.11 Unique Natural Features and Agricultural Lands**

Unique natural features are primarily, geological, features which are unique in the sense that their occurrence is infrequent or they are of special social/cultural, economic, educational, aesthetic, or scientific value. Development on or near them may render them inaccessible to investigators or visitors, or otherwise limit potential future use and appreciation of these resources.

Examples of unique natural features include: sand dunes, waterfalls, unique rock outcroppings, caves, especially with limestone or gypsum deposits, canyons, and petrified forests. Also included are unique stands of trees such as Redwoods or unique colonies of animals, such as Prairie Dog, Town.

The key criterion in defining, a unique natural feature is the rareness of the feature, a characteristic often recognized by local landmarks. Another characteristic is information content. Some unique natural features contain a great deal of information concerning natural history such as geologic evolution.

There is no Federal legislation which protects unique natural features per se other than features which might qualify for historic or archaeological preservation or endangered species protection.

As previously discussed, Lanai City and surrounding area was developed in the 1920s when pineapple production was undertaken. At that time, the general pattern of land use was established including the grid system of streets and the residential and commercial land uses. This development required clearing and grading so that the streets, residential and commercial uses could be constructed. This clearing and grading would have removed any unique or natural features which may have been present at that time.

Currently, the Health Center project site and surrounding areas of Lanai City do not contain any unique natural features which would be affected by development of the Health Center.

Agricultural lands are those lands currently used to produce agricultural commodities or lands that have the potential for such production. Agricultural commodities include food, seed, fiber, forage, oilseed ornamental plant material and wood for all purposes. Development on or near them may destroy a valuable natural and economic asset. Infrastructure development in undeveloped agricultural areas may stimulate new commercial and residential development which would, in turn, threaten and destroy potential or future agricultural uses. .

The Farmland Protection Policy Act of 1981 (U.S.C.4201 et seq, Implementing Regulations 7 CFR Part 658) (Subtitle 1 of the Agriculture and Food Act of 1981) requires



Federal agencies to minimize the extent to which their programs contribute to the unnecessary and irreversible commitment of farmland to nonagricultural uses. It further requires that where practical, Federal programs will be administered in such a manner that they will be compatible with State, local and private programs and policies to protect farmland in the following categories:

- o "prime" farmland - the highest quality land for food and fiber production having the best chemical and physical characteristics for producing;
- o unique farmland - land capable of yielding high value crops such as citrus fruits, olives, etc., and;
- o farmlands designated as important by State and local government, with the approval of the Secretary of Agriculture.

The area of Lanai City, including the Health Center project site, was developed for residential and commercial uses in the 1920s and has generally remained in such use since that time. Thus, construction of the Health Center would not remove or affect any category farmland.

#### **3.17.12 Fish and Wildlife Coordination Act (16 USC § 661-666)**

The Fish and Wildlife Coordination Act, as amended, authorizes the Secretaries of Agriculture and Commerce to require consultation with the Fish and Wildlife Service and the fish and wildlife agencies of States where the "waters of any stream or other body of water are proposed or authorized, permitted or licensed to be impounded, diverted... or otherwise controlled or modified" by any agency under a Federal permit or license. Consultation is to be undertaken for the purpose of "preventing loss of and damage to wildlife resources."

As documented in Section 3.4, the Health Center project site does not contain surface water resources. Thus, construction of the Lanai Health Center will not result in a diversion of any water body and will not result in impacts on fish or wildlife resources.

#### **3.17.13 National Historic Preservation Act of 1966 (16 USC § 470 (F))**

Section 106 of the National Historic Preservation Act of 1966 (PL 89-665, codified as 16 USC 470f) requires that Federal agencies consider the effects of their projects on

historic properties and allow the Advisory Council on Historic Preservation a reasonable opportunity to comment on such projects. The Section 106 review regulations are set forth in CFR 800. In most cases, the State of Hawaii Department of Land and Natural Resources Historic Preservation Division (SHPD) acts for the Advisory Council to undertake this review process. The SHPD must concur that the Health Center project will have "no effect" on historic properties.

Based on the historic records and surface field inspection, it is recommended that precautionary monitoring during grading of the project site and excavation for foundations and footings of the planned facility and utility connections. Subsurface deposits may include indigenous and post contact cultural material remains, and remnants of structural remains, and possibly human burials. Refer to section 3.10 for additional information.

In the event that human remains are identified during the course of excavation, all work in the immediate area should be stopped, the location secured, and SHPD contacted for further directions.

On February 25, 2010, as part of the pre-assessment consultation for this Draft EA, the State of Hawaii Department of Land and Natural Resources (DLNR) State Historic Preservation Division (SHPD) (LOG NO: 2010.0427/DOC NO: 1002PC008) replied that the project site has been previously disturbed and as such the History and Culture Branch does not anticipate any burials or other related sites in the area. Further, the SHPD noted that there is probably no impact to traditional Hawaiian cultural practices for at least since Lanai City was built in the 1920's. Appendix A shows the SPHD letter.

The SHPD also stated the project site is located in Lanai Town Square and its boundaries are currently under consideration and review for nomination to the National Historic Register.

On June 30, 2010, as part of the Draft EA review, the State Historic Preservation Division determined (LOG NO. 2010.2190, DOC No. 1006RS 16) that the proposed project would have "no effect on historic properties". This determination was also reiterated in the Division's letter dated June 17, 2010 (LOG NO: 2010.2353/DOC NO: 1006RS47) which also indicated that after examination of the plans and conferral with

the Maui County Planning Office, the Historic Preservation Division's concurs that the project will "not affect historic properties." See Appendix E.

#### **3.17.14 Wild and Scenic Rivers Act (16 USC 1271-1287)**

The Wild and Scenic Rivers Act was first passed in October 1968 and has been amended a number of times. (16 U.S.C. §§ 1271-1287, October 2, 1968, as amended 1972, 1974-1976, 1978-1980, 1984, 1986-1994 and 1996.)

This Act established a National Wild and Scenic Rivers System for the protection of rivers with important scenic, recreational, fish and wildlife, and other values. Rivers are classified as wild, scenic or recreational. The Act also designated specific rivers for inclusion in the System and prescribes the methods and standards by which additional rivers may be added. The Act contains procedures and limitations for control of lands in federally administered components of the System and for disposition of lands and minerals under Federal ownership. Hunting and fishing are permitted in components of the System under applicable federal and state laws.

The purpose of this act, as stated in Section (b) of its preamble is as follows:

*It is hereby declared to be the policy of the United States that certain selected rivers of the Nation which, with their immediate environments, possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values, shall be preserved in free-flowing condition, and that they and their immediate environments shall be protected for the benefit and enjoyment of present and future generations. The Congress declares that the established national policy of dam and other construction at appropriate sections of the rivers of the United States needs to be complemented by a policy that would preserve other selected rivers or sections thereof in their free-flowing condition to protect the water quality of such rivers and to fulfill other vital national conservation purposes.*

There are no rivers in Hawaii designated as wild and scenic as part of the Wild and Scenic Rivers Act (see Appendix D-4).

As discussed Section 3.4, there are no surface water resources on the Health Center project site. Development of the Health Center does not have the potential to affect the hydrology, water quality, or aquatic resources. Thus, the Health Center project is consistent with the provisions of the Wild and Scenic Rivers Act.

### **3.17.15 Fishery Conservation and Management, Magnuson-Stevens Fishery Conservation and Management Act (16 USC Sec. 1801)**

The Congress found and declared the following:

*(1) The fish off the coasts of the United States, the highly migratory species of the high seas, the species which dwell on or in the Continental Shelf appertaining to the United States, and the anadromous species which spawn in United States rivers or estuaries, constitute valuable and renewable natural resources. (2) Certain stocks of fish have declined to the point where their survival is threatened, and other stocks of fish have been so substantially reduced in number that they could become similarly threatened (3) Commercial and recreational fishing constitutes a major source of employment and contributes significantly to the economy of the Nation. (4) International fishery agreements have not been effective in preventing or terminating the overfishing of these valuable fishery resources. (5) Fishery resources are finite but renewable. If placed under sound management before overfishing has caused irreversible effects, the fisheries can be conserved and maintained so as to provide optimum yields on a continuing basis. (6) A national program for the conservation and management of the fishery resources of the United States is necessary to prevent overfishing, to rebuild overfished stocks, to insure conservation, to facilitate long-term protection of essential fish habitats, and to realize the full potential of the Nation's fishery resources. (7) A national program for the development of fisheries which are underutilized or not utilized by the United States fishing industry, including bottom fish off Alaska, is necessary to assure that our citizens benefit from the employment, food supply, and revenue which could be generated thereby. (8) The collection of reliable data is essential to the effective conservation, management, and scientific understanding of the fishery resources of the United States. (9) One of the greatest long-term threats to the viability of commercial and recreational fisheries is the*

*continuing loss of marine, estuarine, and other aquatic habitats. (10)  
Pacific Insular Areas contain unique historical, cultural, legal, political,  
and geographical circumstances which make fisheries resources  
important in sustaining their economic growth.*

The project site does not include water resources which supports fishery resources. Thus, the Health Center project will not have an adverse effect on fishery resources.

#### **3.17.16 U.S. Department of Transportation Act Section 4 (F); (49 USC Section 303)**

The Department of Transportation (DOT) Act of 1966 Section 4(f) included specific provisions providing special protection to publicly owned parks, recreational areas, wildlife and waterfowl refuges, and all historic sites. In 1983, the DOT Act was codified and Section 4(f) became 49 USC Section 303. (Note, some documents still use the term Section 4(f) when referring to this issue.) Under Section 303, the DOT may approve a project requiring the use of publicly owned land of a park, recreation area, or wildlife and waterfowl refuges, or historic site, only if there is no prudent and feasible alternative to using that land, and the project includes all possible planning to minimize harm to the park, recreation area, wildlife refuge, or historic site.

The Health Center project site is not located on public property under the jurisdictional authority of 49 USC Section 303.

#### **3.17.17 Department of Army Section 10 of the Rivers and Harbors Act of 1899 (33 USC 403) and Federal Water Pollution Control Act (33 USC 1341)**

The Department of the Army Corps of Engineers (COE) regulates activities in the nation's waters. Section 10 of the Rivers and Harbors Act of 1899 (33 USC 403) prohibits the obstruction or alteration of navigable waters of the U.S. without a permit from the COE. (Navigable waters of the U.S. means those waters that are subject to the ebb and flow of the tide shoreward of the mean high water mark and/or presently used, or have been used in the past or may be susceptible to use to transport interstate or foreign commerce.)

Section 404 of the Federal Water Pollution Control Act (33 USC 1341), commonly called the Clean Water Act, prohibits the discharge of dredged or fill material into waters of the U.S. without a permit from the COE. (Waters of the U.S. is a broader term than

navigable waters of the U.S. Waters of the U.S. includes adjacent wetlands and tributaries to navigable waters and other waters where degradation or destruction of which could affect interstate or foreign commerce.) A structure is considered fill material along with other fill or dredged materials placed in the waters of the U.S. COE permits continue in effect until they automatically expire or are modified, suspended, or revoked. The permit will specify time limits for completing the work and may also specify a date by which the work must be started.

As discussed Section 3.4, there are no surface water resources on the Health Center project site. Development of the Health Center project site does not have the potential to affect the waters of the U.S.

#### **3.17.18 Airport Runway Clear Zone Disclosure (Section 58.6(d))**

Lanai Airport, the only aviation facility serving Lanai with scheduled aircraft operations, is operated by the State of Hawaii Department of Transportation and contains a single 5000-foot long runway (Runway 3-21). The project site is 15,800 linear feet (LF), approximately 3.0 miles, northeast from the end of Runway 21 at Lanai Airport and 14,600 LF northeast from the end of the Runway Protection Zone (formerly Clear Zone) (see Appendix D-5).

According to 24 Code of Federal Regulations (CFR) 51, Subpart D, HUD assistance for construction or major rehabilitation of any property located on a clear zone site is prohibited if located within 2,500 feet of the end of a civil airport runway or 8,000 feet of the end of a military airfield runway.

The US Department of Transportation Federal Aviation Administration (FAA) sets forth criteria and guidelines regarding air space at and around airports. FAA Advisory Circular No. 150/5300-13 Change 7 (Oct 1, 2002) and 150/5300-13 Change 11 (Mar 28, 2007) identifies the Runway Protection Zone (RPZ) as trapezoidal shaped and centered on the extended runway centerline. The RPZ for Runway 21 begins 200 LF from end of the runway and extends for 1,000 LF. The total width of the RPZ is 700 LF from the extended centerline of Runway 21.

Lanai Airport is not designated as a Department of Defense airfield.

The project site is not within the Lanai Airport Runway Protection Zone (Clear Zone) as defined by Section 151.9, Federal Aviation Regulations and FAA Advisory Circular No. 150/5300-13 Change 7 (Oct 1, 2002) and 150/5300-13 Change 11 (Mar 28, 2007).

### **3.17.19 Noise Abatement and Control**

The most recent airport noise study prepared by the State of Hawaii Department of Transportation is the Lanai Airport Master Plan Update Federal Air Regulation (FAR) Part 150 Airport Noise Compatibility Program Final Report dated December 1999. As part of this study, a noise exposure map for 2004 was prepared showing the noise contours from Lanai Airport, based on the expected aircraft mix and forecasted number of aircraft operations. The noise exposure map shows the 60 DNL contour would be about 6,200 feet (approximately 1.2 miles) from the Health Center project site. The 55 DNL would be about 4,600 feet (approximately 0.87 miles) from the Health Center project site. Appendix D-6 shows the 2004 noise exposure map.

The 1999 study included jet aircraft operations from Aloha Airlines and Hawaiian Airlines. Currently, Hawaiian Airlines no longer provides jet service to Lanai Airport. Aloha Airlines ceased operations in 2009.

Commercial air service to Lanai Airport is currently provided primarily by Hawaii Island Air using DASH-8 aircraft. These aircraft operations, along with the jets, were included in the 2004 noise exposure maps. Since commercial jet aircraft no longer operate at Lanai Airport, the noise contours currently at Lanai Airport would be expected to be smaller than those shown for 2004. Currently, only corporate jets occasionally fly charter flights to Lanai Airport. Based on these considerations, aircraft noise from Lanai Airport would not affect the Health Center.

### **3.17.20 Toxic/Hazardous/Radioactive Materials**

As previously discussed, the Health Center project site has been used for residential purposes since the 1920s. Further, the project site is within the developed area of Lanai City and surrounded by a mix of residential and some commercial and public uses. As such, the Health Center project site is not located in general proximity to dumps, landfill, industrial sites, or other locations that contain, or may have contained, hazardous wastes.

In addition, geotechnical investigations were conducted at the Health Center project site during design of the facility. Review of the report shows the soil borings extended to a depth of 21.5 feet below the existing grade. The report did not indicate the presence of debris or trash materials or any unusual odors during the borings.

Lastly, Lanai City has been a residential development since the 1920's and the surrounding area used for agricultural production. None of these uses and the historic research would indicate the use of radioactive materials on Lanai and at the Health Center project site. Thus, the Health Center would not be adversely affected by hazardous materials, contamination, toxic chemicals and gases, and radioactive substances.

### **3.17.21 Hazards and Nuisances including Site Safety**

The Health Center project site is located in an area of Lanai City which has been used for residential and commercial uses since the 1920s. The project site shows a slight slope from north to south. There are no sources of odor nearby which could affect the project site and create a nuisance to the users of the Health Center.

The streets surrounding the project site include utility poles with overhead street lights to provide sufficient lighting for vehicles and pedestrians. The project site is not near any natural water bodies which could create a hazard to the Health Center. As previously discussed, according to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM) Community Panel Number 1500030500E (revised September 25, 2009), the project site is within Zone X, "other areas determined to be outside the 0.2% annual chance floodplain" (See Appendix D-1). Further, the project site is not located in the area designated as a tsunami evacuation zone.

Lanai and Lanai City show no history or evidence of a toxic chemical dump or use as a site for uranium mining or any other mining or disposal of tailings from uranium or other mining operations.

The project site is located in a developed area of Lanai City not subject to nuisances or safety considerations from surrounding uses or previous uses in the area. Thus, Health Center project site will not be subjected to nuisances or site safety considerations.

As previously discussed, the Health Center will be primarily open during day time hours. However, necessary site lighting will be included for the safety of the patients and



employees. The light fixtures and level of lighting will be compatible with the area surrounding the Health Center project site.

The preliminary plans show the finished floor for the Health Center will be at elevation 1615 feet mean sea level (msl). As previously discussed, the elevations on the project site range from about 1610 msl on the north to approximately 1608 feet msl on the south. Thus, the floor of the building will be about 5 to 6 feet above the elevation of the site. This would ensure surface flows from storm events will not create a flood hazard to the Health Center. The FIRM map shows the project site will not be subject to flood hazards.

### **3.17.22 Siting of HUD-Assisted Projects Near Hazardous Operations**

24 Code of Federal Regulations (CFR) Part 51-Environmental Criteria and Standards, Subpart C, Siting of HUD Assisted Projects Near Hazardous Operations Handling Conventional Fuels or Chemical of an Explosive or Flammable Nature, sets forth the Department of Housing and Urban Development (HUD) environmental standards, criteria and guidelines for determining project acceptability and necessary mitigating measures to insure that activities assisted by the Department achieve the goal of a suitable living environment.

HUD will not approve an application for assistance for a project located at less than the acceptable separation distance from a hazard, unless appropriate mitigating measures, are implemented, or unless mitigating measures are already in place.

The Maui County Fire Department was contacted to provide information any stationary containers which store or handle hazardous substances of an explosive or fire prone nature. Specific information was requested on the location above ground tanks storage tanks within a 1-mile radius of the Health Center. See Appendix D-7-1 to D-7-8.

The Fire Department data showed a total of 27 above ground tanks with a storage capacity larger than 50 gallons located within the 1-mile radius, which encompassed almost all of Lanai City. See Appendix D-7-9 to D-7-10.

(Note, since many commercial businesses use Liquefied Petroleum Gas (LPG), to heat water for cooking and cleaning, there are a number of tanks in Lanai City. LPG is a compressed liquefied gas consisting primarily or propane, although it is often a mixture

of propane butane, and other hydrocarbons. LPG will evaporate at normal temperatures and pressures and is supplied in pressurized steel cylinders.)

Except for a single tank, analysis of the Maui County Fire Department records, aerial photographs, and site visits, show there are existing permanent buildings or structures located between the Health Center and the tanks. The permanent intervening buildings or structures would mitigate any explosive or thermal hazard from the tank. The single tank is located west, or behind, the launderette located on the corner of Houston and Seventh Street. This site places the center of the tank about 116 feet (115 feet 11-15/16 inches) east of the north wing of the Health Center on Houston Seventh Street. The Fire Department records show this is a 499-gallon LPG tank. There are no existing permanent structures which intervene between this tank and the corner of the Health Center. A topographic survey and site visit to the tank show the tank to be about 7.75 feet long with a diameter of approximately 3.0 feet. The top of the tank is about 4.0 to 4.5 feet above the surrounding grade. See Appendix D-7-11 to D-7-13.

### **Impacts and Mitigation Measures**

HUD has developed a guidebook relating to siting HUD assisted projects to ensure that they are not adversely affected by explosive and flammable hazards. These technical guidelines set forth methods for determining the acceptable separation distance from explosive and flammable hazards for the siting of HUD-assisted projects near stationary hazardous operations which store, handle or process chemicals or petrochemicals of an explosive or flammable nature.

(Acceptable Separation Distance (ASD) is the actual distance beyond which the explosion or combustion effect of a hazard is not likely to unnecessarily expose individuals to injury or buildings to damage from blast overpressure or a thermal radiation flux levels in excess of the standards cited in 24 CFR Part 51 Subpart C (specifically 51.2f3) as established by HUD.)

Based on a 499-gallon LPG tank, the ASD for thermal radiation is 210 feet for people and for blast overpressure 170 feet. See Appendix D-7-14 to D-7-15.

Since the LPG tank is located closer than the two measures for ASD, a barrier would be required to mitigate thermal radiation and blast overpressure from the LPG tank. The HUD guidelines provide a method to determine or calculate the type of barrier needed to mitigate the thermal or explosive hazard from a tank. HUD also provides an on-line web

site which can also be used to determine the mitigation. Based on these sources, the calculations show a 100-foot high barrier would be needed at the Health Center property line which lies between the 499-gallon tank and the Health Center building.

HUD defines a blast barrier as a barrier of substantial construction designed to contain the blast force expected to emanate from a specific hazard source and should be constructed as close to the hazard source as practical. Barriers may be incorporated into the project to permit a lesser separation distance between the site and potential hazard but its location and design must be determined specifically on a case-by-case basis. The design and location of barriers are based on an analysis of the site, the location of the potential hazard, and the type of hazard.

Since such a 100-foot high barrier would not be feasible to construct at the Health Center, a barrier constructed surrounding the hazard would be acceptable to mitigate the potential hazard to the Health Center. As described by HUD, a barrier constructed closer to the source of the hazard would contain the hazard and would be much lower than 100 feet. The barrier would have to be designed to withstand the blast overpressure and thermal radiation anticipated from the hazard and would have to be constructed of reinforced concrete masonry unit (CMU) or reinforced concrete. The barrier would have to be located on the south and west sides of the tank to protect the Health Center. See Appendix D-7-11.

The parcel containing the launderette tank is located on a parcel not owned by the Health Center. The Health Center has contacted the landowner who has stated they have no problem with the Health Center constructing a barrier as long they have an opportunity to review the plans and that all required permits are obtained and the Lanai Gas Company, the gas supplier, has access to the tank. See Appendix D-7-16.

### **3.17.23 Commercial Facilities**

Commercial services on Lanai are generally located on three areas, which include Lanai City and the two major resort areas. Tourists to Lanai usually stay at the two resorts, Manale Bay on the southern coast and Koele Lodge located on the western edge of Lanai City. The two resort areas have been developed to provide a variety of commercial services, various types of retail outlets, restaurants, retail food, and other personal services, and recreation activities on the resort site so visitors do not have to travel to Lanai City for these types of commercial services.

Lanai City serves as the commercial center for the local resident population on Lanai. The commercial activities include banks, grocery markets, other retail food stores, clothing stores, restaurants, personal service establishments, pet stores, real estate offices, and other commercial services. These commercial activities are located along three sides of Dole Park, the west, north, and east. The commercial services are small when compared to most areas on Maui. However, the since population of Lanai is about 3,135 persons (2010 census), the scale and size of the commercial services meet the needs of the resident population.

The Health Center is intended to primarily serve the health needs of the residents of Lanai, although visitors can also use the Health Center, if needed. The Health Center project site is located just west of Dole Park, adjacent to the commercial center of Lanai City.

The Health Center patients can continue to use the existing commercial services of Lanai City. The proximity of the Health Center project site to these commercial services means that patients can conveniently visit these commercial activities before of after their visits to the Health Center. Overall, since the Health Center will not change the resident population or shift need for the commercial services, the Health Center would not have an adverse effect to the commercial services on Lanai.

Further, since Health Center project site does not contain commercial services which would be displaced by the construction of the facility, the Health Center will not adversely affect the availability of commercial services on Lanai.

#### **3.17.24 Social Services**

Social services on Lanai are primarily provided by the State of Hawaii Department of Human Services, the State of Hawaii Department of Health, the Office of Hawaiian Affairs, the County of Maui, and the Queen Liliuokalani Children's Center. These agencies are located in an office complex on Lanai Avenue north of Dole Park, or about five blocks from the Health Center project site.

The Department of Human Services provides welfare assistance including financial assistance and the food stamps program. The Department also provides child welfare and adult protective services.

The Department of Health provides adult mental health services and a program called parent and children together. The Office of Hawaiian Affairs medical and old age assistance programs are for primarily native Hawaiians, although services are provided to non-native Hawaiians in need.

The Queen Liliuokalani Children's Center provides assistance related to native Hawaiian orphans and other children in need.

The County of Maui Lanai Senior Center strives to provide a balanced variety of classes, lectures and seminars, activities such as art, culture, crafts, performing arts, self-improvement, exercise, and wellness. In addition to providing leisure type activities for seniors, the Center provides meals-on-wheels, a congregate dining space, and assisted transportation services. Maui County has recently begun construction of a 2-story building to replace the former facility at the same location at the corner of Gay and Seventh Streets, almost diagonally to the southern end of the Health Center. The Senior Center has served as a gathering place for Lanai's seniors, as well as a community meeting hall for years, and will include space for an activity room and two craft rooms in the new facility.

The Health Center will provide services primarily to existing residents on Lanai, although some of the staff health providers will be commuting to Lanai to provide their services. Since the primary users of the Health Center are residents already on Lanai, construction and operation of the Health Center will not create additional need or adverse impacts to the social services providers on Lanai.

The services provided by the Health Center will not compete with those provided by the social service agencies. Moreover, since the Health Center services will primarily be directed to those related to health care, the Health Center will complement the services from social service agencies.

## 4. RELATIONSHIP TO PLANS, POLICIES AND CONTROLS

### 4.1 Hawaii State Plan

The Hawaii State Plan, adopted in 1978 and revised in 1988, establishes the overall theme, goals, objectives, and priority guidelines to guide the future long-range development of the State. The Health Center project supports and is consistent with the following State Plan objectives and policies:

#### Section 226-6 Objectives and policies for the economy - in general.

(b)(6) *Strive to achieve a level of construction activity responsive to, and consistent with, state growth objectives.*

Comment: The Health Center project will involve construction of replacement facilities at a new site. The Health Center project will increase the level of construction activity on Lanai during the period of construction which will enhance the state's growth objectives.

#### Section 226-20 Objectives and policies for socio-cultural advancement – health

(a)(1) *Fulfillment of basic individual health needs of the general public.*

(b)(1) *Provide adequate and accessible services and facilities for prevention and treatment of physical and mental health problems, including substance abuse.*

(b)(2) *Encourage improved cooperation among public and private sectors in the provision of health care to accommodate the total health needs of individuals throughout the State.*

(b)(5) *Provide programs, services, and activities that ensure environmentally healthful and sanitary conditions.*

Comment: The Health Center will provide accessible primary medical care, dental care, behavioral health services, prenatal, family planning, nutrition and preventive health education services open to the low- and moderate-income, uninsured, and underserved residents of Lanai.

## **4.2 State Land Use District**

The Hawaii Land Use Law of Chapter 205, Hawaii Revised Statutes, Land Use Commission, classifies all land in the State into four land use districts: Urban, Agriculture, Conservation, and Rural. The project site and Lanai City lie within the Urban District, which includes "lands characterized by city-like concentrations of people, structures, streets, urban level of services and other related uses." The Health Center land use is consistent with the Urban classification.

## **4.3 State of Hawaii Department of Hawaiian Home Lands**

On June 30, 2010, as part of the Draft EA review, the State of Hawaii Department of Hawaiian Home Lands (DHHL) commented that DHHL owns approximately 50 acres on the island of Lanai and has just finished developing a Lanai Regional Plan that was approved by the Hawaiian Homes Commission on June 22, 2010.

As adjacent landowners on Lanai, DHHL is engaging in its own planning process, and has responsibility to participate and plan appropriately for the larger region. In addition, it is DHHL's priority to ensure that DHHL's plans are as consistent as possible with other plans in the area. In general, DHHL stated support for the development of a community health center for the island of Lanai and that the facility will ultimately help DHHL's beneficiaries and the community at large. See Appendix E. Based on these considerations, the Health Center would be consistent with DHHL's Lanai Regional Plan.

## **4.4 County of Maui**

### **4.4.1 County General Plan**

Maui County's General Plan was adopted under Ordinance No. 1052 in 1980 and updated in 1990. The Plan is the guiding document for the long-range development of the County. The Plan provides policy statements in the form of goals, directions and strategies for meeting the long-term social, economic, environmental and land use needs for the general welfare and prosperity of the people through multi-level government action.

Maui County is currently updating the General Plan, with a planning horizon of 2030. As part of the 2030 General Plan Update, the County issued a Draft Countywide Policy Plan in January 2008. Until the 2030 General Plan Update is completed and adopted, the 1990 General Plan remains in effect.

The 1990 General Plan emphasizes five (5) major themes that focus on the overall goals of the Plan. The Health Center project is consistent with the following General Plan objectives and policies relating to health and family.

V. Social Infrastructure

A. Access to Human Services

*Objective 1: To coordinate through the Maui County Department of Human Concerns the establishment of quick and reliable access to human services.*

*Policy 2: Coordinate the services of government (Federal, State, and County) and private non-profit agencies, in order to insure the quickest and most reliable access.*

C. Health and Family

*Objective 1: To meet the health needs of all residents and visitors.*

*Policy 3: Encourage the expansion and improvement of our hospitals and our public and private medical facilities.*

*Objective 2: To focus on the quality of family life including the young, the elderly, and the handicapped as the basic building block of community well-being*

*Policy 1: Establish community based family support programs.*

**4.4.2 Lanai Community Plan**

The Health Center project site is located in the Lanai Community Plan region, one (1) of nine (9) Community Plan regions established in the County of Maui. Planning for each region is guided by the respective Community Plans, which are designed to implement the Maui County General Plan. Each Community Plan has been adopted for each region to set forth desired land use patterns, goals, objectives, policies, and implementation actions for a number of functional areas, including land use,



environment, economic activity, cultural resources, housing, urban design, infrastructure, social infrastructure, and government.

According to the Lanai Community Plan Land Use Map, the Health Center project site is designated for “commercial use” (see Figure 4.1). The Community Plan also identifies lack of social services and public services and facilities as major issues on Lanai.

The Lanai Community Plan (1998 Update) sets forth goals, objectives and policies which are statements identifying preferred future conditions. Goals, objectives and policies associated with the Health Center project include the following:

### **Urban Design**

*Goal: Preserve and enhance the unique urban design character of Lanai through consideration of planning, land use and design standards which respect the island's rural plantation history.*

#### *Objectives and Policies:*

1. *Establish design standards in the commercial/civic center area of Lanai City, to provide special treatment in the maintenance and/or enhancement of the unique visual and physical identity of the town. Design standards should be based on the following guidelines:*
  - *Maintain existing scale and street layout pattern of Lanai City.*
  - *Develop off-street parking as part of expanded commercial facilities.*
  - *Promote an architectural style within the commercial/civic center areas that is consistent with existing buildings and neighborhood character.*
  - *Preserve Dole Park as the focal point of Lanai City.*
2. *Provide additional landscaping to Lanai City, to enhance the environment, utilizing native and non-invasive climate-adapted plants appropriate for the region.*
4. *Encourage the use of wood construction for residential and commercial projects.*

### **Physical Infrastructure**

*Goal: Provide adequate, reliable and well-designed public infrastructure systems in a timely fashion to meet the social, economic and public safety and welfare needs of the Lanai community.*

# LEGEND

SF	Single Family
MF	Multi-family
H	Hotel
B	Commercial
BMF	Business Multi-family
BI	Business/Industrial
SBR	Service Business/Residential
LJ	Light Industrial
HI	Heavy Industrial
A	Airport
AG	Agriculture
AG15	AG Act 15
R	Rural
PD	Project District
OS	Open Space
C	Conservation
P	Public/Quasi-public
PK	Park
PK-GC	Park/Golf Course
50 ft	50 ft Contour

Source: Lanai Community Plan, County of Maui, 1998

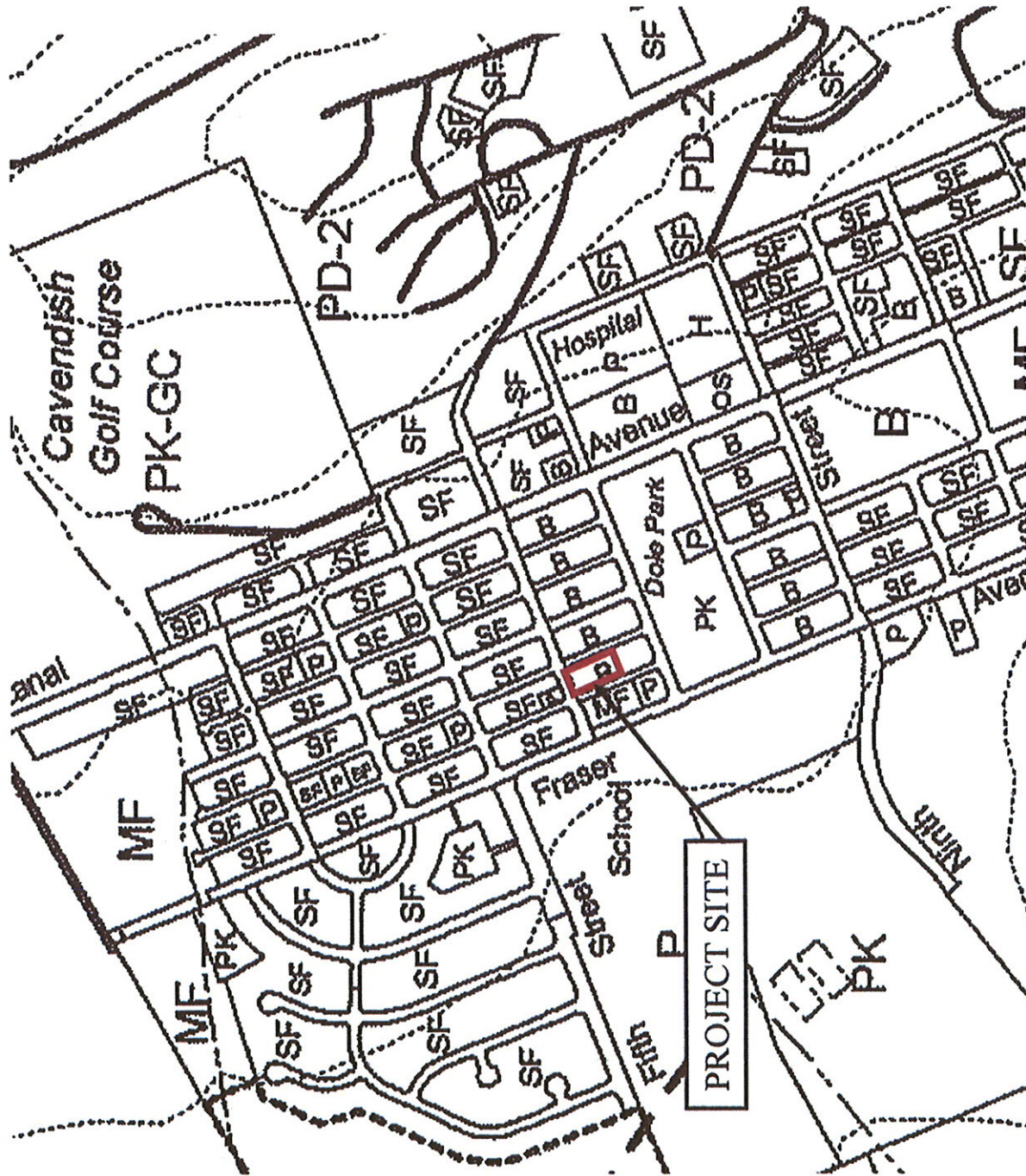


FIGURE 4.1

Lanai Community Health Center  
Lanai City, Lanai, Hawaii CBDG Project No. 08-04

## Lanai Community Plan Land Use Map



## **Social Infrastructure**

Goal: Provide public facilities and services system which is responsive to the needs of Lanai's rural island environment and lifestyle.

### Health and Public Safety Objectives and Policies:

1. Improve accessibility to medical and dental care by increasing professional or para-professional full-time staff
2. Expand public health programs, services and facilities which support family planning and the special needs of children, elderly and immigrants.
3. Ensure the long-term integrity of medical and emergency medical facilities and services with appropriate allocation of capital improvements funding and staff positions, adequate provision of supporting programs and facilities, and ready access to state-of-the art medical technologies.

## **Planning Standards**

The following planning standards are specific guidelines or measures for development and design. These standards are essential in clarifying the intent of the land use and town design objectives and policies and the Land Use Map.

### 2. Building Height

Limit building heights to two stories or 30 feet above grade except as follows:

- Buildings within business/commercial areas surrounding Dole Park shall not exceed one story in height.
4. Building Design: All commercial buildings and government or private infrastructure improvements shall be designed in accordance with design guidelines developed for Lanai City.

The Lanai Health Center will provide a health care facility designed for current medical-dental practices and procedures and will be open to the low- and moderate-income, uninsured, and underserved residents of Lanai. In addition, the design of Lanai Health Center will be in concurrence with the Lanai City Community Design Guidelines.

### **4.4.3 Lanai City Community Design Guidelines**

The purpose of the *Lanai City Community Design Guidelines* (April 1997) is to document existing conditions and to establish an identifiable and unified urban design theme to be

retained and carried on within Lanai City. The Lanai Design Guidelines specifically address the commercial uses within Lanai City. The guidelines also conform to policies identified in the Lanai Community Plan, as discussed in the previous section.

The Health Center project is located within Lanai City and will be compatible with the existing structures in the surrounding area. In addition, the design of the Lanai Health Center will be in concurrence with the Lanai City Community Design Guidelines.

#### **4.4.4 County of Maui Zoning**

The zoning for the project site is "BCT" (Business Country Town) (see Figure 4.2).

#### **4.4.5 Coastal Zone Management Objectives and Policies**

Pursuant to the Hawaii Coastal Zone Management Act (Chapter 205A, HRS) all counties have enacted ordinances establishing Special Management Areas (SMA). The project site is not located within the County's SMA.

This section addresses the project's relationship to applicable coastal zone management considerations.

#### ***Recreational Resources***

*Objective: Provide coastal recreational opportunities accessible to the public.*

Comment: The Health Center project will not affect access to the shoreline as it is not a shoreline property, nor is it in the vicinity of the island's shoreline.

#### ***Historic Resources***

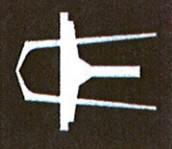
*Objective: Protect, preserve, and where desirable, restore those natural and manmade historic and prehistoric resources in the coastal zone.*

Comment: Based on the historic records and surface field inspection it is recommended that precautionary monitoring during grading of the project and excavation for foundations and footings of the planned facility and utility connections. Subsurface deposits may include indigenous and post contact cultural material remains, and remnants of structural remains, and possibly human burials.



NOT TO SCALE

Lanai Community Health Center  
 Lanai City, Lanai, Hawaii CBDG Project No. 08-04



**COUNTY OF MAUI ZONING MAP**

**FIGURE**

**4.2**

In the event that human remains are identified during the course of excavation, all work in the immediate area should be stopped, the location secured, and SHPD contacted for further directions.

**Scenic and Open Space Resources**

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

Comment: The Health Center project will be developed to ensure visual compatibility with the surrounding environment. The Health Center project is not located along the shoreline and is not anticipated to negatively impact coastal and scenic and open space resources.

**Coastal Ecosystems**

*Objective: Protect valuable coastal ecosystems, including reefs, from disruption and minimize adverse impacts on all coastal ecosystems.*

Comment: The Health Center project site is not located along the shoreline and will impact coastal ecosystems.

**Economic Uses**

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

Comment: The Health Center project is located in Lanai City and is not a coastal dependent development.

**Coastal Hazards**

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

Comment: The Health Center project is not located in a tsunami, flood, erosion or subsidence area. Appropriate mitigation measures will be implemented to mitigate storm water runoff associated the Health Center project.

### **Managing Development**

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

Comment: Opportunities for public review of the Health Center project is provided through the Environmental Assessment public comment process.

### **Public Participation**

*Objective: Stimulate public awareness, education, and participation in coastal management.*

Comment: Opportunities for public review of the Health Center project is provided through the EA process.

### **Beach Protection**

*Objective: Protect beaches for public use and recreation.*

Comment: The Health Center project is located inland in Lanai City at an elevation of about 1,600 feet mean sea level. No significant impacts on beaches are anticipated.

### **Marine Resources**

*Objective: Promote the protection, use, and development of marine and coastal resources to assure their sustainability.*

Comment: The Health Center project is not located on or near the shoreline and is not anticipated to significantly impact marine resources.

## **5. ALTERNATIVES TO THE PROPOSED ACTION**

### **5.1 No Action Alternative**

The “no action” alternative would not result in the construction of the Lanai Community Health Center. The “no action” alternative would preclude short- and long-term beneficial and impacts described in this EA.

### **5.2 Alternative Sites**

The Lanai Community Health Center considered an alternative site north of Dole Park near the existing Lanai Community Hospital and Straub Clinic. The alternative site is located on the one-way access loop road which also provides access to the Hospital and Clinic.

There were several drawbacks to the alternative site. The one-way access loop was not an ideal traffic pattern for access to the Health Center, especially given the presence of the other existing medical facilities. The alternative site has a slope which meant cutting or retaining walls would be needed to provide a level building pad. Lastly, the alternative site also had 6 to 10 large Northfolk pine trees which would have to been removed to construct the facility. Based on these considerations, the alternative site was not selected.

### **5.3 Alternative Development Concepts**

An alternative building concept was considered for the Health Center. This alternative considered a "T" configuration for the building. This "T" concept would retain Sixth Street as the main entrance and use two parking areas, one with 9 stalls in one lot for visitors and one with 11 in the other for visitors and staff. The building would have a central waiting area accessible from both parking areas.

The alternative building would be designed with both the medical and dental/ specialty areas would be located on the south side along Gay Street adjacent to each other. The administrative and multi-purpose room would be located on the north or opposite side of the building along Houston Street.

Although this alternative concept would contain the same floor area, the building would have resulted in a single long corridor for the various treatment/examination rooms and would not have provided the separation of functions as the selected concept. Also, the



building would not have provided the same opportunities for using natural ventilation as the selected concept.

## 6. DETERMINATION

Short-term construction impacts include disruption to the Health Center project site and surrounding areas during construction, decline in air quality from construction activities, and increase in noise levels. Once construction has been completed, the short-term adverse impacts will no longer occur.

Based on analysis of the anticipated impacts, a Finding of No Significant Impact (FONSI) is determined for the Lanai Community Health Center. The significance criteria to make this determination are set forth below and in Hawaii Administrative Rules Title 11, State of Hawaii Department of Health, Chapter 200, Environmental Impact Statement Rules.

- 1) *Involve an irrevocable commitment to loss or destruction of any natural or cultural resources;*

The project site was previously developed in the 1920's and redeveloped in 1965. These previous uses have removed natural resources which may have been present at one time. Reuse or redevelopment of this previously developed site will not result in loss of natural resources.

Based on the historic records and surface field inspection, it is recommended that precautionary monitoring during grading of the project and excavation for foundations and footings of the planned facility and utility connections. Subsurface deposits may include indigenous and post contact cultural material remains, and remnants of structural remains, and possibly human burials.

In the event that human remains are identified during the course of excavation, all work in the immediate area should be stopped, the location secured, and SHPD contacted for further directions.

- 2) *Curtail the range of beneficial uses of the environment;*

The Health Center will use lands which were once used for single family houses and then later redeveloped into three dormitories in the mid 1960's. The Health Center will use an area of about 25,067.07 square feet (about 0.575 acres) which is a minor portion

of the Lanai City lands near Dole Park. Thus, the Health Center will not curtail the beneficial uses of the environment.

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

The Health Center will not involve actions or activities which would adversely affect natural resources of the project site. The Health Center will be consistent with the guidelines of Chapter 344, HRS, as it will provide a facility to support medical and social service functions. As such, the Lanai Community Health Center will not conflict with the State's long-term environmental policies or goals as expressed in Chapter 344, HRS.

- 4) *Substantially affect the economic or social welfare of the community or state;*

The Health Center would provide short-term economic benefits in the form of construction jobs as well as employment associated with the operation of the Health Center. The Health Center will positively impact the social welfare of the community and the State by providing needed medical and social services.

- 5) *Substantially affect public health;*

The Health Center is anticipated to have a positive impact on public health by providing medical and social services to the residents of Lanai, especially to the uninsured and underinsured residents. The facility will be designed to provide sufficient space for residents of Lanai to seek proper and preventative medical and dental services and supporting services. The Health Center should improve overall public health of the community.

- 6) *Involve substantial secondary impacts, such as population changes or effects on public facilities;*

The Health Center will replace the existing facility and provide adequate facilities and systems to accommodate the medical and social services needs of those on Lanai who are uninsured and underinsured. The Health Center will not significantly increase demand for public facilities, services, and infrastructure. The Health Center will have a

total of 23 full time and part time employees, including about one-half who are residents of Lanai. Thus, there would not be secondary impacts related to population changes or the need for additional public facilities on Lanai to support operation of the Health Center.

7) *Involve a substantial degradation of environmental quality;*

Construction activities associated with the Health Center are anticipated to result in short-term impacts to noise, air quality, water quality, and traffic in the immediate project area. With the incorporation of mitigation measures during the construction period, the Health Center project will not result in long-term degradation of environmental quality.

8) *Have a cumulative effect upon the environment or involves a commitment for larger actions;*

The Health Center project will replace the existing facility and provide sufficient space to accommodate medical and social services for the residents of Lanai. The Health Center project is consistent with the County General Plan and zoning and is not anticipated to have a cumulative effect upon the environment.

9) *Affect a rare, threatened or endangered species;*

There are no known Federally protected, threatened or endangered species of plants or animals known to inhabit the project site or immediate vicinity.

10) *Detrimentially affect air or water quality or ambient noise levels;*

Operation of construction equipment would increase noise and exhaust emission levels in the immediate vicinity of the Health Center project site during the construction period. Once operational, the Lanai Community Health Center will not contribute significant additional noise or air emissions to the area.

11) *Affects or likely to suffer damage by being located in an environmentally sensitive area such as a floodplain, tsunami zone, beach, erosion-prone area, geographically hazardous land, estuary, fresh water or coastal water;*

The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM). Community Panel Number 1500030500E (revised September 25, 2009) shows the project site is within Zone X, "other areas determined to be outside the 0.2% annual chance floodplain". There are no flood hazards associated with the Health Center project site. Further, the project site is not located in the area designated as a tsunami evacuation zone. The project site is at elevation 1,610 feet mean sea level and not located in a coastal area.

- 12) *Substantially affect scenic vistas and viewplanes identified in county or state plans or studies;*

The Health Center project will replace a previously developed area. The Health Center project will be designed to be consistent with the Lanai City Community Design Guidelines and the character of the area. The Health Center project will not affect any scenic vistas or view planes identified in County or State plans or studies.

- 13) *Require substantial energy consumption.*

The Health Center will use natural ventilation in most areas of the building, except for medical examination rooms. The Health Center project will be submitted to the US Green Building Council for Leadership in Energy & Environmental Design (LEED) certification under Building Design & Construction. Features will be incorporated in the design of the building to the minimize energy consumption.

Based on these findings and the assessment of potential impacts from the Health Center project, a Finding of No Significant Impact (FONSI) is determined. Further, based on Hawaii Administrative Rules Title 11, State of Hawaii Department of Health, Chapter 200, Environmental Impact Statement Rules, Subchapter 6, Section 11-200-9 (4), construction of the Health Center does not warrant the preparation of an environmental impact statement preparation notice.

## **7. Permit and Approvals**

### **County of Maui**

- Building Permit
- Grading Permit
- Sewer Connection

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## 8. CONSULTED PARTIES

### 8.1 Pre-Assessment Consultation

The following agencies were consulted during the pre-assessment phase of the Draft Environmental Assessment. Each agency was sent a copy of a project summary and a request for their written comments on the project. Of those who formally replied, some had no comments, while others provided substantive comments as indicated by the ✓ and ✓✓ respectively. All written comments and responses are reproduced in Appendix A.

#### Federal

Department of the Army

U.S. Fish and Wildlife Service

National Resources Conservation Services, U.S. Dept. of Agriculture

U.S. Environmental Protection Agency

#### State of Hawaii

Department of Hawaiian Home Lands

✓✓ Department of Health

✓✓ Department of Health, Maui District Office

Department of Land and Natural Resources (DLNR)

✓ Division of Aquatic Resources

✓ Engineering Division

✓ Land Division

✓✓ Department of Land and Natural Resources Historic Preservation Division,  
Lanai Burial Council, DLNR

✓✓ Office of Hawaiian Affairs

#### County of Maui

Department of Fire and Public Safety

✓✓ Department of Environmental Management

✓ Department of Parks & Recreation

✓✓ Planning Department

Police Department

✓✓ Department of Public Works

✓ Department of Transportation



- ✓✓ Department of Water Supply

Other

Alu Like, Inc.

- ✓ Castle & Cooke Resorts, LLC
- ✓ Maui Electric Company Ltd.

**8.2 Agencies and Organizations Consulted on the Draft EA**

The following is a list of agencies and organizations consulted during the comment period for the Draft Environmental Assessment. Of those who formally replied, some had no comments, while others provided substantive comments as indicated by the ✓ and ✓✓ respectively. All written comments and responses are reproduced in Appendix E.

Federal

Department of the Army, US Army Engineer District, Honolulu  
U.S. Fish and Wildlife Service  
U.S. Dept. of Agriculture National Resources Conservation Services  
U.S. Environmental Protection Agency

State

Department of Agriculture  
Department of Business, Economic Development and Tourism, Office of Planning  
✓✓ Department of Hawaiian Home Lands  
✓✓ Department of Health  
Department of Health, Office of Environmental Quality Control  
Department of Land and Natural Resources (DLNR)  
✓✓ Department of Land and Natural Resources Historic Preservation Division  
Office of Hawaiian Affairs

County of Maui

Department of Fire and Public Safety  
✓✓ Department of Environmental Management  
✓ Department of Parks & Recreation  
✓✓ Planning Department  
✓✓ Police Department

- ✓✓ Department of Public Works
- Department of Transportation
- ✓✓ Department of Water Supply

Officials

Senator J. Kalani English, 6<sup>th</sup> District  
Representative Mele Carroll, 13<sup>th</sup> District  
Councilmember Sol P. Kahoolalahala

Other

Maui Electric Company  
Hawaiian Telcom  
Oceanic Time Warner Cable  
Alu Like, Inc.  
Castle & Cooke Resorts, LLC

Lanai Public Library

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## 9. REFERENCES

CFR Part 51-Office of the Secretary HUD, Environmental Criteria and Standards.

County of Maui. *Lanai Community Plan*. January 1998.

County of Maui. *Lanai City Community Design Guidelines*. April 1997

County of Maui Department of Housing and Human Concerns. *Lanai Senior Center. Final Environmental Assessment*. December 2009.

County of Maui Department of Environmental Management. *Integrated Solid Waste Management*. February 2009.

Federal Emergency Management Agency Flood Insurance Rate Map Community Panel Number 1500030500E. Revised September 25, 2009

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State of Hawaii Department of Agriculture. *Agricultural Lands of Importance to the State of Hawaii, Island of Molokai*. January 1977.

*The Hawaii State Plan Chapter 226, Hawaii Revised Statutes*. Office of the Governor Office of State Planning. 1988.

Title 11 Hawaii Administrative Rules State of Hawaii Department of Health Chapter 46 Community Noise Control. September 23, 1996.

State of Hawaii Department of Education. *Lanai High and Elementary School, School Status and Improvement Report Grades K-12 School Year 2008-2009*. November 2009.

State of Hawaii Department of Education. *Lanai High and Elementary School Master Plan Draft Environmental Assessment*. August 2009.

State of Hawaii Department of Transportation Airports Division. *Lanai Airport Master Plan Update*, June 1999.

State of Hawaii Department of Transportation. *Lanai Airport Master Plan Update FAR Part 150 Airport Noise Compatibility Program Final Report*. December 1999.

State of Hawaii Department of Health Office of Environmental Planning. *Water Quality Standards Map of the Islands of Molokai, Lanai, and Kahoolawe*. October 1967

State of Hawaii Department of Health. *Title 11 Hawaii Administrative Rules Chapter 54 Water Quality Standards*. August 31, 2004

State of Hawaii Department of Health, *Title 11, Hawaii Administrative Rules Chapter 46 Community Noise Control*. September 23, 1996

State of Hawaii Department of Business and Economic Development & Tourism Office of Planning. Letter to US Department of Housing and Urban Development (HUD), Hawaii State Field Office (Ref No. P-10520). June 24, 2004,

US Department of Agriculture Soil Conservation Service. *Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii*. Issued August 1972.

U.S. Fish & Wildlife Service John H. Chaffee Coastal Barrier Resources System Website. [http://www.fws.gov/habitatconservation/coastal\\_barrier.html](http://www.fws.gov/habitatconservation/coastal_barrier.html) Website access March 29, 2010.

U.S, Department of Transportation Federal Aviation Administration. Advisory Circular No. 150/5300-13 Change 7, Oct 1, 2002, and 150/5300-13 Change 11, Mar 28, 2007.

24 CFR, Subtitle A Subpart C-Siting of HUD Assisted Projects Near Hazardous Operations Handling Conventional Fuels or Chemical of an Explosive or Flammable Nature

Siting of HUD Assisted Projects Near Hazardous Operations Handling Conventional Fuels or Chemical of an Explosive or Flammable Nature, (HUD-I060-CPD, Sept. 1996).

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# Appendix A

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Pre-Assessment Consultation Letters

CHARMAINE TAVARES  
Mayor  
CHERYL K. OKUMA, Esq.  
Director  
GREGG KRESGE  
Deputy Director



COUNTY OF MAUI  
DEPARTMENT OF  
ENVIRONMENTAL MANAGEMENT  
2200 MAIN STREET, SUITE 100  
WAILUKU, MAUI, HAWAII 96793

April 12, 2010

Mr. John Sakaguchi  
Wilson Okamoto Corporation  
1907 South Beretania Street  
Artesian Plaza, Suite 400  
Honolulu, Hawaii 96826

SUBJECT: LANAI COMMUNITY HEALTH CENTER  
DRAFT EA PRE-ASSESSMENT NOTICE  
TMK (2) 4-9-006:011, LANAI CITY, LANAI

We reviewed the subject project as a pre-application consultation and have the following comments:

1. Solid Waste Division comments:
  - a. Discuss options for construction waste recycling, reuse, disposal.
2. Wastewater Reclamation Division (WWRD) comments:
  - a. Although wastewater system capacity is currently available as of 4/12/2010, the developer should be informed that wastewater system capacity cannot be ensured until the issuance of the building permit.
  - b. Wastewater contribution calculations are required before building permit is issued.
  - c. Developer is not required to pay assessment fees for this area at the current time.
  - d. Plans shall show the existing property sewer service manhole near the property line. If a property sewer service manhole does not exist, one shall be installed.
  - e. Commercial kitchen facilities and medical related discharges within the proposed project shall comply with pre-treatment requirements (including grease interceptors, sample boxes, screens etc.)

Mr. John Sakaguchi  
April 12, 2010  
Page 2

f. Non-contact cooling water and condensate should not drain to the wastewater system.

If you have any questions regarding this memorandum, please contact Gregg Kresge at 270-8230.

Sincerely,

Cheryl K. Okuma, Director

7453-01  
TRACY TAKAMINE, P. E.  
Solid Waste Division  
DAVID TAYLOR, P. E.  
Wastewater Reclamation  
Division

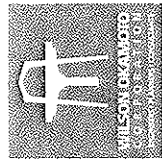
4/15/10  
JS

cc: AHL / em

RECEIVED

APR 14 2010

WILSON OKAMOTO CORPORATION



7953-01  
May 17, 2010

927 West Wahiawa Street  
Honolulu, HI 96818-4296  
Phone: 808-953-1100  
Fax: 808-953-1111  
www.wilsonconsultants.com

Ms. Cheryl Okuma, Director  
County of Maui  
Department of Environmental Management  
200 South High Street  
Wailuku, Hawaii 96793

Subject: Draft Environmental Assessment, Pre-Assessment Notice;  
Lanai Community Health Center, CBDG Project No. 08-04  
Lanai City, Lanai, Hawaii; TMK: 4-9-006:011  
Response to Comment

Dear Ms. Okuma:

Thank you for your letter dated April 12, 2010 on the Draft Environmental Assessment (EA), Pre-Assessment Notice, for the Lanai Community Health Center, CBDG Project No. 08-04 project. Our responses follow:

1. Solid Waste Division
  - a. The Draft EA will include a discussion of solid waste issues related to the project.
2. Wastewater Reclamation Division
  - a. The Draft EA will note, although wastewater system capacity is currently available, the wastewater capacity cannot be confirmed until issuance of the building permit.
  - b. The Draft EA will include wastewater calculations used in design of the facility.
  - c. The Draft EA will state that the Health Center will not be required to pay assessment fees at this time.
  - d. The Draft EA will include a site plan. The information regarding the sewer manholes will be provided to the designer.
  - e. The information regarding the sewer design requirements will be provided to the designer.
  - f. The Draft EA will state that non-contact cooling water and condensate will not drain to the wastewater system.



7953-01  
Letter to Ms. Cheryl Okuma  
Page 2  
May 17, 2010

We appreciate your participation in the Draft EA review process.

Sincerely,

John L. Sakaguchi, AICP, Senior Planner

cc: H. Matsumoto, CBDG  
M. Murdock, AHL  
D. Shaw, LCHC



CHARMAINE TAVARES  
Mayor



**DEPARTMENT OF PARKS & RECREATION**  
Planning & Development Division  
700 Halia Nakoa Street, Unit 2, Wailuku, Hawaii 96793

February 17, 2010

John L. Sakaguchi, Senior Planner  
Wilson Okamoto Corporation  
1907 South Bereania Street, Suite 400  
Honolulu, Hawaii 96826

RE: Draft Environmental Assessment, Pre-Assessment Notice  
Lanai Community Health Center, CDBG Project No. 08-04  
Lanai City, Lanai, Hawaii; TMK: (2) 4-9-006:011  
Request for Comment

Dear Mr. Sakaguchi:

Thank you for the opportunity to review and comment on the Draft Environmental Assessment, Pre-Assessment documents for the Lanai Community Health Center on the Island of Lanai.

At this time we have no comment to offer regarding this proposed development. We would, however, appreciate the opportunity to review the project design as it further develops.

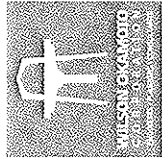
Should you have any questions, please feel free to call me, or Patrick Matsui, Chief of Parks Planning & Development at 808-270-7931.

Sincerely,

TAMARA HORCAJO  
Director of Parks and Recreation

c: Patrick Matsui, Chief of Parks Planning & Development

TH:PTM:rh



7953-01  
May 17, 2010

Ms. Tamara Horcajo, Director  
Department of Parks and Recreation  
County of Maui  
700 Halia Nakoa Street, Unit 2  
Wailuku, HI 96793

Subject: Draft Environmental Assessment (EA) - Pre-Assessment Consultation  
Lanai Community Health Center, CDBG Project No. 08-04  
TMK: 4-9-006:011; Lanai City, Lanai, Hawaii  
Response to Comment

Dear Ms. Horcajo:

Thank you for your letter dated February 17, 2010 in the Draft Environmental Assessment (EA), Pre-Assessment Notice; for the Lanai Community Health Center, CDBG Project No. 08-04 project.

The Draft EA will include that the County of Maui Department of Parks and Recreation had no comments to offer at this time.

We appreciate your participation in the Draft EA review process.

Sincerely,

John L. Sakaguchi, AICP, Senior Planner

cc: H. Matsumoto, CBDG  
M. Murdock, AHL  
D. Shaw, LCHC

CHARMAINE TAVARES  
Mayor  
JEFFREY S. HUNT  
Director  
KATHLEEN ROSS AOKI  
Deputy Director



COUNTY OF MAUI  
DEPARTMENT OF PLANNING

April 15, 2010

RECEIVED  
APR 19 2010

441.508 GUARDIAN-CORPORATION

Mr. John Sakaguchi, AICP  
Wilson Okamoto Corporation  
1907 South Beretania Street, Suite 400  
Honolulu, HI 96826

Dear Mr. Sakaguchi:

**SUBJECT: COMMENTS ON THE DRAFT ENVIRONMENTAL ASSESSMENT (EA) PRE-ASSESSMENT NOTICE FOR THE PROPOSED LANAI HEALTH CENTER, LOCATED IN LANAI CITY, LANAI, HAWAII; TMK: (2) 4-9-006:011 (POR); (EAC 2010/0002)**

The Department of Planning (Department) is in receipt of the above-referenced request for comments on the Lanai Health Center prior to the development of a Draft EA. The Department understands the proposed action includes the following:

- Demolition of three (3) one-story apartment buildings that were formerly used for plantation worker housing.
- The subdivision of TMK: (2) 4-9-006:011
- The development and operation of a new Lanai Health Center building and associated parking lot.

Based on the foregoing, the Department provides the following comments on the Draft EA:

1. The Land Use Designations for the project are assumed to be as follows:
  - a. State Land Use: Urban
  - b. Lanai Community Plan: Business
  - c. County Zoning: Business Country Town
  - d. Other: As stated, the site is within the proposed Lanai City Business Country Town Historic district for the National Register of Historic Places.

250 SOUTH HIGH STREET, WAILUKU, MAUI, HAWAII 96793  
MAIN LINE (808) 270-7735; FACSIMILE (808) 270-7634  
CURRENT DIVISION (808) 270-8205; LONG RANGE DIVISION (808) 270-7214; ZONING DIVISION (808) 270-7253

Mr. John Sakaguchi  
April 15, 2010  
Page 2

2. The Department could not determine who would be the Accepting Authority for the Draft EA. Please clarify.
3. The age and condition of the three (3) one-story apartment buildings was not described in the pre-assessment letter. In the draft EA, please provide a description of the history and use of the buildings, along with a description of their condition.
4. Please also include an assessment of the impacts the project will have on the activities and programs of the Lanai Art Center. The Lanai Art Center provides a number of programs to the Lanai community that enhances the quality of life of Lanai residents. Please take this into consideration in the evaluation of impacts.
5. Finally, please indicate how the building will aesthetically impact the Business Country Town district.

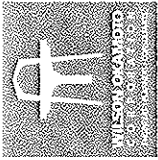
Thank you for the opportunity to comment. Should you require further clarification, please contact Erin Wade, Small Town Planner at [erin.wade@mauicounty.gov](mailto:erin.wade@mauicounty.gov) or at 270-5517.

Sincerely,

CLAYTON I. YOSHIDA, AICP  
Planning Program Administrator

for  
JEFFREY S. HUNT, AICP  
Planning Director

xc: Erin Wade, AICP, Small Town Planner  
Jocelyn Perreira, Tri-Isle Main Street Resource Center  
Kwan Law, Architects Hawaii Limited  
2010 EAC File  
General File  
JSH:CIY:ERW:lraq  
K:\WP\_DOCS\PLANNING\EAC\2010\0002\_LanaiHealthCtrn\CommentLitr.doc



7953-01  
May 17, 2010

Ms. Kathleen Ross Aoki, Director  
County of Maui  
Department of Planning  
250 South High Street  
Wailuku, Hawaii 96793

Subject: Draft Environmental Assessment, Pre-Assessment Notice;  
Lanai Community Health Center, CBDG Project No. 08-04  
Lanai City, Lanai, Hawaii; TMK: 4-9-006:011  
Response to Comment

Dear Ms. Aoki:

Thank you for your letter dated April 15, 2010 on the Draft Environmental Assessment (EA), Pre-Assessment Notice, for the Lanai Community Health Center, CBDG Project No. 08-04 project. Our responses follow:

1. The land use designations for the project site will be included in the Draft EA.
2. The County of Maui, Office of the Mayor through the US Department of Housing and Urban Development (HUD) Community Development Block Grant (CDBG) program has issued a grant to the Lanai Community Health Center, a non-profit agency, to plan and design, and potentially to construct, the Lanai Community Health Center. In Maui, the CDBG office is within the Office of the Mayor which will be the accepting agency for the Draft and Final EA.
3. Information regarding the existing structures on the project site will be included in the Draft EA.
4. The Draft EA will include information about the activities and programs of the Lanai Art Center.
5. The Draft EA will provide information about the design characteristics of the Health Center.

We appreciate your participation in the Draft EA review process.

Sincerely, 

John L. Sakaguchi, AICP, Senior Planner  
cc: H. Matsumoto, CBDG  
M. Murdock, AHL  
D. Shaw, LCHC



Maui Police Department  
55 Mahalani Street  
Waialuku, HI 96793

(7953-01)

2/18/10



FACSIMILE TRANSMISSION COVER SHEET

cc: AHL  
COM/EM

DATE : 02 - 18 - 2010

TO : John L. Sakaguchi, AICP, Senior Planner

AGENCY NAME : Wilson Okamoto Corporation

OFFICE PHONE NO. : (808) 946-2277

FAX PHONE NO. : (808) 946-2253

FROM : Gary Yabuta

DIVISION/SECTION : Chief of Police

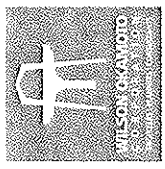
OFFICE PHONE NO. : (808) 244-6300

FAX PHONE NO. : (808) 244-6411

This fax consists of 1 pages (including cover sheet). If there are any problems with this transmission, please contact the sender.

Contents :

Comments : No adverse impacts noted by Officer Pyland, Lanai Patrol  
re Lanai Community Health Center, CBDG Proj #08-04  
Therefore no comments from MPD



7953-01  
May 17, 2010

Chief Gary Yabuta, Chief of Police  
Police Department  
County of Maui  
55 Mahalani Street  
Waialuku, HI 96793

Subject: Draft Environmental Assessment (EA) - Pre-Assessment Consultation  
Lanai Community Health Center, CBDG Project No. 08-04  
TMK: 4-9-006: 011; Lanai City, Lanai, Hawaii  
Response to Comment

Dear Chief Yabuta:

Thank you for your facsimile dated February 18, 2010 on the Draft Environmental Assessment (EA), Pre-Assessment Notice; for the Lanai Community Health Center, CBDG Project No. 08-04 project. The Draft EA will state no adverse impacts have been noted by the Maui Police Department.

We appreciate your participation in the Draft EA review process.

Sincerely,

John L. Sakaguchi, AICP, Senior Planner

cc: H. Matsumoto, CBDG  
M. Murdock, AHL  
D. Shaw, LCHC

CHAFERNAIRE TAVARES  
Mayor

MILTON M. ARAKAWA, A.I.C.P.  
Director

MICHAEL M. MIYAMOTO  
Deputy Director

Telephone: (808) 270-7845  
Fax: (808) 270-7555



COUNTY OF MAUI  
DEPARTMENT OF PUBLIC WORKS  
200 SOUTH HIGH STREET, ROOM NO. 434  
WAILUKU, MAUI, HAWAII 96793

February 24, 2010

Mr. John L. Sakaguchi, A.I.C.P., Senior Planner  
WILSON OKAMOTO CORPORATION  
1907 South Beretania Street  
Artesian Plaza, Suite 400  
Honolulu, Hawaii 96826

Dear Mr. Sakaguchi:

**SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT, PRE-ASSESSMENT  
NOTICE; LANAI COMMUNITY HEALTH CENTER, CDBG  
PROJECT NO. 08-04; LANAI CITY, LANAI, HAWAII;  
TMK: (2) 4-9-006:011**

We reviewed the subject application and have the following comments:

1. Landscaping along roadways shall be provided with root barriers to prevent roots from uplifiting roads, curbs/gutters, and sidewalks.
2. Ensure that adequate sight distance exists for vehicles entering/exiting the parking lot's driveway(s).
3. One (1) open permit No. 93-1142 requires final inspection.

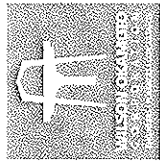
Please call Michael Miyamoto at (808) 270-7845 if you have any questions regarding this letter.

Sincerely,

*John L. Sakaguchi*  
MILTON M. ARAKAWA, A.I.C.P.  
Director of Public Works

MMA:MMMtlis  
xc: Highways Division  
Engineering Division

S:\LUCACZM\lanai\_Comm\Hittl\_Ctl\_dea\_pa\_49006011\_is.wp6



7953-01  
May 17, 2010

Mr. Milton M. Arakawa, Director  
Department of Public Works  
County of Maui  
200 South High Street, Room 434  
Wailuku, HI 96793

**Subject: Draft Environmental Assessment (EA) - Pre-Assessment Consultation  
Lanai Community Health Center, CDBG Project No. 08-04  
TMK: 4-9-006: 011; Lanai City, Lanai, Hawaii  
Response to Comment**

Dear Mr. Arakawa:

Thank you for your letter dated February 24, 2010 on the Draft Environmental Assessment (EA), Pre-Assessment Notice, for the Lanai Community Health Center, CDBG Project No. 08-04 project. Our responses follow:

1. The Draft EA will state that landscaping plans will be developed to ensure landscaping along roadways do not affect adjacent roads, curbs/gutters and sidewalks.
2. The Draft EA will include a site plan showing access driveways to the visitor and staff parking lots. Site improvements, including plantings, will be sited to ensure adequate site distance will be provided for vehicles entering/exiting the driveways. Based on discussions with Mike Miyamoto, Open Permit No 93-1142 is for work located at the intersection of Queen and Seventh Streets. The Health Center project site is at the intersection of Sixth, Houston, and Gay Streets. Thus, the open permit is not applicable to this project.

We appreciate your participation in the Draft EA review process.

Sincerely,

*John L. Sakaguchi*

John L. Sakaguchi, AICP, Senior Planner

cc: H. Matsumoto, CBDG  
M. Murdock, AHL  
D. Shaw, LCHC

CHARVINE TAVARES  
MAYOR



US

7953-01  
2/10/10

DON A. MEDEIROS  
Director  
Wayne A. Bortelac  
Deputy Director  
Telephone (808) 270-7511  
Facsimile (808) 270-7505

DEPARTMENT OF TRANSPORTATION

COUNTY OF MAUI  
200 South High Street  
Wailuku, Hawaii, USA 96793-2155

February 9, 2010

Mr. John L. Sakaguchi, AICP, Senior Planner  
Wilson Okamoto Corporation  
1907 South Beretania Street, Suite 400  
Honolulu, Hawaii 96826

Dear Mr. Sakaguchi:

**SUBJECT: LANAI COMMUNITY HEALTH CENTER**

Thank you for opportunity to comment on this important project.

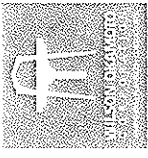
The County Department of Transportation does not operate the Maui Bus on Lanai. However, we do operate social service transportation through Maui Economic Opportunity (MEO). As such, we recommend that provisions be made for a bus stop or bus stop area at the health center. We foresee MEO disembarking a fair amount of passengers there.

Please do not hesitate to contact me if the Department may be of any further assistance or clarification.

Sincerely,

DON MEDEIROS  
Director of Transportation

S:\WAB\TRC\ongen020910



7953-01  
May 20, 2010

Mr. Don Medeiros, Director  
Department of Transportation  
County of Maui  
200 South High Street  
Wailuku, HI 96793

Subject: Draft Environmental Assessment (EA) - Pre-Assessment Consultation  
Lanai Community Health Center, CDBG Project No. 08-04  
TMK: 4-9-006: 011; Lanai City, Lanai, Hawaii  
Response to Comment

Dear Mr. Medeiros:

Thank you for your letter dated February 9, 2010. Our responses follow:

The Draft EA will include that the County Department of Transportation does not operate the Maui Bus on Lanai, however social services transportation is provided on Lanai through Maui Economic Opportunity (MEO).

The Draft EA will include the Health Center will work with MEO to identify a suitable bus stop.

We appreciate your participation in the Draft EA review process.

Sincerely,

John L. Sakaguchi, AICP, Senior Planner

cc: H. Matsumoto, CBDG  
M. Murdoch, AHL  
D. Shaw, LCHC

CHARMAINE TAVARES  
Mayor



**DEPARTMENT OF WATER SUPPLY**

COUNTY OF MAUI  
200 SOUTH HIGH STREET  
WAILUKU, MAUI, HAWAII 96793-2155  
www.mauiwater.org

7453-01  
JEFFREY K. ENG 3/23/10  
Director  
ERIC H. YAMASHIGE, PE., L.S.  
Deputy Director

JS JK

cc: AKL  
MK  
MLC

RECEIVED  
MAR 18 2010

WILSON OKAMOTO CORPORATION

March 9, 2010  
Mr. John Sakaguchi, Sr. Planner  
Wilson Okamoto Corporation  
1907 S Beretania Street  
Honolulu, Hawaii 96826

Re: TMK: (2) 4-9-006:011  
Project Name: Lanai Community Health Center, CBDG Project No. 08-04  
Draft Environmental Assessment, Pre-Assessment Notice

Dear Mr. Sakaguchi:

Thank you for the opportunity to comment on this Draft Environmental Assessment (DEA) pre-assessment notice.

**Source Availability, Consumption and System Infrastructure**

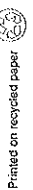
The EA should identify sources and potable and non-potable demand for the proposed Lanai Community Health Center project. Potable water service to the subject lot is provided by the Lanai Water Company's Leeward Well 8 and Windward Well 6. 8-inch water lines run along Houston, Sixth and Gay Streets. Fire flow, domestic and irrigation calculations will be reviewed during the building permit process in accordance to system standards. Anticipated demand using system standards, would be approximately 5,880 gallons per day.

**Conservation**

To mitigate demand on Lanai resources, please find attached our checklist of Water Conservation Ideas for Commercial Buildings. We recommend that the following conservation measures be included in the project design and noted in the DEA:  
**Use Climate-adapted Plants:** We recommend limiting turf areas and using native climate-adapted plants for all landscaping. The project is located in Plant Zones 3 and 5. Native plants adapted to the natural climate and rainfall of the area conserve water and protect the watershed from degradation due to invasive alien species. Please find attached our planting brochure.

*"By Water All Things Find Life"*

The Department of Water Supply is an Equal Opportunity provider and employer. To file a complaint of discrimination, write: USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington DC 20250-9410. Or call (202) 720-5964 (voice and TDD)



Proposed Lanai Community Health Center  
Page 2

Eliminate Single-Pass Cooling: Single-pass, water-cooled systems should be eliminated per Maui County Code Subsection 14.21.20. Although prohibited by code, single-pass water cooling is still manufactured into some models of air conditioners, freezers, and commercial refrigerators.  
Maintain Fixtures to Prevent Leaks: A simple, regular program of repair and maintenance can prevent the loss of hundreds or even thousands of gallons a day. The applicant should establish a regular maintenance program.  
Utilize Low-Flow Fixtures and Devices: Maui County Code Subsection 16.20A.680 requires the use of low-flow water fixtures and devices in faucets, showerheads, water closets, and hose bibs.  
Prevent Over-Watering By Automated Systems: Provide rain-sensors on all automated irrigation controllers. Check and reset controllers at least once a month to reflect the monthly changes in evapo-transpiration rates at the site. As an alternative, provide the more automated, soil-moisture sensors on controllers.

**Pollution Prevention**

In order to protect ground and surface water sources, please find enclosed Best Management Practices (BMPs) for medical facilities and BMPs designed to minimize infiltration and runoff from construction. The mitigation measures below should be noted in the EA and implemented during construction:

- Prevent cement products, oil, fuel and other toxic substances from leaching into the ground.
- Properly and promptly dispose of all loosened and excavated soil and debris material from drainage structure work.
- Retain ground cover until the last possible date.
- Stabilize denuded areas by sodding or planting as soon as possible. Replanting should include soil amendments and temporary irrigation. Use high seeding rates to ensure rapid stand establishment.
- Avoid fertilizers and biocides, or apply only during periods of low rainfall to minimize chemical run-off.
- Keep run-off on site.

Should you have any questions, please contact our Water Resources and Planning Division at 808-244-8550.

Sincerely,  
  
Jeffrey K. Eng, Director

mhb  
cc: consultant, engineering division  
Attachment: "Saving Water in the Yards"; "Checklist of Water Conservation for Commercial Buildings"; BMPs for Medical Facilities

LAND USE: Medical Facilities

CONCERN: Laboratory chemicals, cold sterilization, pharmaceuticals

GOAL: Wastewater Control

**SUGGESTED PRACTICES:**

Pollution prevention for mercury and silver:  
Silver containing wastes: The major sources of silver is from x-ray and photographic equipment. Another source of silver is silver nitrate solutions used to treat burns. Solutions with high concentrations of silver should be collected and disposed of as hazardous waste.

Mercury: The primary sources of mercury in medical facilities are equipment, such as measurement devices, lamps and electrical equipment. Proper handling and disposal of mercury-containing equipment should prevent mercury from entering the sanitary sewer. In most cases, alternative products that do not contain mercury are available. (Terrene Institute). Mercury thermometers and manometers can be replaced by equipment with electronic sensors. Cantor tubes can often be replaced by Anderson tubes which contain no mercury. Electrical equipment containing mercury can be replaced by solid state devices and fiber optic equipment. Batteries can be replaced by lithium, zinc air or alkaline batteries. There are no effective substitutes for high energy fluorescent lights, but technology is reducing the volume of mercury required in such lights.

Mercury is also present in some laboratory chemicals and pharmaceutical preparations. The amount of mercury in antiseptics, diuretics, and skin preparations is low making these compounds unlikely to be significant sources. For other mercury-containing chemicals however, there are alternatives available.

Cold Sterilization: Formaldehyde and glutaraldehyde solutions must be treated and detoxified prior to discharge to the sewer. In certain cases, these solutions may be replaced with peracetic acid.

Laboratories: Wet chemistry methods may be replaced with automated chemical analyzers. Cyanide-free solutions may be available for cell sorting and counting analyzers. Alternatives, such as naphtha isoparaffinic hydrocarbons, may be used in place of xylenes. If xylenes must be used, spent solutions should be recycled and not discharged to the sanitary sewer.

Pharmacy: Neither medicines containing significant levels of metals nor expired medicines should be discharged to the sewer. Chemicals should be clearly labeled.

Utilities and Maintenance: Use automatic injection for laundry and boiler chemicals. Replace single pass cooling systems with recirculating systems. Avoid use of cooling water additives containing tributyltin or copper. Use latex paints instead of oil-based paints. Replace solvents with detergent-based cleaning agents. Replace phenolic disinfectants with quaternary amine disinfectants.

REFERENCE: Residential & Commercial Source Control Programs. WERF 1998

## A Checklist of Water Conservation Ideas For

# Commercial Buildings

This checklist provides water conservation tips successfully implemented by industrial and commercial users. This list has been revised from the original copy first published and distributed by the Los Angeles Department of Water and Power.

### General suggestions

Increase employee awareness of water conservation.

Install signs encouraging water conservation in employee and customer restrooms.

When cleaning with water is necessary, use budgeted amounts.

Determine the quantity and purpose of water being used.

Read water meter weekly to monitor success of water conservation efforts.

Assign an employee to monitor water use and waste.

Seek employee suggestions on water conservation; put suggestion boxes in prominent areas.

Determine other methods of water conservation.

### Building maintenance

Check water supply for leaks.

Turn off any unnecessary flows.

Repair dripping faucets and showers and continuously running or leaking toilets.

Install faucet aerators where possible.

Reduce toilet water use by adjusting flush valves or installing dams and flapper mechanisms.

As appliances or fixtures wear out, replace them with water-saving models.

Shut off water supply to equipment rooms not in use.

Minimize the water used in cooling equipment in accordance with manufacturers recommendations. Shut off cooling units when not needed.



### Cafeteria area

Turn off continuous flow used to clean the drain trays.

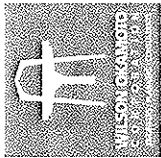
Turn off dishwasher when not in use. Wash full loads only.

Use water from steam tables to wash down cooking area.

Do not use running water to melt ice or frozen foods.

Use water-conserving ice makers.





7953-01  
May 17, 2010

Mr. Jeffrey K. Eng, Director  
Department of Water Supply  
County of Maui  
200 South High Street  
Wailuku, HI 96793

Subject: Draft Environmental Assessment (EA) - Pre-Assessment Consultation  
Lanai Community Health Center, CDBG Project No. 08-04  
TMK: 4-9-006: 011; Lanai City, Lanai, Hawaii  
Response to Comment

Dear Mr. Eng:

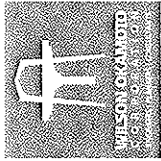
Thank you for your letter dated March 9, 2010 on the Draft Environmental Assessment (EA), Pre-Assessment Notice, for the Lanai Community Health Center, CDBG Project No. 08-04 project. Our responses follow:

**Source Availability, Consumption and System Infrastructure:** The Draft EA will state that the Lanai Water Company Leeward Well 8 and Windward Well 6 as the water sources for the project. The Draft EA will state 8-inch water lines are located along Houston, Sixth, and Gay Streets. The anticipated demand will be included in the Draft EA.

**Conservation:** The measures included in the checklist for Water Conservation Ideas for Commercial Buildings will be provided to the design team for consideration in the design of the project. At this time, the preliminary design drainage drawings show the intent is to maintain the existing drainage patterns and drainage discharge points off the site. Drainage will generally sheet flow from Houston Street towards Gay Street. The increased drainage from the proposed site will be detained on-site, utilizing landscaped areas along Gay Street as detention basins and swales within the site. The swales and basins would also function as bio-swales.

The Draft EA will also state that the Health Center will submit to the US Green Building Council for Leadership in Energy & Environmental Design certification under Building Design and Construction.

**Pollution Prevention:** The mitigation measures provided will be considered and implemented where appropriate.



7953-01  
Letter to Mr. Jeffrey K. Eng  
Page 2  
May 17, 2010

We appreciate your participation in the Draft EA review process.

Sincerely,

John L. Sakaguchi, AICP, Senior Planner

cc: H. Matsumoto, CBDG  
M. Murdock, AHL  
D. Shaw, LCHC



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

March 8, 2010

Mr. John L. Sakiguchi, AICP  
Senior Planner  
Wilson Okamoto Corporation  
1907 South Beretania Street, Suite 400  
Honolulu, Hawaii 96826

**Subject: Draft Environmental Assessment, Pre-Assessment Notice for  
Lanai Community Health Center, CBDG Project No. 08-04  
Lanai City, Island of Lanai, Hawaii  
TMK: (2) 4-9-006:011**

Dear Mr. Sakiguchi:

The Department of Health (DOH), Clean Water Branch (CWB), received your Request for Comment, dated February 12, 2010, and project summary sheet and location map for the subject project. The DOH-CWB has reviewed the document and offers these comments on your project. Please note that our review is based solely on the information provided in the subject document and its compliance with Hawaii Administrative Rules (HAR), Chapters 11-54 and 11-55. You may be responsible for fulfilling additional requirements related to our program. We recommend that you also read our standard comments on our website at <http://www.hawaii.gov/health/environmental/env-planning/landuse/CWB-standardcomment.pdf>.

- Any project and its potential impacts to State waters must meet the following criteria:
  - Antidegradation policy (HAR, Section 11-54-1.1), which requires that the existing uses and the level of water quality necessary to protect the existing uses of the receiving State water be maintained and protected.
  - Designated uses (HAR, Section 11-54-3), as determined by the classification of the receiving State waters.
  - Water quality criteria (HAR, Sections 11-54-4 through 11-54-8).
- You are required to obtain a National Pollutant Discharge Elimination System (NPDES) permit for discharges of wastewater, including storm water runoff, into State surface waters

*[Handwritten initials]*  
 KYONELLE EWING, M.D.  
 DIRECTOR OF HEALTH  
 HONOLULU, HI 96826  
 IN REPLY, PLEASE REFER TO:  
 03016PSS.10  
*cc: [Handwritten initials]*

03016PSS.10

RECEIVED  
MAR 10 2010  
WILSON OKAMOTO CORPORATION

Mr. John L. Sakiguchi, AICP  
March 8, 2010  
Page 2  
03016PSS.10

(HAR, Chapter 11-55). For the following types of discharges into Class A or Class 2 State waters, you may apply for NPDES general permit coverage by submitting the applicable Notice of Intent (NOI) form:

- Storm water associated with construction activities, including excavation, grading, clearing, demolition, uprooting of vegetation, equipment staging, and storage areas that result in the disturbance of equal to or greater than one (1) acre of total land area. The total land area includes a contiguous area where multiple separate and distinct construction activities may be taking place at different times on different schedules under a larger common plan of development or sale. An NPDES permit is required before the start of the construction activities.
- Discharges of hydrotesting water.
- Discharges of construction activity dewatering.

You must submit a separate NOI form for each type of discharge at least 30 calendar days prior to the start of the discharge activity, except when applying for coverage for discharges of storm water associated with construction activity. For this type of discharge, the NOI must be submitted 30 calendar days before the start of construction activities. The NOI forms may be picked up at our office or downloaded from our website at <http://www.hawaii.gov/health/environmental/water/cleanwater/forms/genl-index.html>.

3. For types of wastewater discharges not covered by an NPDES general permit or discharges to Class AA or Class 1 State waters, you may need an NPDES individual permit. An application for an NPDES individual permit must be submitted at least 180 calendar days before the commencement of the discharge. The NPDES application forms may be picked up at our office or downloaded from our website at <http://www.hawaii.gov/health/environmental/water/cleanwater/forms/indiv-index.html>.

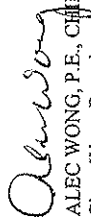
4. Please note that all discharges related to the project construction or operation activities, whether or not NPDES permit coverage is required, must comply with the State's Water Quality Standards. Noncompliance with water quality requirements contained in HAR, Chapter 11-54, and/or permitting requirements, specified in HAR, Chapter 11-55, may be subject to penalties of \$25,000 per day per violation.

Mr. John L. Sakiguchi, AICP  
March 8, 2010  
Page 2

03016PSS.10

If you have any questions, please visit our website at  
<http://www.hawaii.gov/health/environmental/water/cleanwater/index.html>, or contact the  
Engineering Section, CWB, at 586-4309.

Sincerely,

  
ALEC WONG, P.E., CHIEF  
Clean Water Branch

SS:ml

c: Mr. Roland Asakura, CWB, Maui District Health Office [via e-mail only]  
DOH-EPO #I-3057 [via email only]



7953-01  
May 17, 2010

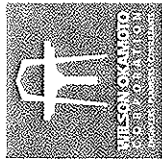
Mr. Alec Wong, P.E., Chief  
Clean Water Branch  
Department of Health  
State of Hawaii  
P.O. Box 3378  
Honolulu, Hawaii 96801

Subject: Draft Environmental Assessment (EA) - Pre-Assessment Consultation  
Lanai Community Health Center, CDBG Project No. 08-04  
TMK: 4-9-006: 011; Lanai City, Lanai, Hawaii  
Response to Comment

Dear Mr. Wong:

Thank you for your letter dated March 8, 2010 on the Draft Environmental Assessment (EA), Pre-Assessment Notice; for the Lanai Community Health Center, CDBG Project No. 08-04 project. Our responses follow:

1. The Draft EA will state that the proposed project will comply with HAR, Chapters 11-54 and 11-55, as applicable.
2. The Draft EA will include:
  - a. The project site will be less than 1.0-acre. Should the area of disturbance exceed 1.0-acre, a National Pollutant Discharge Elimination (NPDES) general permit coverage Notice of Intent (NOI) will be submitted prior to start of construction.
  - b. The Health Center project includes construction of water and fire protection lines. Should discharges of hydrotesting water be required, a NPDES permit for hydrotesting will be submitted.
  - c. The Health Center construction will include slab foundations and footings. Dewatering is not anticipated at this time. Should discharges of dewatering be required, a NPDES permit for dewatering will be submitted.
3. The Draft EA will state that the Health Center project site is approximately 0.575 acres and located at 1,600 feet mean sea level and about 4.5 miles from the shoreline. Nearby State waters are Class 2 Inland. An NPDES Individual permit is not anticipated.



7953-01  
Mr. Alec Wong, P.E., Chief  
Page 2  
May 17, 2010

4. The Draft EA will state that all discharges related to the project construction or operation activities, whether or not NPDES permit coverage and/or Section 401 Water Quality Certification are required, must comply with the State's Water Quality Standards. Noncompliance with water quality requirements contained in HAR, Chapter 11-54, and/or permitting requirements, specified in HAR, Chapter 11-55, may be subject to penalties of \$25,000 per day per violation.

We appreciate your participation in the Draft EA review process.

Sincerely,

John L. Sakaguchi, AICP, Senior Planner

cc: H. Matsumoto, CBDG  
M. Murock, AHL  
D. Shaw, LCHC



STATE OF HAWAII  
DEPARTMENT OF HEALTH  
MAUI DISTRICT HEALTH OFFICE  
54 HIGH STREET  
WAILUKU, MAUI, HAWAII 96793-2102

February 23, 2010

Mr. John L. Sakaguchi  
AICP, Senior Planner  
Wilson Okamoto Corporation  
1907 South Beretania Street, Suite 400  
Honolulu, Hawaii 96826

Dear Mr. Sakaguchi:

**Subject:** Draft Environmental Assessment, Pre-Assessment Notice for Lanai  
Community Health Center, CBDG Project No. 08-04 Lanai City,  
Lanai, Hawaii  
TMK: 4-9-006:11

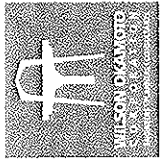
Thank you for the opportunity to comment this project. The following comments are offered:

1. The noise created during the construction phase of the project may exceed the maximum allowable levels as set forth in Hawaii Administrative Rules, Chapter 11-46 "Community Noise Control". A noise permit may be required and should be obtained before the commencement of this project.
2. The Department of Health supports the project to be connected to the Lanai Wastewater Reclamation Facility and Lanai Water Company.

Should you have any questions, please call me at 808 984-8230 or e-mail me at [patricia.kitkowski@doh.hawaii.gov](mailto:patricia.kitkowski@doh.hawaii.gov).

Sincerely,

Patti Kitkowski  
Acting District Environmental Health Program Chief



1555 South Beretania Street  
Honolulu, HI 96826  
1555 South Beretania Street  
Honolulu, HI 96826  
1555 South Beretania Street  
Honolulu, HI 96826  
1555 South Beretania Street  
Honolulu, HI 96826

7953-01  
May 17, 2010

Ms. Patti Kitkowski, Acting District Chief  
State of Hawaii  
Department of Health  
Maui District Health Office  
Environmental Health Program  
54 High Street  
Wailuku, HI 96793

**Subject:** Draft Environmental Assessment (EA) - Pre-Assessment Consultation  
Lanai Community Health Center, CBDG Project No. 08-04  
TMK: 4-9-006: 011; Lanai City, Lanai, Hawaii  
Response to Comment

Dear Ms. Kitkowski:

Thank you for your letter dated February 23, 2010 on the Draft Environmental Assessment (EA), Pre-Assessment Notice, for the Lanai Community Health Center, CBDG Project No. 08-04 project. Our responses follow:

1. The Draft EA will include that construction of the Health Center will, most likely, occur during daytime working hours. However, should the contractor elect to work during other hours, a noise permit will be necessary.
2. The Draft EA will include that wastewater from the Health Center will connect to existing County lines and flows will be directed to the Lanai Wastewater Reclamation Facility. Water service will be from the Lanai Water Company.

We appreciate your participation in the Draft EA review process.

Sincerely,

John L. Sakaguchi, AICP, Senior Planner

cc: H. Matsumoto, CBDG  
M. Murdock, AHL  
D. Shaw, LCHC

LINDA LINGLE  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
LAND DIVISION

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

March 1, 2010

Wilson Okamoto Corporation  
1907 South Beretania Street Suite 400  
Honolulu, Hawaii 96826

Attention: Mr. John L. Sakaguchi, AICP, Senior Planner

Ladies and Gentlemen:

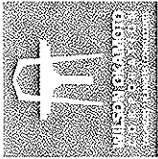
Subject: Pre-Assessment for Draft Environmental Assessment for Lanai  
Community Health Center

Thank you for the opportunity to review and comment on the subject matter. The Department of Land and Natural Resources' (DLNR), Land Division distributed or made available a copy of your report pertaining to the subject matter to DLNR Divisions for their review and comment.

Other than the comments from Division of Aquatic Resources, Engineering Division, the Department of Land and Natural Resources has no other comments to offer on the subject matter. Should you have any questions, please feel free to call our office at 587-0433. Thank you.

Sincerely,

*Morris M. Atta*  
for Morris M. Atta  
Administrator



7953-01  
May 17, 2010

Mr. Morris M. Atta, Administrator  
Land Division  
Department of Land and Natural Resources  
State of Hawaii  
P.O. Box 621  
Honolulu, HI 96809

Subject: Draft Environmental Assessment (EA) - Pre-Assessment Consultation  
Lanai Community Health Center, CDBG Project No. 08-04  
TMK: 4-9-006: 011; Lanai City, Lanai, Hawaii  
Response to Comment - Land Division

Dear Mr. Atta:

Thank you for your letter dated March 1, 2010 on the Draft Environmental Assessment (EA), Pre-Assessment Notice, for the Lanai Community Health Center, CDBG Project No. 08-04 project.

The Draft EA will include that the Land Division had no comments to offer at this time.

We appreciate your participation in the Draft EA review process.

Sincerely,

*John L. Sakaguchi*

John L. Sakaguchi, AICP, Senior Planner

cc: H. Matsumoto, CBDG  
M. Murdock, AHL  
D. Shaw, LCHC

7953-01 JS  
LAWRENCE W. ABEL  
DIRECTOR OF LAND AND NATURAL RESOURCES  
COMMISSIONER OF THE DEPARTMENT OF LAND AND NATURAL RESOURCES  
OFF

cc: AKK

RECEIVED

MAR 03 2010

WILSON OKAMOTO CORP.

LAUGA H THIELER  
 BOARD OF LAND AND NATURAL RESOURCES  
 DIVISION OF WATER RESOURCES MANAGEMENT



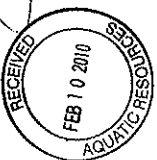
RECEIVED  
 LAND DIVISION

2010 FEB 23 10:40 AM  
 DEPARTMENT OF LAND AND NATURAL RESOURCES  
 DEPT. OF LAND DIVISION  
 NATURAL RESOURCES DIVISION, BOX 621  
 STATE OF HAWAII  
 HONOLULU, HAWAII 96809

February 9, 2010

MEMORANDUM

- TO: **DENR Agencies:**
- Div. of Aquatic Resources
  - Div. of Boating & Ocean Recreation
  - Engineering Division
  - Div. of Forestry & Wildlife
  - Div. of State Parks
  - Commission on Water Resource Management
  - Office of Conservation & Coastal Lands
  - Land Division -
  - Historic Preservation

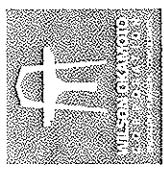


FROM: **Morris M. Atta**  
 SUBJECT: Pre-Assessment for draft environmental assessment for Lanai Community Health Center Project  
 LOCATION: Island of Lanai  
 APPLICANT: Wilson Okamoto Corporation

Transmitted for your review and comment on the above referenced document. We would appreciate your comments on this document. Please submit any comments by March 2, 2010.  
 If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact my office at 587-0433. Thank you.

- Attachments
- We have no objections.
  - We have no comments.
  - Comments are attached.

Signed: *[Signature]*  
 Date: *23 Feb 2010*



7953-01  
 May 17, 2010

Mr. Morris M. Atta, Administrator  
 Land Division  
 Department of Land and Natural Resources  
 State of Hawaii  
 P.O. Box 621  
 Honolulu, HI 96809

Subject: Draft Environmental Assessment (EA) - Pre-Assessment Consultation  
 Lanai Community Health Center, CDBG Project No. 08-04  
 TMK: 4-9-006: 011; Lanai City, Lanai, Hawaii  
 Response to Comment - Division of Aquatic Resources

Dear Mr. Atta:

Thank you for your letter dated March 1, 2010 on the Draft Environmental Assessment (EA), Pre-Assessment Notice, for the Lanai Community Health Center, CDBG Project No. 08-04 project.

The Draft EA will note that the Division of Aquatic Resources has no objections at this time.

We appreciate your participation in the Draft EA review process.

Sincerely,  
*[Signature]*

John L. Sakaguchi, AICP, Senior Planner

cc: H. Matsumoto, CBDG  
 M. Murdock, AHL  
 D. Shaw, LCHC

STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
LAND DIVISION  
POST OFFICE BOX 621  
HONOLULU, HAWAII 96809



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
LAND DIVISION  
POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

February 9, 2010

MEMORANDUM

TO: DLNR Agencies:  
 Div. of Aquatic Resources  
 Div. of Boating & Ocean Recreation  
 Engineering Division  
 Div. of Forestry & Wildlife  
 Div. of State Parks  
 Commission on Water Resource Management  
 Office of Conservation & Coastal Lands  
 Land Division  
 Historic Preservation

FROM: Morris M. Ata  
SUBJECT: Pre-Assessment for draft environmental assessment for Lanai Community Health Center Project  
LOCATION: Island of Lanai  
APPLICANT: Wilson Okamoto Corporation

Transmitted for your review and comment on the above referenced document. We would appreciate your comments on this document. Please submit any comments by March 2, 2010.  
If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact my office at 587-0433. Thank you.

We have no objections.  
 We have no comments.  
 Comments are attached.  
Signed: \_\_\_\_\_  
Date: 2/19/10

LANDS DIVISION  
GOVERNOR OF HAWAII



DEPARTMENT OF LAND AND NATURAL RESOURCES  
ENGINEERING DIVISION

LD/MorrisM. Ata  
RE: Pre-Assessment/DEALanaiComHealthCenter  
Maui, 496

COMMENTS

- We confirm that the project site, according to the Flood Insurance Rate Map (FIRM), is located in Flood Zone \_\_\_\_\_.
- Please take note that the project site, according to the Flood Insurance Rate Map (FIRM), is located in Flood Zone X. The Flood Insurance Program does not have any regulations for developments within Flood Zone X.
- Please note that the correct Flood Zone Designation for the project site according to the Flood Insurance Rate Map (FIRM) is \_\_\_\_\_.
- Please note that the project must comply with the rules and regulations of the National Flood Insurance Program (NFIP) presented in Title 44 of the Code of Federal Regulations (44CFR), whenever development within a Special Flood Hazard Area is undertaken. If there are any questions, please contact the State NFIP Coordinator, Ms. Carol Tyau-Beam, of the Department of Land and Natural Resources, Engineering Division at (808) 587-0267.
- Please be advised that 44CFR indicates the minimum standards set forth by the NFIP. Your Community's local flood ordinance may prove to be more restrictive and thus take precedence over the minimum NFIP standards. If there are questions regarding the local flood ordinances, please contact the applicable County NFIP Coordinators below:  
 Mr. Robert Sumitomo at (808) 768-8097 or Mr. Mario Siu Li at (808) 768-8098 of the City and County of Honolulu, Department of Planning and Permitting.  
 Mr. Frank DeMarco at (808) 961-8042 of the County of Hawaii, Department of Public Works.  
 Mr. Francis Cerizo at (808) 270-7771 of the County of Maui, Department of Planning.  
 Mr. Mario Antonio at (808) 241-6620 of the County of Kauai, Department of Public Works.

The applicant should include project water demands and infrastructure required to meet water demands. Please note that the implementation of any State-sponsored projects requiring water service from the Honolulu Board of Water Supply system must first obtain water allocation credits from the Engineering Division before it can receive a building permit and/or water meter.  
 The applicant should provide the water demands and calculations to the Engineering Division so it can be included in the State Water Projects Plan Update.

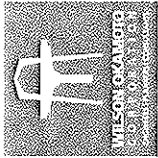
Additional Comments: \_\_\_\_\_  
 Other: \_\_\_\_\_

Should you have any questions, please call Ms. Suzie S. Agraan of the Planning Branch at 587-0258.

Signed: \_\_\_\_\_  
Date: 2/19/10  
CARY S. CHANG ACTING CHIEF ENGINEER

Attachments





7953-01  
May 17, 2010

Mr. Morris M. Atta, Administrator  
Land Division  
Department of Land and Natural Resources  
State of Hawaii  
P.O. Box 621  
Honolulu, HI 96809

Subject: Draft Environmental Assessment (EA) - Pre-Assessment Consultation  
Lanai Community Health Center, CDBG Project No. 08-04  
TMK: 4-9-006: 011; Lanai City, Lanai, Hawaii  
Response to Comment - Engineering Division

Dear Mr. Atta:

Thank you for your letter dated March 1, 2010 on the Draft Environmental Assessment (EA), Pre-Assessment Notice, for the Lanai Community Health Center, CDBG Project No. 08-04 project.

The Draft EA will note the proposed project is located within the Flood Insurance Rate Map (FIRM) Zone X and that the Flood Insurance Program does not have any regulations for developments in Zone X.

We appreciate your participation in the Draft EA review process.

Sincerely,

A handwritten signature in black ink, appearing to read 'John L. Sakaguchi'.

John L. Sakaguchi, AICP, Senior Planner

cc: H. Matsumoto, CBDG  
M. Murdock, AHL  
D. Shaw, LCHC



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES

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

February 25, 2010

Wilson Okamoto Corporation  
1907 South Beretania Street #400  
Honolulu, Hawaii 96826

Dear John L. Sakaguchi:

**SUBJECT:** Draft Environmental Assessment, Pre-Assessment Notice; Lana'i Community Health Center, CBDG Project No. 08-04, Lana'i City, Lana'i, Hawaii.  
TMK: 4-9-006:011

Mahalo for the opportunity to comment on the above project for the Lana'i Community Health Center for Lana'i City. This project will be a welcome addition and improvement on the current health center and services for the community. Your letter for comment has also been distributed to the Maui-Lana'i Islands Burial Council for their review and comments.

The project area has been previously disturbed and the SHPD History and Culture Branch do not anticipate any burials or other related sites in the area. Our archaeological branch will be sending in their separate review comments. This letter acknowledges there is probably no impact to traditional Hawaiian cultural practices for at least since the town was built in the 1920's.

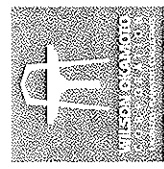
Be mindful that the Lana'i Town Square and its boundaries are currently under consideration and review for nomination to the National Historic Register and this project may or may not be within those boundaries and would be impacted by those rules for design and so on.

Please call me directly at 808.692.8025 or email at [Phyllis.L.Cayan@hawaii.gov](mailto:Phyllis.L.Cayan@hawaii.gov) should you have any questions.

Sincerely,

*Phyllis Coochie Cayan*  
Phyllis Coochie Cayan  
History and Culture Branch Chief

cc: Nancy McMahon, Deputy SHPO/State Archaeologist  
Ross Stephenson, Architecture Historian



7953-01  
May 17, 2010

Ms. Phyllis Coochie Cayan, Branch Chief  
History and Culture  
State Historic Preservation Division  
601 Kamokila Boulevard, Room 555  
Kapolei, HI 96707

**Subject:** Draft Environmental Assessment (EA) - Pre-Assessment Consultation  
Lana'i Community Health Center, CBDG Project No. 08-04  
TMK: 4-9-006: 011; Lana'i City, Lana'i, Hawaii  
Response to Comment

Dear Ms. Cayan:

Thank you for your letter dated February 25, 2010 (LOG NO: 2010.0427/DOC NO: 1002PC008) on the Draft Environmental Assessment (EA), Pre-Assessment Notice, for the Lana'i Community Health Center, CBDG Project No. 08-04 project. Our responses follow:

The Draft EA will include that the project site has been previously disturbed and as such the History and Culture Branch does not anticipate any burials or other related sites in the area. Further, the Draft EA will include that there is probably no impact to traditional Hawaiian cultural practices for at least since Lana'i City was built in the 1920's.

The Draft EA will state the project site is located in the Lana'i Town Square and its boundaries are currently under consideration and review for nomination to the National Historic Register.

We appreciate your participation in the Draft EA review process.

Sincerely,  
*John L. Sakaguchi*

John L. Sakaguchi, AICP, Senior Planner

cc: H. Matsumoto, CBDG  
M. Murdock, AHL  
D. Shaw, LCHC

PHONE (808) 594-1888



STATE OF HAWAII  
OFFICE OF HAWAIIAN AFFAIRS  
711 KAPIOLANI BOULEVARD, SUITE 500  
HONOLULU, HAWAII 96813

March 02, 2010

Wilson Okamoto Corporation  
Attn: John L. Sakaguchi, AICP, Senior Planner  
1907 South Beretania Street, Suite 400  
Honolulu, HI 96826

Re: Draft Environmental Assessment, Pre-Assessment Notice; Lana'i Community Health Center, CBDG Project No. 08-04; Lana'i City, Lana'i, Hawaii; TMK: 4-9-006:011; Request for Comment

Aloha e Mr. Sakaguchi:

Thank you for the opportunity to comment on the above-referenced project.

The Office of Hawaiian Affairs (OHA) is in receipt of the above-referenced Draft Environmental Assessment (DEA), Pre-Assessment Notice. Applicant Lana'i Community Health Center (LCHC) is considering construction of a new health care facility in Lana'i City which will provide accessible primary medical care, dental care, behavioral health services, prenatal, family planning, nutrition and preventive health education services open to the low- and moderate-income, uninsured, and underserved residents of Lana'i. State of Hawai'i funds, and land leased from Center Castle & Cooke Resorts LLC, will be used for operation of the LCHC. OHA offers the following comments.

We look forward to reviewing the DEA's analysis and mitigation measures relating to the project's impact primarily on historic and cultural properties and/or resources. We note that in January 2009, the County of Maui Planning Department and the State of Hawai'i Department of Land and Natural Resources (DLNR), State Historic Preservation Division (SHPD) issued a Draft National Register of Historic Places Registration Form for Lana'i City Business Country Town historic district, a 17-block area located in the center of Lana'i City. We understand that the Draft Registration Form is still under review.

OHA further understands that the LCHC project is located on the southwestern edge of the historic district. The Draft Registration Form identifies three (3) existing buildings on the

Wilson Okamoto Corporation  
Attn: John L. Sakaguchi, AICP, Senior Planner  
March 02, 2010  
Page 2 of 2

project site as non-contributing buildings, which were constructed in 1965 as among a total of 19 dormitories built by Plantation Housing Ltd. We anticipate more detailed elaboration on this matter in the completed DEA, as well as discussion on the historical context pertaining to this historic district and Lana'i island.

Lastly, in the event that historic properties, including iwi kūpuna (human burials), are encountered during construction work for the LCHC project, OHA requests to be informed and asks for applicant's compliance pursuant to Chapter 6E, HRS, and Section 13-300, HAR, as follows:

1. Stop all construction/disturbing activity in the immediate area.
2. Leave all remains in place.
3. Immediately notify the SHPD and the county police department.

Thank you again for the opportunity to comment on this project. Should you have any questions, please contact Jerome Yasuhara, Compliance Specialist III, at (808) 594-0239 or by email at [jeromey@oha.org](mailto:jeromey@oha.org).

'O wau iho nō, me ka ha'aha'a,

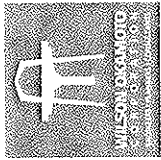
Clyde W. Nāmu'o  
Chief Executive Officer

c: Trustee Boyd P. Mossman  
OHA Maui/Lana'i Island—CRC

7753-01  
3/5/10  
FAX (808) 594-1885

JS  
cc: AAL

HRD10-4825



7933-01  
May 17, 2010

Mr. Clyde W. Namuo, Chief Executive Officer  
Office of Hawaiian Affairs  
State of Hawaii  
711 Kapiolani Boulevard, Suite 500  
Honolulu, Hawaii 96813

Subject: Draft Environmental Assessment (EA) - Pre-Assessment Consultation  
Lanai Community Health Center, CDBG Project No. 08-04  
TMK: 4-9-006: 011; Lanai City, Lanai, Hawaii  
Response to Comment

Dear Mr. Namuo:

Thank you for your letter dated March 2, 2010 (HRD10-4825) on the Draft Environmental Assessment (EA), Pre-Assessment Notice, for the Lanai Community Health Center, CDBG Project No. 08-04 project. Our responses follow.

1. The Draft EA will state the project site is located in Lanai City Business Country Town District and its boundaries are currently under consideration and review for nomination to the National Historic Register.
2. The Draft EA will include that the existing three buildings on the project site are identified as non-contributing buildings which were constructed in 1965, or 45 years ago. An archaeological literature review was prepared for the project site and findings will be included in the Draft EA.
3. The Draft EA and construction documents will include that in the event historic properties, including iwi kupuna are encountered during construction, work will stop in the immediate area and the appropriate agencies will be notified.

We appreciate your participation in the Draft EA review process.

Sincerely,

John L. Sakaguchi, AICP, Senior Planner

cc: H. Matsumoto, CDBG  
M. Murdock, AHL  
D. Shaw, LCHC

March 5, 2010  
J.L. Sakaguchi  
Lanai Community Health Center  
Page 2

March 5, 2010

Mr. John L. Sakaguchi, AICP  
Senior Planner  
Wilson Okamoto Corporation  
1907 South Beretania Street, Suite 400  
Honolulu, Hawaii 96826



RECEIVED  
MAR 03 2010

WILSON OKAMOTO CORPORATION

Subject: Draft Environmental Assessment, Pre-Assessment Notice;  
Lanai Community Health Center, CBDG Project No. 0804  
Lanai City, Lanai, Hawaii; TMK: 4-9-006:011  
Response Comments

Dear Mr. Sakaguchi,

Thank you for allowing Castle & Cooke Resort, LLC (CCR) the opportunity to provide comment on your Pre-Assessment Notice, dated February 5, 2010.

Our comments are as follows:

1. The current zoning for the Lanai Community Health Center is Business Country Town (BCT) district. Any modification or new structures need to comply with the current BCT Design Guidelines. In addition, the County of Maui (COM) is in the process of updating the current BCT Design Guidelines, therefore be cognizant of the potential revisions.
2. The current structures on the parcel of the proposed Lanai Community Health Center (LCHC), are greater than 50 years old, and will come under the State of Hawaii State Historic Preservation Division review (SHPD). You will need to comply with guidelines for any proposed demolition and/or building replacement.
3. The statement concerning the "Lanai Wastewater Reclamation Facility (LWRF)" is incorrect. CCR does not own or operate this facility. The COM owns & operates this facility.
4. Your statement concerning the COM and SHPD issuance of a "Draft National Register of Historic Places Registration Form for the Lanai City Business Country Town historic district" needs to be updated, as there have been rulings since then. Please contact the COM, as they are the applicant.
5. Please conduct a thorough analysis on the potential impact of traffic circulation and parking demand for your project and the surrounding area. In mid 2010, a new Lanai Senior Center, at the corner of Sixth Street & Fraser Avenue will begin

construction and is expected to be completed in one year. This new Senior Center will attract higher use, increased traffic, and offsite parking demand.

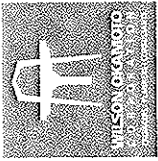
6. Please conduct a thorough analysis of the surface drainage impact of your proposed facility to the current infrastructure. During rain periods, this area is prone to flooding.
7. Please explain the requirement for subdivision.
8. The application for the subdivision of the parcel will need to be coordinated with CCR, and an agreement will need to be prepared concerning the funding responsibilities of this process.

We look forward to reviewing the Draft Environmental Assessment. If you have any questions, please do not hesitate to call us.

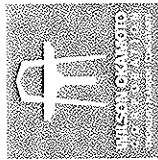
Sincerely,

Steve Bumber, AIA  
President - Lanai Operations

Clay R. Rumbaou, P.E.  
Director of Engineering



7953-01  
Letter to Mr. Clay R. Rumbaou and Mr. Steve Bumber  
Page 2  
May 17, 2010



7953-01  
May 17, 2010

Mr. Clay R. Rumbaou, P.E., Director of Engineering and  
Mr. Steve Bumber, AIA, President, Lanai Operations  
Castle & Cooke Resorts, LLC  
P.O. Box 630310  
Lanai City, Hawaii 96763

Subject: Draft Environmental Assessment (EA) - Pre-Assessment Consultation  
Lanai Community Health Center, CDBG Project No. 08-04  
TMK: 4-9-006: 011; Lanai City, Lanai, Hawaii  
Response to Comment

Dear Mr. Rumbaou and Mr. Bumber:

Thank you for your letter dated March 5, 2010 on the Draft Environmental Assessment (EA) Pre-Assessment Notice; for the Lanai Community Health Center, CDBG Project No. 08-04 project. Our responses follow:


1. The Draft EA will state that the project site is located within the Business Country Town (BCT) district. The Health Center design will need to comply with current BCT design guidelines to obtain necessary County permit approvals.
  2. Research indicates the existing three buildings on the project site were constructed in 1965, or 45 years ago. Further, the buildings have been determined to be non-contributing to the National Register Historic Places nomination currently under review. A demolition permit will be included in the design plans submitted for County permits.
  3. The Draft EA will state that the Lanai Wastewater Reclamation Facility is owned and operated by the County of Maui.
  4. The Draft EA will include current information regarding the National Register of Historic Places Nomination.
  5. The Draft EA will state that the project includes two parking lots, a lot with 12 visitor parking spaces with access to Sixth Street and a lot 8 parking spaces for staff with access to Gay Street. The Draft EA will also include the Health Center hours of operation will start at 8:00am and 9:00am.
- The traffic analysis conducted for the Lanai High and Elementary School project included manual counts at the Sixth Street and Fraser Avenue intersection and other the nearby streets shows the roadways operated at Level of Service A or B during the

morning peak hour 7:00am to 8:00am and the afternoon peak from 3:30pm to 4:30pm. Note, the school project traffic analysis accounted for about 640 students and related personnel.

Further, in December 2009, the County of Maui Department of Housing and Human Concerns issued the Final Environmental Assessment for the Lanai Senior Center project located on Seventh Street and Gay Street. The Final EA stated, a variance to the County's off-street parking requirements will be requested. Since there is no off-street parking currently provided on-site, there should be no change to exiting conditions when the Senior Center is completed.

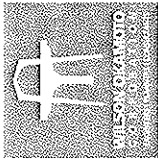
Based on these findings, a traffic impact analysis is not warranted for the Health Center. The Draft EA for the Health Center will provide additional information related to the Health Center access and parking.

6. At this time, the preliminary design drainage drawings show, the intent is to maintain the existing drainage patterns and drainage discharge points off the site. Drainage will generally sheet flow from Houston Street towards Gay Street. The increased drainage from the proposed site will be detained on-site, utilizing landscaped areas along Gay Street as detention basins and swales within the site. The swales and basins would also function as bio-swales.
  7. Information related to the subdivision of the parcel will be included in the Draft EA.
  8. The application for the subdivision will need to be coordinated with Castle & Cooke, LLC.
- We appreciate your participation in the Draft EA review process.

Sincerely,  
  
John L. Sakaguchi, AICP, Senior Planner

cc: H. Matsumoto, CBDG  
M. Murdock, AHL  
D. Shaw, LCHC

Maui Electric Company, Ltd. • 210 West Kamehameha Avenue • PO Box 388 • Kahului, Maui, HI 96733-6886 • (808) 871-6461



7953-01  
May 17, 2010

*JS*  
2/18/10

*cc: AHL*  
*com/len*

February 9, 2010

Mr. John L. Sakaguchi, AICP, Senior Planner  
Wilson Okamoto Corporation  
1907 South Beretania Street, Suite 400  
Honolulu, Oahu, Hawaii, 96826

Mr. Ray Okazaki, Staff Engineer  
Maui Electric Company, Ltd.  
210 West Kamehameha Avenue  
PO Box 398  
Kahului, HI 96733-6898

Subject: Draft Environmental Assessment (EA) - Pre-Assessment Consultation  
Lanai Community Health Center, CDBG Project No. 08-04  
TMK: 4-9-006: 011; Lanai City, Lanai, Hawaii  
Response to Comment

Subject: Draft Environmental Assessment and Pre-Assessment Notice for the Lanai  
Community Health Center  
CDBG Project No. 08-04  
Tax Map Key: (2) 4-9-006:011  
Gay Street and Sixth Street  
Lanai City, Lanai, Hawaii

Dear Mr. Okazaki:

Thank you for your letter dated February 9, 2010 on the Draft Environmental Assessment (EA), Pre-Assessment Notice; for the Lanai Community Health Center, CDBG Project No. 08-04 project. The Draft EA will note Maui Electric has no objections to the proposed project at this time. The design team's electrical consultant will coordinate with MECO at the appropriate time.

Dear Mr. Sakaguchi.

Thank you for allowing us to comment on the Draft Environmental Assessment and Pre-Assessment Notice for the subject project.

In reviewing our records and the information received, Maui Electric Company has no objection to the subject project at this time. We highly encourage the customer's electrical consultant to submit the electrical demand requirements and a project time schedule with us as soon as practical so that any electric service can be provided on a timely basis.

We appreciate your participation in the Draft EA review process.

Should you have any questions or concerns, please call me at 871-2340.

Sincerely,

*Ray Okazaki*  
Ray Okazaki  
Staff Engineer

Sincerely,  
*John L. Sakaguchi*

John L. Sakaguchi, AICP, Senior Planner

cc: H. Matsumoto, CBDG  
M. Murdock, AHL  
D. Shaw, LCHC

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## Appendix B

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Archaeological Literature Review and Field Inspection  
Report for Proposed Lanai Health Center, Cultural  
Surveys Hawaii, Inc.,  
May2010



**AN ARCHAEOLOGICAL LITERATURE REVIEW  
AND FIELD INSPECTION REPORT FOR A  
PROPOSED LĀNA'I COMMUNITY HEALTH  
CENTER IN LĀNA'I CITY, KAMOKU AHUPUA'A,  
LAHAINA DISTRICT, LĀNA'I ISLAND  
TMK: (2) 4-9-006: PORTION OF 011**

## Prepared for

Wilson Okamoto Corporation  
1907 South Beretania Street, Suite 400  
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## Prepared by

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and

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Cultural Surveys Hawai'i, Inc.

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(Job Code: KAMOKU-9)

May 2010

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## Management Summary

Reference	An Archaeological Literature Review and Field Inspection Report for the proposed Lāna'i Community Health Center in Lāna'i City, Kamoku Ahupua'a, Lahaina District, Lāna'i Island [TMK (2) 4-9-006: Portion of 011]
Date	April 2010
Project Number	Cultural Surveys Hawai'i Inc. (CSH) Job Code: KAMOKU-9
Investigation Permit Number	CSH completed the literature review and field inspection under state archaeological permit No. 0920 (2009) issued by the Department of Land & Natural Resources/ State Inventory of Historic Places (DLNR/ SHP) per Hawai'i Administrative Rules (HAR) Chapter 13-13-282.
Project Location	The Lāna'i Community Health Center project site is located on a 42,857 square foot, (circa 0.98 acre) parcel bounded by Houston Street on the northeast, Seventh Street on the southeast, Gay Street on the southwest, and Sixth Street on the northwest. The Lāna'i Community Health Center will subdivide the parcel and use approximately 25,067.07 square feet or about 0.575 acres of the western parcel. It is on the southwestern edge of the historic district within the Kamoku Ahupua'a, Lahaina District, Lāna'i Island [TMK: (2) 4-9-006: Portion of 011]. This area is depicted on the 1992 Lanai City 7.5-minute USGS topographic quadrangle map.
Land Jurisdiction	Private: Castle & Cooke Resorts, LLC
Agencies	Maui County Department of Health and Human Services, State Historic Preservation Division (SHPD)
Project Description	CSH completed this archaeological literature review and field inspection investigation for the County of Maui, regarding a proposal to build a Lāna'i Community Health Center. There are three small multi-family housing units on the parcel which were built in 1965 or 45 years ago. Two of the three buildings have been abandoned. A portion of the third building serves as the current Lāna'i Community Health Center Administration offices and the other portion as the Lāna'i Art Center. These three existing buildings will be removed to construct the new Lāna'i Community Health Center. This facility is located on the southwestern edge of the recently nominated historic district for the Lāna'i City Business Country Town (LC-BCT). The draft Registration Form identifies the three buildings on the project site as non-contributing buildings.
Project Acreage	25,067.07 square feet, or 0.575 acres

<p>Area of Potential Effect (APE) and Survey Acreage</p>	<p>For this field inspection, the project's APE is defined as the entire 25,067.07-square-foot portion of TMK: (2) 4-9-006: 011. The project APE is a small portion of the proposed 9.77-acre BCT historic district of Lāna'i City consists of a thematic group of buildings which from the commercial core of the last intact plantation town in Maui County (Solamillo et al. 2009). However, the three buildings in the APE are proposed to be removed as APE are non-contributing features of the BCT.</p>
<p>Historic Preservation Regulatory Context</p>	<p>This archaeological literature review and field inspection study does not meet the requirements of an inventory-level survey, per HAR Chapter 13-276. However, the level of work is sufficient to address site types and locations, and to formulate future work recommendations. The literature review and field inspection report details research methods and findings. The goal is to identify, if possible, cultural resources and/or historic properties and provide recommendations related to the State of Hawai'i historic review process.</p>
<p>Fieldwork Effort</p>	<p>Fieldwork was accomplished on February 2, 2010 by Hallett H. Harman, Ph.D. with a follow up field check was carried out by Jonas K. Madeus, B.A. on March 30, 2010. The field effort included a general pedestrian inspection and photographs. The total time required to complete the fieldwork consisted of two days.</p>
<p>Results Summary</p>	<p>It has been previously determined by Solamillo and others (2009) that the three existing structures on the project parcel are "non-contributing" features or structures within the context of the proposed historic district of Lāna'i City Business Country Town. No other surface indications of historic-era constructions or traditional cultural material remains were observed during the present field inspection.</p> <p>The project area is located within the original layout of Lāna'i City. It appears from a review of historic photographs that, it was not previously cultivated in pineapple. Soil stratigraphy in such areas may consist of modern fill material overlaying undisturbed regional soils, indicating that undisturbed cultural deposits may exist in scattered pockets. Such subsurface deposits may include indigenous and post-contact cultural material remains, remnants of structural remains, and possibly, human burials.</p> <p>CSH recommends precautionary monitoring during grading of the project and excavation for foundations and footings of the planned facility for utility connections.</p> <p>In the event that human remains are identified during the course of excavation, all work in the immediate area should be stopped, the location secured, and the Cultural Historian from SHPD, Himano Rodrigues, should be contacted for further direction.</p>

## Table of Contents

Management Summary .....	i
<b>Section 1 Introduction</b> .....	<b>1</b>
1.1 Project Background .....	1
1.2 Scope of Work .....	2
1.3 Environmental Setting .....	8
1.3.1 Natural Environment .....	8
1.3.2 Built Environment .....	10
<b>Section 2 Methods</b> .....	<b>14</b>
2.1 Field Methods .....	14
2.2 Document Review .....	14
<b>Section 3 Background Research</b> .....	<b>15</b>
3.1 Traditional and Historical Background .....	17
3.1.1 Traditional Accounts .....	17
3.1.2 Mythological Accounts .....	23
3.1.3 Early Historic Period .....	24
3.1.4 Mid- to late-1800s .....	25
3.1.5 Early to Mid-1900s .....	36
3.1.6 Mid-1900's .....	41
3.1.7 Modern Land Use .....	42
<b>Section 4 Previous Archaeological Research</b> .....	<b>43</b>
4.1 Summaries of Previous Studies in the Project Area Region .....	47
4.2 Background Summary and Predictive Model .....	51
<b>Section 5 Results of Fieldwork</b> .....	<b>53</b>
5.1 Architectural Description and Archaeological Observation .....	54
5.1.1 Site # LC-BCT-019 .....	54
5.1.2 Site # LC-BCT-020 .....	55
5.1.3 Site # LC-BCT-021 .....	57
<b>Section 6 Summary and Interpretation</b> .....	<b>60</b>
<b>Section 7 Recommendations</b> .....	<b>61</b>
<b>Section 8 References Cited</b> .....	<b>62</b>

## List of Figures

Figure 1. A portion of the 1992 Lanai City 7.5-minute USGS topographic quadrangle, the project location is indicated on this map in red.....	3
Figure 2. Map courtesy of Wilson Okamoto Corporation, showing the current project area.....	4
Figure 3. TMK map [TMK: (2) 4-9-006: Parcel 011] showing portion of parcel 011; the project area is indicated by black hatching outlined.....	5
Figure 4. View of the three former multi-family housing units on the project area, one of which is currently used for the Lānaʻi Community Health Center and the Lānaʻi Art Center, the green building in far left background; and the other two gray structures have been abandoned; view to the southeast.....	6
Figure 5. View of the central portion of the project area showing the signage for the Lānaʻi Community Health Center and the Lānaʻi Women's Center in middle portion of photo; view to the southwest.....	7
Figure 6. A portion of the 1998 South Lanai 7.5-minute USGS topographic quadrangle, showing the project area relative to the local soil series (U.S. Department of Agriculture, Natural Resources Conservation Service 2001).....	9
Figure 7. An aerial photo showing portion of Lānaʻi City with the current project area in red....	11
Figure 8. View of built environment on the east side of the project area, Lānaʻi Community Health Center and the Lānaʻi Women's Center building, roads; view to the northwest....	12
Figure 9. View of built environment on the south end of the project area buildings; view to the east.....	13
Figure 10. J. F. Brown and M.D. Monsarrat Government Survey map of 1878 for Lānaʻi Island, showing Crown land in brown/gold color and Government land in green. The remaining lands were available for private ownership and other purposes during the Māhele.....	16
Figure 11. Map showing Land Commission Awards (LCAs) and Land Grants in the vicinity of the project area.....	35
Figure 12. The plateau region of Lānaʻi is visible in this early photo of pineapple cultivation on the island ( <i>Paradise of the Pacific</i> , December 1936, Vol. 48, No. 12).....	38
Figure 13. Dole Park circa 1923, following the acquisition of the island of Lānaʻi by the Hawaiian Pineapple Company, and the subsequent construction of laborer and management housing. (Hawaiian Pineapple Company photo courtesy of Castle & Cooke Resorts LLC).....	39
Figure 14. A photograph of the city of Lānaʻi, with children visible in the foreground, and hundreds of acres of land cleared for pineapple cultivation in the background (Nippu Jiji Co., Ltd. 1929).....	40
Figure 15. Lānaʻi City, visible in the distance (left) with pineapples under cultivation in the foreground (Nippu Jiji Co., Ltd. 1929).....	40

Figure 16. Map from Emory (1924a) showing <i>heiau</i> and house sites on the island of Lānaʻi.....	44
Figure 17. Previous archaeological investigations conducted in the region of Lānaʻi City.....	46
Figure 18. View of portions of the three multi-family buildings that are located on the main portion of the project area; view to the north northwest.....	53
Figure 19. View of Site # LC-BCT-019, one of the two abandoned structures on the project area, at 334 Sixth Street; view to the northwest.....	55
Figure 20. View of Site # LC-BCT-020; this building is currently used by the current Lānaʻi Community Health Center and the Lānaʻi Women's Center on the project area at 624 Houston Street; view to the north.....	56
Figure 21. View of Site # LC-BCT-021, one of the two abandoned structures on the project area, at 622 Gay Street; view to the north.....	58
Figure 22. Newspaper clipping from the <i>Lanaiian</i> , dated April 15, 1955, regarding plans of the Hawaiian Pineapple Company to move building LC-BCT-024 from the Lānaʻi High School to its present location, and to add another structure to the original structure (Solamillo et al. 2009).....	59

## List of Tables

Table 1. Place name meanings of the project area and general vicinity. ....17

Table 2. LCAs within Kamoku Ahupua'a, with translations by Kēpa Maly (2009). Translations of Royal Patents by the Waihoŋa 'Aina Corporation (Waihoŋa 'Aina 2002). ....27

Table 3. Previous archaeological investigations in the upland region of Kamoku Ahupua'a .....45

## Section 1 Introduction

### 1.1 Project Background

At the request of Wilson Okamoto Corporation, Cultural Surveys Hawai'i, Inc. (CSH) conducted an archaeological literature review and field inspection for a 25,067.07-square foot, or 0.575 acre, parcel in Lāna'i City, located in Kamoku Ahupua'a, Lahaina District, Lāna'i Island [TMK: (2) 4-9-006:por. 011] (Figure 1 through Figure 3). The County of Maui, Office of the Mayor through the Community Development Block Grant (CDBG) program has issued a grant to the Lāna'i Community Health Center, a non-profit agency, to plan and design, and potentially to construct, the Lāna'i Community Health Center. CDBG is a Federal program of the U.S. Department of Housing and Urban Development (HUD). It is the principal Federal program providing grants to state and local governments to devise innovative and constructive approaches to improve the physical economic and social conditions in their communities which will benefit persons of low and moderate income.

The Lāna'i Community Health Center project is located in Lāna'i City northwest of Dole Park on the northwestern portion of parcel (Tax Map Key: 4-9-006:011), bounded by Houston Street on the northeast, Seventh Street on the southeast, Gay Street on the southwest, and Sixth Street on the northwest and occupies an area of approximately 42,857 square feet, or about 0.98 acres (Figure 3). The Lāna'i Community Health Center will use the land under a lease agreement with Castle & Cooke Resorts LLC which will retain ownership of the parcel. The Lāna'i Community Health Center will subdivide the parcel and use approximately 25,067.07 square feet (about 0.575 acres) of the northwest portion of parcel 011 for the new facility. The southeastern portion of this parcel along Seventh Street contains an existing facility occupied by the Lāna'i Art Center and Maui Community College, which will remain without changes (Figure 2). In 1965, the project site was cleared and developed for three small multi-family housing units, two of which have been abandoned with the third building serving as the current Lāna'i Community Health Center and Lāna'i Art Center facility. These three existing buildings will be removed to construct the new facility (Figure 4 to Figure 5).

### 1.2 Scope of Work

The scope of work included:

- 1- Historical research to include study of archival sources, historic maps, Land Commission Awards and previous archaeological reports to construct a history of land use and to determine if archaeological sites have been recorded on or near this property.
- 2- Limited field inspection of the project area to identify any surface archaeological features and to investigate and assess the potential for impact to such sites. This assessment will identify any sensitive areas that may require further investigation or mitigation before the project proceeds.
- 3- Preparation of a report to include the results of the historical research and the limited fieldwork with an assessment of archaeological potential based on that research, with recommendations for further archaeological work, if appropriate. It will also provide mitigation recommendations if there are archaeologically sensitive areas that need to be taken into consideration.

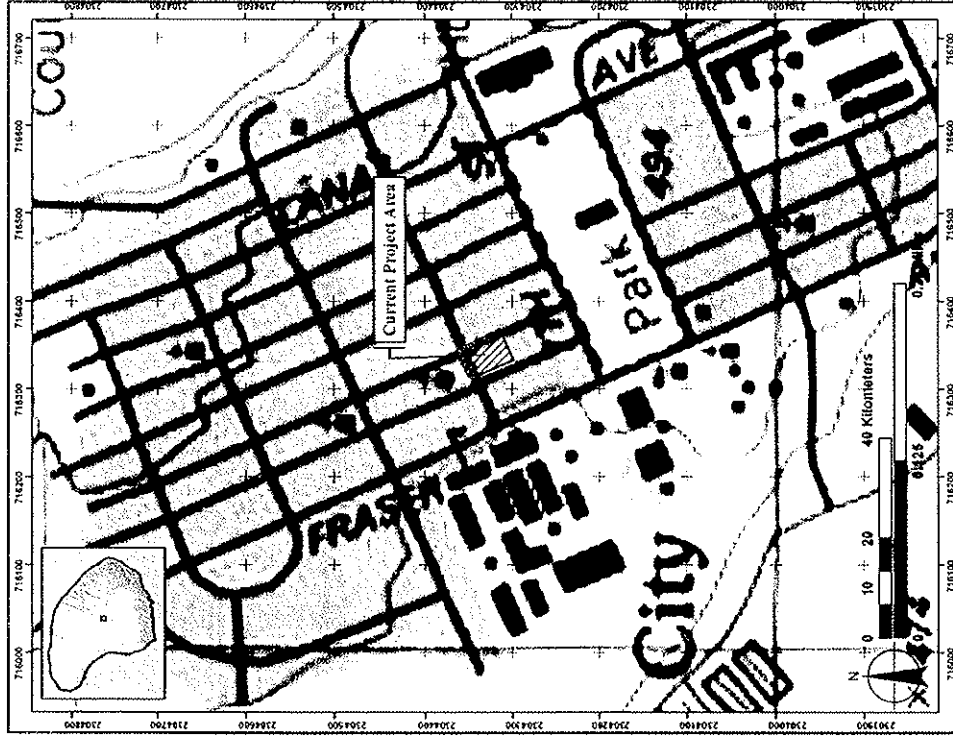


Figure 1. A portion of the 1992 Lanai City 7.5-minute USGS topographic quadrangle, the project location is indicated on this map in red.

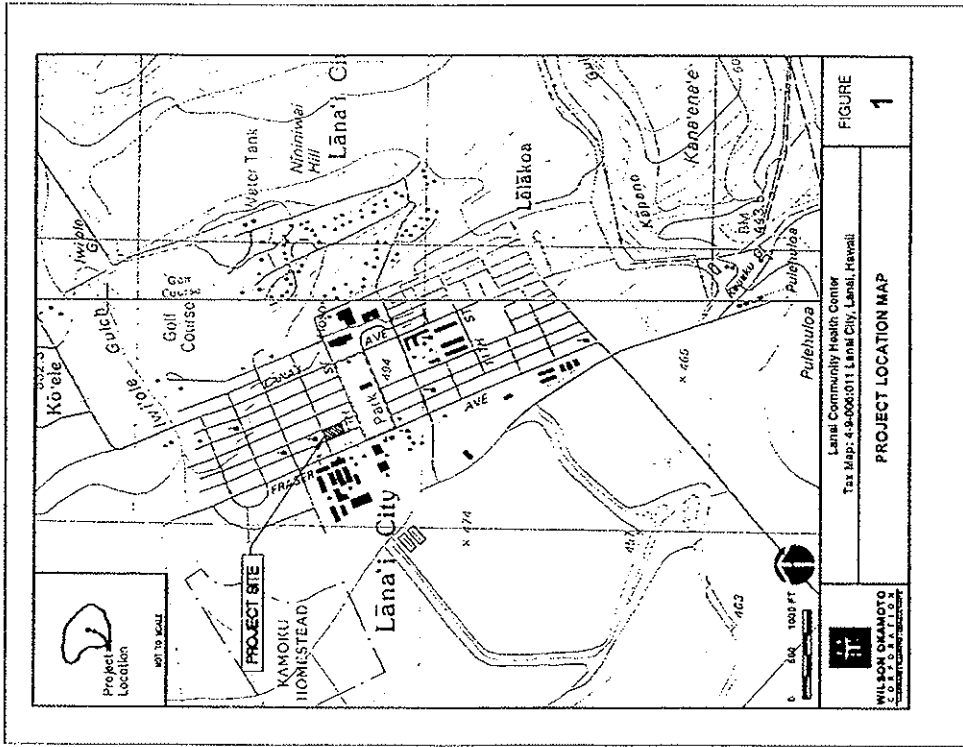


Figure 2. Map courtesy of Wilson Okamoto Corporation, showing the current project area

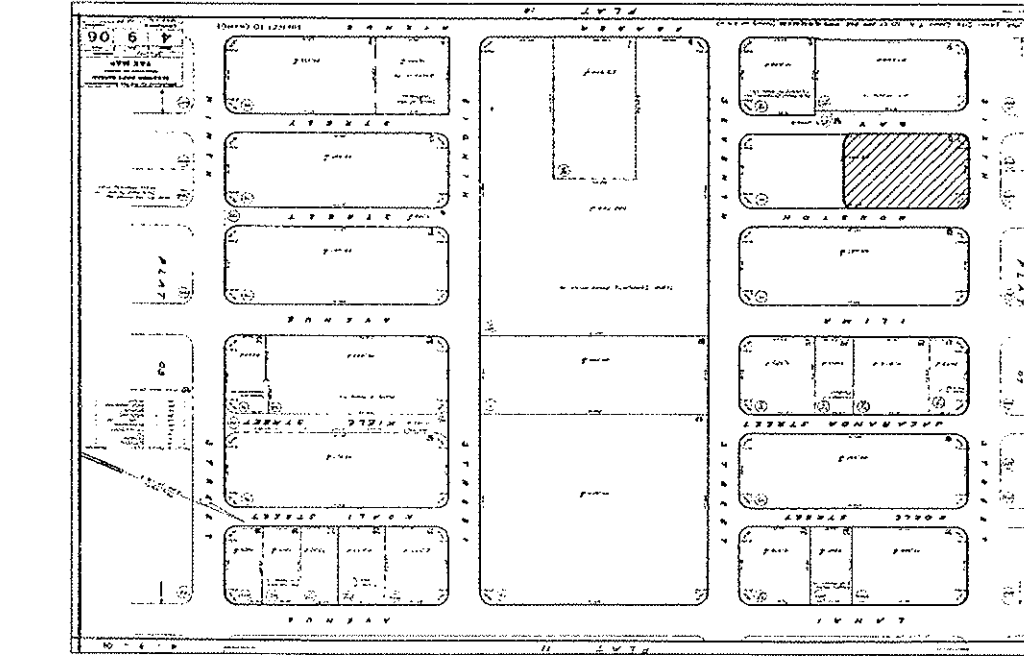


Figure 3. TMK map [TMK: (2) 4-9-006: Parcel 011] showing portion of parcel 011; the project area is indicated by black hatching outlined

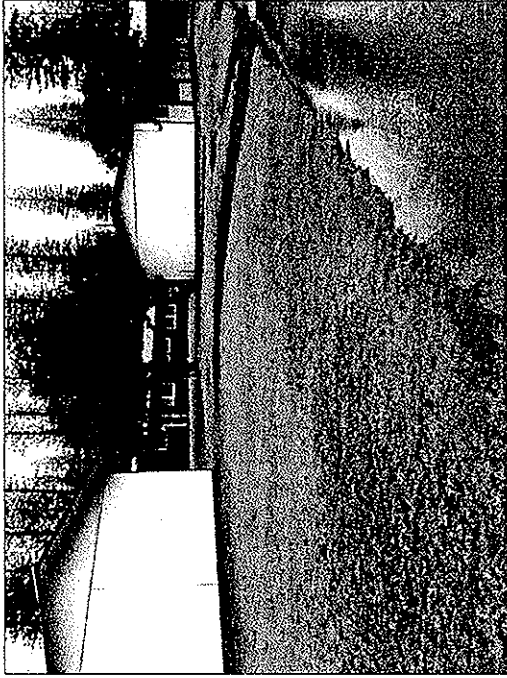


Figure 4. View of the three former multi-family housing units on the project area, one of which is currently used for the Lana'i Community Health Center and the Lana'i Art Center, the green building in far left background; and the other two gray structures have been abandoned; view to the southeast

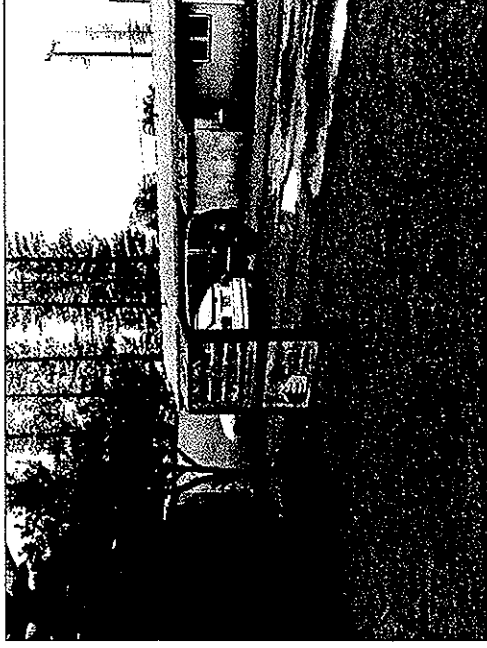


Figure 5. View of the central portion of the project area showing the signage for the Lana'i Community Health Center and the Lana'i Women's Center in middle portion of photo; view to the southwest

### 1.3 Environmental Setting

#### 1.3.1 Natural Environment

The project area is situated within the central plateau region of Lānaʻi Island, at an average elevation of 1,600 feet (488m) above mean sea level (amsl). Generally, the soils underlying Lānaʻi City are deep, nearly level, well-drained soils of the Molokai-Lahāna Association (Figure 6). This soil association is noted for fine-textured soils of the upland regions. More specifically, the sediments within the project area are Lahāna silty clay (LaB), 3 to 7 percent slopes. In a representative profile, the surface layer is about 15 inches thick, consisting of dark reddish-brown silty clay. The subsoil is 45 inches thick, consisting of dusky-red and dark reddish-brown silty clay. The substratum is soft, weathered basic igneous rock (Foote et al. 1972:78).

Lahāna silty clay (LaB) soils are characterized by slow runoff with a slight erosion hazard. Permeability is moderate with this soil type considered good for sugarcane and pineapple cultivation. Small acreages are used for truck crops, pasture, and home sites (Foote et al. 1972:79).

Temperatures in this upland region range between 60° and 80° F. The average annual rainfall in the area ranges from 25-35 inches (699-800 mm) with the heaviest rains in January and the lightest in June. The entire island lies in the dry rain shadow of the West Maui Mountains on Maui, leaving it without a wet windward side. Winds are consistent northeasterly trades.

Vegetation within Lānaʻi City is dominated by plantings of Cook pine trees (*Ataucaria columnaris*) and Norfolk Island pine trees (*Ataucaria heterophylla*). These trees were introduced in the 1920's by naturalist George Munro, when the Pālāwai Basin began to be cultivated in pineapple and the master plan for housing the pineapple plantation laborers involved the layout for Lānaʻi City (Taylor 1976). Most all other vegetation in the region of Lānaʻi City is imported landscape and ornamental, with various non-native plant species, such as *it* (*Corchorus fruticosus*) evident in the yards of most retail establishments and residences.

The landscape of the project area has been heavily modified by historic industrial and residential subdivision construction and forest clearance to develop agricultural lands. Aside from the city-wide plantings of Norfolk Island pine trees, the northern slopes leading toward Kēʻele are also planted in introduced eucalyptus (*Eucalyptus robusta* being dominant), silver oak (*Grevillea robusta*), and various fruit trees, such as mango (*Mangifera indica*) and papaya (*Carica papaya*) (H.E.A.R. 2009). Small stands of native *kīkīi* (*Aleurites malaccana*) were observed near the project area during the present field inspection.



Figure 6. A portion of the 1998 South Lanai 7.5-minute USGS topographic quadrangle, showing the project area relative to the local soil series (U.S. Department of Agriculture, Natural Resources Conservation Service 2001)



### 1.3.2 Built Environment

Lānaʻi City was constructed beginning in 1922, following the purchase of the island by James Drummond Dole to grow pineapple. The city of Lānaʻi was constructed to provide laborer housing, stores, schools, a hospital, a library, a bank, social halls, a gymnasium, a movie house, warehouses and repair shops (Mackie 1939). The master-planned community was designed to expand as additional laborers were needed. The present project area is surrounded by other buildings which appear to be original to the period during which the original construction of Lānaʻi City by the Hawaiian Pineapple Company occurred. According to the history of Castle & Cooke by Taylor and others (1976), most portions of the city had been completed by 1926. Three small multi-family homes on the parcel were built in 1965 (334 Sixth Street; 622 Gay Street, and 624 Houston Street) (Project Summary, Lānaʻi Community Health Center, CBDG Project No. 08-04). There are paved roads, a water hydrant, water meters and electrical lines on and around the project area (Figure 7 through Figure 9).

The project area is located on the block that is bounded by Sixth Street on northwest, the Houston Street on the northeast, Gay Street on the southwest and the Seventh Street on the southeastern portion. This southeastern portion of this parcel along Seventh Street contains an existing facilities occupied by Maui Community College, which will remain without changes. The project area is also located north of the Dole Park and northeast from the Lānaʻi Elementary, Intermediate and High School. The original character of the Dole Park region of Lānaʻi City remains as it was constructed in the years before World War II, with very few modern changes visible.

With the switch from pineapple cultivation to resort hotel development in 1991, an expansion of outlying residential neighborhoods occurred, resulting in modern townhomes and single-family homes at the outer edges of present-day Lānaʻi City.

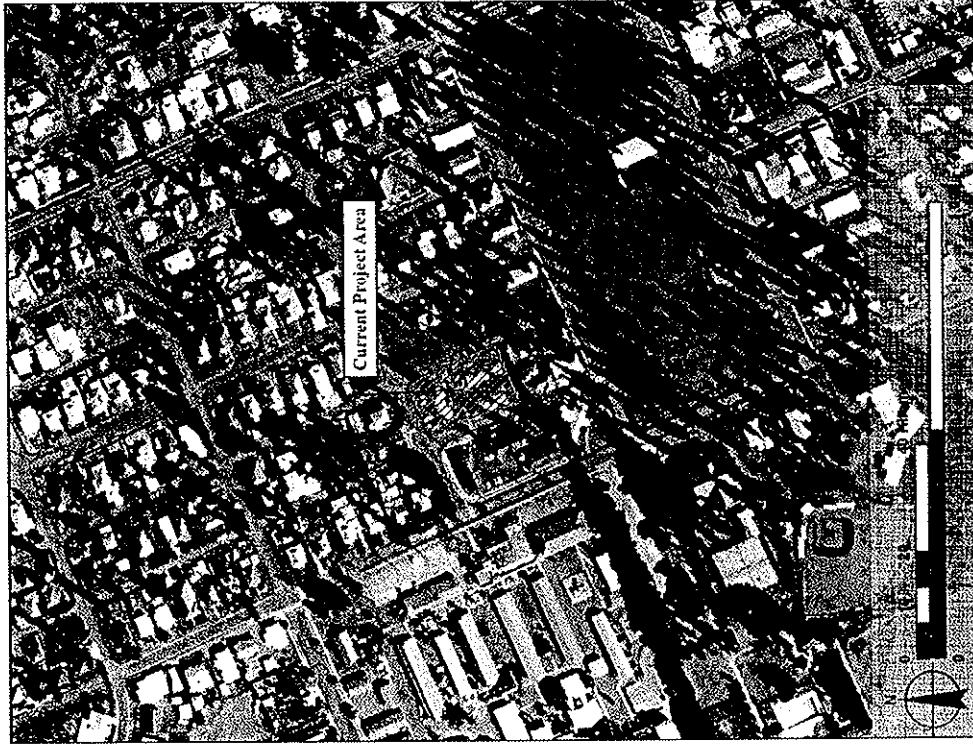


Figure 7. An aerial photo showing portion of Lānaʻi City with the current project area in red



Figure 8. View of built environment on the east side of the project area, Lāna'i Community Health Center and the Lāna'i Women's Center building, roads; view to the northwest

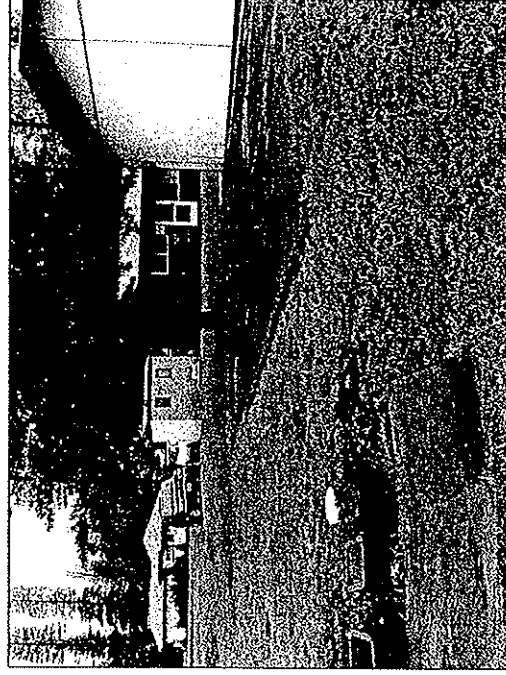


Figure 9. View of built environment on the south end of the project area buildings; view to the east

## Section 2 Methods

The archaeological field inspection was carried out by Archaeologist Hallett H. Hammatt, Ph.D. This fieldwork was conducted on February 2, 2010, with a follow up field check was carried out by Jonas K. Madeus, B.A. on March 30, 2010.

### 2.1 Field Methods

The field inspection consisted of a pedestrian walkover or check on the portion of TMK: (2) 4-9-006: 011 proposed for development of the Lāna'i Community Health Center. The project area was visually examined for native or indigenous plants, and evidence of traditional and post-contact cultural material remains and architectural structures.

Documentation methods included photographs and a geo-referenced map of Lāna'i City. Photographs were taken using a digital camera. A Garmin GPSMAP 76S unit was also brought into the field to locate and/or pinpoint identified historic properties.

### 2.2 Document Review

As part of the literature review and field inspection, a review of all previous archaeological work conducted in the surrounding area was performed. In addition, a variety of resources devoted to historical perspectives of the region and traditional stories and accounts were reviewed. Research venues included the State Historic Preservation Division of the Department of Land and Natural Resources and the Survey Office of the Department of Accounting and General Services. Research regarding the history of the Hawaiian Pineapple Company was conducted using the services of the Bailey House Museum, in Wailuku, Maui. Online research venues included the Kumu Pono Associates LLC website (Maly 2008a) and the Lāna'i Culture and Heritage Center website (Maly 2008b), which were consulted for current information regarding the traditional history of the island. Online reports of meetings of the Maui/Lāna'i Island Burial Council and Hui Mālama Pono O Lāna'i were accessed at <http://Hawaii.gov/dlnr/meetings/Meetings> and <http://huimalama.tripod.com>, respectively. In addition, all relevant Land Commission Awards (LCAs), Land Patent Grants, and Royal Patents were researched using resources associated with the Waihoana 'Aina online database (Waihoana 'Aina Corp. 2002).

## Section 3 Background Research

The division of Lāna'i's lands into political districts may have occurred under the direction of the chiefs of Maui, as Lāna'i appeared historically to be "subject or tributary to Maui" during the times of Kamaialawalu (about 1550-1600 AD) (Formander 1916: 424, 1919:206-8). Moffat and Fitzpatrick (1995:23) explain that while Lāna'i was sometimes considered a *mohipiuni* or division of land surrounded by water, in other instances Lāna'i was noted as a *kālanā* or division of land that was smaller than a *mokai* (district) and subordinated to one of the *mokai* of Maui Island.

The political position of Lāna'i would play a role in the political aspirations of the Maui and Hawai'i Islands chiefs and the warfare tactics they employed. The boundaries of the present project area *ahupua'a* of Kamoku are traditional, though refined by surveyors employed by the Kingdom of Hawai'i beginning in the 1850's. The *ahupua'a* of Kamoku (Figure 10) is bounded by the mountainous region of Lāna'i to the northeast, and by the ocean to the southwest.

### 3.1 Traditional and Historical Background

#### 3.1.1 Traditional Accounts

While the mythological and traditional accounts of the upland areas of Lāna'i are relatively scarce, an analysis of place name meanings may yield some insight into the patterns of life in an area (Table 1). Literal translations of several of the place names for land areas and divisions within the project area are listed below. Most all translations are taken from Pukui et al. (1976), Emory (1924a), Formander (1916-1920), and Kalākaua (1888). Maly (2008a) notes that the proliferation of place names in the region points to a "viable native presence on the island of Lāna'i in traditional times".

Table 1. Place name meanings of the project area and general vicinity.

Anapuka	<i>Lit.</i> , cave with holes. Fishermen would tie their canoes to such holes (Pukui et al. 1976). Emory (1924a:29) notes that two rocky points with arches are named Anapuka, one at the shore of Kamoku Ahupua'a, and one at the shore of Kaunolu village.
Halulu	Pukui (et al. 1976) believe this place name refers to the legendary man-eating bird Halulu. (See "A Lamentation for Young Kaahumanu" following this table.) Formander (1916:66) defines Halulu as a bird-god, who the hero Aukelenuiaiku defeats in battle. Emory (1924a) links the traditional meaning of this place name along the north coast of Lāna'i to the speed by which a man could run the <i>ahupua'a</i> boundary of Mahana. This tradition appears to allow for travel from the north coast of Lāna'i to the plateau of Kamoku. Additionally, Emory (1924a) recorded the <i>heiau</i> of Halulu at the southwestern part of the island, at Kaunolu. He noted that Kamehameha I may have used Halulu Heiau as late as 1810.
Hao	<i>Lit.</i> , to gather up (Pukui et al. 1976). Emory (1924a) describes a small <i>heiau</i> structure at the north coast, significant because of the traditional link between Mahana and Kamoku Ahupua'a in terms of travel to the north coast.
Hōkūao	Morning star, Venus, when seen in the morning (Pukui and Elbert 1986). Emory (1924a) notes the location on the plateau, west of Lāna'i City.
Ho'opulupuluamoa	Place of a fish-god, Ho'u, where desirable fish are found (Formander 1919 V III). <i>Lit.</i> , strong smell of chickens. According to Emory (1924a), this ridge abounds with stones and holes where chickens were once cooked, located at the northwestern end of the plateau.
Hulupu'unui	<i>Lit.</i> , whirling feather hill. Emory (1924a) notes the location on the plateau, just east of Lāna'i City.

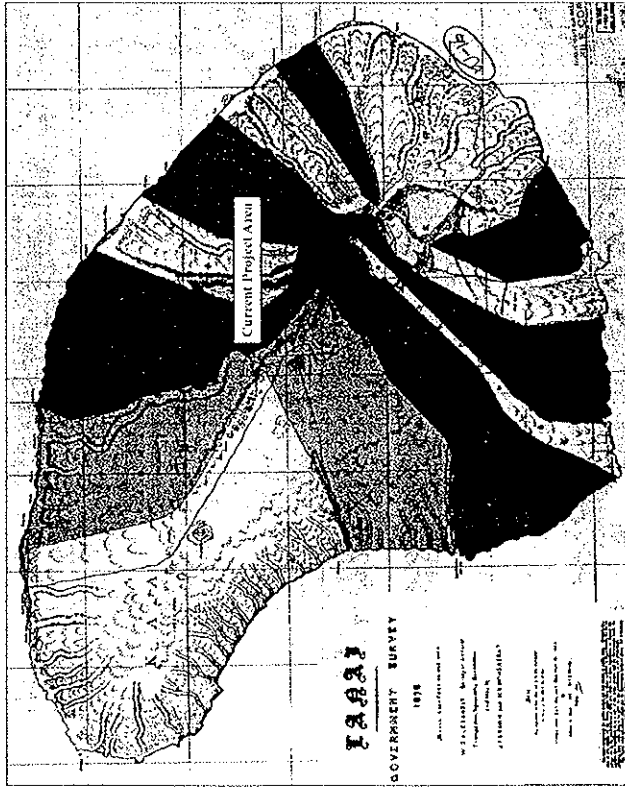


Figure 10. J. F. Brown and M.D. Monsarrat Government Survey map of 1878 for Lāna'i Island, showing Crown land in brown/gold color and Government land in green. The remaining lands were available for private ownership and other purposes during the Māhele.

Table 1 continues.

Iwiolo	<i>Lit.</i> , fang bone. Type of adze (Pukui and Elbert 1986). Emory (1924a) notes the name of the upper valley of Iwiolo is called Kaiholena. Iwiolo is located just east of Lāna'i City.
Ka ā	<i>Lit.</i> , the burning (Emory 1924a). According to Formander (1916:370) the largest of the thirteen <i>ahupua'a</i> of Lāna'i, Ka ā, appears to take its name from the legend of the demi-god Maui, and his quest to pull the islands of Hawai'i from the bottom of the ocean using a giant fishhook. The knot fastening the hook to the line was named Ka ā. The traditional use of the Ka ā plateau by those living in Kamoku is posited in Emory (1924a, 1924b).
Kaiholena	<i>Lit.</i> , the iholena banana (Emory 1924a). Valley just northeast of Kō etc.
Kaiolohia	<i>Lit.</i> , tranquil sea (Pukui et al. 1976). Emory (1924a) places its location on the north shore of Lāna'i, near the traditional inland route to Kamoku Ahupua'a.
Kaka'alani	<i>Lit.</i> , The members of a royal court (Pukui and Elbert 1986). Descriptive term according to Emory (1924a) meaning, "splitting <i>alani</i> ( <i>Pelea sandwicensis</i> ) wood." A place name in the forested upland plateau region of Lāna'i.
Kalaeāhole	<i>Lit.</i> , point where the <i>āhole</i> fish congregate (Pukui et al. 1976). <i>Lit.</i> , rasping point (Emory 1924a). Emory described a small <i>heiau</i> structure "half a mile up the parched slopes back of Kalaeāhole," placing it just below the plateau.
Kalamanui	<i>Lit.</i> , large Kalama (Pukui et al. 1976). Emory (1924a) gives the literal meaning as "torch"; a valley just north of Kaumālapa u Harbor.
Kalamaiki	<i>Lit.</i> , small Kalama (Pukui et al. 1976). Emory (1924a) notes the location of this valley along the Kamoku coast.
Kalapū'u	<i>Lit.</i> , ending hill (Emory 1924a), located in the upper plateau of Paoma'i.
Kalihi	<i>Lit.</i> , the edge (Emory 1924a), a <i>pu'u</i> (hill) located in the upper plateau of Ka ā, in the travelled region of Kamoku.
Kamoku	<i>Lit.</i> , the district (Pukui et al. 1976). Emory (1924a) relates the name to an <i>ahupua'a</i> in the Hāmākua region of Hawai'i Island, which was "cut off" from other <i>ahupua'a</i> . Emory felt the name meant "cut off."
Kānepu'u	<i>Lit.</i> , hill of Kāne. Kānepu'u is the highest point of a ridge that originates west of Kō'ele, some four miles distant. (This area contains a 600-acre dryland forest, first described by George C. Munro in 1920.)
Kapukalao	Emory (1924a) shows this as the head of a valley, located on the plateau just below the peak of Kāne pu'u.

Table 1 continues.

Kaumaikahōkū	<i>Lit.</i> , the stars are out (Emory 1924a). Hill located just southwest of Lāna'i City, where traditionally clouds do not obstruct the view of the stars.
Kaumālapa'u (Harbor)	A well-defined <i>ko'a</i> fishing shrine, with an adjacent house platform and two fireplaces recorded by Emory (1924a). According to Maly (2008a) a cave and waterspout are located just south of the harbor, both of which were described by Kalākaua (1888). <i>Lit.</i> , soot [from burning] placed [in] gardens.
Kea'aku	<i>Lit.</i> , the standing root (Emory 1924a). Located just south of Lāna'i City.
Keahi'āloa	<i>Lit.</i> , the long lasting fire, according to the story of Kawelo. In this story, Kawelo, a powerful <i>kahuna</i> of Lāna'i, heard that his arch-rival, Lamikaula, from Molo'ka'i, had cast a spell on the people of his village. He saw that they moved as in a trance. The two <i>kahunas</i> traded fireballs across the channel separating the two islands. Kawelo was the victor. Smoke from the burning fires from the battle is said to have changed the color of the Lāna'i <i>lehua</i> blossom from red to purple (Nupepa Kuokoa Dec. 22, 1922, author not attributed). W. M. Gibson, a resident of Lāna'i in the 1860's, was also quoted as the source for this story of Kawelo in Kalākaua (1888). The ruins of two circular platforms at Keahi'āloa form a small <i>heiau</i> site and a habitation complex described by Emory (1924a).
Keahikawelo	<i>Lit.</i> , fire of Kawelo (Emory 1924a). Trail marker ( <i>āhu</i> ) here is associated with the magic of Kawelo (see entry for Keahi'āloa above). This site is located on the plateau of Ka ā, just above Keahi'āloa. Maly (2008a) relates two stories of Keahi-a-Kawelo, the sorcerer of Lāna'i who defeated Lamikaula: the first account by W. M. Gibson (see above) and the second by a native writer to the newspaper "Kaiokoa," July 18, 1868.
Keanaolalo	<i>Lit.</i> , cave of the shipwrecked (Emory 1924a), on the north shore in Māhana Ahupua'a, in a region accessible in traditional times from Kamoku Ahupua'a.
Keone	<i>Lit.</i> , the sand. A shoreline bay of west Lāna'i (Pukui et al. 1976), in Kamoku Ahupua'a. The site of a cave described by Emory (1924a) in the upper gulch.
Keonehe'ehe'e	Site of Maluhie, categorized by Emory (1924a:69) as a small <i>heiau</i> . <i>Lit.</i> , the sliding sands (Pukui et al. 1976). Emory states, "several hundred yards from the main ridge at Keonehehe on the flat grass lands is the site, marked only by a line of stones in the ground forming a rectangle about 20 by 30 feet."
Kite	<i>Lit.</i> , peer. Bay of southwest Lāna'i (Pukui et al. 1976).

Table 1 continues.

Kihāmānienie (Kihāmāniana)	According to Emory (1924a), the site of the Protestant church, built in 1851. Emory stated that the "smooth hill covered in <i>maniania</i> grass" was the origin of the place name. According to Pukui and Elbert (1986), <i>mānienie ʻula</i> (golden beardgrass, or <i>Chrysopogon aciculatus</i> ), is the upland grass found in the region of the church.
Kō'eie	Land division of central Lāna'i. <i>Lit.</i> , dark sugar cane (Pukui et al. 1976). Emory (1924a) stated that the name meant "place seized by a chief."
Kukuikahi	<i>Lit.</i> , lone <i>kukui</i> (Emory 1924a). In the plateau land of Ka'ā, Emory (1924a) stated that the region was named for a <i>kukui</i> tree ( <i>Aletrisites moluccana</i> ) stump.
Lālākoa	Land section, northeast Lāna'i. <i>Lit.</i> , <i>koa</i> tree ( <i>Acacia koa</i> ) branch (Pukui et al. 1976). Region of east Lāna'i City, according to Emory (1924a), where Charles Gay constructed his family home.
Leinukalahua	<i>Lit.</i> , plateau land (Emory 1924a). A promontory measuring 466 feet above mean sea level (amsl).
Makapa'ia	<i>Lit.</i> , enclosed eyes (Emory 1924a). Region of the plateau just south of Lāna'i City.
Malauea	Malauea is the southernmost region of the plateau land, before it slopes away toward Mānele Bay.
Mahulani	<i>Lit.</i> , heavenly shade (Emory 1924a), named for the region of the plateau, in the <i>ahupua'a</i> of Ka'ā, where Mahulani, one of the seven legendary sisters of the fire goddess Pele, lived (Fomander 1919:576-580, see "Story of the 'Ōhele" following this table).
Mauna Kūi	<i>Lit.</i> , sharp pointed hill (Emory 1924a), located on the plateau overlooking the southwestern cliffs of Ka'ā Ahupua'a.
Māunalei (Gulch)	<i>Lit.</i> , <i>lei</i> mountain (Pukui et al. 1976). The clouds that ring the valley walls of Maunalei appeared as flower garlands, or <i>leis</i> . Although located some nine miles by road from Lāna'i City, a series of earthen tunnels and pipelines connect Lāna'i City to this water source.
Nanahumui	<i>Lit.</i> , much charcoal (Emory 1924a), located at the headland of Mānele Gulch.
Naupaka	Land section of west Lāna'i, in which a shoreline cliff and valley of Kamoku Ahupua'a are located. A Hawaiian coastal shrub, the <i>naupaka</i> ( <i>Scaevola taccada</i> ) is native to Lāna'i (H.E.A.R. 2009).
Ninimīwai Hill	<i>Lit.</i> , pour water (Pukui et al. 1976). The region of northeastern Lāna'i City, according to Emory 1924a), and site of a reservoir.

Table 1 continues.

*Ōanapuka	<i>Lit.</i> , hole ( <i>nyka</i> ) in which a small taro tuber ( <i>ōana</i> ) is peeled, wrapped in <i>iti</i> leaves, and baked in a ground oven (Pukui and Elbert 1986).
Pālāwai (Basin)	The central basin of Lāna'i Island formed of a collapsed volcanic caldera, with an area of 3.5 square miles (Stearns 1940). The name Pālāwai is given by Maly (2008a) as one of four paddlers accompanying Mākalei, the legendary fisherman of Lāna'i, in a story recounted by J.W.H.I. Kihe in issues of the newspaper "Na Hoku o Hawai'i" between January 31 <sup>st</sup> and August 21 <sup>st</sup> , 1928. This account names Mauna-iei as the daughter of Pālāwai.
Paoma'i	In Kalākau's account "Kaala, the Flower of Lana'i", the hero of the story, Ka'ai'ai, ran across the coastal area of Paoma'i in his search of his loved one, Ka'ala (Kalākau 1888: 422). <i>Lit.</i> , sick Pao. Pao was a district overseer who exhausted himself swimming and running to and from Lahaina (Pukui et al. 1976).
Pōhaku'loa	<i>Lit.</i> , long stone (Pukui et al. 1976), and the name of a portion of Mānele Gulch, according to Emory (1924a).
Poho'ula	<i>Lit.</i> , red hollow (Emory 1924a), a region located just north of Lāna'i City.
Pūlehu'loa	<i>Lit.</i> , big roasting. Emory (1924a) attributes the translation to Thurum (no date given) and shows this location in the plateau region just south of the present-day Lāna'i City.
Pu'ukaula	<i>Lit.</i> , hill of <i>kaulā</i> tree. Emory (1924a) states that the location of this hill is in Kamoku, at the boundary with Kalulu Ahupua'a.
Pu'ukoa	<i>Lit.</i> , <i>koa</i> tree hill (Pukui et al. 1976). Emory (1924a) shows this hill in the plateau of Kamoku.
Pu'umalekahi	Prominent hill on the high mountain ridge of Lāna'i, set back from Pōhaku'loa, and forming a peak above the Pālāwai Basin.
Pu'u Nānā i Hawai'i	Peak from which a view of the island of Hawai'i can be seen. Emory (1924a) shows this promontory in the plateau region of Kamoku.
Pu'u Nēnē	Land section of Lāna'i. <i>Lit.</i> , goose hill (Pukui et al. 1976). Emory (1924a) notes two locations, one just above Kō'eie in Kamoku Ahupua'a, and one on a promontory in Ka'ōhai Ahupua'a.

The above place names, together with the environmental data, suggest that the lands of the central plateau basin were productive agriculturally and of great traditional significance.

In this region of the island of Lāna'i, gulches, ridges, hilltops and other terrestrial landmarks were given descriptive names, some referring to heroic characters of Hawaiian mythology, and others suggestive of actions which could be accomplished (i.e., the sighting of the island of

Hawai'i) from its promontory. The upland plateau region was of great importance, both in terms of habitation and subsistence during the traditional or pre-contact time period, as well as an area somewhat sheltered from coastal raiding parties from other islands.

Emory (1924a: 122) estimated the aboriginal population of Lāna'i as about 3,150 prior to 1778. He stated that the inhabitants of Lāna'i survived by collecting dew on "oiled *ʻāpapa* or whipped from heavy shrubbery." Water that accumulated in natural depressions was husbanded carefully, and a few wells were dug along the coast and were "plastered on the seaward side with mud and straw" to stop the infiltration of sea water. Emory stated that the water derived from these wells was brackish, but usable by the Hawaiians because they had become accustomed to the salinity. He further postulated that survival along the leeward coastline also depended on Hawaiians visiting small springs in the distant hills, and carrying water in gourds back to the coast.

In 1778, only months before the arrival of Captain James Cook and his discovery of the Sandwich Islands, a raid by Hawai'i chief Kalani'ōpu'u "ravaged the island of Lāna'i thoroughly" (Formander 1880:157). The battle between the forces of Kalani'ōpu'u and those of Maui chief Kahekili were concentrated along the north coast of Lāna'i. The Lāna'i chiefs, unable to oppose these forces, retreated into the upper recesses of Maunalei, where they were killed. The army of Kalani'ōpu'u destroyed food crops across the entire island and cut down and burned forests. Historian Samuel Kamakau (1992) reported the *alupua'a* of Ka'ōhai was the most severely damaged during this warfare.

John E. Dockall (Dockall et al. 2004) authored an archaeological assessment report for the Hi'i Flais region which straddles both Keālia Kapu and Keālia Aupuni Ahupua'a. In this report, he cites both Handy et al. (1972) and Emory (1924a), stating that Lāna'i was known for widespread planting of sweet potatoes. In fact, the distribution of planted sweet potatoes followed the geographic distribution of settlements. Handy and colleagues also noted that the island had ample good land for growing sweet potatoes but that the most serious limitation was drinking water.

Dockall and others (2004) postulated that the main reason that taro agriculture on Lāna'i was so difficult was related to stream capability. The island had only two small stream systems that were capable of providing enough water for taro irrigation (Handy et al. 1972). Maximum elevations on the island also limit the amount of rainfall that occurs. This rainfall was traditionally suitable for sweet potato and later for pineapple but not for sustained irrigation and cultivation of taro as a significant portion of the diet. The authors also noted that there was apparently much breadfruit planted on Lāna'i but there are few direct indicators of the areas that were so planted. Kamakau (1992) stated that the *Pūāwāi* or bottomlands were most suitable for the cultivation of sweet potatoes due to the richness of the soil.

This brief overview of legendary and traditional accounts indicates the particular importance attributed to the northern coast of Lāna'i during pre-contact Hawai'i. The accounts do not specifically state but do suggest that the productivity of the northwestern coastal area, in terms of fish resources, is the main reason for its desirability. The productivity of the ocean allowed direct access to fish protein for the *ʻāfi'i* (chiefly class) who resided at villages along the northwest coastal areas.

### 3.1.2. Mythological Accounts

#### 3.1.2.1 The Story of the 'Ōiēlo

The "Story of the 'Ōiēlo", as translated from the original Hawaiian by Abraham Formander (1919), describes the origin of the sacred offering of 'ōiēlo to the goddess Pele, and the importance of Lāna'i Island in the telling of the story. According to Formander, the many sisters of Pele followed her east from Tahiti across the Pacific Ocean. As Maui, Lāna'i, Kaohelo, Hi'iaka, and Pele arrived at the Hawaiian Islands, Maui chose Lāna'i to dwell on, while Pele, Kaohelo, and her younger sisters traveled on to the island of Hawai'i.

Kaohelo had a son named Kiha, who was given instructions by Kaohelo as she neared death where she should be buried. "Take my body to the very navel of your grandmother, right on top of Kīlāteā; then bury me there." This her son did. The flesh of Kaohelo became the creeping vine and her bones became the bush-plant of the 'ōiēlo. Her head was treasured by Pele as the smoldering fire of Kīlāteā. The remainder of her body brought volcanic fire to Haleakalā on Maui, Keālia on O'ahu, and also to Kaua'i.

When Maui, living on Lāna'i, heard of the death of her youngest sister, she went to Hawai'i to retrieve her body, but found that small pieces of her body were strewn across the landscape sprouting into vines and bushes of the 'ōiēlo. She gathered as much of her sister's remains as she could, but upon returning to Lāna'i, was surprised to find the pieces of Kaohelo's body had been strung as leis and worn as adornment. Saddened by this, Maui died.

Hi'iaka then came to Lāna'i to recover the body of Maui, whereupon small bundles containing her remains were scattered across the island of Hawai'i, causing small hills and islets that remain to this day. In this way, the island of Lāna'i is part of the legend of how the 'ōiēlo came to be spread across the Hawaiian Islands, and why the 'ōiēlo is the special sacred offering to Pele (Formander 1919, V, III: 576-580).

#### 3.1.2.2 A Lamentation for Young Kaahumanu

The place name Halulu, a *hietau* on the southwestern coast of Lāna'i, was said to have been used by Kamehameha I until about 1810, after which he spent most of his remaining life on the island of Hawai'i. Based on the research of Formander (1920:451), "A Lamentation for Young Kaahumanu," was a chant composed for the favorite queen of Kamehameha I at her death. She was eulogized as having a soul that flew as a bird. In this chant, performed by her bereaved husband, Kaunua'i, the soul of Ka'ahumanu was said to have a spirit guide to heaven in the form of Halulu: a fabled bird whose head feathers were said to have adorned noted idols, and who was supposed to have answered the prayers of faithful devotees by fluttering, or by rising and falling, in answer to the good or ill wishes of the prayers sent to him.

#### 3.1.2.3 *Fallen is the Chief (A Prophecy of the Overthrow of the Kingdom by Kamehameha)*

In a chant composed to commemorate the uniting of all of the Hawaiian Islands under the rule of Kamehameha I, the fabled bird Halulu is again given a prominent part in the story. The feather of Halulu adorned the brow of Kaili, the god of war that Kamehameha was granted custody of by his father. Formander (1920:381) noted that the chant described how Kamehameha worshipped Halulu, and that "when the feather sprung up in the forehead of the idol, the people thought it

was a sign of ability to conquer; *o ka makia o Kamehameha*: that which fastens together, or holds together the islands."

### 3.1.2.4 The Ghosts of Lāna'i

The northern coastal place name of Laewahie refers to the point on Lāna'i where Kaulūā'au built a signal fire to the people of Lahaina. Fornander (1918:542) recorded the story of Kaka alano, the chief of all of West Maui. His son, Kaulūā'au, grew up as a boy involved in great mischief. Because he uprooted the sacred breadfruit grove of Lahaina, his father had no choice but to banish his son to the uninhabited island of Lāna'i. At that time, Lāna'i was the abode of ghosts, and Kaulūā'au was sent there to be killed by them. Tabrah (1976) notes the many tricks the ghosts tried to use to murder Kaulūā'au, and her account notes the location of the signal fire to the people of Lahaina after he had defeated all of the ghosts of the island as Naha, located in the *ahupua'a* of Kaohai. (The literal translation of Kaohai is "firebrand.") Kalaikaua (1888:212, 230) records the legend of Kaulūā'au conquering the ghosts of Lāna'i in two separate stories, one of which details his fight with the *Mō'oa'oa*, a lizard god of the island as the most difficult of the ghosts to overcome. He does not give the location of the signal fire used by Kaulūā'au. (There is a village named Kaulūā'au on the coast of Pāwili Ahupua'a.) The legend ends with Kaulūā'au being reunited with his father, mending his mischievous ways, and opening the island of Lāna'i for settlement.

### 3.1.3 Early Historic Period

Lāna'i was first seen by Captain James Cook during his voyage to the Sandwich Islands in January and February of 1779. The expedition had returned to the Hawaiian Islands in order to resupply following many months of mapping the west coast of North America (Ellis 1969). William Ellis, Assistant Surgeon to the expedition, noted the first time that the ships *HMS Resolution* and *Discovery* sighted "Araniu" [Lāna'i], as the ships made their way past "Kaowr vee [Kaho'olawe] nearly adjoining to Mow'whae" in 1779. It was during this voyage that Ellis went on to describe Lāna'i as an island under the dominion of the king of Maui (Ellis 1969: Vol. 2, 187). The previous January, 1778, Kaulā'i and Ni'ihau had been discovered and visited by Cook's expedition as the two ships had been making for the west coast of North America from French Polynesia (Ellis 1969, Vol.1: 167).

An account of a shipwreck on the northwestern reef of Lāna'i in the late 1820's was detailed by an American Navy Lieutenant, Hiram Paulding, when his ship, the U.S.S. Dolphin, arrived to aid the survivors of the "Loudon", a ship out of New York. Paulding recorded that the chief of Lāna'i was "encouraging the natives of the island to plunder the Loudon, which carried a large amount of specie and bullion." The account continued with the captain of the U.S.S. Dolphin, John Percival, chartering a vessel and saving the treasure with the intervention and aid of Bokī, the governor of O'ahu (Paulding 1831).

During the early and middle 1800s, the Hawaiian demography was affected by two dramatic factors: radical depopulation resulting from Western disease and nucleation around developing port towns. The traditional Hawaiian population was largely dispersed and, although there were royal centers and areas of more concentrated population, these areas never came close to rivaling

the populations of the historic port towns that developed on Hawai'i's shorelines during the 1800s. In this regard, Kuykendall (1938:313) notes of the period from 1830 to 1854:

The commercial development during this period, by magnifying the importance of a few ports, gave momentum and direction to a townward drift of population; the population of the kingdom as a whole was steadily going down, but the population of Honolulu, Lahaina and Hilo was growing.

By the 1830's, Protestant missionaries sent to the Sandwich Islands from the east coast of America were reporting having established a thriving congregation on Lāna'i. Letters written by missionaries to the American Board of Commissioners for Foreign Missions in 1830 listed 10 schools on Lāna'i Island attended by 506 students. Of these students, the missionaries reported that 206 could read, and 42 could write (Richards 1831).

On September 20<sup>th</sup>, 1845, Reverend Cochran Forbes left Lahaina at sunrise for "Ranai in company with bro. Baldwin. Kaulūob took us over in his boat. We had a very pleasant sail, until within some 3 miles of the landing when the fresh trades spattered us a little" (Forbes 1864). Forbes landed at Kaunolu, where he described a Protestant meeting house. Forbes and Reverend Dwight Baldwin preached to a congregation of about 125 persons, which grew to 180 for Sunday services. Monday morning the two missionaries went by canoe to Maunalei, "the place of the teacher Waimalu."

Forbes and Baldwin then hiked to the upper plateau. "After we had crossed the ridge the soil became better and vegetation more lively. There was an extensive piece of tableland there, perhaps 10 miles one way & 3 or 4 the other, on which are very few stones. There we spent the night & met with the people, near 200 in all who had come together to hear & see the strangers." Forbes wrote, "Pali the Lūnaathau for the whole island resides at this place called *Kihāmāniana*. His influence is manifestly good. We found several pious people around him & himself a good man. He told us that his little children only 6 and eight years old had read the Bible through. He also gave us a list of all the men - the women & children in the island; the whole numbering 584 inhabitants. Most of the children are in school and very few of them who are 12 years old that cannot read" (Forbes 1864).

Forbes commented that the air was cool and invigorating at Kihāmāniana. "We spent the night there and early in the morning held another meeting with them, after which we left amid many greetings for the seaside at *Kaohai*, Pia's place. We travelled constantly only stopping once to hold meetings at the place of Kamatulu, who teaches a school and is Lūnaathau for the whole island." By dark, the two missionaries had reached Kaohai, "where Pia had the people of all that neighborhood assembled under some *koa* trees at his door." The two missionaries returned to Maui by whaleboat. "The surf rolls in so heavily at Kaohai that it was with difficulty we got out. I was expecting two or three times to be swamped, but the boat rode through every surf safely so that by the goodness of God we got safely to sea and reached Lahaina safely before 12 o'clock" (Forbes 1864).

### 3.1.4 Mid- to late-1800s

The most significant change in land-use patterns and allocation came with The Great Māhele of 1848 and the privatization of land in Hawai'i. This action hastened the shift of the Hawaiian



economy from subsistence-based to market-based. During the Māhele, all of the lands in the Kingdom of Hawai'i were divided between *mō'i* (king), *ali'i* and *konohiki* (overseer of an *aliupua'a*), and *maka'āinana* (tenants of the land) and passed into the Western land tenure model of private ownership. On March 8, 1848, Kamehameha III further divided his personal holdings into lands he would retain as private holdings and parcels he would give to the government. This act paved the way for government land sales to foreigners, and in 1850 the legislature granted resident aliens the right to acquire fee simple land rights (Moffat and Fitzpatrick 1995: 41-51).

This significant change of land tenure on Lāna'i during the Great Māhele of 1848 is indicated in a map by J.F. Brown and M.D. Monsarrat (Figure 10). It shows that the island divided into Crown land, Government land, and lands available for private ownership and other purposes.

Native Hawaiians who desired to claim the lands on which they resided were required to present testimony before the Board of Commissioners to Quiet Land Titles. Upon acceptance of a claim the Board granted a Land Commission Award (LCA) to the individual. The awardee was then required to pay in cash an amount equal to one-third of the total land value or to pay in unused land. Following this payment, a Royal Patent was issued that gave full title of ownership to the tenant. By 1850, the government of Hawai'i offered land for sale to both Native Hawaiians and foreigners. Such lands when purchased were referred to as Royal Patent Grants, or, after the term of the Monarchy, as Land Patent Grants.

Native land transactions within the Kamoku Ahupua'a were recorded soon after the terms of the Great Māhele became law. Five small Royal Patent Grants representing four LCA tracts were sold to native families, beginning in 1848. Land use terms, such as whether portions of the lands included areas of pasturage, types of crops cultivated, house lots, paths, roads, and appurtenant streams were mentioned in some of the Royal Patent Grants (Table 2 and Figure 1).

One vast Land Patent Grant (R. P. 5011) was issued in 1907 to Walter M. Giffard, within which the lands of Kama'o, Kalulu, Kamoku, Keālia Paoma'i, Kaunolu, Māhana and Pāvili Ahupua'a, not subject to claim as Land Commission Awards, were transferred in fee simple. With specific reference to Kamoku Ahupua'a, Land Patent Grant 5011 mentions a number of landmarks within the metes-and-bounds property description. The *lii o Lono Heiau* is described as, "along [the boundary of] Kalulu to a cross cut in a sione amongst a lot of stores at the former site of an old Heiau called *lii Lono*." A water hole within Kalulu Valley is named Kaiholena, and "an old house site" is mentioned along the *aliupua'a* boundary with Paoma'i.

Table 2. LCAs within Kamoku Ahupua'a, with translations by Kēpa Maly (2009). Translations of Royal Patents by the Waiohona 'Alina Corporation (Waiohona 'Alina 2002).

Royal Patent Number	Land Commission Award Number	Chainant(s)	Award Type	Average
4800	10630	Patl. Na	Helu 10630, Patl. Kamoku, Native	Helu 10630, Patl. Kamoku, Māhele award Book 7:222.
8429	10029	Capolo	Helu 10029, Capolo, Māhana, Native	Helu 10029 Māhele Award Book 7:213

Royal Patent Number	Land Commission Award Number	Claimant(s)	Award Type	Acreage
Grant 5011		Walter M. Giffard	Certificate of the Boundaries of the Land	8,291.09 acres
			<p>Translation by Malo (2009)</p> <p>My knowledge is the same.</p> <p>Kawaiki, Sworn. All the words are true. one has objected.</p> <p>He received these Parcels of land from his parents in the year 1840, and his parents received them from Daniela L. He has resided there peaceably to this time. No Parcel 3. The boundaries are thus. <i>Mauka</i> and all about, land of <i>Konohiki</i>.</p> <p>Parcel 2. The boundaries are thus. <i>Mauka</i>, <i>Kawana</i>, <i>Makua</i>, <i>Maui</i> of <i>Konohiki</i>. <i>Makua</i>, the same. <i>Kaena</i>, <i>Maui</i> of <i>Kapana</i>.</p> <p>Parcel 3. There are in the <i>Maui</i> of <i>Kamoku</i>. . . . 5 Acres, 3 Rods, 2 Rods.</p>	

Royal Patent Number	Land Commission Award Number	Claimant(s)	Award Type	Acreage
6159	06833	Kaana	<p>Translation by Malo (2009)</p> <p>and all about, land of the <i>Konohiki</i>. -</p> <p>Parcel 2. The boundaries are thus. <i>Mauka</i> <i>Konohiki</i>.</p> <p>Parcel 1. The boundaries are thus. <i>Mauka</i> <i>Konohiki</i>. <i>Kawana</i>, <i>Kaena</i> and all about, land of <i>Mauka</i> land of <i>Konohiki</i>, <i>Mauka</i>, <i>Maui</i> of <i>Konohiki</i>.</p> <p>Parcel 2. <i>Mauka</i> is thus.</p> <p>Parcel 1. - 1 <i>Kulona hale</i> (house complex) land at Mahana. <i>Mauka</i>, 2 Parcels of land.</p> <p>Parcel 2. <i>Mauka</i> is thus.</p> <p>Parcel 2. <i>Mauka</i> is thus.</p> <p>Parcel 2. <i>Mauka</i> is thus.</p> <p>Parcel 2. <i>Mauka</i> is thus.</p> <p>Parcel 2. <i>Mauka</i> is thus.</p> <p>Parcel 2. <i>Mauka</i> is thus.</p> <p>Parcel 2. <i>Mauka</i> is thus.</p> <p>Parcel 2. <i>Mauka</i> is thus.</p>	
			<p>Translation by Malo (2009)</p> <p>and all about, land of the <i>Konohiki</i>. -</p> <p>Parcel 2. The boundaries are thus. <i>Mauka</i> <i>Konohiki</i>.</p> <p>Parcel 1. The boundaries are thus. <i>Mauka</i> <i>Konohiki</i>.</p> <p>Parcel 2. The boundaries are thus. <i>Mauka</i> <i>Konohiki</i>.</p> <p>Parcel 3. House for [illegible] - in the <i>Maui</i> of <i>Kamoku</i>.</p> <p>Parcel 1. There are in the <i>Maui</i> of <i>Kamoku</i>. . . . 7 Acres, 3 Rods, 10 Rods.</p> <p>Parcel 2. There are in the <i>Maui</i> of <i>Kamoku</i>. . . . 7 Acres, 3 Rods, 17.8 Rods.</p>	

Royal Patent Number	Land Commission Award Number	Claimant(s)	Award Type	Average
			<p>main gulch from the South. Thence                      2. North 88° 46' East true 5225.9 feet                      along                      Kalulu up South edge of gulch to a cross                      cut in a stone on South edge of same.                      Thence                      3. North 84° 40' East true 2594 feet                      along Kalulu to head of gulch. Thence                      4. North 72° 43' East true 2080 feet                      along                      Kalulu to a cross cut in a stone amongst a                      lot of stones at the former site of an old                      Heiau called Ilio Lono. Thence                      5. North 46° 19' East true 1041.4 feet                      along                      Kalulu up road to a point a little North of a                      cactus clump marked by two triangular                      pits.                      6. North 65° 44' East true 4939 feet                      along                      Kalulu along North edge of crater to a red                      wood post on the North wall of the crater at                      a place called Piteluaoa. near                      Kauhunanui's house.                      7. Thence along Kalulu down across a                      small                      ravine (coming in from the North called                      Keaku) to Government road and up the                      Northwest edge of the Kapano valley;                      passing near Kawanahele's house [Page</p>	

Royal Patent Number	Land Commission Award Number	Claimant(s)	Award Type	Average
			<p>470) to a point on ridge marked with four                      triangular pits and ditch thus (diamond                      with circle inside, with four points marked                      by small triangles with points toward                      diamond); said point being a little East of                      Puunene and bearing North 44° 53' East                      true 8052 feet from above mentioned red                      wood post. Thence                      8. North 45° 49' East true 1067.9 feet                      along                      Kalulu across valley passing to the                      Southeast of a water hole, called Kauhona                      to a red wood post on ridge that comes                      down from the central mountain range.                      Thence                      9. North 62° 37' West true 6742.5 feet                      along                      Paonai down above mentioned ridge and                      across valley on to a small ridge and down                      said ridge to a red wood post at end of                      same. 10. South 84° 37' West true 1316.8                      feet along Paonai to a cross cut in a stone.                      11. South 74° 8' West true 6258 feet along                      Paonai passing to the North of a couple of  <i>Hala</i> clumps to two triangular pit                      [sic? pits] at an old house site.                      12. South 74° 51' West true 5045 feet                      along Paonai to a cross cut on a stone at                      head of gulch.                      13. North 86° 6' West true 1368 feet along</p>	

Royal Patent Number	Patent Land Commission Award Number	Claimant(s)	Award Type	Average
3029		Nahina and Kethiuc	Award Type	103.58 acres
<p>Paomai down South side of gulch.                      14. South 83° 45' West true 1455 feet along Paomai to a cross cut in a stone.                      15. South 74° 9' West true 920 feet along Paomai.                      16. North 55° 12' West true 898 feet along Paomai across gulch to a red wood post a little West of a cactus clump. (Here ends the Crown land of Paomai) Thence 17. South 65° 58' West true 1617 feet along Kaa down North side of gulch to a cross on a stone. Thence 19. South 70° 33' West true 3590 feet along Kaa to a point 10 feet East of a large rock with cross cut on it. Thence 20. South 68° 53' West true 1664 feet along Kaa to sea shore. Thence 21. South 1° 55' West true 13460 feet along sea shore to point of Commencement Area 8291.09 Acres.</p> <p>Apana 2 -                      // of Kaunaloa; within Kamoku, beginning at the northeast corner. North 52% West 415 links along the government land North 44 West 2144 links to Molohi's land South 32% West 4664 links to Molohi's</p>				

Royal Patent Number	Patent Land Commission Award Number	Claimant(s)	Award Type	Average
5137	08556	Kauwaeaina	Award Type	
<p>land South 43 East 2320 links along the government land North 29 East 2540 links to the // of Puae 103.58 acres                      Excepting the <i>kulema</i> of a native.                      September 12, 1866</p>				
<p>Helu 8556, Kaunaloa, Maunaloa, Lanai Feb. 7, 1848. Greetings Commissioners who Quiet Land Titles. I have three <i>loi</i> (taro pond fields) at Maunaloa. Here are other claims of mine, several <i>moku mauu</i> (grass land/ pasture sections) at Kahlua, and a <i>paiku</i> (planting section) at Puae. By Kaunaloa. Helu 8556, Native Testimony 13:265.</p> <p>Kawaiki. Sworn. I know his Parcels of land on Lanai. They are in the // and <i>Ahupuaa</i> below. 3 Parcels. Parcel 1, 3 <i>lo'i kolo</i> (taro pond fields) in the // of <i>Ahauiki</i>, Maunaloa <i>Ahupuaa</i>. Parcel 2, 1 <i>moku mauu</i> (grass land/ pasture</p>				
<p>Helu 8556 Kaunaloa Maunaloa, Kahlua and Kamoku. Native Register 6:468                      Mähle Award Book 7:212                      There in the <i>Ahupuaa</i> of Kahlua and Kamoku, Lanai.                      Parcel 2. There in the // of Kapanouka... 1 Acre, 0 Rods, 35 Rods.                      Parcel 3. There in the // of Puae... 38 Acres, 2 Rods, 12 Rods.</p>				

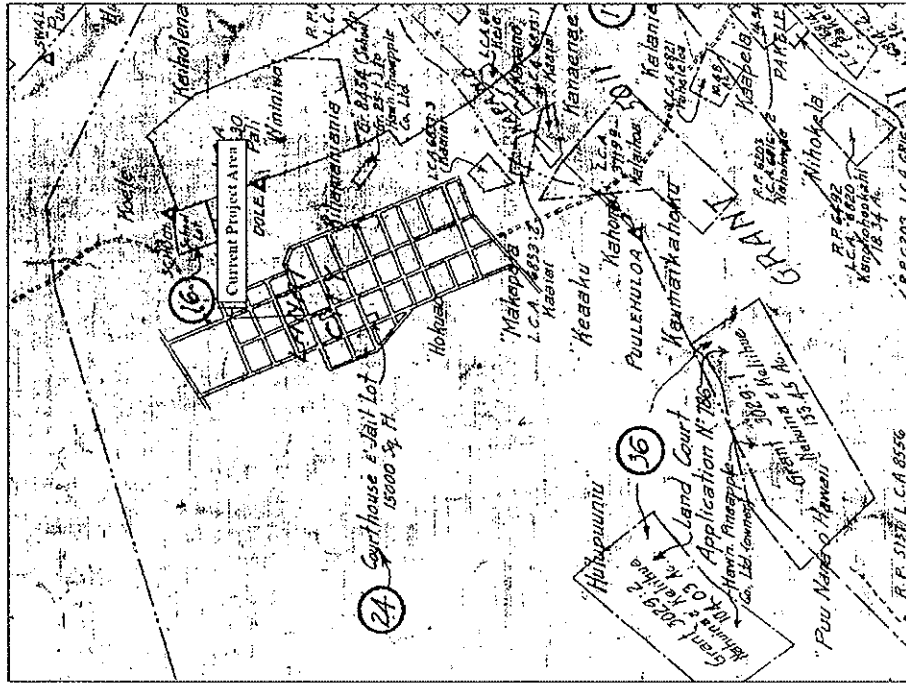


Figure 11. Map showing Land Commission Awards (LCAs) and Land Grants in the vicinity of the project area

Royal Patent Number	Land Commission Award Number	Claimant(s)	Award Type	Average
			<p>section) in the <i>ili</i> of Kapano uka, Kalulu Ahupua'a.</p> <p>Parcel 3. <i>Pauku</i> land in the <i>ili</i> of Pucō, Kanoku Ahupua'a.</p> <p>Parcel 1. The boundaries are thus. <i>Mauka</i>, my land. <i>Kaena</i> and all about, land of <i>Konohiki</i>.</p> <p>Parcel 2. The boundaries are thus. <i>Mauka</i> and all about, land of <i>Konohiki</i>.</p> <p>Parcel 3. The boundaries are thus. <i>Mauka</i> and all about, land of <i>Konohiki</i>.</p> <p>He received Parcel 1 from Kawaiki in the year 1844. Parcel 2 from his parents in the time of Kanehameha II. Parcel 3 from his parents in the time of Kanehameha I. He has resided there peaceably to this time. No one has objected. I, Kallihimoku, Sworn, understand it is exactly like that as spoken by Kawaiki.</p> <p>(Translation by Malby (2009).</p>	

Walter Murray Gibson, arriving in Honolulu as a representative of the Mormon Church on the 4<sup>th</sup> of July 1861, came to the Sandwich Islands with the idea of converting islanders to that religion. Gibson learned of large tracts of land available for pasturage on the island of Lānaʻi, and leased "Crown Lands" (lands reserved by the Royal Family of Hawaii during the Great Māhele of 1848) from King Kamehameha III for the raising of sheep and for other agricultural purposes. The authorities of the Mormon faith from Salt Lake, Utah, pressed Mr. Gibson to deed his property interests on Lānaʻi to the Church. By 1864, W. M. Gibson was cut off from the Mormon Church for his refusal to comply, and much of his interest in real property involving the *ahuipuaʻa* of Pālāwai, Keālia Aupuni, Keālia Kapu, Pawili, Kānaʻo, Kaʻā, and Kaohai was inherited by his daughter, Talula Lucy Hayselden (Tabrah 1976).

The descendants of the Gay family, which had purchased the island of Niʻihau from the Kingdom of Hawaii in 1864, now set their sights on acquiring a majority of the property of the island of Lānaʻi. In 1902, Charles Gay purchased the former Walter Murray Gibson estate lands at auction, and in 1903, bought out the Hayselden properties. He then purchased the *ahuipuaʻa* lands of Kaʻā and Kaohai from the Crown Land holdings of Princess Ruth Keʻelikōlani. Charles Gay moved his family into the Gibson-built ranch house in Kōʻele, and made plans to purchase the eight remaining *ahuipuaʻa* then still under government control. A legal battle and a three-year drought forced Charles Gay to sell all of his property on Lānaʻi to a consortium of ranchers from Honolulu (Tabrah 1976). Ranching on the island was barely profitable. The Baldwin family, Maui's most famous ranchers, could not find a way to gain a profit from the island. In 1920, the Baldwin-owned Lanai Ranch Company brought 12 Asian chital deer (*Axis axis*) to Lānaʻi from Molokai, where good hunting ranges had been established for sportsmen (Graff and Nichols 1966). Despite these efforts, ranching was abandoned.

### 3.1.5 Early to Mid-1900s

Botanist J. M. Lydgate, visiting Lānaʻi with an expedition to obtain rare specimens of trees and flowering plants, reported that 40 continuous years of livestock grazing had "pretty well denuded [Lānaʻi] of its forest cover; only on the summit of the island ridge was there a somewhat moth-eaten mantle of it left, and only on the slopes of the higher ravines and the steep hillsides was that mantle really intact and undisturbed" (Lydgate 1920). Lydgate also reported the extinction of plant species observed on Lānaʻi only four years prior: plants that had been documented by fellow botanist Horace Mann of Harvard University. Lydgate (1920) commented that, "the ravages of cattle, sheep and goats, as well as forest diseases, hastened the decadence of the indigenous forest [of Lānaʻi]."

The success of the Hawaiian Pineapple Company of Honolulu acquiring all of the lands of the Baldwin-owned Lanai Ranch Company began with the annexation of the Hawaiian Islands by the United States in 1898. With annexation came political stability for Hawaii. Worldwide food prices were rising due to the outbreak of war between the United States and Spain over Spanish colonies in Cuba, Puerto Rico and the Philippines. The pineapple industry on the island of Oʻahu was bolstered by the sharp rise in demand for this food product, with corresponding expansion of canning facilities taking place at the Waiʻanae cannery. By 1904, the production and earning of Hawaiian pineapple had become "big business" (McClellan 1939), with the Hawaiian Pineapple Company of Honolulu in a leadership position.

By the time the United States entered World War I (1917), the pack of Hawaiian canned pineapple from all packers was about to reach an all-time high. The pack increased from 2.6 million cases in 1917 to 3.8 million cases in 1918 (Thrum 1920). The island of Lānaʻi, however, continued to be considered as prime ranch land, and not suitable for agriculture. In 1917, Henry Perrine Baldwin and his brother, Frank Fowler Baldwin, of the Maui-based Hawaiian Commercial & Sugar Company, acquired control of most of Lānaʻi. Small ranch land tracts owned by the descendants of Charles Gay, and about 500 acres remaining under native titles, were held out of the sale to the Baldwins (Wentworth 1925).

In 1922, the Baldwins sold their holdings on Lānaʻi Island to the Hawaiian Pineapple Company (Figure 12) in order to finance a real estate transaction on the island of Maui (Maui County Council, Lānaʻi Community Plan 1998:28). The construction of office buildings, warehouses, shops and dwellings for 250 workers and their families began immediately (Figure 13 and Figure 14). By 1927, three thousand acres of the Pālāwai Basin had been planted in pineapple, the first construction phase to establish Lānaʻi City had been finished (Figure 15), and a roadway linking the new piers at Kaumālapaʻu with Lānaʻi City had been paved (Freeman 1927). The cultivation of pineapple on Lānaʻi had become integral in Hawaii's supplying more than 90 percent of the world output of canned pineapple.

The dredging of Kaumālapaʻu Harbor and the construction of a breakwater was begun in 1924, after a large storm destroyed the wharf at Mānele Bay. Road construction to the new harbor was completed by the Hawaiian Pineapple Company, and transportation of the pineapple pack for 1925 was assured. Over the course of the next 20 years, five million dollars were invested in the company infrastructure, with annual packs in the late 1930's valued at over 1.4 million dollars. Peak harvest data for 1936 stated that as many as 100,000 crates containing more than 1,300,000 pineapples could be shipped out of Kaumālapaʻu Harbor in a 24-hour period (Stearns 1940).

In 1925, Bishop Museum Fellow of Yale University, Chester K. Wentworth, published "The Geology of Lanai" (Wentworth 1925). At the time of his study, he described construction projects by the Hawaiian Pineapple Company, including the erection of power plants and refrigeration plants. He referred his readers to Emory's work regarding cultural traditions of Lānaʻi and made an interesting assumption regarding the flora of Lānaʻi prior to European contact. Wentworth stated that "the traditions of the natives and the presence of dry tree stems and roots in aeolian deposits over much of its area make it fairly certain that Lānaʻi was wooded to the sea coast at the time when it was first visited by the Hawaiians" (Wentworth 1925:6).

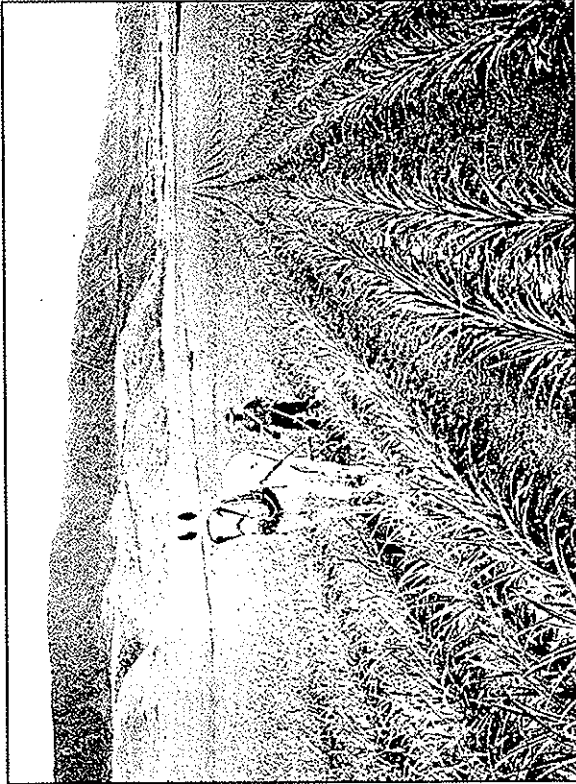


Figure 12. The plateau region of Lana'i is visible in this early photo of pineapple cultivation on the island (*Paradise of the Pacific*, December 1936, Vol. 48, No. 12).

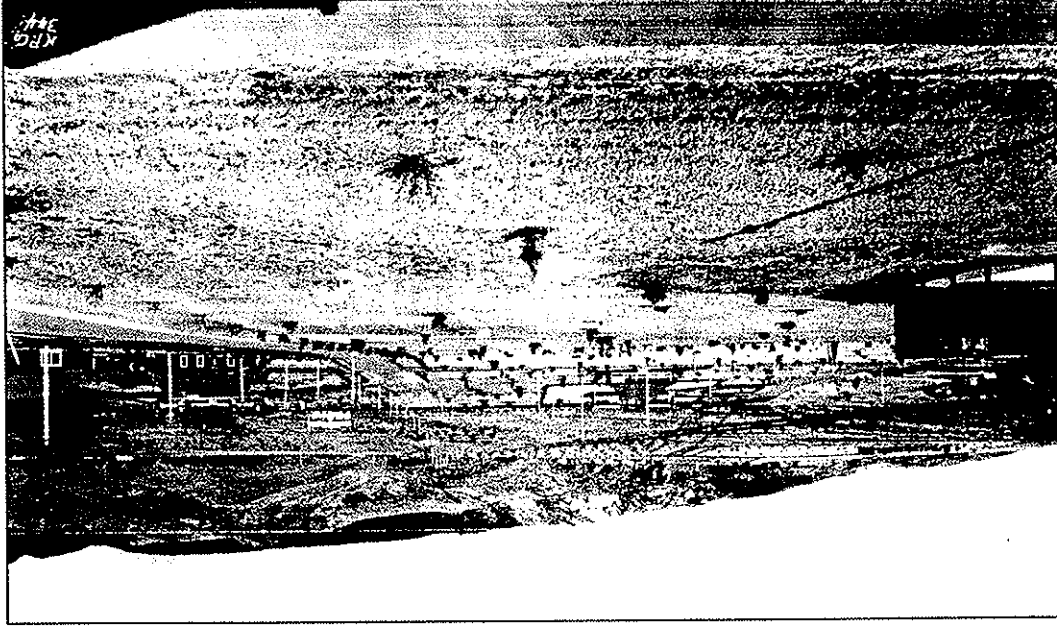


Figure 13. Dole Park circa 1923, following the acquisition of the island of Lana'i by the Hawaiian Pineapple Company, and the subsequent construction of laborer and management housing. (Hawaiian Pineapple Company photo courtesy of Castle & Cooke Resorts LLC)

By 1939, the population of Lāna'i was reported at four thousand, with virtually all of the residents working to maintain the fifteen thousand acres of pineapple fields. The expansion of the market to accommodate Hawaiian pineapples occurred so rapidly, with so much success, that new machinery was quickly developed to take advantage of the gentle topography of Lāna'i (Mackie 1939). The long, flat fields could accommodate mechanical harvesters, which operated by straddling rows of pineapple plants, and moving slowly behind men who broke the ripe fruit off their stalks. Once aboard the harvester, pineapples had their crowns removed, were sorted for size, and crated. Pineapples picked in the morning on Lāna'i, about sixty miles from Honolulu, were barged to Honolulu, canned and ready for shipment by nightfall the same day (McClellan 1939).

3.1.5.1 Water Source Development

Harold T. Stearns traversed the island of Lāna'i between June and August of 1936, conducting studies of the geology and ground-water resources. He was assisted by personnel from the U.S. Geological Survey, completing hydrographic maps for the study. His work highlighted the explorations for ground water in Maunalei and at Kō'ele, to improve sources of drinking water, and for irrigation of the expanding fields of pineapple cultivated on the island (Stearns 1940). He reported that the westernmost slopes of the Palāwai Basin of Lāna'i "[are] not sheltered by other islands on the southerly side, [and] kona storms are unobstructed. Heavy downpours during a single kona [southern exposure] storm commonly account for a considerable part of the annual rainfall, and in some of the arid sections a single rain storm may contribute as much as 80 percent of the annual total" (Stearns 1940:65).

3.1.6 Mid-1900's

Following the end of World War II, the agricultural population of Lāna'i continued to work for wages comparably lower than those earned by sugar workers on the other islands. When restrictions against organized unions were lifted in 1945, sugar workers and dock workers were the first to unionize. By 1946, the International Longshoremen and Warehouse Union (I.L.W.U.) had consolidated its hold on workers who grew, harvested, milled, transported, warehoused and refined Hawaiian sugar. For the 3,200 people on Lāna'i, labor relations with the Hawaiian Pineapple Company were about to heat up (Henderson 1949).

Between 1947 and 1951, pineapple workers in Hawai'i tried but were unable to demand wages and benefits comparable to sugar workers. An industry-wide strike among all pineapple companies was called by the I.L.W.U. in 1947, resulting in minimum wage concessions that raised pay from 35 cents an hour to 97 cents an hour for men. Comparable sugar wages in 1948 were \$1.77 per hour for men, and this disparity continued until pineapple workers on Lāna'i staged a strike that lasted for seven months in 1951, finally winning higher wages and benefits on par with sugar workers. In 1954, the Hawai'i I.L.W.U. fought for and was awarded the first pension plan for agricultural workers in the United States. Throughout the 1950's, other labor concessions awarded to pineapple workers included the 40-hour work week, medical benefits, provisions for sick leave, and paid vacations and holidays (Labor 2009).



Figure 14. A photograph of the city of Lāna'i, with children visible in the foreground, and hundreds of acres of land cleared for pineapple cultivation in the background (Nippu Jiji Co., Ltd. 1929)

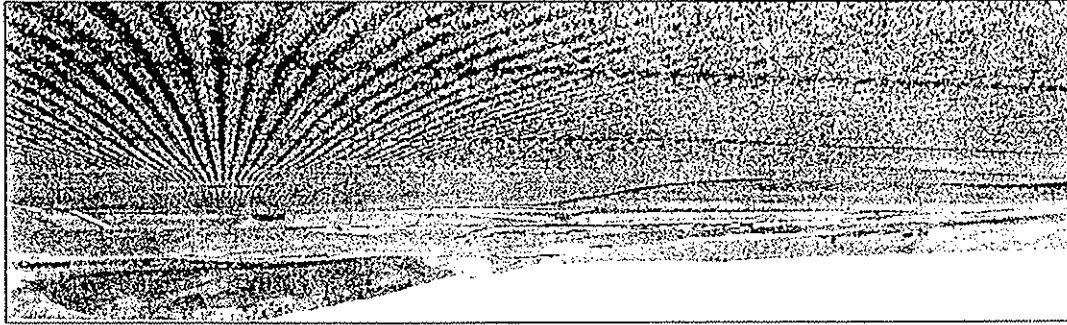


Figure 15. Lāna'i City, visible in the distance (left) with pineapples under cultivation in the foreground (Nippu Jiji Co., Ltd. 1929).



### 3.1.7 Modern Land Use

By 1961, James D. Doie's pineapple lands on the island of Lāna'i were merged with the assets of Castle & Cooke Inc., a prominent Hawai'i-based corporation. World-wide prices for pineapple continued to drop throughout the 1970's as competing countries, most notably Cuba and the Philippines, supplied the market with cheaper pineapple.

Three small multi-family housing units on the subject property were built in 1965. At present, two of the buildings have abandoned and the third is currently used as the Lāna'i Community Health Center and Lāna'i Women's Center. The buildings were renovated sometimes in the past but the specific time periods were not known. These structures will be removed to construct the new Lāna'i Community Health Center.

During the 1980's, Castle & Cooke began a long-term program to phase the island out of pineapple cultivation, and expand tourism on Lāna'i. In 1988, David Murdock, chairman of Castle & Cooke, Inc., opened a resort hotel and companion championship golf course at Mānele Bay. A second resort hotel and golf course in the uplands of Kō'ele was opened in 1990. The present continuing construction of additional residential and luxury housing projects has created additional jobs for the people of Lāna'i; however, the current statewide downturn in the economy has boosted the unemployment rate for the island past 8% (Labor 2009).

## Section 4 Previous Archaeological Research

Archaeological studies that have dealt with larger regions of Lāna'i, but with specific mention of historic properties and features within Kamoku Ahupua'a, include those by Emory (1924a, 1924b), Hommon and Emory (1972), Hommon (1974), and Hammatt and Borthwick (1982a).

Late in 1920, Kenneth P. Emory completed a detailed series of excavations within the crater of Haleakalā on Maui, where he had examined the construction of stone terraces and platforms for clues as to their cultural use. Continuing this work for the Bishop Museum on Lāna'i, Emory (1924a) documented Hawaiian pre-contact ceremonial platform (*heiau*) features, as well as pre-contact dwelling and village sites. Many of the abandoned pre-contact village complexes Emory recorded on Lāna'i also included small ceremonial altar (*ko'a*) structures, burial areas, trail markers (*āhiu*), petroglyph incised pictograms on boulders, and, in some cases, relic wooden timbers from the ancient framework of their habitation structures (Emory 1921). In all, Emory's work recorded 59 house sites within the *āhiupua'a* of Kamoku (Emory 1924a: 50) (Figure 16).

In the upland plateau, northwest of the present project area, Emory (1924a:51) described two separate consolidated groups of visible house sites that appeared to constitute large upland dryland settlement areas east of Kānepu'u. Set against the ridge line of Kaka'alani that rises some one thousand feet in elevation as it leaves the region of Kō'ele, and ending at Kānepu'u, this dryland plateau included the village sites of (in east-to-west order) Kukukahi, Kalapu'u, and Keonehe'ehe'e. Emory recorded 38 visible house sites, spread out over three miles along this ridge line. With ample evidence of habitation in the upland region, Emory estimated that the region of the Ka'a plateau supported at least 500 inhabitants (Emory 1921:27). Hearths, ovens, activity scatters and outlying temporary habitations in the lower elevations of the northwestern portion of Lāna'i, between the shoreline settlements and the upland dryland region, indicated to Emory the former existence of trails linking the upland settlements to the ocean resources below.

Archaeological studies specific to Kamoku Ahupua'a in the region of Lāna'i City includes Borthwick and Hammatt (1992), and Hammatt and Borthwick (1988, 1993). In 1988, on the eastern side of Lāna'i City, Hammatt and Borthwick conducted an assessment of the Lāākoa III Subdivision to determine the nature of a surface scatter of lithic artifacts. Finished adze fragments and four adze preforms found here were attributed to an off-site gravel quarry from which the material had originated. Most archaeological studies in the vicinity of Lāna'i City have identified no significant traditional Hawaiian cultural material remains and/or deposits.

Table 3 lists all previous archaeological investigations performed in the upper region of Kamoku Ahupua'a. A synopsis of each investigation, including the number of habitation sites found (if any), follows the table. Figure 17 shows locations of previous archaeological studies in the vicinity of the current project area.

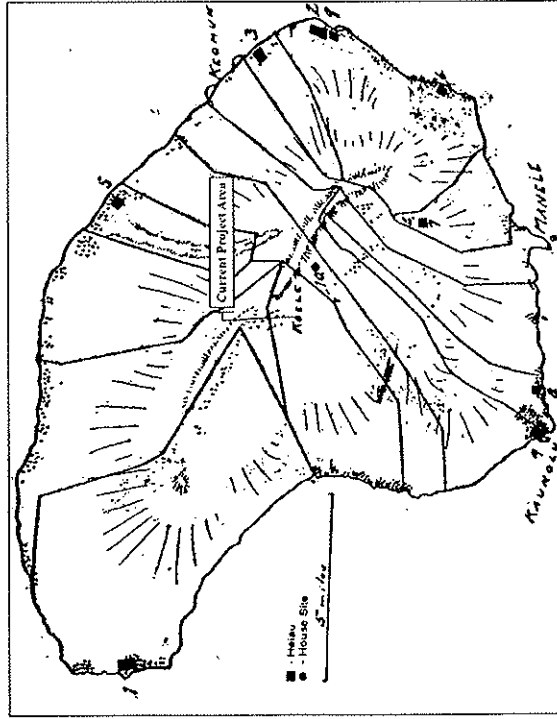


Figure 16. Map from Emory (1924a) showing heiau and house sites on the island of Lana'i

Table 3. Previous archaeological investigations in the upland region of Kamoku Ahupua'a.

Investigator(s) and Year	Location	Study Type
Emory 1924a & b	Island-Wide	General Survey
Homon and Emory 1972	Island-Wide	General Survey
Homon 1974	Island-Wide	General Survey
Hammatt <i>et al.</i> 1988	Ranching Areas of Kō'ele	Inventory Survey and Data Recovery
Hammatt and Borthwick 1988	Lāiākoa Subdivision, Kamoku Ahupua'a, Lana'i City	Archaeological Assessment
Hammatt and Borthwick 1989a	Waialua Multi-Family Housing, Lana'i City	Reconnaissance Survey
Hammatt and Borthwick 1989b	Kō'ele Golf Course, Housing and Subdivision	Reconnaissance Survey
Borthwick and Hammatt 1992	Kō'ele Reservoir	Inventory Survey
Hammatt and Borthwick 1993	Waste Water Treatment Project at Kamoku	Inventory Survey
Hammatt 1996	Paoma'i	Inventory Survey
Tuggle 1997	Northwestern uplands, including portions of the Paoma'i and Ka'ā Ahupua'a	Inventory Survey
Creed, J. Hammatt and H. Hammatt 2000	50-Acre parcel at the northwest corner of Lana'i City	Inventory Survey
Hammatt and Shideler 2004	Nitiwai Hill	Inventory Survey
Lee-Greig and Hammatt 2007	The Courts Affordable Housing, Lana'i City	Field Inspection
Solamillo, Liverman and Kastner 2009	Lana'i City Business-Country-Town Historic District	Architectural Inventory Survey

#### 4.1 Summaries of Previous Studies in the Project Area Region

Although Emory's most comprehensive archaeological work on the island of Lāna'i pertained to coastal settlements at Kapihā'a and Kaunolu, his investigations of deserted village sites in the uplands of the island are noteworthy because he described burial areas associated with habitation areas. He described a flexed burial exposed by a landslide at an area just north of Kō'e'e, and he described ancient house sites just south of Kō'e'e.

Emory (1924a) conducted his landmark island-wide survey of Lāna'i between July 1921 and January 1922. He observed pre-contact house sites and burial sites in the Kūkuikahi area, just north of Kō'e'e in Paoma'i, and wrote, "I counted 27 house sites...and at Pohoula is a stone faced terrace 22 x 59 feet, 4 feet high, having 4 walled divisions probably for as many houses. The hill above has been used as a burial ground" (Emory 1924b:26).

Another specific reference to habitation sites in the upper plateau is given by Emory (1921) in his field notes for September 1921, as he tried to answer the question as to where the natives of the north coast lived when they ascended the plateau:

Along the bluffs which bound the plateau on the mauka side [in Ka'ā Ahupua'a], I counted 31 house sites as I came home. Here, certainly, is where the natives lived. Allowing for 20 more house sites marked with stone divisions, and 50 grass houses at least which had used a perishable wooden fence, and allowing 5 natives to a house, this sheltered spot could have and probably did hold a population in ancient times of 500 (Emory 1921:27).

Other types of historic properties and features observed by Emory across the upper plateau, the northwestern transitional zone, and the northwestern coastal regions (excluding Maunāte'i and Kaunolu) include oven pits at Kānepu'u ridge in Paoma'i (Emory 1924a:45); a well at Honopū in Ka'ā (Emory 1924a:47); remnant wooden frames of thatched houses at Kanaele in Paoma'i (Emory 1924a:50); the largest (55 x 152 feet) *hetau* structure on Lāna'i at Ka'ena Iki in Ka'ā (Emory 1924a:64); a fishing shrine (*ko'a*) at Honua'ula in Paoma'i (Emory 1924a:68); Maluhie *hetau* at Keonehe'uhe'e in Ka'ā (Emory 1924a:69); a small *hetau* at Hao in Mahana (Emory 1924a:69); a complex of habitation platforms, enclosures, and shelters and a ceremonial platform at Kalaehohle, in Ka'ā (Emory 1924a:69); a fishing shrine (*ko'a*) at Pāhākuloa, and a *ko'a* in Kūāhā, in Mahana; both coastal shrines built among house sites (Emory 1924a:71); one *ko'a* in Kukui and four in Kahue in Paoma'i, as well as *ko'a* structures at Cape Kae'a and at Ka'ena in Ka'ā (Emory 1924a:71); a *ko'a* at Ōanapuka on the coast of Kamoku (Emory 1924a:72); stone markers (*ahii*) at Keahikawelo ridge in Ka'ā (Emory 1924a:72); upright stone slab alignments at Hale o Lono in Paoma'i (Emory 1924a:72); burials in Kuahua Valley in Mahana (Emory 1924a:73); burials in the sand dunes of Awahua in Paoma'i (Emory 1924a:73); burials at Pohoula hill, near the summit, in Paoma'i (Emory 1924a:73); a cave at Keone gulch in Kamoku, along the coast of the present project area *ahupua'a* (Emory 1924a:88); lava tube caves at Honopū (Emory 1924a:88); petroglyphs at Ka'ena in Ka'ā (Emory 1924a:103); and petroglyphs at Kaumālapu Bay in Kamoku, within the present project area *ahupua'a* (Emory 1924a: 103).

The identification of culturally significant sites across the central plateau of Lāna'i was also undertaken by other scientists working on the island at approximately the same time as Emory.

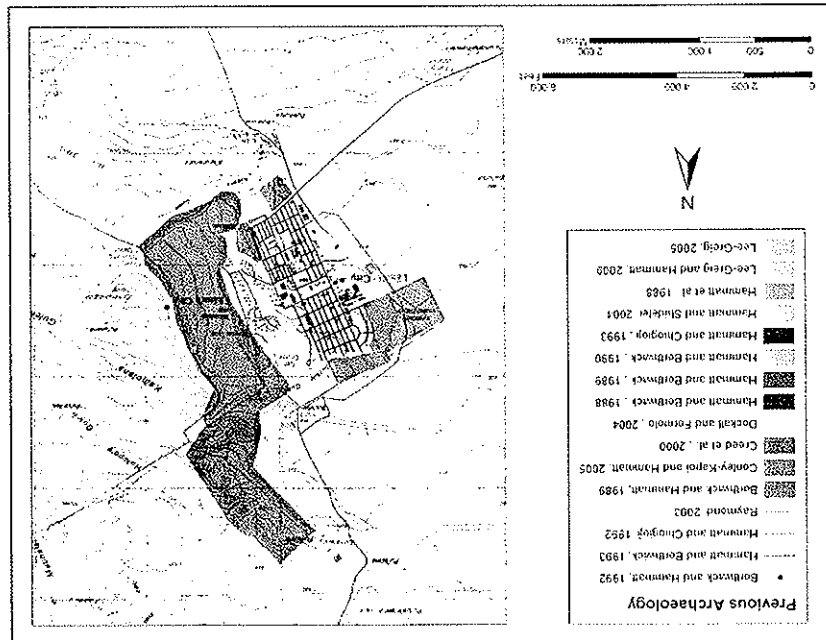


Figure 17. Previous archaeological investigations conducted in the region of Lāna'i City.

Chester K. Wentworth, a Yale University Fellow at the B.P. Bishop Museum, published the first scientific geologic study of the island in 1924 (B.P. Bishop Museum Bulletin 24), and supplied Emory with additional information while performing his surveys of the island (Wentworth 1925). Ornithologist George C. Munro (1920), and botanist J. M. Lydgate (1919-1921) had both performed surveys on Lānaʻi and both provided further cultural background information to Emory.

It was Emory's exemplary research on pre-contact occupation of the Mānele District of Lānaʻi that best showed how permanent habitation occurred along the coastline of the island. While an examination of the archaeological landscape of the Pālāwai Basin underscores the importance of the uplands as a focus of agriculture and habitation, Hawaiian traditions and the presence of hundreds of house sites at Kaunolu were evidence that the coastal environs were also a focus of settlement and marine exploitation.

In all, Emory (1924a) recorded 489 house sites across Lānaʻi. Of eleven large *heiau* structures found on the island, one (Pu'u Makeni) is located in the upper plateau region. Of the ten smaller *heiau* structures listed by Emory, two are in the upper plateau region. Maluhie *heiau*, in Keemehe'ehe'e, and north of Koa, below the trail that leads from the Pālāwai Basin onto the mountain bench at Kaehu'i is an unnamed 30 by 45 foot terrace. Of the 18 intact fishing shrines (*ka'a*) of Lānaʻi, one is located in the project area *ahupua'a*, at Kaumālāpua'u. This shrine included an adjacent house platform and two fireplaces. Smaller cairn structures were recorded by Emory in Mahana, along the area traveled by those crossing the plateau from the north coast

Emory (1924a:72) described stones marking places of religious or magical observances on the upper plateau:

On the great boulders [sic] along the Keahikawelo ridge many small monuments of three or four stones, one on top of the other, have been erected by natives traveling up and down, to insure good fortune on their way. I am reminded of similar monuments which were set up along the trail at Ke-zhu-o-ka-holo in Hialekala to keep the fog from enveloping the travelers and causing them to lose their way. But the *ahii* at Keahikawelo represent the *kūkāe* offerings of Kawelo.

In addition to these historic properties, Emory recorded a large number of artifacts. Some were isolated finds, some were associated with scatters. Petroglyph sites recorded in the project area *ahupua'a* included rock faces at Kaumālāpua'u.

Robert Hommon and Kenneth Emory (1972) made recommendations for the preservation of archaeologically-sensitive regions of Lānaʻi. They identified Lānaʻi City as an area where future residential subdivision might endanger historic properties or ruins not previously located. Their recommendations for archaeological studies included the areas of Mānele Gulch and Mānele Bay.

Robert Hommon (1974) conducted a survey of historic properties on Lānaʻi using Bishop Museum staff members. Hommon attempted to reacquire 262 of Emory's sites located outside of the Kaunolu work area, and documented a small number of previously unrecorded sites in the northwestern upland and coastal areas. Hommon observed that most of the coastal sites had

remained intact in the 50 years since the Emory's survey had been performed, and termed the state of preservation "unmatched elsewhere in similar Hawaiian sites."

Although Hommon's most significant finds during this survey occur outside of the present project area, they are relevant because they represent the use of a north-south travel route across the upper plateau. In addition, Hommon recorded complete habitation complexes along the southwest shoreline, including SIHP 50-40-98-202, a complex at Kaluako I: SIHP 50-40-98-166, the "Pālāwai Complex", which included an enclosure described as "probably a *ko'a* [fishing shrine] and walls "used as a temporary shelter for fishermen"; and SIHP 50-40-98-086, the "Kapaha Complex." In discussing significance, Robert Hommon noted that the Kaluako I sites "constitute the most densely concentrated group of well built terraced platforms yet found on Lānaʻi." He continued his assessment by stating, "if all of these features were used as foundations for houses; and if they were all used at the same time, the cluster constitutes one of the densest habitation complexes in the Hawaiian Islands" (Hommon 1974).

Investigations by Hallett Hammatt and Douglas Borthwick within the Lānaʻi City development region and within the former ranching areas of Kō'e'e are noteworthy, and are described below.

In 1988, Hallett H. Hammatt, Douglas Borthwick, David Shideler, and Kirstie Nakamura conducted a subsurface data recovery of two trash pits within the 20-acre construction site of the present-day "Four Seasons Lodge at Kō'e'e" hotel. This upland spot had been the private home of a number of prominent Lānaʻi families, and the recovery of historic artifacts from the trash pits added greatly to the understanding of the lives of early ranching families.

Hallett H. Hammatt and Douglas Borthwick performed an archaeological assessment of the Lāiākoā III Subdivision within Kamoku Ahupua'a (Hammatt and Borthwick 1988) and recorded a scatter of basalt and volcanic glass. The investigation recorded numerous coarse-grained basalt fragments, which were interpreted as industrial-grade modern gravel. Many fine-grained basalt flakes and basalt artifacts (including a finished adze fragment, eight adze preforms, a basalt core, and thirteen retouched flakes) were collected, and were determined to have originated at the Kō'i Adze Quarry in the Pālāwai Ahupua'a. Both the modern gravel and the pre-contact artifacts had been transported together from the quarry site by modern equipment.

Hallett H. Hammatt and Douglas Borthwick (1989a) performed a reconnaissance survey of the former Waiāluu multi-family housing subdivision (currently known as the Iwi'ole Dormitories) in 1989, and recorded a sparse scatter of flaked basalt lithic material. The context of this scatter of cultural material was determined to have been highly disturbed by modern agricultural cultivation.

Also in 1989, Hallett H. Hammatt and Douglas Borthwick (1989b) performed reconnaissance surveys for four separate projects, including the Kō'e'e golf course, the Kō'e'e single-family housing, the Queen's multi-family housing and the Olopuu Woods Subdivision. During the survey of the golf course project area, four historic features were recorded. Three were associated with the water system and debris from a ranching-era homestead, and the fourth was an unrelated concentration of pre-contact lithic material. The remaining three surveys produced a very small amount of additional pre-contact lithic material that was found to have originated (again) from the nearby modern rock quarry.

The Kuahua complex of platforms, terraces and rock shelters was first described by Emory (Site 207 at Kuahua Gulch) in 1924, and had not been relocated by Hommon in 1974. Additionally, Tomamari-Tuggie (1992) noted that an area of the valley of Kuahua reported by Emory (1924b:14) to have contained the disorganized remains of approximately twenty flexed burials, was not relocated by this survey.

In 1993, Douglas F. Bortherwick and Hallett H. Hammatt conducted an archaeological inventory survey for an approximately 13,000 foot-long waste water pipeline connecting the Lānaʻi sewage treatment plant with the Kōʻele golf course irrigation system. This survey did not locate any traditional cultural deposits or structures, but did augment knowledge of the Lānaʻi City/ Kamoku Ahupuaʻa development region.

In 1996, Hallett H. Hammatt conducted an archaeological inventory survey of a 14.9-acre parcel in the *ahupuaʻa* of Paomaʻi, along the Malau ridge above the area developed as the "Four Seasons Lodge at Kōʻele" hotel. SIHP 50-40-98-1598, a pre-contact rectangular habitation enclosure, was recorded, and the positions of other associated crude terraces and rock piles were mapped.

In 1997, David Tuggie performed an archaeological inventory survey of five locations within the rural districts of Kaʻā and Paomaʻi Ahupuaʻa, during which he identified five historic properties. The five properties were assigned SIHP numbers. SIHP -1941 was located just west of the Kaʻena/Polihua roadway fork, and consisted of a 40m long alignment of cobbles and boulders. SIHP -1942 was located along the western side of Lapaiki Road, in the *ahupuaʻa* of Paomaʻi adjacent to the boundary of Kaʻā, and consisted of three separate scatters of cultural material including basalt flakes, marine shell and coral fragments, and a few worked artifacts. Also included in this site were specimens of fire-cracked rock and an exposed horizon of charcoal and burned soil. SIHP -1943 was located proximate to SIHP -1942, and included an intact hummock, which displayed a hearth-like area with fire-cracked rock scatters. SIHP -1944 was located proximate to the previous two sites, and included an additional scatter of fire-cracked rock, and an exposed hearth. SIHP -1945 was located on a ridge line at the edge of a low bluff, at a location named Ka-unu-a-Kane by Emory (1924). Here, the property was a large boulder outcrop against which a terrace of faced, upright stones (slab-shaped cobbles) was constructed. Based on its unusual method of construction, the terrace was interpreted by David Tuggie as probably ceremonial.

In 2000, an archaeological inventory survey was conducted at a 50-acre parcel belonging to the Department of Hawaiian Home Lands at the northwest corner of Lānaʻi City. The investigation by Victoria S. Creed, Jared Hammatt and Hallett H. Hammatt (2000) found that the project area had been previously cultivated in pineapple, and no cultural material was observed.

In 2004, Hallett H. Hammatt and David W. Shideler performed an archaeological inventory survey of the Kihamānienie Church (SIHP 50-40-98-1946) and an associated churchyard complex at Nininiwai Hill (SIHP 50-40-98-1947). Both historic properties are within the region of Lānaʻi City, in Kamoku Ahupuaʻa. The investigation focused on the surface markings that appeared to denote the positions and relationships of some eighteen historic burials within the churchyard, as well as features associated with the early historic occupation of the Kōʻele area, including an irrigation feature and a small section of a stone-lined trail.

In 2007, Tanya Lee-Greig and Hallett H. Hammatt conducted sub-surface testing on property slated for affordable apartment housing during an archaeological field inspection in Lānaʻi City, Kamoku Ahupuaʻa. This investigation was conducted to determine the extent of historic-era cultural material from the earliest days of commercial pineapple cultivation. No cultural structures or deposits were observed during this inspection.

In 2009, Stanley Solamillo, Astrid Liverman, Ph.D. and Katie Kasner conducted an architectural survey of structures in Lānaʻi City for evaluation and inclusion in the Lānaʻi City "Business Country Town" (BCT) historic district. A number of buildings were determined as eligible for nomination to both National and Hawaiʻi State Registers of Historic Places. The study determined that the three existing buildings on the present project area were "non-contributing," and the Planning Department of Maui County determined that mitigation at Historic American Building Survey (HABS) Level II was an appropriate action.

#### 4.2 Background Summary and Predictive Model

During Emory's comprehensive study of Lānaʻi in 1921 for the Bishop Museum (Emory 1924a), he observed that historic period development on the island, including ranching and pineapple cultivation, had destroyed archaeological sites within the central basin of Pālāwai (Kirch 1985). However, Emory found both the upland plateau and coastal regions largely undisturbed, and the preservation of archaeological remains was excellent. Emory's seven-month study concentrated on mapping and surveying settlement structures, such as house foundations and *heiau* platforms. In addition, Emory's ethnographic investigation of place names formed an invaluable aid to understanding the settlement pattern of the plateau region (Emory 1921).

Archaeological remains related to the use of the upland plateau region for dryland agriculture, such as stacked-basalt enclosures and ceremonial structures, such as *heiau* and stacked-basalt trail markers (*ahu*), have been recorded in two major areas of the plateau. According to Emory (1924a), upland habitation sites recorded in the summit area of Pohoʻuia, just northwest of Kōʻele, contained habitation and ceremonial structures as well as a burial ground in close proximity to each other.

Emory's journal of his work in the plateau region (Emory 1921) also documented settlements in Kukuikahi, and the remains of a village just north of Kōʻele in Paomaʻi, where dryland agriculture was the primary focus (Emory 1924a). These upland areas, with a slightly larger water supply and good soil, would have sustained a larger population. In the upland region, rainfall for the present project area occurs as moisture-laden tradewinds encounter the low mountainous region of Lānaʻi Hale, only 3,379 ft. amsl at its highest point (Stearns 1936). The resulting light orographic rainfall pattern (Giambelluca and Schroeder 1998) is limited to the highest regions of the mountain ridge above Kōʻele. Because rainfall at the upland plateau rarely exceeds 35 inches annually, there are no perennial streams (Stearns 1940).

Situated between the vast expanse of the central basin and the upland plateau is the region within which Lānaʻi City was developed. From the area of Lānaʻi City, travel into the upland plateau also allowed for travel across Mahana Ahupuaʻa, to the north coast of the island. While traveling along the upland plateau ridge, both Munro (2007) and Gay (1965) observed traces of the ancient upland forest, and concluded that portions of the upland plateau had been traditionally cultivated. Evidence of slash-and-burn agriculture in the region northwest of Kōʻele

was noted by Munro (2007:47), who estimated that the pre-contact cultivation of sweet potatoes, yams and dry-land taro in the uplands probably represented 150 years of erosion, resulting in the exposure of vast amounts of hardpan and subsoil on the Ka'a lands west of Kānepu'u.

Dryland agriculture occurring in the upland plateau was irrigated only by intermittent rainfall. According to Handy and Handy (1972), breadfruit and yams were once plentiful, but due to low rainfall, any drought would have resulted in famine. Owing to these fragile living conditions, it appeared that Lāna'i was closely dependent on Maui in times of adversity.

Other ancillary features, such as small lava-dike quarries for the procurement of fine-grained basalt, and stone artifacts derived from these activities, have been noted in the central basin by Hammat (1988). Storage caves with parts of wood canoes have been found in the vicinity of Kaunāhāpu'u. Munro (2007:48-49) stated that the erosion of the Ka'a lands occurred before the introduction of livestock to the island. That the upland region of Lāna'i was not sufficiently protected from the wind led Munro to speculate that the upland population must have moved toward Kō'ule in an attempt to find better shelter, although sacrificing exposure to rainfall brought by the prevailing tradewinds. In the region between the forests of Kānepu'u and Kō'e, Munro (2007) saw evidence, in the form of firepits, midden deposits, and burials, that the area had been inhabited for a long period.

From these studies a strong outline for an overall settlement pattern for Kamoku Ahupua'a can be postulated. Small, permanent coastal villages appeared in gulch areas in the vicinity of coastal fresh water seeps and wells (Emory 1924a) probably about A.D. 1500, according to Kirch (1985:306), owing to the range of lithic and wood artifacts found in the settlement area of Kaunāhāpu'u. The steep, arid gullies of the transition zone, located between the rich marine resources of the coast, and the upland region, have not yet been extensively studied (Colin and Hammat 1996, Borthwick and Hammat 1990), and may yield much new information about traditional habitation and agricultural practices. Both the upland and upland plateau regions supported dryland taro, sweet potato, breadfruit and yams (Handy and Handy 1972, Emory 1924a, Gay 1965, Munro 2007) probably around A.D. 1650, according to Kirch's (1985:307) descriptions of the adoption of dryland agriculture in marginal lands, as well as changes in traditional methods of warfare. Widespread destruction of the small, permanent, upland populations occurred during warfare between the forces of Maui's chief and those of the Hawai'i island chief on Lāna'i about A.D. 1778 (Fornander 1880:157).

After the reviewing of histories literature and previous archaeological studies in Kamoku Ahupua'a, we believe that the project area once had traditional agricultural and probably habitation sites. However, it is in Lāna'i City and adjacent to pineapple cultivated fields which have been graded, excavated and plowed continuously, likely destroying evidence of precontact activities. This project area is on the southern edge of Lāna'i City. In some cases within the city, subsurface soil remnants have remained relatively intact. These relatively undisturbed areas could retain significant traditional pre-contact cultural material, including temporary habitation and agricultural structure remnants. In addition, because this general area has been previously utilized for residential area for many of years, post-contact deposits could also be present in the project parcel. Finally, given the presence of the three multi-family homes built in 1965, modern-era deposits could possibly be identified.

## Section 5 Results of Fieldwork

An archaeological field inspection was conducted by Hallett H. Hammat, Ph.D., on February 2, 2010 with a follow up field check was carried out by Jonas K. Madeus, B.A. on March 30, 2010. The CSH archaeologists conducting the present field inspection documented the three extant structures by taking notes and photographs and a plan view sketch map. All three buildings planned for removal to construct the new health center facility.

The project area parcel is located within Lāna'i City, a tract of land developed for plantation laborers, supervisory personnel and equipment of the Hawaiian Pineapple Company beginning in the early 1920's. There are indications from historical records that the portion of Lāna'i City in the region of Dole Park was bulldozed level prior to the construction of plantation structures. It appears that little additional subsurface disturbance, other than trenching for roadways and underground utilities, has occurred within the bounds of Lāna'i City.

During the pedestrian survey of the Lāna'i Community Health Center building and the project parcel, no surface cultural material remains or deposits were observed. As noted above, the current Lāna'i Community Health Center building is one of three small multi-family housing units constructed in 1965 on the project area (Figure 18). The other two buildings are no longer in use. The three buildings were previously documented in an architectural inventory survey carried out by Solamillo and others (2009), and are covered in greater detail in the nomination form for the Lāna'i City BCT Historic District to the Hawai'i Register of Historic Places, (Solamillo 2009, APP).



Figure 18. View of portions of the three multi-family buildings that are located on the main portion of the project area; view to the north northwest

### 5.1 Architectural Description and Archaeological Observation

The following architectural descriptions are for the three small multi-family buildings that are planned for removal prior to the beginning of construction for the Lānaʻi new Community Health Center. All of the architectural information in this section is adapted from Solamillo (2009), field studies performed by Astrid Liverman, Ph.D. and Katie Kasner in 2009, and the results of the Multi-Property Nomination to the Hawaiʻi Register of Historic Places, Lānaʻi City BCT Historic District, Lānaʻi, Hawaiʻi, by the County of Maui Planning Department, Wailuku (Solamillo 2009).

The general project area appears to be approximately 30 to 50 cm higher in elevation than the ground surface of the surrounding streets and the adjacent parcels north, east and west. This might have been from fill during the first construction of the structures. All electrical lines are overhead with other utilities underground. Some ornamental plants surround the buildings and include ti plants (*Cordyline fruticosa*), banana plants (*Musa sp.*), palm trees (*Palmsaceae*), Norfolk Island pine trees (*Avicaria heterophylla*) and other unidentifiable plants.

#### 5.1.1 Site # LC-BCT-019

**Name of Structure:** Dormitory (Four-plex)  
**Feature Type:** Building Structure (Plantation Vernacular)  
**Feature function:** Multi-family and Dormitory  
**Age:** Original construction: circa 1965

#### Description: Original Construction circa 1965

Site # LC-BCT-019 is a four-plex at 334 Sixth Street that appears to have been erected ca. 1965 by HPCo carpenters as a dormitory for single men who arrived during the picking season. It replaced an earlier dwelling that had been erected by Kikuchi Honda and his building crew in 1923-1924 (Figure 19). The building was converted into four apartment units at an indeterminate date and remained in that use in 2008. This building was modified sometimes in the past but the specific date is not known (Solamillo *et. al.* 2009).

#### Archaeological Observations

Site # LC-BCT-19 is a building structure located 8.8 m on the south side of Sixth Street and to the west of Houston Street, and east side of Gay Street. This structure is rectangular in shape and built on a concrete slab. It is constructed from lumber or wood and corrugated tin roof. The sidsings or exterior walls of the building are 6 in. wide by 1 in. thickness of Tongue and Groove (TNG) wood. The building measures 71 ft. and 6 in. (21.7 m) in length by 22 ft. and 7 in. (6.9 m) in width, and by 11 ft. and 9 in. (3.63 m) in height to the highest peak of the roof. The roof is a cable roof style. There are four units in this building. Window treatments are lowered windows indicating a more recent replacement date. Two concrete driveways or parking lots are at the front of this structure toward Sixth Street. There is also a concrete slab at the southeast corner of the building which probably the septic or cesspool for the building.

While the sidsings on the building are likely the original wood 6 in TNG wood or board, the exterior walls and tin roof are deteriorating and rotting away. As the windows are not original and the given high degree of deterioration little to no historic integrity remains.

#### Nomination to the National Register of Historic Places

This structure was not nominated to the State and National Register of Historic Places because it is a non-contributing structure or feature of the Lānaʻi City, Business Country Town historic district, according to the Historic Resources Inventory Identification form (Solamillo *et. al.* 2009).



Figure 19. View of Site # LC-BCT-019, one of the two abandoned structures on the project area, at 334 Sixth Street, view to the northwest

#### 5.1.2 Site # LC-BCT-020

**Name of Structure:** Women's Center/Arts Center  
**Feature Type:** Building Structure (Plantation Vernacular)  
**Feature function:** Multi-family and Institutional  
**Age:** Original construction: circa 1965

#### Description: Original Construction circa 1965

The four-plex at 624 Houston Street appears to have been erected ca. 1965 by HPCo carpenters as a dormitory for single men who arrived during the picking season. It replaced an earlier dwelling that had been erected by Kikuchi Honda and his building crew in 1923-1924 (Figure 20). This building was converted into four apartment units at an indeterminate date and remained in that use in 2008. This building was modified sometime in the past but the date is not clear (Solamillo *et. al.* 2009).

### Archaeological Descriptions

Site # LC-BCT-20 is a building structure which is situated 7.5 m from the west side of Houston Street, east of Site # LC-BCT-021 and southeast of Site # LC-BCT-021. This structure is rectangular in shape, built on a concrete slab, and constructed from lumber or wood with a corrugated tin roof. This building has modern sliding glass windows. The sidings or exterior walls of the building are 6 in. wide by 1 in. thickness of Tongue and Groove (TNG) wood. The building measures 72 ft. and 4 in. (21.8 m) in length by 22 ft. and 4 in. (6.8 m) in width, and by 11 ft. and 5 in. (3.5 m) in height to the highest peak of the roof. The roof is a cable style roof and there are only two units in the building. One unit is currently used by the Lāna'i Community Health Center and the other by the Art Center. The building has a concrete driveway and/or parking lot on each end which can accommodate two cars.

The sidings or exterior walls of this building appear to be the original walls because they are TNG wood and/or board, the windows have been replaced sliding glass windows and the interior of this structure had been altered. Therefore the structure has no historic integrity.

### Nomination to the National Register of Historic Places

This structure is not eligible for nomination to the National Register of Historic Places (NRHP), because it is a non-contributing building or feature of the BCT historic district, according to the Historic Resources Inventory Identification form (Solamillo 2009).

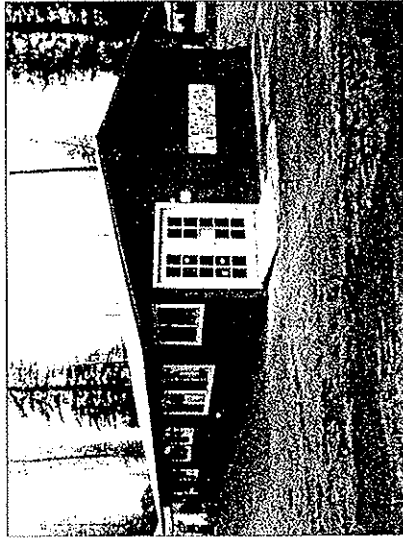


Figure 20. View of Site # LC-BCT-020; this building is currently used by the current Lāna'i Community Health Center and the Lāna'i Women's Center on the project area at 624 Houston Street; view to the north.

### 5.1.3 Site # LC-BCT-021

**Name of Structure:** Dormitory (four-plex)  
**Feature Type:** Building Structure (Plantation Vernacular)  
**Feature function:** Multi-family  
**Age:** Original Construction: circa 1965

### Description: Original Construction circa 1965

This dwelling at 622 Gay Street appears to have been erected ca. 1965 by HPCo carpenters as a dormitory for single men who arrived during the picking season. It replaced an earlier dwelling that had been erected by Kikuchi Honda and his building crew in 1923-1924 (Figure 21). The building was converted into four apartments at an indeterminate date and remained in that use in 2008. This building was modified sometime in the past but the specific date is not known (Solamillo *et al.* 2009).

### Archaeological Descriptions

Site # LC-BCT-021 is a building structure that is located 4 m east side of Gay Street and to the southwest of Site # LC-BCT-019 and to the west side of Site # LC-BCT-020. This structure is built on a concrete slab and constructed from lumber or wood and corrugated tin roof. The sidings or exterior walls of the building are 4 ft. wide by 1 in. thickness of plywood with grooves. The building measures 75 ft. (22.8 m) in length by 22 ft. and 3 in. (6.8 m) in width, and by 11 ft. and 9 in. (3.63 m) in height to the highest peak of the roof. The roof is a cable style roof with four bedroom units in the building. The original window treatments have been replaced with louvered windows. There is one door for each unit toward the Gay Street and each end of the building has a concrete driveway or parking lot. There is an additional concrete slab at the northeast corner of the building which may be the septic or cesspool for the building.

As the sidings or exterior walls and the windows on the building are of a more recent construction style and the exterior walls and tin roof are deteriorating and rotting away, little to no historic integrity remaining.

### Nomination to the National Register of Historic Places

Site # LC-BCT-021 is not nominated to the NRHP as it is a non-contributing feature or building to the BCT, according to the Historic Resources Inventory Identification form (Solamillo 2009).



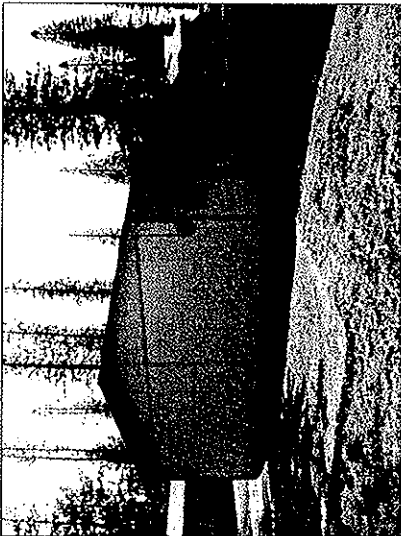


Figure 21. View of Site # LC-BCT-021, one of the two abandoned structures on the project area, at 622 Gay Street; view to the north.

**Library To Be Moved To Fraser And Seventh**

Hawaiian Pineapple Company has made the plans for on the north side of Fraser Avenue and Seventh Street for the new location of the Library and Reading Room, and will move the present building to this site next week. Mrs. Esie Wong, Librarian, and several plantation employees spent a busy day on Tuesday packing books, magazines and furniture in preparation for the move.

**HOPE TO ADD MUSEUM**

Hapeco hopes to be able to remodel the present building, at least in part, and to add a room in which the growing collection of books about Hawaii and Lanai, and a collection of ancient Hawaiian implements can be housed. When this work can be done, and how extensive it will be, will depend on the completion of the plans and estimates, and the availability of funds, a Company spokesman said.

It was learned, however, that an empty "C" type building will be moved to the new library location in anticipation of its being added to the present Reading Room.

**LANAIAN 4/15/55**

Figure 22. Newspaper clipping from the *Lanaiian*, dated April 15, 1955, regarding plans of the Hawaiian Pineapple Company to move building LC-BCT-024 from the Lanai High School to its present location, and to add another structure to the original structure (Solamillo et al. 2009).

As noted above, many of the building structures in Lanai City were modified one or more times in the past, as a result of which, their original integrity has been distorted. The period during which the three structures within the present project area may have been modified is not clear. Consequently, these structures are deemed non-contributing features or buildings to the Lanai City BCT historic district. The above newspaper clip mentions relocation and plans for modification to building LC-BCT-024 in Lanai City, (Figure 22) (Hill et al. 2009). While this building is not on the current project area, the news paper clip shows a history of continue modifications to some buildings in Lanai City.

## Section 6 Summary and Interpretation

A review of the historic documentation indicates that Lāna'i City, in Kamōku Ahupua'a, was extensively developed for residential use and commercial pineapple cultivation beginning in the early 1920's. Construction of utility installation would have been contributed to the high level of disturbance of this current project area. Construction would have included roads, driveways, water line and sewer line installation. In addition, gardening and landscaping also contributed to the surface disturbance of the project area. The high level of disturbance in this area has probably obliterated any surface evidence that the native Hawaiian inhabitants of these upland slopes might have left behind.

However, based on the number of traditional cultural historic properties previously recorded by Emery (1924a) in the upper basin and upper plateau region, in addition to historic properties identified recently by Cultural Surveys Hawai'i in the region of Kihāmānienie and Kō'e'e, it is possible that excavation and construction in the proposed project area will occur in an area where subsurface traditional pre-contact or historic cultural deposits and buried structure remnants may be present.

Additionally, because the project area is located within the boundaries of the original Lāna'i City, it is possible that subsurface deposits of post-contact cultural material and remnants of plantation structural features may be present in the project area.

## Section 7 Recommendations

The project area is located within the original layout of Lāna'i City. A review of historic photographs indicates that it was not previously cultivated in pineapple. Soil stratigraphy in such areas may consist of modern fill material overlying undisturbed regional soils, indication that undisturbed cultural deposits may exist in scattered pockets. Such subsurface deposits may include indigenous and post-contact cultural material remains, remnant structural remains, and, possibly, human burials.

Given the above information precautionary monitoring is recommended during ground altering activities of the project area and excavation associated with the Lāna'i Community Health Center.

Such subsurface deposits may include both traditional or indigenous and post contact cultural material remains, and probably of structural remains, and probable human burials.

In the event that human remains are identified during the course of excavation, all work in the immediate area should be stopped, the location secured, and Ms. Martha Sevans of the Lāna'i Archaeological Committee and Mr. Hitano Rodrigues, the Cultural Historian from SHPD, should be contacted for further direction.

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## Appendix C

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Cultural Impact Assessment for Proposed Lanai Health  
Center, Cultural Surveys Hawaii, Inc.,  
July 2011

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**Cultural Impact Assessment**  
**For the Lāna‘i Community Health Center Project, in**  
**Kamoku Ahupua‘a, Lahaina District, Lāna‘i Island**  
**[TMK: (2) 4-9-006: 011]**

Prepared for  
Wilson Okamoto Corporation

Final

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### Management Summary

Reference	Cultural Impact Assessment for the Lāna'i Community Health Center Project, Kamoku Ahupua'a, Lahaina District, Lāna'i Island [TMK: (2) 4-9-006: 011] (Dagan, Cordova, Hill, Lee-Greig and Hammatt 2010)
Date	July 2011 Final
Project Number (s)	CSH Job Code: Kamoku 10
Project Location	The subject project site is located in Lāna'i City and sits at the corners of Sixth Street to the northwest, Gay Street to the southwest, Seventh Street to the southeast and Houston to the northeast [TMK: (2) 4-9-006: 011].
Land Jurisdiction	<b>Property Lessee:</b> Lāna'i Community Health Center-Non-Profit <b>Property Owner:</b> Castle & Cooke Resorts, LLC-Private
Project Description	The new health center would be a "U" shaped, single story building of approximately 6,800 sf. The design of the building will be made in the "plantation home style" and will be aesthetically compatible with surrounding buildings. The facilities will house spaces for consult rooms, exam rooms, dental specialty/exam rooms, a mini laboratory, an X-ray area, and offices. The building will also have room for a staff lounge, reception/conference rooms, administrative areas and multipurpose rooms. Multipurpose rooms will be available for flu clinics, health education events, Women, Infants and Children (WIC) Program activities, and Lanai Art Center activities. The facilities for the health center will use approximately 25,067.07 square feet of the parcel. Castle and Cooke Resorts, LLC will lease the land to the Lāna'i Community Health Center.
Project Acreage	25,067.07 square feet, or about 0.575 acres
Region of Influence (ROI) also referred to as "study area"	The area of direct effect (the "project area") for the proposed project is the construction footprint of the Lāna'i Community Health Center structure itself. When assessing the presence or absence of direct, indirect, and cumulative effects of the project on the traditional cultural practices of this region we would look at the ROI for this project which is defined as the geographical area encompassing the <i>ahupua'a</i> of Kamoku referred to as the "study area".
Regulatory Context	This cultural impact assessment was conducted per the requirements of the Hawaii State Office of Environmental Quality Control (OEQC) subject to Hawai'i Administrative Rules (HAR) Title 11 Chapter 200-4(a) and Chapter 343 of the Hawai'i Revised Statutes (HRS). This cultural impact assessment follows the Guidelines for Assessing Cultural Impacts as set forth by the OEQC.

Summary and Recommendations	Currently existing on the property are three buildings which were once used as dormitories by workers employed by the plantation. Two of these buildings are now abandoned, and a portion of the third building houses the existing administration offices for the health center and the activity room for the Lanai Art Center. The project area is located in Lāna'i City within an area that is being considered for nomination to the National Register of Historic Places as the Lanai City Business Country Town Historic District. As described in the nomination to the National Register of Historic Places, the three buildings located on the current project site are listed as non-contributing buildings. These buildings were built in 1965 by Plantation Housing Ltd. among a total of nine dormitories. These three structures have been considered non-contributing buildings of the Lanai City Business Country Town Historic District and are slated for removal to make room for construction of the new Lāna'i Community Health Center. Throughout the consultation process the Lāna'i community identified their need for and support of the proposed Lāna'i Community Health Center. The new location and the new facilities were viewed as necessary improvements to the island's overall health care services. There will be no adverse impacts to cultural resources or traditional cultural practices by the proposed project. To the contrary, the project is viewed as an enhancement this community.
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## Table of Contents

Management Summary .....	i
<b>Section 1 Introduction .....</b>	<b>1</b>
1.1 PROJECT BACKGROUND .....	1
1.2 SCOPE OF WORK .....	1
1.3 ENVIRONMENTAL SETTING .....	8
1.3.1 Natural Environment .....	8
1.3.2 Built Environment .....	8
<b>Section 2 Methods .....</b>	<b>10</b>
2.1 DOCUMENT REVIEW AND RESEARCH .....	10
2.2 SCOPING AND COMMUNITY OUTREACH .....	11
2.2.1 Government Agencies, Advisory Councils, Local Community Organizations and <i>Kama'āina</i> .....	11
<b>Section 3 Traditional and Historic Background .....</b>	<b>15</b>
3.1 TRADITIONAL AND HISTORICAL BACKGROUND .....	16
3.1.1 Traditional Accounts .....	16
3.1.2 Mythological Accounts .....	18
3.1.3 Early Historic Period .....	19
3.1.4 Mid- to late-1800s .....	20
3.1.5 Early to Mid-1900s .....	27
3.1.6 Mid-1900's .....	32
3.1.7 Modern Land Use .....	33
<b>Section 4 Archaeological Research .....</b>	<b>34</b>
4.1 SUMMARIES OF ARCHAEOLOGICAL STUDIES IN THE REGION OF LĀNA'I CITY .....	37
<b>Section 5 Community Consultations .....</b>	<b>42</b>
<b>Section 6 Summaries of Kama'āina Interviews .....</b>	<b>46</b>
6.1 MS. ALBERTA (MORITA) DE JETLEY .....	46
6.2 MRS. MARTHA EVANS .....	46
6.3 MR. ROBERT HERA .....	47
6.4 MR. ALBERT MORITA .....	47
6.5 MR. GARY ONUMA .....	48
6.6 AUNTY IRENE (COCKETT) PERRY .....	48
6.7 MS. DIANA SHAW .....	48
<b>Section 7 Traditional Cultural Practices .....</b>	<b>50</b>
7.1 GATHERING FOR PLANT RESOURCES .....	50
7.1.1 Medicinal Plant Gathering .....	50
7.1.2 Subsistence Plant Gathering .....	50
7.1.3 Gathering <i>Mālie</i> .....	50

7.2 TRAILS AND TRADITIONAL ACCESS ROUTES .....	50
7.3 TRADITIONAL HAWAIIAN STONE TOOL AND CRAFT MANUFACTURE .....	51
7.4 FRESH WATER RESOURCES .....	51
7.5 AGRICULTURAL PRACTICES .....	52
7.6 HUNTING PRACTICES AND DEER HABITAT .....	54
7.7 HONORING THE <i>KŪPUNA</i> .....	54
<b>Section 8 Summary and Recommendations .....</b>	<b>56</b>
8.1 RECOMMENDATION .....	56
<b>Section 9 References .....</b>	<b>57</b>
<b>Appendix A Guidelines for Assessing Cultural Impacts from the State of Hawaii Office of Environmental Quality Control .....</b>	<b>1</b>
<b>Appendix B Formal Letter Responses .....</b>	<b>1</b>
<b>Appendix C Community Contact Letters .....</b>	<b>1</b>
<b>List of Figures</b>	
Figure 1. Topographic map with ROI outlined in dark blue .....	3
Figure 2. TMK map [TMK: (2) 4-9-006; Parcel 011] showing project area in red hatching .....	4
Figure 3. Map courtesy of Wilson Okamoto Corporation, showing the current project area .....	5
Figure 4. View of the three former multi-family housing units on the project area, one of which is currently used for the Lāna'i community Health Center and the Lāna'i Women's Center, the green building in far left background; the other two gray structures have been abandoned; view to the southeast .....	6
Figure 5. View of the central portion of the project area showing the signage for the Lāna'i Community Health Center and the Lāna'i Women's Center in the middle portion of the photo; view to the southwest .....	7
Figure 6. The portion of Kamoku Ahupua'a, showing the location of Lāna'i City in its easternmost (right) upland portion (Stearns 1942:Plate 1) .....	15
Figure 7. The plateau region of Lāna'i is visible in this early photo of pineapple cultivation on the island ( <i>Paradise of the Pacific</i> , December 1936, Vol. 48, No. 12) .....	29
Figure 8. Dole Park circa 1923, following the acquisition of the island of Lāna'i by the Hawaiian Pineapple Company, and the subsequent construction of laborer and management housing. (Hawaiian Pineapple Company photo courtesy of Castle & Cooke Resorts LLC) .....	30
Figure 9. A photograph of the outskirts of the city of Lāna'i, with a reservoir visible in the foreground, a lone Cook Island pine in the forested portion of the city, and hundreds of acres of land cleared for pineapple cultivation (Wentworth 1925) .....	31
Figure 10. Archaeological investigations conducted in the region of Lāna'i City .....	36
<b>Table 1. Kamoku Ahupua'a - Place Names Near Lāna'i City .....</b>	<b>16</b>

Table 2. LCAs within Kamoku Ahupua'a, with translations by Kēpa Maly (2009). Translations of Royal Patents by the Waihoŋa 'Aina Corporation (Waihoŋa 'Aina 2002). .....21

Table 3. Archaeological investigations in the upland region of Kamoku Ahupua'a.....35

Table 4. Community Contacts .....42

## Section 1 Introduction

### 1.1 Project Background

On behalf of the County of Maui, Community Development Block Grant Program, the Lāna'i Community Health Center and Wilson Okamoto Corporation, Cultural Surveys Hawai'i, Inc. (CSH) completed a Cultural Impact Assessment (CIA) for a 25,067.07-square foot, or 0.575 acre, parcel in Lāna'i City, located in Kamoku Ahupua'a, Lahaina District, Lāna'i Island [TMK: (2) 4-9-006:por. 011] (Figure 1, Figure 2, Figure 3). The health center has been given a grant from the County of Maui, through the federally-funded Community Development Block Grant (CDBG) program for planning and design phases of the proposed new Lāna'i Community Health Center facilities. The new health center will serve low- and moderate-income residents of Lāna'i.

The Lāna'i Community Health Center project is located in Lāna'i City northwest of the Lāna'i Senior Center on the northwestern portion of parcel (Tax Map Key: 4-9-006:011). The parcel is bounded by Houston Street on the northeast, Seventh Street on the southeast, Gay Street on the southwest, and Sixth Street on the northwest. Castle & Cooke Resorts LLC currently owns the parcel and will lease it to the Lāna'i Community Health Center. The entire parcel is approximately 42,857 square feet, or about 0.98 acres. The Lāna'i Community Health Center will subdivide the parcel and use approximately 25,067.07 square feet (about 0.575 acres) of the northwest portion of parcel 011 for the new facility. The southeastern portion of this parcel along Seventh Street contains existing facilities occupied by the Lāna'i Art Center and Maui Community College, which will remain without changes (Figure 4 and Figure 5).

The project area is located in Lāna'i City within an area that is being considered for nomination to the National Register of Historic Places as the Lāna'i City Business Country Town Historic District (Lāna'i City BCT). The registration form identifies the three buildings located on the current project site listed as non-contributing buildings. These buildings were built in 1965 by Plantation Housing Ltd. among a total of nine dormitories constructed throughout Lāna'i City. The three structures located on the subject property are non-contributing buildings to the Lāna'i City BCT.

The Area of Potential Effect (APE) for the proposed project includes 25,067.07-square feet of property in the northwest portion of parcel 011. The Region of Influence (ROI), herein after referred to as the "study area", encompasses the *ahupua'a* of Kamoku.

### 1.2 Scope of Work

The scope for the cultural impact assessment is summarized as follows:

1. Examination of historical documents, Land Commission Awards, historic maps, with the specific purpose of identifying traditional Hawaiian activities including gathering of plants, animal and other resources or agricultural pursuits as may be indicated in the historic record.

2. A review of the existing archaeological information pertaining to archaeological sites within the study area to reconstruct traditional land use activities and to identify and describe the cultural resources, practices, and beliefs associated with the parcel and identify present uses, if appropriate.
3. Interviews with persons knowledgeable about the past and present cultural practices in the project area and its surrounding area. We anticipate both formal and informal interviews.
4. Preparation of a report on items 1-3 summarizing the information gathered related to traditional practices and land use. The report will assess the impact of the proposed undertaking on the cultural practices and features identified.

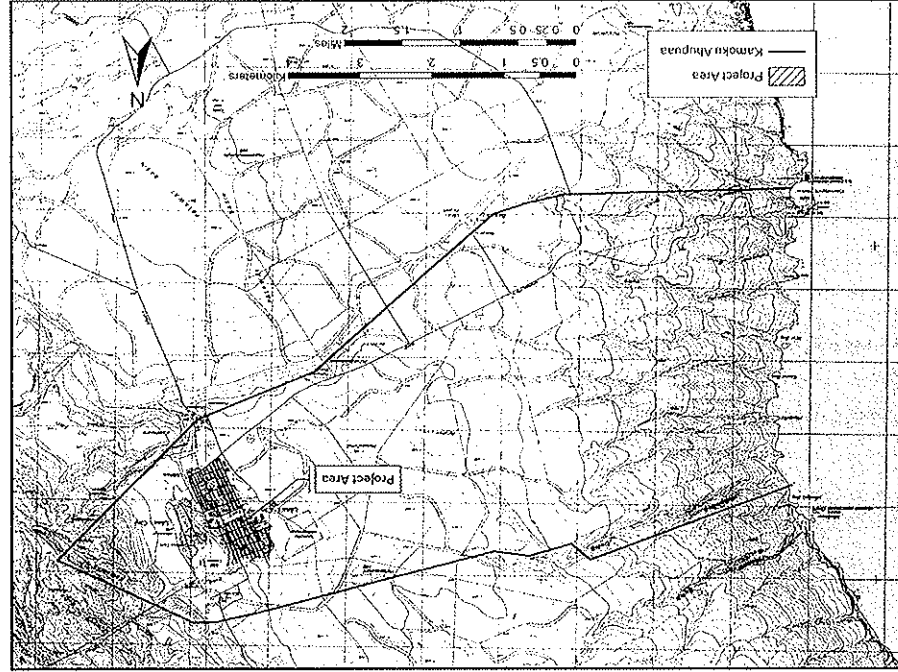


Figure 1. Topographic map with ROI outlined in dark blue.

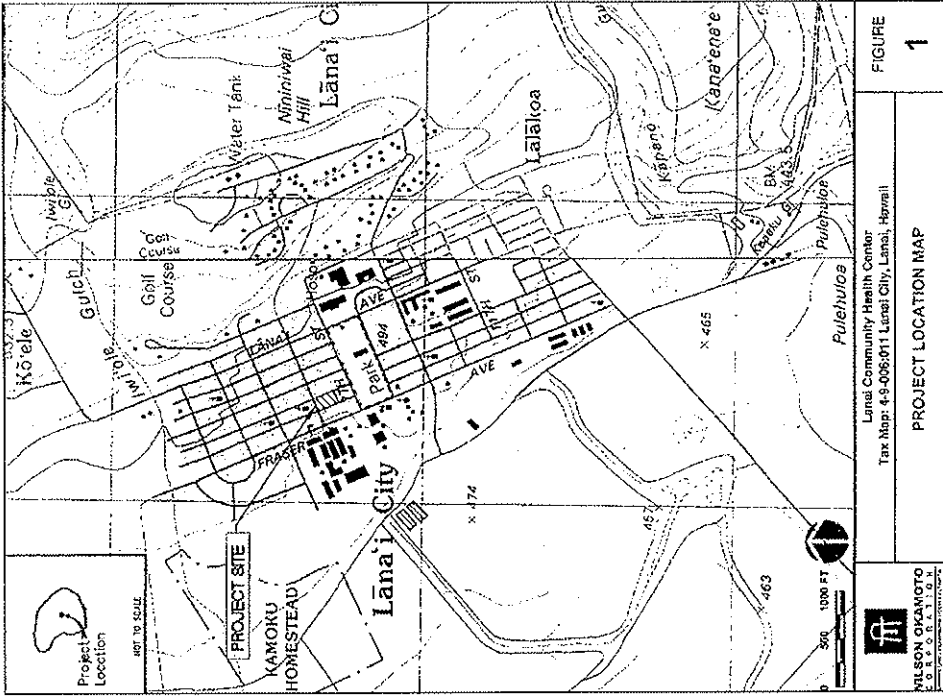


Figure 3. Map courtesy of Wilson Okamoto Corporation, showing the current project area

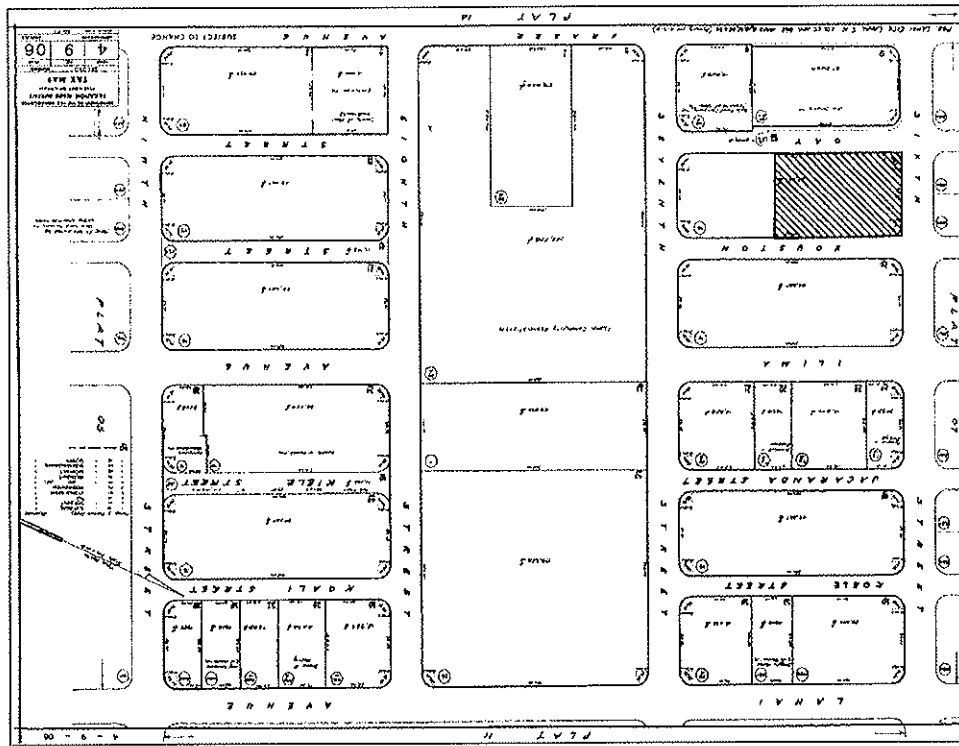


Figure 2. TMK map [TMK: (2) 4-9-006: Parcel 011] showing project area in red hatching.

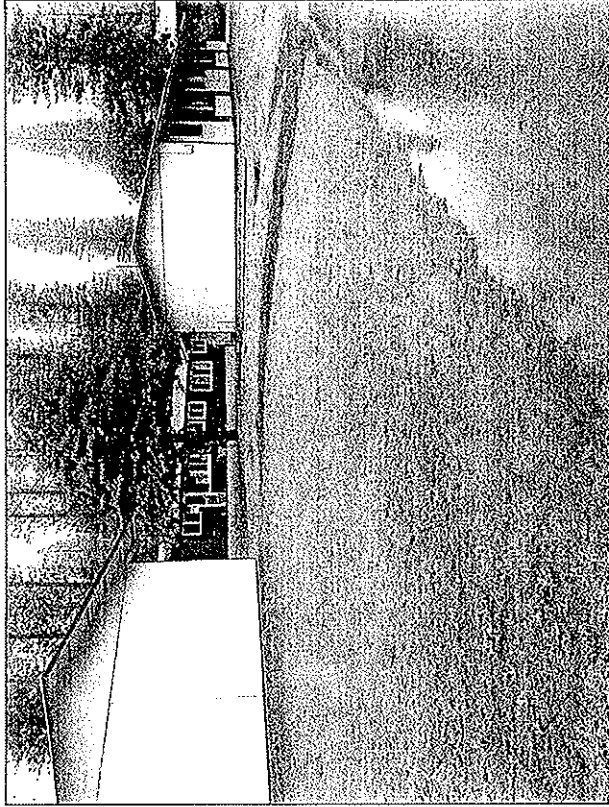


Figure 4. View of the three former multi-family housing units on the project area, one of which is currently used for the Lana'i Community Health Center and the Lana'i Women's Center; the green building in far left background; the other two gray structures have been abandoned; view to the southeast.

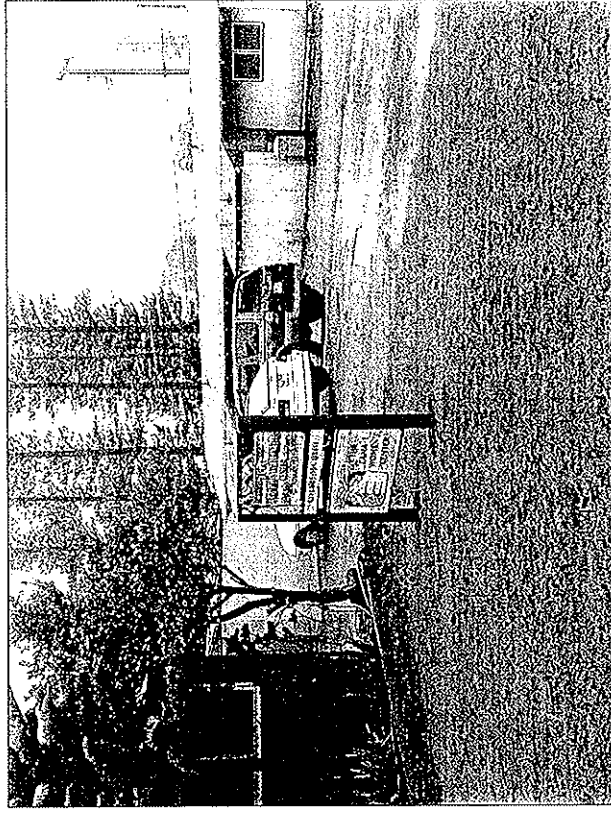


Figure 5. View of the central portion of the project area showing the signage for the Lana'i Community Health Center and the Lana'i Women's Center in the middle portion of the photo; view to the southwest.

### 1.3 Environmental Setting

#### 1.3.1 Natural Environment

The project area is situated within the central plateau region of Lānaʻi Island, at an average elevation of 1,600 feet (488m) above mean sea level (amsl). Generally, the soils underlying Lānaʻi City are deep, nearly level, well-drained soils of the Molokai-Lāhaina Association. This soil association is noted for fine-textured soils of the upland regions. More specifically, the sediments within the project area are Lāhaina siltty clay (LaB), 3 to 7 percent slopes. In a representative profile, the surface layer is about 15 inches thick, consisting of dark reddish-brown siltty clay. The subsoil is 45 inches thick, consisting of dusky-red and dark reddish-brown siltty clay. The substratum is soft, weathered basic igneous rock (Foote et al. 1972:78).

Lāhaina siltty clay (LaB) soils are characterized by slow runoff with a slight erosion hazard. Permeability is moderate with this soil type considered good for sugarcane and pineapple cultivation. Small acreages are used for truck crops, pasture, and home sites (Foote et al. 1972:79).

Temperatures in this upland region range between 60° and 80° F. The average annual rainfall in the area ranges from 25-35 inches (699-800 mm) with the heaviest rains in January and the lightest in June. The entire island lies in the dry rain shadow of the West Maui Mountains on Maui, leaving it without a wet windward side. Winds are consistent northeasterly trades.

Vegetation within Lānaʻi City is dominated by plantings of Cook pine trees (*Arcauraria coluinaris*) and Norfolk Island pine trees (*Arancaria heterophylla*). These trees were introduced in the 1920's by naturalist George Munro, when the Pālāwai Basin began to be cultivated in pineapple and the master plan for housing the pineapple plantation laborers involved the layout for Lānaʻi City (Taylor 1976). Most all other vegetation in the region of Lānaʻi City is imported landscape and ornamental, with various non-native plant species, such as *ti* (*Corchorine fruticosa*) evident in the yards of most retail establishments and residences.

The landscape of the project area has been heavily modified by historic industrial and residential subdivision construction and forest clearance to develop agricultural lands. Aside from the city-wide plantings of Norfolk Island pine trees, the northern slopes leading toward Kōʻeie are also planted in introduced eucalyptus (*Eucalyptus robusta* being dominant), silver oak (*Grevillea robusta*), and various fruit trees, such as mango (*Mangifera indica*) and papaya (*Carica papaya*) (H.E.A.R. 2009). Small stands of native *kukui* (*Aleurites moluccana*) were observed near the project area during the present field inspection.

#### 1.3.2 Built Environment

Lānaʻi City was constructed beginning in 1922, following the purchase of the island by James Drummond Dole to grow pineapple. The city of Lānaʻi was constructed to provide laborer housing, stores, schools, a hospital, a library, a bank, social halls, a gymnasium, a movie house, warehouses and repair shops (Mackie 1939). The master-planned community was designed to expand as additional laborers were needed. The present project area is surrounded by other buildings which appear to be original to the period during which the original construction of

Lānaʻi City by the Hawaiian Pineapple Company occurred. According to the history of Castle & Cooke by Taylor and others (1976), most portions of the city had been completed by 1926. Three small dormitories were built on the subject parcel in 1965 which replaced plantation homes that were there previously constructed between 1923 and 1924. There are paved roads, a water hydrant, water meters and electrical lines on and around the project area.

The project area is located north of Dole Park, the city center and northeast of the Lānaʻi High & Elementary School. The original character of the Dole Park region of Lānaʻi City remains as it was constructed in the years before World War II, with very few modern changes visible. With the switch from pineapple cultivation to resort and hotel development in 1991, an expansion of outlying residential neighborhoods occurred, resulting in modern townhomes and single-family homes at the outer edges of present-day Lānaʻi City.

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## Section 2 Methods

This section details the methods used by CSH personnel during the fieldwork and preparation of this cultural impact assessment. Interviews and consultation was conducted by lead researcher, Colleen Medeiros Dagan, B.S. and contributing researchers Anna Cordova, B.A. Background research was compiled by Mrs. Tanya L. Lee-Greig, M.A.; Jonas K. Madeus, B.A.; and Robert H. Hill, B.A. under the overall guidance of Hallett H. Hammat, Ph.D. Community consultations were accomplished over a three-month period from February 2010 to May 2010. This cultural impact assessment follows the Guidelines for Assessing Cultural Impacts as set forth by the Hawai'i State Office of Environmental Quality Control (see Appendix A).

In recent years, several in-depth oral histories have been collected by Cultural Surveys Hawai'i from *kama āina* and *kāpuna* of Lāna'i. Oral history interviews are extensive, and often exciting for the participants who enjoy sharing their knowledge and life experience. But oral histories are also time consuming and can be physically and emotionally taxing on *kāpuna*. For the latter reason, Cultural Surveys Hawai'i tries to avoid the "over taxing" the communities we work in and the *kāpuna* we work with. Much of the information presented for this project was shared during previous consultation for the Kamoku *āhupua'a*. As a part of the consultation for this project, letters and phone calls went out to community members and past interviewees asking explicitly for permission to utilize previously shared traditional, historical and cultural knowledge about Kamoku *āhupua'a* and how it applies to the current project area.

### 2.1 Document Review and Research

Numerous published and unpublished accounts, surveys, reports, maps and photographs found in public and private collections pertaining to Lāna'i City and the study area were investigated by Cultural Surveys Hawai'i Inc. English language historical documents, maps, and archaeological studies were researched at the DLNR/SHPD library, the Survey Office of the Department of Accounting and General Services (DAGS), the Maui County Planning Department, and the Cultural Surveys Hawai'i (CSH) library; in addition to private collections held by others in the community. Research regarding the history of the Hawaiian Pineapple Company was conducted using the services of the Bailey House Museum, in Wailuku, Maui. Online research regarding the present cultural landscape study for Lāna'i Island by Kepā Maly (Maly 2008a) and the online resources of the Lāna'i Culture and Heritage Center (Maly 2008b) were consulted for current information regarding the traditional history of the island. Online reports of meetings of the Maui/Lāna'i Island Burial Council and Hui Mālama Pono Ō Lāna'i were accessed at <http://Hawaii.gov/dlnr/meetings/Meetings> and <http://hualamama.tripod.com>, respectively. In addition, all relevant Land Commission Awards (LCA) and Royal Patents were researched using resources associated with the Waihona 'Aina online database (Waihona 'Aina Corp. 2002).

### 2.2 Scoping and Community Outreach

#### 2.2.1 Government Agencies, Advisory Councils, Local Community Organizations and *Kama 'āina*

In order to identify individuals with knowledge of the traditional cultural practices of the area of potential effect or the study area, CSH initiated contact with government agencies, advisory councils, local community organizations and *kama 'āina*. Two separate letters were mailed out for this CIA: a formal contact letter was sent to government agencies, advisory councils, local community organizations and an informal contact letter was sent to *kama 'āina* who CSH has consulted with on various occasions in the past.

The formal contact letter was mailed February 10, 2010. The contact letter contained a brief description of the proposed project and a project area maps. The following is the text of the formal letter:

On behalf of the County of Maui, Community Development Block Grant Program, the Lāna'i Community Health Center and Wilson Okamoto Corporation, Cultural Surveys Hawai'i, Inc. is conducting a Cultural Impact Assessment (CIA) for the proposed Lāna'i Community Health Center (hereafter referred to as "the health center") project. The project is located in Lāna'i City, Kamoku 'Ahiupua'a, Lāhaina District, Lāna'i Island [TMK: (2) 4-9-006: 01]. More specifically, the proposed health center will be just north of the Lanai Senior Center between Houston Street and Gay Street, and 6<sup>th</sup> Street and 7<sup>th</sup> Street.

The area is approximately 42,857 square feet, and is currently owned by Castle & Cooke Resorts LLC who will lease it to the health center. The parcel will be subdivided, and the health center will use approximately 23,067 square feet of the western portion for the new facility. Currently existing on the property are three buildings which were once used as dormitories by workers employed by the plantation. Two of these buildings are now abandoned, and a portion of the third building houses the existing administration offices for the Lāna'i Community Health Center and the activity room for the Lanai Art Center. The health center has been given a grant from the County of Maui, through the federally-funded Community Development Block Grant Program. This grant was issued so that the health center could plan and design a new health center in order to serve low- and moderate-income residents of Lāna'i. The health center would provide the following:

- accessible primary medical care
- dental care
- behavioral health services
- prenatal and family planning
- nutrition and preventive health education services



In addition to the CIA, Cultural Surveys Hawai'i is also currently performing a Field Inspection and Literature Review in order to address the project's historic preservation review process. The project area is located in Lāna'i City within an area that is being considered for nomination to the National Register of Historic Places as the Lanai City Business Country Town historic district. In the registration form submitted to the National Register of Historic Places, the three buildings located on the current project site are listed as non-contributing buildings. These buildings were built in 1965 by Plantation Housing Ltd. among a total of nine dormitories. Because they are non-contributing buildings, they will be removed to make room for the new construction.

The purpose of the CIA is to evaluate potential impacts to traditional cultural practices as a result of the proposed project.

We are seeking your *kōkua* or help and guidance regarding the following aspects of our study:

- General history and present and past land use of the project area.
- Knowledge of cultural resources which may be impacted by the Lāna'i Community Health Center area - for example, traditional plant gathering sites, historic sites, archaeological sites, and burials.
- Knowledge of traditional gathering practices in the area – both past and ongoing.
- Cultural associations of the project area, such as legends and traditional uses.
- Referrals of *kūpuna* or elders who might be willing to share their cultural knowledge of the project area and the surrounding *ahupua'a* lands.
- Any other cultural concerns the community might have related to Hawaiian cultural practices within or in the vicinity of the proposed Lāna'i Community Health Center area.

We invite you to contact us, Anna Cordova and/or Colleen Medeiros Dagan, at 1-808-242-9882. You may also contact us by e-mail at [acordova@culturalsurveys.com](mailto:acordova@culturalsurveys.com) and [cdagan@culturalsurveys.com](mailto:cdagan@culturalsurveys.com) if you have any information you would like to share.

The informal letter sent to *kama āina* was mailed March 30, 2010 and included the following text:

My name is Anna Cordova and I work for Cultural Surveys Hawai'i. Ms. Colleen Dagan, Ms. Tanya Lee-Greig and I will be conducting a Cultural Impact Assessment for the Lāna'i Community Health Center Project. I am writing to introduce myself and also to familiarize you with the proposed project. Just as you have provided help for past projects in this area – the Lanai

Senior Center, the high school and elementary expansion, and the affordable housing project - we are seeking your *kōkua* and guidance for this project. We understand that, because they share the same *ahupua'a*, much of the traditional and historical knowledge may be the same as in past projects. For this reason, we ask for permission to use your previously given information for this project. Any additional information regarding the specific parcel on which the proposed project will be located will be very useful and appreciated.

Here are a few points containing general information about the project:

- Wilson Okamoto Corporation is the planner in this project.
- The new health center will be located just north of the Lanai Senior Center between Houston Street and Gay Street, and 6<sup>th</sup> Street and 7<sup>th</sup> Street (Figure 1).
- The Lāna'i Community Health Center is seeking federal funds through the Community Development Block Grant Program to construct the project.
- Castle & Cooke Resorts LLC currently owns the property and will lease it to the health center.
- The project is located within an area that is being considered for nomination to the National Register of Historic Places as the Lanai City Business Country Town Historic District.
- There are three buildings located on the current project site. They were built in 1965 by Plantation Housing Ltd. and are listed as non-contributing buildings. They will be removed to make room for the new construction.
- In order to serve low- and moderate-income residents of Lāna'i, the health center would provide the following:
  - accessible primary medical care
  - dental care
  - behavioral health services
  - prenatal family planning
  - nutrition and preventive health education services
- Specifically, we are seeking your *kōkua* and guidance regarding the following aspects of our study:
  - Cultural associations of the project area, such as legends and traditional uses and/or historical land use of the study area.
  - Knowledge about cultural resources and/or traditional cultural practices within and around the project area that may be impacted.

If there is anything you might like to share, please contact any one of us, Colleen Dagan B.S., Tanya Lee-Greig M.A. and/or me, Anna Cordova B.A. at 1-808-242-9882. You may also contact us by e-mail at [cdagan@culturalsurveys.com](mailto:cdagan@culturalsurveys.com), [leegreig@culturalsurveys.com](mailto:leegreig@culturalsurveys.com) or [acordova@culturalsurveys.com](mailto:acordova@culturalsurveys.com).

### Section 3 Traditional and Historic Background

The division of Lāna'i's lands into political districts may have occurred under the direction of the chiefs of Maui, as Lāna'i appeared historically to be "subject or tributary to Maui" during the times of Kamaalawalu (about 1550-1600 AD) (Fornander 1916: 424, 1919:206-8). Moffat and Fitzpatrick (1995:23) explain that while Lāna'i was sometimes considered a *moku* or division of land surrounded by water, in other instances Lāna'i was noted as a *kālana* or division of land that was smaller than a *moku* (district) and subordinated to one of the *moku* of Maui Island.

This political position of Lāna'i would play a role in the political aspirations of the Maui and Hawai'i Islands chiefs and the warfare tactics they employed. The boundaries of the present project area *ahupua'a* of Kamoku are traditional, though refined by surveyors employed by the Kingdom of Hawai'i beginning in the 1850's. The *ahupua'a* of Kamoku (Figure 6) is bounded by the mountainous region of Lāna'i to the northeast, and by the ocean to the southwest.

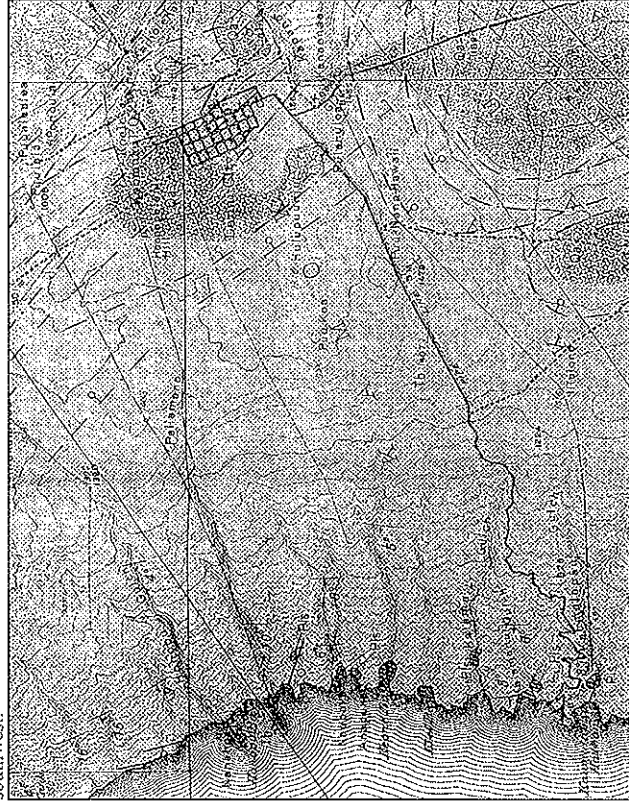


Figure 6. The portion of Kamoku Ahupua'a, showing the location of Lāna'i City in its easternmost (right) upland portion (Stearns 1942:Plate 1).

### 3.1 Traditional and Historical Background

#### 3.1.1 Traditional Accounts

While the mythological and traditional accounts of the upland areas of Lāna'i are relatively scarce, an analysis of place name meanings may yield some insight into the patterns of life in an area (Table 1). Literal translations of several of the place names for land areas and divisions within the project area are listed below. Most all translations are taken from Pukui et al. (1976), Emory (1924a), Formander (1916-1920), and Kalākaua (1888). Maly (2008a) notes that the proliferation of place names in the region points to a "viable native presence on the island of Lāna'i in traditional times."

Table 1. Kamoku Ahupua'a - Place Names Near Lāna'i City

Kamoku	<i>Lāi</i> , the district or the cut-off portion (Pukui et al. 1976:82); the piece cut off (Emory 1924:31)
Kō'ele	<i>Lāi</i> , dark sugar cane (Pukui et al. 1976:114); Place seized by a chief (Emory 1924:33)
Hulupu'unio	Whirling feather hill (Emory 1924:30)
Hokuaō	Morning star (Emory 1924:29)
Makapapa	Enclosed eyes (Emory 1924:34)
Pū'u Nana o Hawai'i	Hill to view Hawai'i (Emory 1924:36)
Keaaku	The standing root (Emory 1924:32)
Pulehiloa	Big roasting (Emory 1924:36)
Kaumaikahoku	The stars are out (Emory 1924:32)
Kaiholena	The iholena banana (Emory 1924:31)

The above place names, together with the environmental data, suggest that the lands of the central plateau basin were productive agriculturally and of great traditional significance. Hawaiian place names typically tell the story or significance of an area. Three place names, located west of the city, may give some insight as to how this place was utilized in traditional times. These place names include Hōkūau, Kaumaikahōkū, Pū'u nānā i Hawai'i.

Hōkūau is located west of the city, in the fallow pineapple fields. Hōkūau translated means "morning star" and is located on plateau lands (Emory 1924: 29). It is further described as the name given to Venus when seen in the morning (Elbert and Pukui 1986:76). Possibly, this was a good spot from which to view Venus just before dawn. Kaumaikahōkū is located approximately one half mile south of Lāna'i City. Its name means "The stars are out". Emory notes that this name describes the normally cloudless skies above this place (1924: 32). Approximately two miles west of Kaumaikahōkū, is Pū'u nānā i Hawai'i. This would be the "Hill to view Hawai'i (Emory 1924:36). From this place, it appears that one might have a view of Hawai'i to the southeast. These three place names seem to indicate that these specific upland areas were excellent viewing vantage points.

In this region of the island of Lāna'i, gulches, ridges, hilltops and other terrestrial landmarks were given descriptive names, some referring to heroic characters of Hawaiian mythology, and

others suggestive of actions which could be accomplished (i.e., the sighting of the island of Hawai'i) from its promontory. The upland plateau region was of great importance, both in terms of habitation and subsistence during the traditional or pre-contact time period, as well as an area somewhat sheltered from coastal raiding parties from other islands.

Emory (1924a: 122) estimated the aboriginal population of Lāna'i as about 3,150 prior to 1778. He stated that the inhabitants of Lāna'i survived by collecting dew on "oiled *tapas* or whipped from heavy shrubbery." Water that accumulated in natural depressions was husbanded carefully, and a few wells were dug along the coast and were "plastered on the seaward side with mud and straw" to stop the infiltration of sea water. Emory stated that the water derived from these wells was brackish, but usable by the Hawaiians because they had become accustomed to the salinity. He further postulated that survival along the leeward coastline also depended on Hawaiians visiting small springs in the distant hills, and carrying water in gourds back to the coast.

In 1778, only months before the arrival of Captain James Cook and his discovery of the Sandwich Islands, a raid by Hawai'i chief Kalamio'pū "ravaged the island of Lanai thoroughly" (Formander 1880:157). The battle between the forces of Kalamio'pū and those of Maui chief Kahekili were concentrated along the north coast of Lāna'i. The Lāna'i chiefs, unable to oppose these forces, retreated into the upper recesses of Maunalei, where they were killed. The army of Kalamio'pū destroyed food crops across the entire island and cut down and burned forests. Historian Samuel Kamakau (1992) reported the *ahupua'a* of Ka'ōhāi was the most severely damaged during this warfare.

John E. Dockall (Dockall et al. 2004) authored an archaeological assessment report for the Hi'i Flats region which straddles both Keālia Kapu and Keālia Ahupua'a. In this report, he cites both Handy et al. (1972) and Emory (1924a), stating that Lāna'i was known for widespread planting of sweet potatoes. In fact, the distribution of planted sweet potatoes followed the geographic distribution of settlements. Handy and colleagues also noted that the island had ample good land for growing sweet potatoes but that the most serious limitation was drinking water.

Dockall and others (2004) postulated that the main reason that taro agriculture on Lāna'i was so difficult was related to stream capability. The island had only two small stream systems that were capable of providing enough water for taro irrigation (Handy et al. 1972). Maximum elevations on the island also are a limiting factor in the amount of rainfall that occurs. This rainfall was traditionally suitable for sweet potato and later for pineapple but not for sustained irrigation and cultivation of taro as a significant portion of the diet. The authors also noted that there was apparently much breadfruit planted on Lāna'i but there are few direct indicators of the areas that were so planted. Kamakau (1992) stated that the *Pāhāwai* or bottomlands were most suitable for the cultivation of sweet potatoes due to the richness of the soil.

This brief overview of legendary and traditional accounts indicates the particular importance attributed to the northern coast of Lāna'i during pre-contact Hawai'i. The accounts do not specifically state but do suggest that the productivity of the northwestern coastal area, in terms of fish resources, is the main reason for its desirability. The productivity of the ocean allowed direct access to fish protein for the *ali'i* (chiefly class) who resided at villages along the northwest coastal areas.

### 3.1.2 Mythological Accounts

#### 3.1.2.1 The Story of the 'Ōhelo

The "Story of the 'Ōhelo", as translated from the original Hawaiian by Abraham Formander (1919), describes the origin of the sacred offering of 'ōhelo to the goddess Pele, and the importance of Lāna'i Island in the telling of the story. According to Formander, the many sisters of Pele followed her east from Tahiti across the Pacific Ocean. As Malulani, Kaohelo, Hi'ika, and Pele arrived at the Hawaiian Islands, Malulani chose Lāna'i to dwell on, while Pele, Kaohelo, and her younger sisters traveled on to the island of Hawai'i.

Kaohelo had a son named Kiha, who was given instructions by Kaohelo as she neared death where she should be buried. "Take my body to the very navel of your grandmother, right on top of Kilauea; then bury me there." This her son did. The flesh of Kaohelo became the creeping vine and her bones became the bush-plant of the 'ōhelo. Her head was treasured by Pele as the smoldering fire of Kilauea. The remainder of her body brought volcanic fire to Haikakāla on Maui, Keālia on Oahu, and also to Kaua'i.

When Malulani, living on Lāna'i, heard of the death of their youngest sister, she went to Hawai'i to retrieve her body, but found that small pieces of her body were strewn across the landscape sprouting into vines and bushes of the 'ōhelo. She gathered as much of her sister's remains as she could, but upon returning to Lāna'i, was surprised to find the pieces of Kaohelo's body had been strung as leis and worn as adornment. Saddened by this, Malulani died.

Hi'ika then came to Lāna'i to recover the body of Malulani, whereupon small bundles containing her remains were scattered across the island of Hawai'i, causing small hills and istets to remain to this day. In this way, the island of Lāna'i is part of the legend of how the 'ōhelo came to be spread across the islands of Hawai'i, and why the 'ōhelo is the special sacred offering to Pele (Formander 1919, V, III: 576-580).

#### 3.1.2.2 A Lamentation for Young Kaahumanu

The place name Halulu, a *heiau* on the southwestern coast of Lanai, was said to have been used by Kamehameha I to about 1810, after which he spent most of his remaining life on the island of Hawai'i. Based on the research of Formander (1920:451), "A Lamentation for Young Kaahumanu," was a chant composed for the favorite queen of Kamehameha I at her death. She was eulogized as having a soul that flew as a bird. In this chant, performed by her bereaved husband, Kaumuali'i, the soul of Ka'ahumanu was said to have a spirit guide to heaven in the form of Halulu: a fabled bird whose head feathers were said to have adorned noted idols, and who was supposed to have answered the prayers of faithful devotees by fluttering, or by rising and falling, in answer to the good or ill wishes of the prayers sent to him.

#### 3.1.2.3 Fallen is the Chief (A Prophecy of the Overthrow of the Kingdom by Kamehameha)

In a chant composed to commemorate to uniting of all of the Hawaiian Islands under the rule of Kamehameha I, the fabled bird Halulu is again given a prominent part in the story. The feather of Halulu adorned the brow of Kaili, the god of war that Kamehameha was granted custody to by his father. Formander (1920:381) noted that the chant described how Kamehameha worshipped Halulu, and that, "when the feather sprung up in the forehead of the idol, the people thought it

was a sign of ability to conquer; *o ka makia o Kamehameha*: that which fastens together, or holds together the islands."

#### 3.1.2.4 The Ghosts of Lāna'i

The northern coastal place name of Laewahie refers to the point on Lāna'i where Kauliā'au built a signal fire to the people of Lāhaina. Formander (1918:542) recorded the story of Kaka'alano, the chief of all of West Maui. His son, Kauliā'au, grew up as a boy involved in great mischief. Because he uprooted the sacred breadfruit grove of Lāhaina, his father had no choice but to banish his son to the uninhabited island of Lāna'i. At that time, Lāna'i was the abode of ghosts, and Kauliā'au was sent there to be killed by them. Tabrah (1976) notes the many tricks the ghosts tried to use to murder Kauliā'au, and her account notes the location of the signal fire to the people of Lāhaina after he had defeated all of the ghosts of the island as Naha, located in the *āhupua'a* of Kaohai. (The literal translation of Kaohai is "Firebrand.") Kailākaia (1888:212, 230) records the legend of Kauliā'au conquering the ghosts of Lāna'i in two separate stories, one of which details his fight with the *Mō'ōlalo*, a lizard god of the island as the most difficult of the ghosts to overcome. He does not give the location of the signal fire used by Kauliā'au. (There is a village named Kauliā'au on the coast of Pawili, Ahupua'a.) The legend ends with Kauliā'au being reunited with his father, mending his mischievous ways, and opening the island of Lāna'i for settlement.

#### 3.1.3 Early Historic Period

Lāna'i was first seen by Captain James Cook during his voyage to the Sandwich Islands in January and February of 1779. The expedition had returned to the Hawaiian Islands in order to resupply following many months of mapping the west coast of America (Ellis 1969). William Ellis, Assistant Surgeon to the expedition, noted the first time that the ships *HMS Revolution* and *Discovery* sighted "Arani" [Lāna'i], as the ships made their way past "Kaowr'ee [Kaho'olawe] nearly adjoining to Mow'whree" in 1779. It was during this voyage that Ellis went on to describe Lāna'i as an island under the dominion of the king of Maui (Ellis 1969: Vol. 2, 187). The previous January, 1778, Kaua'i and Ni'ihau had been discovered and visited by Cook's expedition as the two ships had been making for the west coast of America from French Polynesia (Ellis 1969, Vol. I: 167).

An account of a shipwreck on the northwestern reef of Lāna'i in the late 1820's was detailed by an American Navy Lieutenant, Hiram Paulding, when his ship, the U.S.S. Dolphin, arrived to aid the survivors of the "Loudon", a ship out of New York. Paulding recorded that the chief of Lāna'i was "encouraging the natives of the island to plunder the Loudon, which carried a large amount of specie and bullion." The account continued with the captain of the U.S.S. Dolphin, John Percival, chartering a vessel and saving the treasure with the intervention and aid of Boki, the governor of O'ahu (Paulding 1831).

During the early and middle 1800s, the Hawaiian demography was affected by two dramatic factors: radical depopulation resulting from Western disease and nucleation around the developing port towns. The traditional Hawaiian population was largely dispersed and, although there were royal centers and areas of more concentrated population, these areas never came close to rivaling the populations of the historic port towns that developed on Hawai'i's shorelines

during the 1800s. In this regard, Kuykendall (1938:313) notes that in the period from 1830 to 1854:

The commercial development during this period, by magnifying the importance of a few ports, gave momentum and direction to a townward drift of population; the population of the kingdom as a whole was steadily going down, but the population of Honolulu, Lahaina and Hilo was growing.

By the 1830's, Protestant missionaries sent to the Sandwich Islands from the east coast of America were reporting having established a thriving congregation on Lāna'i. Letters written by missionaries to the American Board of Commissioners for Foreign Missions in 1830 listed 10 schools on Lāna'i Island attended by 506 students. Of these students, the missionaries reported that 206 could read, and 42 could write (Richards 1831).

On September 20<sup>th</sup>, 1845, Reverend Cochran Forbes left Lahaina at sunrise for "Ranai in company with bro. Baldwin. Kaoluloo took us over in his boat. We had a very pleasant sail, until within some 3 miles of the landing when the fresh trades spattered us a little" (Forbes 1864). Forbes landed at Kaunolu, where he described a Protestant meeting house. Forbes and Reverend Dwight Baldwin preached to a congregation of about 125 persons, which grew to 180 for Sunday services. Monday morning the two missionaries went by canoe to Maunalei, "the place of the teacher Waimalu."

Forbes and Baldwin then hiked to the upper plateau. "After we had crossed the ridge the soil became better and vegetation more lively. There was an extensive piece of tableland there, perhaps 10 miles one way & 3 or 4 the other, on which are very few stones. There we spent the night & met with the people, near 200 in all who had come together to hear & see the strangers." Forbes wrote, "Pali the Lumaauhau for the whole island resides at this place called Kihamaniania. His influence is manifestly good. We found several pious people around him & himself a good man. He told us that his little children only 6 and eight years old had read the Bible through. He also gave us a list of all the men - the women & children in the island; the whole numbering 584 inhabitants. Most of the children are in school and very few of them who are 12 years old that cannot read" (Forbes 1864).

Forbes commented that the air was cool & invigorating at Kihamaniania. "We spent the night there and early in the morning held another meeting with them, after which we left amid many greetings for the seaside at Kaohai, Pia's place. We travelled constantly only stopping once to hold meetings at the place of Kamalulu, who teaches a school and is Lunahanawai for the whole island." By dark, the two missionaries had reached Kaohai, "where Pia had the people of all that neighborhood assembled under some *koa* trees at his door." The two missionaries returned to Maui by whaleboat. "The surf rolls in so heavily at Kaohai that it was with difficulty we got out. I was expecting two or three times to be swamped, but the boat rode through every surf safely so that by the goodness of God we got safely to sea and reached Lahaina safely before 12 o'clock" (Forbes 1864).

### 3.1.4 Mid- to late-1800s

The most significant change in land-use patterns and allocation came with The Great Māhele of 1848 and the privatization of land in Hawai'i. This action hastened the shift of the Hawaiian

economy from subsistence-based to market-based. During the Māhele, all of the lands in the Kingdom of Hawai'i were divided between *mēi* (king), *ali'i* and *konohiki* (overseer of an *ahupua'a*), and *maka'aimana* (tenants of the land) and passed into the Western land tenure model of private ownership. On March 8, 1848, Kamehameha III (Kamehameha III) further divided his personal holdings into lands he would retain as private holdings and parcels he would give to the government. This act paved the way for government land sales to foreigners, and in 1850 the legislature granted resident aliens the right to acquire fee simple land rights (Moffat and Fitzpatrick 1995: 41-51).

Native Hawaiians who desired to claim the lands on which they resided were required to present testimony before the Board of Commissioners to Quiet Land Titles. Upon acceptance of a claim the Board granted a Land Commission Award (LCA) to the individual. The awardee was then required to pay in cash an amount equal to one-third of the total land value or to pay in unused land. Following this payment, a Royal Patent was issued that gave full title of ownership to the tenant. By 1850, the government of Hawai'i offered land for sale to both Native Hawaiians and foreigners. Such lands when purchased were referred to as Royal Patent Grants or as Land Grants.

Native land transactions within the Kamoku Ahupua'a were recorded soon after the terms of the Great Māhele became law. Five small Royal Patent Grants representing four LCA tracts were sold to native families, beginning in 1848. Land use terms, such as whether portions of the lands included areas of pasture, types of crops cultivated, house lots, paths, roads, and appurtenant streams were mentioned in some of the Royal Patent Grants (Table 2).

One vast Royal Patent Grant (R. P. 5011) was issued in 1907 to Walter M. Giffard, within which the lands of Kama'o, Kalulu, Kamoku, Keālia Paoma'i, Kaunolu, Mahana and Pāwili Ahupua'a, not subject to claim as Land Commission Awards, were transferred in fee simple. With specific reference to Kamoku Ahupua'a, the language of Land Patent 5011 mentions a number of landmarks within the metes-and-bounds property description. The Ili o Lono Heiau is described as, "along [the boundary of] Kalulu to a cross cut in a stone amongst a lot of stones at the former site of an old Heiau called Ili Lono." A water hole within Kalulu Valley is named Katholena, and "an old house site" is mentioned along the *ahupua'a* boundary with Paoma'i.

Table 2. LCAs within Kamoku Ahupua'a, with translations by Kēpa Maly (2009). Translations of Royal Patents by the Waihona 'Aina Corporation (Waihona 'Aina 2002).

Royal Patent Number	Land Commission Award Number	Claimant's Name	Award Type	Acreage
4800	10630	Pali, Na	Helu 10630, Pali, Kamoku, Native Testimony 13:259 Lanai, July 10, 1851. Poupou, Sworn. I know his Parcels of land in the Ahupuaa of Makaliili, Kuleleba, Iwiolo and the 2 Aurnoku on Lanai. They are	Helu 10630, Pali, Kamoku, Māhele award Book 7:222. One Parcel. Beginning at

Parcel Patent Number	Commission Number	Commission(s)	Awardee(s)	Acres
8429	10029	Oapolo	<p>combined into one, being several <i>moku mauu</i> (grass land/ pasture sections), sweet potato and gourd fields.</p> <p>The boundaries are thus. <i>Mauka</i>, land of <i>Konoiki</i>. <i>Kamaiki</i>, land of <i>Kaauaeana</i>. <i>Makai</i>, land of <i>Konoiki</i>. <i>Kaena</i>, <i>Alanui</i> (Road).</p> <p>He received his land from M. Kekauloahi in the year 1839, and has resided there peaceably to this time. No one has objected, and he is the Overseer of these lands. Keawe, Sworn. All the words above are true. My knowledge is the same.</p> <p>Translation by Maly (2009)                      Helu 10029, Oapolo, Mahana, Native Testimony 13:281-282</p> <p>Kawaaiki, Sworn. I know his Parcels of land at Mahana, Lanai. 2 Parcels of land.                      Parcel 1. - 1 <i>Kulana hale</i> (house complex) and <i>mahina ai</i> (cultivated field) in the <i>iti</i> of "Kuahua."                      Parcel 2. 1 cultivated section of the <i>iti</i> of "Kuahua."</p> <p>Parcel 1 is thus.  <i>Mauka</i> land of <i>konoiki</i>, <i>Maunalei</i>, land of <i>Kalawaia</i>, <i>Kaena</i> and all about, land of <i>Konoiki</i>.</p> <p>Parcel 2. The boundaries are thus. <i>Mauka</i> and all about, land of the <i>Konoiki</i>. -</p> <p>Translation by Maly (2009)                      Helu 6833 Native Testimony 13:272-273</p> <p>Paii, Sworn. I know his Parcels of land at <i>Kalulu</i>, <i>Lanai</i>. 3 Parcels of land in the <i>iti</i> below.</p>	<p>the western corner and running....112 Acres, 1 Rood, 23 Rods.</p> <p>Helu 10029                      Māhele Award Book 7:213</p> <p>Two Parcels.                      Parcel 1 has been abandoned because it was not cultivated.                      Parcel 2...1 Rood, 12 Rods.</p> <p>Helu 6833                      Māhele Award Book 7:215.</p>

Parcel Patent Number	Commission Number	Commission(s)	Awardee(s)	Acres
			<p>Parcel 1. 1 <i>moku mauu</i> (grass/pasture section) of the <i>iti</i> of "Ahupau."                      Parcel 2. 1 <i>moku mauu</i> in the <i>iti</i> of "Elialii."                      Parcel 3. House lot [illegible - in the <i>iti</i> of] Kamoku.</p> <p>Parcel 1. The boundaries are thus. <i>Mauka</i>, land of Keie. <i>Kamaiki</i>, <i>Ahupuaa</i> of "Kaunolu." <i>Makai</i>, land of <i>Kaukapala</i>. <i>Kaena</i>, <i>iti</i> land of Kamoku.</p> <p>Parcel 2. The boundaries are thus. <i>Mauka</i>, land of Maawe. <i>Kamaiki</i>, land of <i>Konoiki</i>. <i>Makai</i>, the same. <i>Kaena</i>, <i>iti</i> of <i>Kapano</i>.</p> <p>Parcel 3. The boundaries are thus. <i>Mauka</i> and all about, land of <i>Konoiki</i>.</p> <p>He received these Parcels of land from his parents in the year 1840, and his parents received them from Daniela Li. He has resided there peaceably to this time. No one has objected.</p> <p>Kawaaiki, Sworn. All the words are true. My knowledge is the same.</p> <p>Translation by Maly (2009)                      Kamoku                      Commencing at a pile of stones over a cross cut in a large stone on South side of Kaunaulapu Harbor on edge of gulch. The Boundary runs:                      1. North 86° 27' East true 3254 feet along Kalulu up South edge of gulch to a stone marked with a cross on edge of gulch a little above a branch that comes into the main gulch from the South. Thence                      2. North 88° 46' East true 5225.9 feet along Kalulu up South edge of gulch to a cross cut in a stone on South edge of same. Thence                      3. North 84° 40' East true 2594 feet along</p>	<p>Three Parcels.                      Parcel 1.                      There in the <i>iti</i> of Ahupau...6 Acres, 3 Rods, 10 Rods.</p> <p>Parcel 2.                      There in the <i>iti</i> of Elialii... 7 Acres, 3 Rods, 17.8 Rods.</p> <p>Parcel 3.                      There in the <i>iti</i> of Kamoku...5 Acres, 3 Rods, 2 Rods.</p> <p>8,291.09 acres</p>

Royal Patent Number	Heard Commission Award Number	Claimant(s)	Award Type	Acres
			Paomai to a cross cut on a stone at head of gulch. 13. North 86° 6' West true 1368 feet along Paomai down South side of gulch. 14. South 83° 45' West true 1455 feet along Paomai to a cross cut in a stone. 15. South 74° 9' West true 920 feet along Paomai. 16. North 55° 12' West true 898 feet along Paomai across gulch to a red wood post a little West of a cactus clump. (Here ends the Crown land of Paomai) Thence 17. South 65° 58' West true 1617 feet along Kaa down North side of gulch to a cross on a stone. 18. South 64° 57' West true 2040 feet along Kaa down North side of gulch to a cross on a stone. Thence 19. South 70° 33' West true 3590 feet along Kaa to a point 10 feet East of a large rock with cross cut on it. Thence 20. South 68° 53' West true 1664 feet along Kaa to sea shore. Thence 21. South 1° 55' West true 13460 feet along sea shore to point of Commencement Area 8291.09 Acres.	103.58 acres
3029		Nahuina and Kelihiue	Apana 2 – <i>‘ili</i> of Kaumalopau, within Kamoku, beginning at the northeast corner: North 52½° West 415 links along the government land North 44° West 2144 links to Molohi's land South 32½° West 4664 links to Molohi's land South 43° East 2320 links along the government land North 29 East 2540 links to the <i>‘ili</i> of Puco North 43½° East 2200 links to the <i>‘ili</i> of Puco 103.58 acres  Excepting the <i>kauieana</i> of a native.	
5137	08556	Kaauiwaeaina	September 12, 1866 Helu 8556, Kaauiwaeaina, Maunalei, Kalulu and Kamoku. Native Register 6:468	Helu 8556 Kaauiwaeaina

Royal Patent Number	Heard Commission Award Number	Claimant(s)	Award Type	Acres
			Kalulu to head of gulch. Thence 4. North 72° 43' East true 2080 feet along Kalulu to a cross cut in a stone amongst a lot of stones at the former site of an old Heiau called Ilio Lono. Thence 5. North 46° 19' East true 1041.4 feet along Kalulu up road to a point a little North of a cactus clump marked by two triangular pits. 6. North 65° 44' East true 4939 feet along Kalulu along North edge of crater to a red wood post on the North wall of the crater at a place called Pulehulua, near Kealihumanui's house. 7. Thence along Kalulu down across a small ravine (coming in from the North called Keaku) to Government road and up the Northwest edge of the Kapano valley, passing near Kawoanahale's house [Page 470] to a point on ridge marked with four triangular pits and ditch thus [diamond with circle inside, with four points marked by small triangles with points toward diamond]; said point being a little East of Puunene and bearing North 44° 53' East true 8052 feet from above mentioned red wood post. Thence 8. North 45° 49' East true 1067.9 feet along Kalulu across valley passing to the Southeast of a water hole, called Kaiholena to a red wood post on ridge that comes down from the central mountain range. Thence 9. North 62° 37' West true 6742.5 feet along Paomai down above mentioned ridge and across valley on to a small ridge and down said ridge to a red wood post at end of same, 10. South 84° 37' West true 1316.8 feet along Paomai to a cross cut in a stone. 11. South 74° 8' West true 6258 feet along Paomai passing to the North of a couple of <i>Hala</i> clumps to two triangular pit [sic? pits] at an old house site. 12. South 74° 51' West true 5045 feet along	

Royal Patent Number	Awards	Acreage
	Lana'i Feb. 7, 1848. Greetings Commissioners who Quiet Land Titles. I have three <i>loi</i> (taro pond fields) at Maunalei. Here are other claims of mine, several <i>moku mauu</i> (grass land/ pasture sections) at Kalulu, and a <i>pauku</i> (planting section) at Pueo. By Kaauaeaina.	Kalulu and Kamoku Māhele Award Book 7:212
	Helu 8556, Native Testimony 13:265.	There in the <i>Ahupuaa</i> of Kalulu and Lanai.
	Kawaaiiki, Sworn. I know his Parcels of land on Lanai. They are in the <i>ili</i> and <i>Ahupuaa</i> below. 3 Parcels.	Parcel 2. There in the <i>ili</i> of Kapanouka...
	Parcel 1. 3 <i>loi i kalo</i> (taro pond fields) in the <i>ili</i> of Ainaiki, Maunalei <i>Ahupuaa</i> .	1 Acre, 0 Roods, 35 Rods.
	Parcel 2. 1 <i>moku mauu</i> (grass land/ pasture section) in the <i>ili</i> of Kapano uka, Kalulu <i>Ahupuaa</i> .	Parcel 3. There in the <i>ili</i> of Pueo... 38 Acres, 2 Roods, 12 Rods.
	Parcel 3. <i>Pauku</i> land in the <i>ili</i> of Pueo, Kamoku <i>Ahupuaa</i> .	
	Parcel 1. The boundaries are thus. <i>Mauka</i> , my land. <i>Kaena</i> and all about, land of <i>Konohiki</i> .	
	Parcel 2. The boundaries are thus. <i>Mauka</i> and all about, land of <i>Konohiki</i> .	
	Parcel 3. The boundaries are thus. <i>Mauka</i> and all about, land of <i>Konohiki</i> .	
	He received Parcel 1 from Kawaaiiki in the year 1844. Parcel 2 from his parents in the time of Kamehameha II. Parcel 3 from his parents in the time of Kamehameha I. He has resided there peaceably to this time. No one has objected. I, Kalilianoku, Sworn. All the words above are correct. My understanding is exactly like that as spoken by Kawaaiiki.	
	Translation by Maly (2009).	

There are four LCA in the immediate vicinity of the project area, they include LCA 3719 to Kaliahoia, LCA 6853 to Kaiaia, LCA 8556 to Kaauaeaina and LCA 10630 to the Noa Pali. These claims consisted of *moku mauu* (grass lands or pastures), sweet potato plots and gourd fields. Pali was the *konohiki* of the area and his LCA extended into neighboring Kalulu and Kaunolu *ahupua'a*. Munro mentions the probable crops in these areas to have been taro, sweet potato and yams (Munro 2007: 47)

Walter Murray Gibson, arriving in Honolulu as a representative of the Mormon Church on the 4<sup>th</sup> of July 1861, came to the Sandwich Islands with the idea of converting islanders to that religion. Gibson learned of large tracts of land available for pasturage on the island of Lāna'i, and leased "Crown Lands" (lands reserved by the Royal Family of Hawaii during the Great Māhele of 1848) from King Kamehameha III for the raising of sheep and for other agricultural purposes. The authorities of the Mormon faith from Salt Lake, Utah, pressed Mr. Gibson to deed his property interests on Lāna'i to the Church. By 1864, W. M. Gibson was cut off from the Mormon Church for his refusal to comply, and much of his interest in real property involving the *ahupua'a* of Pālāwai, Keālia Aupuni, Keālia Kapu, Pawili, Kāma'o, Ka'ā, and Kaohai was inherited by his daughter, Tabula Lucy Hayselden (Tabrah 1976).

The descendants of the family which had purchased the island of Ni'ihau from the Kingdom of Hawai'i in 1864, the Gay family, now set their sights on acquiring a majority of the property of the island of Lāna'i. In 1902, Charles Gay purchased the former Walter Murray Gibson estate lands at auction, and in 1903, bought out the Hayselden properties. He then purchased the *ahupua'a* lands of Ka'ā and Kaohai from the Crown Land holdings of Princess Ruth Keelikolani. Charles Gay moved his family into the Gibson-built ranch house in Kō'ele, and made plans to purchase the eight remaining *ahupua'a* then still under government control. A legal battle and a three-year drought forced Charles Gay to sell all of his property on Lāna'i to a consortium of ranchers from Honolulu (Tabrah 1976). Ranching on the island was barely profitable. The Baldwin family, Maui's most famous ranchers, could not find a way to gain a profit from the island. In 1920, the Baldwin-owned Lanai Ranch Company brought 12 Asian chital deer (*Axis axis*) to Lāna'i from Moloka'i, where good hunting ranges had been established for sportsmen (Graf and Nichols 1966). Despite these efforts, ranching was abandoned.

### 3.1.5 Early to Mid-1900s

Botanist J. M. Lydgate, visiting Lāna'i with an expedition to obtain rare specimens of trees and flowering plants, reported that 40 continuous years of livestock grazing had, "pretty well denuded [Lāna'i] of its forest cover; only on the summit of the island ridge was there a somewhat moth-eaten mantle of it left, and only on the slopes of the higher ravines and the steep hillsides was that mantle really intact and undisturbed" (Lydgate 1920). Lydgate also reported the extinction of plant species observed on Lāna'i only four years prior: plants that had been documented by fellow botanist Horace Mann of Harvard University. Lydgate (1920) commented that, "the ravages of cattle, sheep and goats, as well as forest diseases, hastened the decadence of the indigenous forest [of Lāna'i]."

The success of the Hawaiian Pineapple Company of Honolulu acquiring all of the lands of the Baldwin-owned Lanai Ranch Company began with the annexation of the Hawaiian Islands by the United States in 1898. With annexation came political stability for Hawai'i. Worldwide food



prices were rising due to the outbreak of war between the United States and Spain over her colonies in Cuba, Puerto Rico and the Philippines. The pineapple industry on the island of O'ahu was bolstered by the sharp rise in demand for their food product, with corresponding expansion of canning facilities taking place at their Wai'anae Cannery. By 1904, the production and canning of Hawaiian pineapple had become "big business" (McClellan 1939), with the Hawaiian Pineapple Company of Honolulu in a leadership position.

By the time the United States entered World War I (1917), the pack of Hawaiian canned pineapple from all packers was about to reach an all-time high. The pack increased from 2.6 million cases in 1917 to 3.8 million cases in 1918 (Thrum 1920). The island of Lāna'i, however, continued to be eyed as prime ranch land, and not suitable for agriculture. In 1917, Henry Perrine Baldwin and his brother, Frank Fowler Baldwin, of the Maui-based Hawaiian Commercial & Sugar Company, acquired control of most of Lāna'i. Small ranch land tracts owned by the descendants of Charles Gay, and about 500 acres remaining under native titles, were held out of the sale to the Baldwins (Wentworth 1925).

In 1922, the Baldwins sold their holdings on Lāna'i Island to the Hawaiian Pineapple Company (Figure 7) in order to finance a real estate transaction on the island of Maui (Maui County Council, Lāna'i Community Plan 1998:28). The construction of office buildings, warehouses, shops and dwellings for 250 workers and their families began immediately (Figure 8). By 1927, three thousand acres of the Pālawai Basin had been planted in pineapple, the first construction phase to establish Lāna'i City had been finished (Figure 9), and a roadway linking the new piers at Kaunālapā'u with Lāna'i City had been paved (Freeman 1927). The cultivation of pineapple on Lāna'i had become integral in Hawai'i supplying more than 90 percent of the world output of canned pineapple.

The dredging of Kaunālapā'u Harbor and the construction of a breakwater was begun in 1924, after a large storm destroyed the wharf at Mānele Bay. Road construction to the new harbor was completed by the Hawaiian Pineapple Company, and transportation of the pineapple pack for 1925 was assured. Over the course of the next 20 years, five million dollars were invested in the company infrastructure, with annual packs in the late 1930's valued at over 1.4 million dollars. Peak harvest data for 1936 stated that as many as 100,000 crates containing more than 1,300,000 pineapples could be shipped out of Kaunālapā'u Harbor in a 24-hour period (Stearns 1940).

In 1925, Bishop Museum Fellow of Yale University, Chester K. Wentworth, published "The Geology of Lanai" (Wentworth 1925). At the time of his study, he described construction projects by the Hawaiian Pineapple Company, including the erection of power plants and refrigeration plants. He referred his readers to Emory's work regarding cultural traditions of Lāna'i and made an interesting assumption regarding the flora of Lāna'i prior to European contact. Wentworth stated that, "the traditions of the natives and the presence of dry tree stems and roots in aeolian deposits over much of its area make it fairly certain that Lanai was wooded to the sea coast at the time when it was first visited by the Hawaiians" (Wentworth 1925:6).

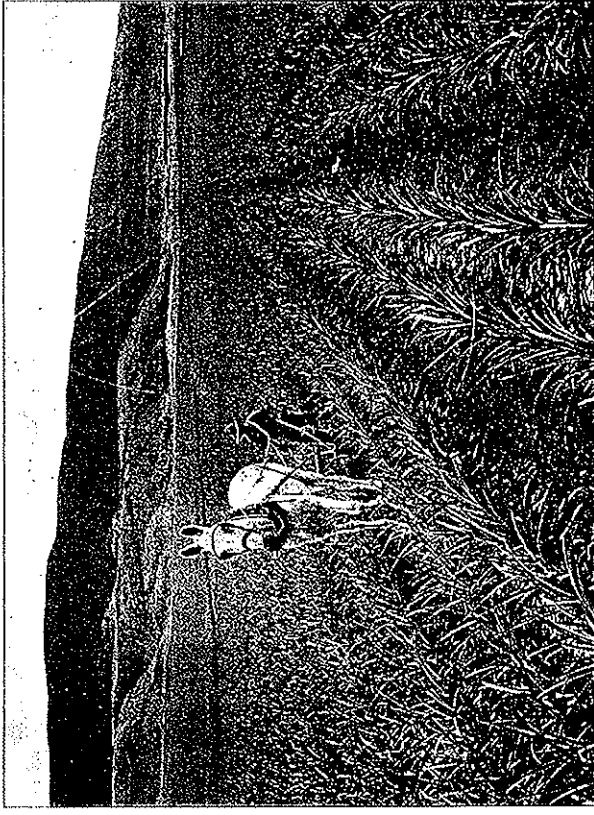


Figure 7. The plateau region of Lāna'i is visible in this early photo of pineapple cultivation on the island (*Paradise of the Pacific*, December 1936, Vol. 48, No. 12).

Figure 9. A photograph of the outskirts of the city of Lana'i, with a reservoir visible in the foreground, a lone Cook Island pine in the forested portion of the city, and hundreds of acres of land cleared for pineapple cultivation (Wentworth 1925).

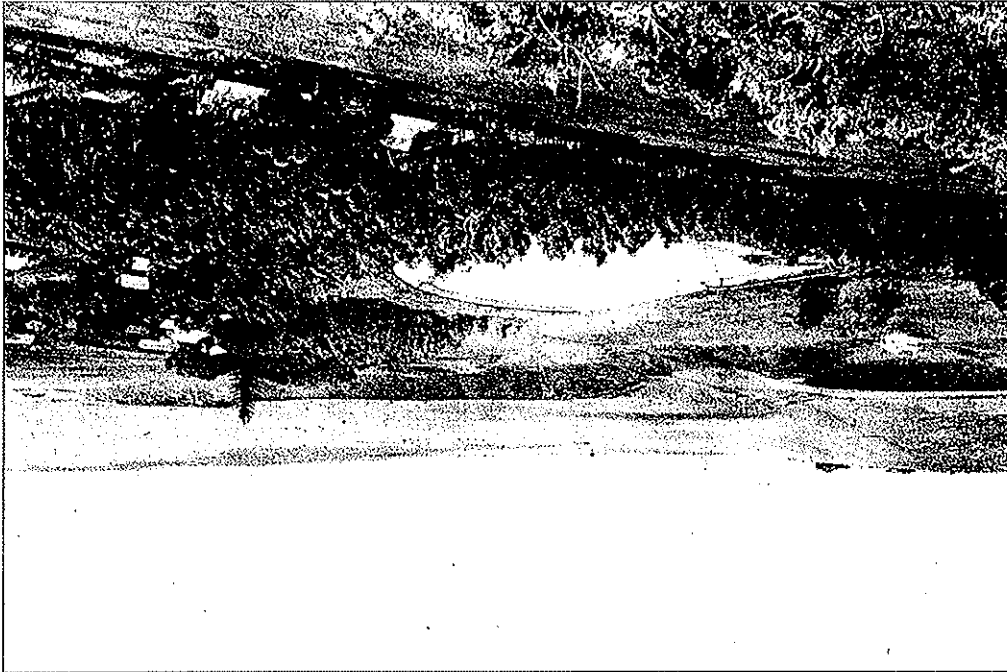
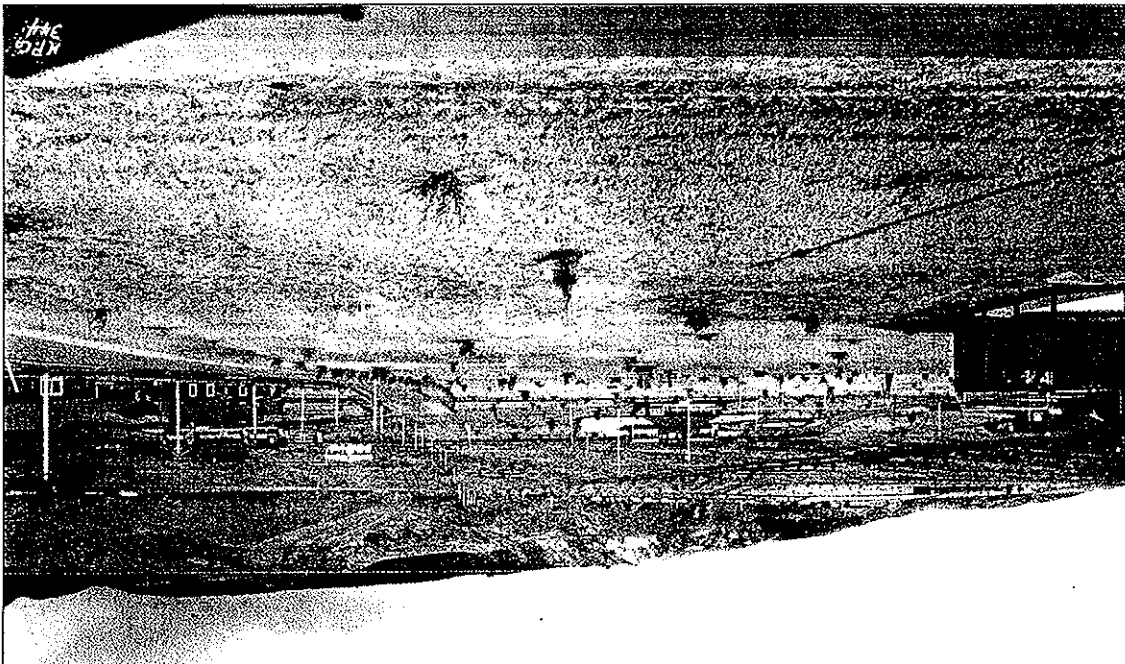


Figure 8. Dole Park circa 1923, following the acquisition of the island of Lana'i by the Hawaiian Pineapple Company, and the subsequent construction of laborer and management housing. (Hawaiian Pineapple Company photo courtesy of Castle & Cooke Resorts LLC).



By 1939, the population of Lāna'i was reported at four thousand, with virtually all of the residents working to maintain the fifteen thousand acres of pineapple fields. The expansion of the market to accommodate Hawaiian pineapples occurred so rapidly, with so much success, that new machinery was quickly developed to take advantage of the gentle topography of Lāna'i (Mackie 1939). The long, flat fields could accommodate mechanical harvesters, which operated by straddling rows of pineapple plants, and moving slowly behind men who broke the ripe fruit off their stalks. Once aboard the harvester, pineapples had their crowns removed, were sorted for size, and crated. Pineapples picked in the morning on Lāna'i, about sixty miles from Honolulu, were barged to Honolulu, canned and ready for shipment by nightfall the same day (McClellan 1939).

### 3.1.5.1 Water Source Development

Harold T. Stearns traversed the island of Lāna'i between June and August of 1936, conducting studies of the geology and ground-water resources. He was assisted by personnel from the U.S. Geological Survey, completing hydrographic maps for the study. His work highlighted the explorations for ground water in Maunalei and at Kō'ele, to improve sources of drinking water, and for irrigation of the expanding fields of pineapple cultivated on the island (Stearns 1940). He reported that the westernmost slopes of the Palāwai Basin of Lāna'i "[are] not sheltered by other islands on the southerly side, [and] kona storms are unobstructed. Heavy downpours during a single kona [southern exposure] storm commonly account for a considerable part of the annual rainfall, and in some of the arid sections a single rain storm a single rain may contribute as much as 80 percent of the annual total" (Stearns 1940:65).

### 3.1.6 Mid-1900's

Following the end of World War II, the agricultural population of Lāna'i continued to work for wages comparably lower than those earned by sugar workers on the other islands. When restrictions against organized unions were lifted in 1945, sugar workers and dock workers were the first to unionize. By 1946, the International Longshoremen and Warehouse Union (I.L.W.U.) had consolidated its hold on workers who grew, harvested, milled, transported, warehoused and refined Hawaiian sugar. For the 3,200 people on Lāna'i, labor relations with the Hawaiian Pineapple Company were about to heat up (Henderson 1949).

Between 1947 and 1951, pineapple workers in Hawai'i tried but were unable to demand wages and benefits comparable to sugar workers. An industry-wide strike among all pineapple companies was called by the I.L.W.U. in 1947, resulting in minimum wage concessions that raised pay from 35 cents an hour to 97 cents an hour for men. Comparable sugar wages in 1948 were \$1.77 per hour for men, and this disparity continued until pineapple workers on Lāna'i staged a strike that lasted for seven months in 1951, finally winning higher wages and benefits on par with sugar workers. In 1954, the Hawai'i I.L.W.U. fought for and was awarded the first pension plan for agricultural workers in the United States. Throughout the 1950's, other labor concessions awarded to pineapple workers included the 40-hour work week, medical benefits, provisions for sick leave, and paid vacations and holidays (Labor 2009).

The three buildings currently located within the project area and are slated for demolition, were originally constructed by HAPCo in 1965. These three buildings were built as part of a

subsidiary called Plantation Housing, Ltd. as a part of nine dormitories in the area (Solamillo et al. 2009).

### 3.1.7 Modern Land Use

By 1961, James D. Dole's pineapple lands on the island of Lāna'i were merged with the assets of Castle & Cooke Inc., a prominent Hawai'i-based corporation. World-wide prices for pineapple continued to drop throughout the 1970's as competing countries, most notably Cuba and the Philippines, supplied the market with cheaper pineapple.

In 1975, library books, ancient Hawaiian artifacts, and valuable historical archives of Lāna'i were transferred to a newly-constructed air-conditioned library building on the campus of Lāna'i High School. The building at the corner of Fraser and Seventh became the Lāna'i City Senior Center (Kaser 1975).

During the 1980's, Castle & Cooke began a long-term program to phase the island out of pineapple cultivation, and expand tourism on Lāna'i. In 1988, David Murdoch, chairman of Castle & Cooke, Inc., opened a resort hotel and companion championship golf course at Mānele Bay. A second resort hotel and golf course in the uplands of Kō'ele was opened in 1990. The present continuing construction of additional residential and luxury housing projects has created additional jobs for the people of Lāna'i; however, the current statewide downturn in the economy has boosted the unemployment rate for the island past 8% (Labor 2009).

## Section 4 Archaeological Research

Archaeological studies that have dealt with larger regions of Lāna'i, but with specific mention of historic properties and features within Kamoku Ahupua'a, include those by Emory (1924a, 1924b), Hommon (1972, 1974), and Hammatt and Borthwick (1989a).

Late in 1920, Kenneth P. Emory completed a detailed series of excavations within the crater of Haleakalā on Maui (Emory 1921), where he had examined the construction of stone terraces and platforms for clues as to their cultural use. Continuing this work for the Bishop Museum on Lāna'i, Emory (1924a) documented Hawaiian pre-contact ceremonial platform (*heiau*) features, as well as pre-contact dwelling and village sites. Many of the abandoned pre-contact village complexes Emory recorded on Lāna'i also included small ceremonial altar (*ko'a*) structures, burial areas, trail markers (*ahu*), petroglyph incised pictograms on boulders, and, in some cases, relic wooden timbers from the ancient framework of their habitation structures (Emory 1921). In all, Emory's work recorded 59 house sites within the *ahupua'a* of Kamoku (Emory 1924a: 50).

In the upland plateau, northwest of the present project area, Emory (1924a:51) described two separate consolidated groups of visible house sites that appeared to constitute large upland dryland settlement areas east of Kānepu'u. Set against the ridge line of Kaka'alani that rises some one thousand feet in elevation as it leaves the region of Kō'ele, and ending at Kānepu'u, this dryland plateau included the village sites of (in east-to-west order) Kukuikahi, Kalapu'u, and Keonehe'ehe'e. Emory recorded 38 visible house sites, spread out over three miles along this ridge line. With ample evidence of habitation in the upland region, Emory estimated that the region of the Ka'a plateau supported at least 500 inhabitants (Emory 1921:27). Hearths, ovens, activity scatters and outlying temporary habitations in the lower elevations of the northwestern portion of Lāna'i, between the shoreline settlements and the upland dryland region, indicated to Emory the former existence of trails linking the upland settlements to the ocean resources below.

Archaeological studies specific to Kamoku Ahupua'a in the region of Lāna'i City includes Borthwick and Hammatt (1992), and Hammatt and Borthwick (1988, 1993). In 1988, on the eastern side of Lāna'i City, Hammatt and Borthwick conducted an assessment of the Lāiākoa III Subdivision to determine the nature of a surface scatter of lithic artifacts. Finished adze fragments and four adze preforms found here were attributed to an off-site gravel quarry from which the material had originated. Most archaeological studies in the vicinity of Lāna'i City have identified no significant traditional Hawaiian cultural materials or deposits.

Table 3 lists all previous archaeological investigations performed in the upper region of Kamoku Ahupua'a. A synopsis of each investigation, including the number of habitation sites found (if any), follows the table. Figure 10. Archaeological investigations conducted in the region of Lāna'i City, graphically illustrates the boundaries of the study areas.

Table 3. Archaeological investigations in the upland region of Kamoku Ahupua'a

Investigator(s) and Year	Location	Study Type
Emory 1924	Island-Wide	General Survey
Hommon 1972	Island-Wide	General Survey
Hommon 1974	Island-Wide	General Survey
Hammatt <i>et al.</i> 1988	Ranching Areas of Kō'ele	Inventory Survey and Data Recovery
Hammatt and Borthwick 1988	Lāiākoa Subdivision, Kamoku Ahupua'a, Lāna'i City	Archaeological Assessment
Hammatt and Borthwick 1989a	Waialua Multi-Family Housing, Lāna'i City	Reconnaissance Survey
Hammatt and Borthwick 1989b	Kō'ele Golf Course, Housing and Subdivision	Reconnaissance Survey
Borthwick and Hammatt 1992	Kō'ele Reservoir	Inventory Survey
Hammatt and Borthwick 1993	Waste Water Treatment Project at Kamoku	Inventory Survey
Hammatt 1996	Paoma'i	Inventory Survey
Tuggle 1997	Northwestern uplands, including portions of the Paoma'i and Ka'a Ahupua'a	Inventory Survey
Creed, Hammatt and Hammatt 2000	50-Acre parcel at the northwest corner of Lāna'i City	Inventory Survey
Hammatt and Shideler 2004	Nimivai Hill	Inventory Survey
Lee-Greig and Hammatt 2007	The Courts Affordable Housing, Lāna'i City	Field Inspection
Solamillo, Liverman and Kastner 2009	Lāna'i City Business-Country-Town Historic District	Architectural Inventory Survey

#### 4.1 Summaries of Archaeological Studies in the Region of Lāna'i City

Although Emory's most comprehensive archaeological work on the island of Lāna'i pertained to coastal settlements at Kapiha'a and Kaunoli, his investigations of deserted village sites in the uplands of the island are noteworthy because he described burial areas associated with habitation areas. He described a flexed burial exposed by a landslide at an area just north of Kō'ele, and he described ancient house sites just south of Kō'ele.

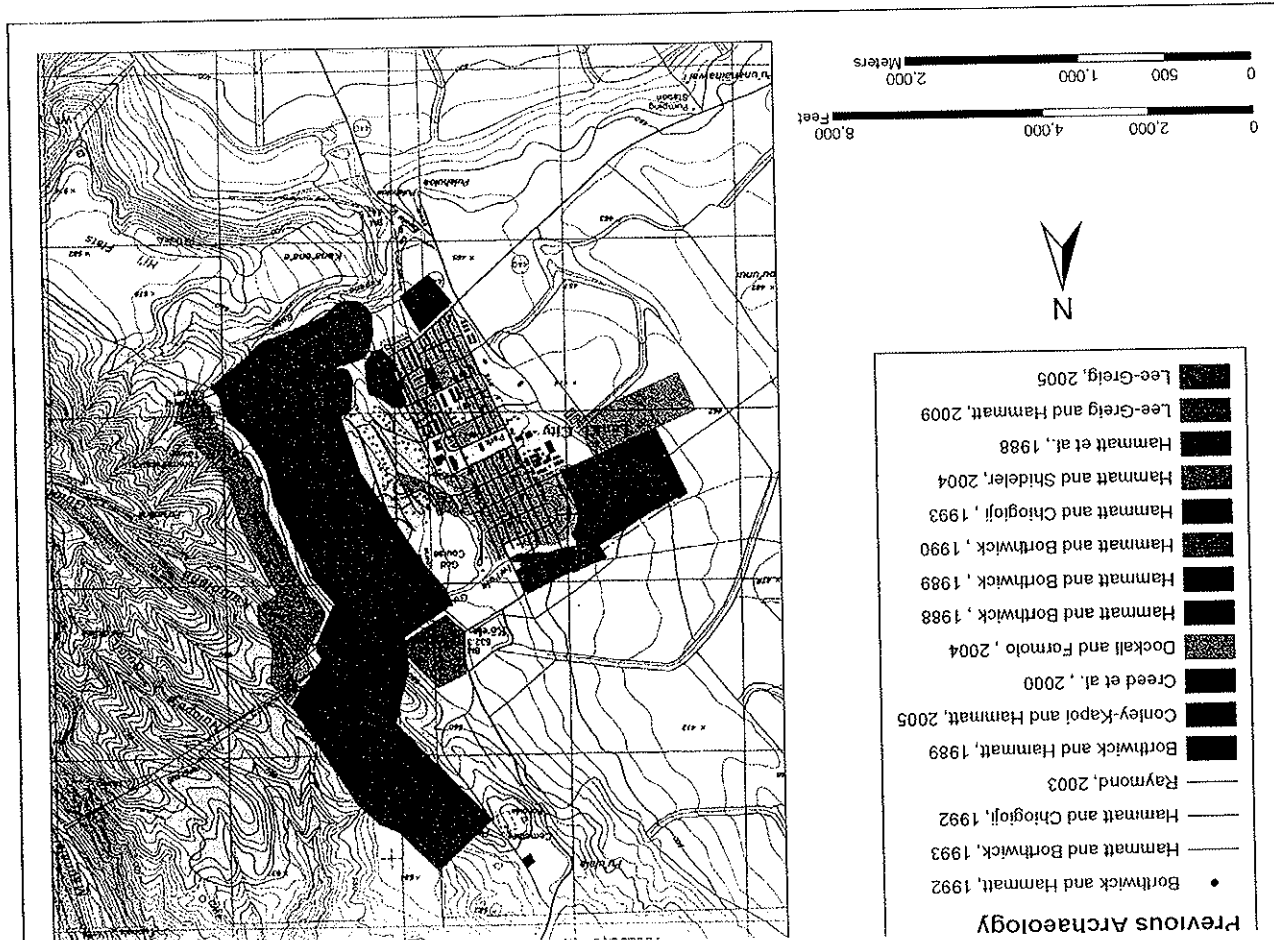
Emory (1924a) conducted his landmark island-wide survey of Lāna'i between July 1921 and January 1922. He observed pre-contact house sites and burial sites in the Kukuikahi area, just north of Kō'ele in Paoma'i, and wrote, "I counted 27 house sites...and at Pohoula is a stone faced terrace 22 x 59 feet, 4 feet high, having 4 walled divisions probably for as many houses. The hill above has been used as a burial ground" (Emory 1924b:26).

Another specific reference to habitation sites in the upper plateau is given by Emory (1921) in his field notes for September 1921, as he tried to answer the question as to where the natives of the north coast lived when they ascended the plateau:

Along the bluffs which bound the plateau on the mauka side [in Ka'ā Ahupua'a], I counted 31 house sites as I came home. Here, certainly, is where the natives lived. Allowing for 20 more house sites marked with stone divisions, and 50 grass houses at least which had used a perishable wooden fence, and allowing 5 natives to a house, this sheltered spot could have and probably did hold a population in ancient times of 500 (Emory 1921:27).

Other types of historic properties and features observed by Emory across the upper plateau, and the northwestern transitional zone, and the northwestern coastal regions (excluding Maunalei and Kaunoli) include oven pits at Kānepu'u ridge in Paoma'i (Emory 1924a:45); a well at Honopū in Ka'ā (Emory 1924a:47); remnant wooden frames of thatched houses at Kanaele in Paoma'i (Emory 1924a:50); the largest (55 x 152 feet) *heiau* structure on Lāna'i at Ka'ena Iki in Ka'ā (Emory 1924a:64); a fishing shrine (*ko'a*) at Honua'ula in Paoma'i (Emory 1924a:68); Maluhie *heiau* at Keonehe'ehe'e in Ka'ā (Emory 1924a:69); a small *heiau* at Hao in Mahana (Emory 1924a:69); a complex of habitation platforms, enclosures, and shelters and a ceremonial platform at Kalaeāhole, in Ka'ā (Emory 1924a:69); a fishing shrine (*ko'a*) at Pōhākuloa, and a *ko'a* in Kōāhūa, in Mahana; both coastal shrines built among house sites (Emory 1924a:71); one *ko'a* in Kukui and four in Kahue in Paoma'i, as well as *ko'a* structures at Cape Kae'a and at Ka'ena in Ka'ā (Emory 1924a:71); a *ko'a* at 'Oanapuka on the coast of Kamoku (Emory 1924a:72); stone markers (*āhu*) at Keahikawelo ridge in Ka'ā (Emory 1924a:72); upright stone slab alignments at Hale o Lono in Paoma'i (Emory 1924a:72); burials in Kuahua Valley in Mahana (Emory 1924a:73); burials in the sand dunes of Awa'ala in Paoma'i (Emory 1924a:73); burials at Pohoula hill, near the summit, in Paoma'i (Emory 1924a:73); a cave at Keone gulch in Kamoku, along the coast of the present project area *ahupua'a* (Emory 1924a:88); lava tube caves at Honopū (Emory 1924a:88); petroglyphs at Ka'ena in Ka'ā (Emory 1924a:103); and petroglyphs at Kaunālapa'u Bay in Kamoku, within the present project area *ahupua'a* (Emory 1924a:103).

The identification of culturally significant sites across the central plateau of Lāna'i was also undertaken by other scientists working on the island at approximately the same time as Emory,



Investigations conducted in the region of Lāna'i City.

Chester K. Wentworth, a Yale University Fellow at the B.P. Bishop Museum, published the first scientific geologic study of the island in 1924 (B.P. Bishop Museum Bulletin 24), and supplied Emory with additional information while performing his surveys of the island (Wentworth 1925). Ornithologist George C. Munro (1920), and botanist J. M. Lydgate (1919-1921) had both performed surveys on Lāna'i and both provided further cultural background information to Emory.

It was Emory's exemplary research on pre-contact occupation of the Mānele District of Lāna'i that best showed how permanent habitation occurred along the coastline of the island. While an examination of the archaeological landscape of the Palāwai Basin underscores the importance of the uplands as a focus of agriculture and habitation, Hawaiian traditions and the presence of hundreds of house sites at Kaulōlū were evidence that the coastal environs were also a focus of settlement and marine exploitation.

In all, Emory (1924a) recorded 489 house sites across Lāna'i. Of eleven large *heiau* structures found on the island, one (Pu'u Makani) is located in the upper plateau region. Of the ten smaller *heiau* structures listed by Emory, two are in the upper plateau region. Maluhie *heiau*, in Keonehe'ehe'e, and north of Koa, below the trail that leads from the Palāwai Basin onto the mountain bench at Kaōhia'i is an unnamed 30 by 45 foot terrace. Of the 18 intact fishing shrines (*ko'a*) of Lāna'i, one is located in the project area *ahupua'a*, at Kaumālāpa'u. This shrine included an adjacent house platform and two fireplaces. Smaller cairn structures were recorded by Emory in Mahana, along the area traveled by those crossing the plateau from the north coast.

Emory (1924a:72) described stones marking places of religious or magical observances on the upper plateau:

On the great bowlders [sic] along the Keahikawelo ridge many small monuments of three or four stones, one on top of the other, have been erected by natives traveling up and down, to insure good fortune on their way. I am reminded of similar monuments which were set up along the trail at Ke-ahu-o-ka-holo in Haleakala to keep the fog from enveloping the travelers and causing them to lose their way. But the *āhu* at Keahikawelo represent the *kūkāe* offerings of Kawelo.

In addition to these historic properties, Emory recorded a large number of artifacts. Some were isolated finds, some were associated with scatters. Petroglyph sites recorded in the project area *ahupua'a* included rock faces at Kaumālāpa'u.

Robert Hommon and Kenneth Emory (1972) made recommendations for the preservation of archaeologically-sensitive regions of Lāna'i. They identified Lāna'i City as an area where future residential subdivision might endanger historic properties or ruins not previously located. Their recommendations for archaeological studies included the areas of Mānele Gulch and Mānele Bay.

Robert Hommon (1974) conducted a survey of historic properties on Lāna'i using Bishop Museum staff members. Hommon attempted to reacquire 262 of Emory's sites located outside of the Kaulōlū work area, and documented a small number of previously unrecorded sites in the northwestern upland and coastal areas. Hommon observed that most of the coastal sites had

successfully remained intact in the 50 years since the Emory's survey had been performed, and termed the state of preservation "unmatched elsewhere in similar Hawaiian sites."

Although Hommon's most significant finds during this survey occur outside of the present project area, they are relevant because they represent the use of a north-south travel route across the upper plateau. In addition, Hommon recorded complete habitation complexes along the southwest shoreline, including SIHP 50-40-98-202, a complex at Kaluako'i, SIHP 50-40-98-166, the "Palāwai Complex", which included an enclosure described as "probably a *ko'a* [fishing shrine]" and walls "used as a temporary shelter for fishermen" and SIHP 50-40-98-086, the "Kāpīha'a Complex." In discussing significance, Robert Hommon noted that the Kaluako'i sites "constitute the most densely concentrated group of well built terraced platforms yet found on Lāna'i." He continued his assessment by stating, "If all of these features were used as foundations for houses, and if they were all used at the same time, the cluster constitutes one of the densest habitation complexes in the Hawaiian Islands" (Hommon 1974).

Four investigations by Hallett Hammatt and Douglas Borthwick within the Lāna'i City development region and within the former ranching areas of Kō'e'e are noteworthy, and are described below.

In 1988, Hallett H. Hammatt, Douglas Borthwick, David Shideler, and Kirstie Nakamura conducted a subsurface data recovery of two trash pits within the 20-acre construction site of the present-day "Four Seasons Lodge at Kō'e'e" hotel. This upland spot had been the private home of a number of prominent Lāna'i families, and the recovery of historic artifacts from the trash pits added greatly to the understanding of the lives of early ranching families.

Hallett H. Hammatt and Douglas Borthwick performed an archaeological assessment of the Lālākoa III Subdivision within Kamoku Ahupua'a (Hammatt and Borthwick 1988) and recorded a scatter of basalt and volcanic glass. The investigation recorded numerous coarse-grained basalt fragments, which were interpreted as industrial-grade modern gravel. Many fine-grained basalt flakes and basalt artifacts (including a finished adze fragment, eight adze performs, a basalt core, and thirteen retouched flakes) were collected, and were determined to have originated at the Kō'i Adze Quarry in the Palāwai Ahupua'a. Both the modern gravel and the pre-contact artifacts had been transported together from the quarry site by modern equipment.

Hallett H. Hammatt and Douglas Borthwick (1989a) performed a reconnaissance survey of the former Waialua multi-family housing subdivision (currently known as the Iwi'ole Dormitories) in 1989, and recorded a sparse scatter of flaked basalt lithic material. Due to modern agricultural cultivation, the context of this scatter of cultural material was determined to have been highly disturbed.

Also in 1989, Hallett H. Hammatt and Douglas Borthwick (1989b) performed reconnaissance surveys for four separate projects, including the Kō'e'e golf course, the Kō'e'e single-family housing, the Queen's multi-family housing and the Olopuia Woods Subdivision. During the survey of the golf course project area, four historic features were recorded. Three were associated with the water system and debris from a ranching-era homestead, and the fourth was an unrelated concentration of pre-contact lithic material. The remaining other three surveys produced a very small amount of additional pre-contact lithic material that was found to have originated (again) from the nearby modern rock quarry.

The Kuahua complex of platforms, terraces and rock shelters was first described by Emory (Site 207 at Kuahua Gulch) in 1924, and had not been relocated by Hommon in 1974. Additionally, Tomanari-Tuggle (1992) noted that an area of the valley of Kuahua reported by Emory (1924b:14) to have contained the disorganized remains of approximately twenty flexed burials, was not relocated by this survey.

In 1993, Douglas F. Borthwick and Hallett H. Hammatt conducted an archaeological inventory survey for an approximately 13,000 foot-long waste water pipeline connecting the Lāna'i sewage treatment plant with the Kō'eie golf course irrigation system. This survey did not locate any traditional cultural deposits or structures, but did augment knowledge of the Lāna'i City/Kamoku Ahupua'a development region.

In 1996, Hallett H. Hammatt conducted an archaeological inventory survey of a 14.9-acre parcel in the *ahupua'a* of Paoma'i, along the Maliau ridgeline above the area developed as the "Four Seasons Lodge at Kō'eie" hotel. SIHP 50-40-98-1598, a pre-contact rectangular habitation enclosure, was recorded, and the positions of other associated crude terraces and rock piles were mapped.

In 1997, David Tuggle performed an archaeological inventory survey of five locations within the rural districts of Ka'ā and Paoma'i Ahupua'a, during which he identified five historic properties. The five properties were assigned SIHP numbers. SIHP -1941 was located just west of the Ka'ena/Polihua roadway fork, and consisted of a 40m long alignment of cobbles and boulders. SIHP -1942 was located along the western side of Lapaiki Road, in the *ahupua'a* of Paoma'i adjacent to the boundary of Ka'ā, and consisted of three separate scatters of cultural material, including basalt flakes, marine shell and coral fragments, and a few worked artifacts. Also included in this site were specimens of fire-cracked rock and an exposed horizon of intact hummock, which displayed a hearth-like area with fire-cracked rock scatters. SIHP -1944 was located proximate to the previous two sites, and included an additional scatter of fire-cracked rock, and an exposed hearth. SIHP -1945 was located on a ridgeline at the edge of a low bluff, at a location named Ka-unu-a-Kane by Emory (1924). Here, the property was a large boulder outcrop against which a terrace of faced, upright stones (slab-shaped cobbles) was constructed. Based on its unusual method of construction, the terrace was interpreted by David Tuggle as probably ceremonial.

In 2000, an archaeological inventory survey was conducted at a 50-acre parcel belonging to the Department of Hawaiian Home Lands at the northwest corner of Lāna'i City. The investigation by Victoria S. Creed, Jared Hammatt and Hallett H. Hammatt found that the project area had been previously cultivated in pineapple, and no cultural material was observed.

In 2004, Hallett H. Hammatt and David W. Shideler performed an archaeological inventory survey of the Kihāmānienie Church (SIHP 50-40-98-1946) and an associated churchyard complex at Niniwai Hill (SIHP 50-40-98-1947). Both historic properties are within the region of Lāna'i City, in Kamoku Ahupua'a. The investigation focused on the surface markings that appeared to denote the positions and relationships of some eighteen historic burials within the churchyard, as well as features associated with the early historic occupation of the Kō'eie area, including an irrigation feature and a small section of a stone-lined trail.

In 2007, Tanya Lee-Greig and Hallett H. Hammatt conducted sub-surface testing on property slated for affordable apartment housing during an archaeological field inspection in Lāna'i City, Kamoku Ahupua'a. This investigation was conducted to determine the extent of historic-era cultural material from the earliest days of commercial pineapple cultivation. No cultural structures or deposits were observed during this inspection.

In 2009, Stanley Solamillo, Astrid Liverman, Ph.D. and Katie Kasner conducted an architectural survey of structures in Lāna'i City for evaluation and inclusion in the Lāna'i City "Business Country Town" (BCT) historic district. A number of buildings were determined as eligible for nomination to both National and Hawai'i State Registers of Historic Places. The study determined that the existing Senior Center building was "non-contributing," and the Planning Department of Maui County determined that mitigation at Historic American Building Survey (HABS) Level II was an appropriate action.

### Section 5 Community Consultations

Cultural Surveys Hawai'i Inc. contacted the following individuals and Hawaiian organizations requesting their *kākau* and guidance regarding knowledge of traditional cultural practices and cultural resources of the study area. The following table represents all community consultations conducted with *kama āina*, Hawaiian cultural advisors and Hawaiian organizations. Individuals who expressed personal knowledge of the study area and gave their consent to share their *mana'o* for this study, both formally and informally, are presented in Table 4. Formal letters of response to the scoping letter sent out by CSH have been appended to this study as Appendix B

Table 4. Community Contacts

Name	Affiliation	Contacted	Personal Knowledge (Y/N/S)	Comments
Ms. Pearl Ah Ho	OHA & DHHL- Lāna'i Representative	Y	Y	Suggested we speak with Mr. Kepa Maly and possibly Mr. Sol Kaho'ohalahala.
Ms. Phyllis "Coochie" Cayan	DLNR-State Historic Preservation Division, History and Culture Branch Chief (Former Lāna'i resident)	Y	S	CSH sent letter of inquiry. Mrs. Cayan suggested contacting Mr. Kepa Maly and utilizing the research he has compiled. Ms. Martha Evans, Ms. Pua Paoa, Mr. Albert Morita, Auntie Irene Perry, Mr. Sol Kaopuiki, Ms. Alberta Morita DeJolley, as well as Kūpuna at the Senior Center.
Mrs. Maggie Masicampo	Lāna'i Senior Center Manager	Y	S	Mrs. Masicampo referred CSH to numerous contacts. She says she is very glad that the new health center facilities are being built.
Mrs. Alberta Morita DeJolley	Commercial Farmer/Editor/Owner of <i>Lana'i Today</i>	Y	Y	Says she is in full support of the project. See 6.1.1 below.

Key:

- Y=Yes
- N=No
- A=Attempted (at least 3 attempts were made to contact individual, with no response)
- S=Some knowledge of project area
- DC=Declined to comment
- DP=Declined to participate
- U=Unable to contact, i.e., no phone or forwarding address, phone number unknown

Name	Affiliation	Contacted	Personal Knowledge (Y/N/S)	Comments
Mrs. Martha Evans	Lāna'ians for Sensible Growth	Y	Y	CSH sent letter of inquiry. Says she is in full support of the project. Mrs. Evans shared her recollections about the area, see 6.1.2, below.
Mrs. Sugar (Minami) Gima	<i>Kama āina</i>	Y	N	CSH sent letter of inquiry. Ms. Gima says she has no problems with this project going through.
Mr. Reynold "Butch" Gima	<i>Kama āina</i> , mother's family ran the Minami Gardens in the 1930's located at the site of the Lāna'i High and Elementary School across from the Senior Center.	Y	S	CSH sent letter of inquiry. Mr. Gima says he has no problems with this project going through.
Mr. Robert Hera	Held several positions with Dole Company over thirty-plus year career, including the title of superintendent.	Y	Y	CSH sent letter of inquiry. See 6.1.3 below.
Auntie Lei Kamipac	<i>Kūpuna</i>	A	-	CSH sent letter of inquiry.
Mr. Sol Kaopuiki	<i>Kūpuna</i>	A	Y	CSH sent letter of inquiry.
Mrs. Mona Kapaku	Department of Hawaiian Home Lands - Maui District Supervisor	Y	N	CSH mailed letter of inquiry. Ms. Kapaku had no concerns regarding cultural impacts. Referrals were made to Unele Sol Kāho'ohalahala and Ms. Pearl Ah Ho. Also referred us to Stuart Matunaga - Project Manager for Lāna'i DHHL - who has done research for developing Hawaiian Homes in the area.
Mr. Kepa Maly	Lāna'i Hawaiian Civic Club Executive Director, Lāna'i Culture and Heritage Center	Y	Y	CSH sent letter of inquiry. Mr. Maly says that CSH has information from past CIAs in the area. He warns to that it is always possible to encounter artifacts even in developed areas. Mr. Maly says the health center will greatly benefit the



Name	Affiliation	Contacted	Personal Knowledge (Y/N/S)	Comments
Ms. Nicole McMullen	Bailey House Museum/Maui Historical Society Director	Y	N	community. CSH mailed a letter of inquiry. Ms. McMullen suggests we speak to Mr. Kapa Maly.
Mr. Shigeto Minami	<i>Kapuaea</i>			
Mr. Kaponoai Molitau	Hawaiian cultural practitioner trained in <i>pule, oli, iouina</i> Hawaii, and <i>'ike</i> Hawaii, as well as a <i>kumu hula</i> .	Y	N	CSH sent a letter of inquiry. Mr. Molitau referred us to Auntie Lei Kamipae.
Mr. Albert Morita	<i>Kapuaea</i> , Retired DLNR, Division of Forestry and Wildlife	Y	Y	See 6.1.4 below. CSH mailed letter of inquiry.
Ms. Theo Morrison	Lahaina Restoration Foundation- Executive Director	Y		CSH sent letter of inquiry. Ms. Morrison referred us to Mr. Kiope Raymond who was the Chairperson of the West Maui Projects Review Committee.
Mr. Clyde Namu'o	OHA-Administrator, Native Hawaiian Historic Preservation Council	Y	S	CSH sent letter of inquiry. OHA recommended that CSH contact Mr. Kapa Maly, Ms. Nani Watanabe, Ms. Pearl AhHo, Mr. Soi Kaho'ohalahala and Mrs. Martha Evans.
Mr. Gary Onuma	<i>Kapuaea</i> , Castle & Cooke Game Manager, <i>Kama'aina</i>	Y	Y	See 6.1.5. CSH sent letter of inquiry.
Mr. Noboru "Squeaky" Oyama	<i>Kapuaea</i>			
Ms. Pua Paoa	Maui/ Lana'i Islands Burial Council, Lana'i Island Representative	Y	S	CSH sent letter of inquiry. In the MLIBC meeting, Ms. Paoa had no comment on the project.
Aunty Irene Perry	<i>Kapuaea</i>	Y	Y	See 6.1.6 below.
Mr. Kiope Raymond	Member of the Board of the Lahaina Restoration Foundation and Chairperson of the West Maui Projects Review Committee	Y	N	CSH sent a letter of inquiry. Mr. Raymond said that the LRF does not wish to comment on this project.
Ms. Sandra Ropa	Hui Malama Pono O Lana'i	A	--	CSH sent letter of inquiry.
Mr. Glenn Richardson	Former member, Maui/ Lana'i Islands Burial	A	--	CSH sent letter of inquiry. Letter was returned.

Name	Affiliation	Contacted	Personal Knowledge (Y/N/S)	Comments
Ms. Diana Shaw	Council, Lana'i Island Representative, <i>Kama'aina</i>			
Mr. Sam Solamillo	Lana'i Community Health Center Director	Y	Y	See 6.1.7 below.
Mr. Sam Solamillo	Maui County Cultural Resources Commission	Y		CSH sent a letter of inquiry. Mr. Solamillo suggested that we could speak with Mr. Kapa Maly.
Mrs. Momi Suzuki	<i>Kama'aina</i> , Mrs. Suzuki is the daughter of Aunty Irene Perry.	A	--	CSH sent letter of inquiry.
Ms. Nani Watanabe	<i>Kama'aina</i>	A	--	CSH sent letter of inquiry but it was returned.
Mrs. Jackie Woosley	Hui Malama O Lana'i	Y	Y	CSH sent letter of inquiry. Ms. Woosley had no comment other than to say that she is glad that the new facilities will be built.

## Section 6 Summaries of Kama'aina Interviews

Information presented in this study was shared during previous consultation regarding the Kamoku *ahupua'a*. Because the Kamoku *ahupua'a* has been researched extensively and to avoid exhausting the community, CSH conferred with *kupuna* and *kama'aina* who supported CSH and the use of information previously shared to be related to the proposed Lāna'i Community Health Center project area. This information was incorporated with any specific comments about the Lāna'i Community Health Center project.

### 6.1 Ms. Alberta (Morita) de Jetley

Ms. Alberta Morita de Jetley's family moved to Lāna'i in 1951 when her father became the island's game warden with the Territory of Hawai'i. After graduating from Lāna'i High School, she moved to Oahu before moving to Hana, Maui in 1968. She lived in Hana until 1996 but returned to Lanai from 1980 to 1984 when she acquired the lease of Hotel Lanai and from 1986 to 1990 when she wrote a monthly newsletter for Castle and Cooke. In 1996, she returned to Lanai to live permanently. Ms. de Jetley is the owner of Bernie's Farm, an 18-acre farm near Lanai Airport. Ms. de Jetley is also the Publisher and Editor of *Lanai Today*, a monthly newspaper for the Lāna'i community.

Mrs. de Jetley's concerns are focused largely on the future of Lāna'i's economy, sustainability and overall viability as a community. Mrs. de Jetley runs the community paper because she thinks it is a critical part of supporting small business and the community interests on Lāna'i. She feels she has a vested interest in the well being and economy of Lāna'i, and wants to see the island do well. She believes that stopping growth on Lāna'i will have a negative effect on the community's future and feels that the community needs to be 'pro-business' if it wants to have a viable economy. She states, 'we should be working on ways to promote the community'.

Ms. de Jetley is aware of the state hunting lands located *makai* of Lāna'i City but does not consider this type of hunting a traditional Hawaiian activity. She further explains that Axis deer were introduced to Lāna'i in 1923 while Mouflon sheep and game birds were introduced in the 1950's and 1960's.

### 6.2 Mrs. Martha Evans

Mrs. Martha Evans is the Vice Principal of Lāna'i High and Elementary School. She has been a resident of Lāna'i since the 1970's when she moved there to work as a teacher. A person of Hawaiian ancestry, Mrs. Evans is also a member of the grass roots organization, Lanaians for Sensible Growth, as well as the Chair of the Lāna'i Archaeology Committee. Mrs. Evans submitted her *mana'o* via e-mail on March 15, 2009. Mrs. Evans recalled stories regarding night marchers when she first started her teaching job. She stated that the night marcher trail began above Lanai Avenue, went through the yard at the *mauika* corner of Lanai St. and Sixth St., then continued along through the Lāna'i High and Elementary School property, and passed by the last cottage of the teacher lodging. Mrs. Evans also remembers there being a culturally significant *pohaku* or stone outside of the last cottage, but she cannot recall its significance.

### 6.3 Mr. Robert Hera

Mr. Robert Hera moved to Lāna'i with his family from Kona in 1936. His family had been working on the coffee farms. They came to Lāna'i on the S.S. Humuila, a steam freight ship. Both he and his parents worked for Dole Company upon arrival in Lāna'i. Throughout his thirty-year career with Dole, Mr. Hera held a variety of positions outside of actual pineapple field work, they included positions in agriculture and engineering, water systems and utilities departments. In addition to the utilities maintenance, Mr. Hera helped with the general upkeep of the city, eventually becoming a superintendent with the company.

Mr. Hera explained that the Lāna'i Community Health Center project area has been developed for as long as he can remember. He does not think that the expansion will impact any cultural activities.

Mr. Hera spoke of the teachers cottages, located near the adjacent school property, and described how pilots during WWII used to fly over and drop letters for the teachers. He said he also used to entertain at the teacher cottages, playing Hawaiian music. He spoke of an airstrip that was once in the area. It was destroyed; trenches were dug through the airstrip after Pearl Harbor was bombed to avoid the possibility of enemy planes landing there. Sikorsky aircraft used to land there as well.

Mr. Hera's sentiment is that the new facilities for the health center, will benefit the community of Lāna'i.

### 6.4 Mr. Albert Morita

Mr. Albert Morita is *kama'aina* of Lāna'i, a retired Department of Land and Natural Resources (DLNR), Division of Conservation and Resources Enforcement (DOCARE) officer and currently sits on the board of directors for the Lāna'i Culture and Heritage Center (LCHC). His familiarity with the study area comes from growing up on Lāna'i and working in the field for 30 years as a DOCARE officer.

Mr. Morita explained that the project area has been in pineapple cultivation as long as he can remember. He explains that as a child, stone artifacts were often found during the plowing of the pineapple fields. He remembers mainly *ulu maika*, and fire pits (*imu*), and therefore believes there is a likelihood that these things may be uncovered during grading and grubbing for the school expansion.

The lower elevations west of the city, from the sea cliffs (*pali*) to the edge of the pineapple fields were territorial hunting grounds since the 50's and remain today under the State DLNR as hunting grounds. These lands were used as ranchlands before hunting. In addition, Hunting Unit 3 has been included in the hunting area. One can hunt large game; axis deer, dall sheep, and bird game; turkey, pheasant, gray Franklyn, chucker, and doves (lace necked and barred) in this area.

Regarding more traditional practices, Mr. Morita recalls individuals collecting *verbena* (*ha'iwāi*) to make a poultice for bruises on themselves or their horses, in lands on the outskirts of town. He also recalls individuals harvesting *'ihaloa* (*Waltheria indica*), which grows wild in the same areas, for its medicinal purposes.

Mr. Morita draws attention to the area of Hōkūhau. He explains that according to Robert Hobbes's map in the book titled "The Story of Lāna'i" by George C. Munro, this area is located east of the project area. Its meaning is Morning Star. Mr. Morita suggested researching this area more thoroughly due to its proximity to the project area. He also suggested Kenneth P. Emory's work. Mr. Morita comments on the above mentioned map and book noting their accuracy and intimate knowledge of Lāna'i and is grateful this family got together to write it. It is a very important historical document.

#### 6.5 Mr. Gary Onuma

Mr. Gary Onuma worked as a Game Manager for Castle & Cooke and grew up near the project area, therefore, he is intimately familiar with the area. As a child Mr. Onuma recalls finding stone artifacts, but explains that the area has been heavily cultivated since the 1930's and archaeological feature remnants would be scarce today. He notes that because this project site is part of the center of town, it has already been disturbed and the health center construction can cause no damage to any traditional practices. He also explains that there is a hunting area just below town, where axis deer can be found. He explains that some axis deer live in the proposed project area and will be displaced by construction, but insists that axis deer find new habitat easily. Mr. Onuma mentions the sewage treatment plant nearby and states that it may be a cause of bad odor.

#### 6.6 Aunt Irene (Cockett) Perry

Aunt Irene Perry was born in Keōmoku in 1917. Her father was Robert Cockett from Maui. Aunt Irene said that she lived on Maui briefly before returning to Keōmoku. Sometime around 1928 her family moved up to Kō'ele and her father worked for the ranch. They lived in a house next to the main ranch house. She spent her childhood playing, fishing and traveling via horseback to her *tutu's* (Keli'ihaanui's) home at Palawai Basin.

As a child living in Keōmoku, Aunt Irene used to ride on horseback up to Lāna'i City. From Keōmoku, she explained, they traveled up through Lāna'iha'e to get to Kō'ele, "all over and through the mountain and down." Aunt Irene describes growing up at Keōmoku, fishing and preparing dried fish, turtle and *he'é*. They remember carrying these dried snacks as well as *kālua* pig to school in their shirt pocket.

Aunt Irene attended school at Kō'ele. Driving around Kō'ele, Aunt Irene pointed to the hill where the original school was located. She also pointed to the location of the old slaughter house and a pasture that was utilized for grazing after the company gave up pineapple.

When asked what her knowledge regarding the high occurrence of Hawaiian stone artifacts said to have been found during plowing of the pineapple fields was, she said she was aware of all the stone artifacts but did not know exactly how the area was utilized by Hawaiians in traditional times.

#### 6.7 Ms. Diana Shaw

Ms. Diana Shaw is the Director of the Lāna'i Community Health Center. She shared her reasons regarding the need of the proposed new health center and how it will benefit the community. Ms. Shaw states that the current health center facilities are located *mauka* and uphill

of Lāna'i City at 478 Lauhala Place, making it difficult for seniors and anyone without a car to walk here. Additionally, Ms. Shaw spoke of the small size of the current building which is currently 900 square feet, and can accommodate only 14 patients per day, with space for only one provider per day.

Ms. Shaw explained that the Lāna'i Community Health Center serves the Lāna'i population which is 200% below the poverty level. She further explains that the majority of their patients are the *kūpuna*. Ms. Shaw says that the new proposed location will be much easier for patients to access. The proposed new location is on flat ground and adjacent to the Lāna'i Senior Center, the Lāna'i Art Center, and the Lāna'i High & Elementary School. This location would make access easier for all patients and provide optimum space to accommodate more individuals. Ms. Shaw also notes that some of the Lāna'i Community Health Center facilities will be used for Lāna'i Art Center activities. These will include art classes for children, and may one day be used to provide art therapy services to patients. Ms. Shaw believes that the proposed new facilities will bring a much needed improvement and will greatly benefit the community of Lāna'i.

## Section 7 Traditional Cultural Practices

The identification of traditional cultural practices for a cultural impact assessment takes into account, past, current and potential future cultural practices. Traditional cultural practices include those practices of any ethnic group who has influenced the culture of the study area and include subsistence hunting practices as well as traditional Hawaiian cultural practices. Traditional cultural practices are identified by community members through the consultation process.

### 7.1 Gathering for Plant Resources

#### 7.1.1 Medicinal Plant Gathering

Gathering of plant resources in the upland portion of the study area consists of the collection of *ha'wōwī* (*Verbena litorea*) and *'uhaloa* (*Waltheria indica*). The leaves, stems and roots of *'uhaloa* were grinded and strained and made to gargle to soothe a sore throat (Abbott 1992: 101). Mr. Morita recalls *ha'wōwī* being used as a poultice for bruises on individuals and horses. He remembers individuals collecting these medicinal plants from around Lāna'i City, in areas of fallow pineapple fields (Dagan *et al* 2009c).

#### 7.1.2 Subsistence Plant Gathering

Mr. Yamato (Dagan *et al* 2009c) explains that he used to hike into the forest *mauka* of Lāna'i City to collect *pepeiao akua*, commonly referred to as *pepeiao* (*Auricularia auricula*), a tree fungus that both Mr. Yamato and Mr. Oyama agreed is excellent in chop suey. Mr. Yamato said it often grew on *kūkui* nut trees (*Aleurites molucana*). Mr. Yamato also explained that *pepeiao*, when dried, could be stored for food and freshens up nicely by soaking in water when ready to use. Mr. Yamato said that he continued to collect *pepeiao* until about ten years ago (Dagan *et al* 2009c).

Mr. Yamato also describes traveling *mauka* to collect bamboo shoots. He said that he continued to collect bamboo shoots about once a year until a fence was recently constructed blocking his access. Guava (*Psidium guajava*) and *Lilikoi* or passion fruit (*Passiflora edulis*) are two other fruits that Mr. Yamato, Mr. Oyama, Aunt Irene Perry and several of the ladies at the senior center remember collecting (Dagan *et al* 2009c).

#### 7.1.3 Gathering Maile

Aunt Irene also recalled collecting *maile* (*Alyxia oliviformis*) from the mountains. It is unclear where exactly where she went to gather this plant or for what purpose. *Maile* has been known to be utilized as a decorative *lei* in *hula*.

### 7.2 Trails and Traditional Access Routes

No traditional Hawaiian trails within the present study area were mentioned during the consultation process. However, several individuals consulted described accessing the upland areas *mauka* of Lāna'i City for recreation and to gather edible foods such as *liliko'i*, guava, bamboo shoots and *pepeiao*. It is unclear as to what routes they utilized; however, it was noted that one access point had recently been fenced and access blocked (Dagan *et al* 2009c).

### 7.3 Traditional Hawaiian Stone Tool and Craft Manufacture

Native Hawaiians utilized *pohaku*, stones of various qualities, for a variety of purposes. The *ūtu maika* stone was designed as a sort of bowling disk used to play a game called *Maika*. *Maika* was a common traditional game played during the *Makahiki* season, the time of peace. To play this game, two stakes would be set in the ground about six inches apart. The player would then stand a distance from the stakes, further being more challenging, and attempt to roll the *ūtu maika* between the stakes. Slingstones or *pohaku ma'a* were used as a weapon in warfare, hunting, and also as sport.

Throughout the consultation process, it was revealed that Hawaiian stone artifacts including *ūtu maika*, *pohaku ma'a* and *imu* stones (fire pit stones) have been discovered and are known to be a common occurrence in the pineapple fields surrounding the city and throughout formerly cultivated areas on Lāna'i. Mr. Kepa Maly, in a written statement regarding Hawaiian habitation of this upland area, said, "Kamoku was noted for its upland forest and springs, with areas which the Hawaiians developed into an extensive forested dry land agricultural system. In Kō'eie, Kaihola and Nīnīhau region" (June 4, 2009 Maui County Cultural Resource Commission meeting). Although several individuals had found stone artifacts and surmised that Hawaiians had clearly left these items behind, few consulted were familiar with more detailed knowledge concerning Hawaiian habitation of these areas (Dagan *et al* 2009c).

Mr. Albert Morita spoke of finding *ūtu maika* and *imu*. There is a possibility of uncovering traditional stone tools during ground altering activities for the new health center. Mrs. Sandra Ropa recalls finding Hawaiian stone artifacts in the pineapple fields as a child and vividly remembers not being allowed to bring them into the house. Mr. Takeo Yamato also said that he found *ūtu maika* in the pineapple fields and Mr. Oyama confirmed that *ūtu maika* were everywhere (Dagan *et al* 2009c).

### 7.4 Fresh Water Resources

As mentioned above, Mr. Maly has stated: "Kamoku was noted for its upland forest and springs, with areas which the Hawaiians developed into an extensive forested dry land agricultural system, in Kō'eie, Kaihola and Nīnīhau region" (Dagan *et al* 2009c). The mention of freshwater "springs" in these areas prompted further research of these resources. The place names of Nīnīhau, meaning pouring water (Emory, 1924; 31) and Kaihola, the name of the gulch, associated spring and the *iholeia* variety of banana (Emory 1924: 31), speaks to the known and relative lushness of these upland areas, Kaihola being the location of one of the principal springs on the island (Emory 1924: 47).

In his book, *The Story of Lāna'i*, Mr. George C. Munro, the manager of the Lanai Ranch from 1911 to 1930, recalls a large boulder that had been modified to collect water located at Kō'eie. Several holes measuring three inches wide and three inches deep had been made in the surface of this boulder (Munro 2007: 126). This boulder and its whereabouts were not mentioned by any individuals consulted. It was also said that Mr. Frederick Hayselden (Walter Murray Gibson's son-in-law in charge of the ranch in the late 1800's) built eight to ten cement lined cisterns whose purpose was to catch water that dripped off the roofs of buildings at Kō'eie (Munro 2007: 128).

Mr. Munro also described a reservoir dug by Mr. Hayselden as being located behind the ranch manager's house. This reservoir caught storm water from the Kaihohena Gulch and was used to water livestock. This same reservoir exists today as a pond at what is now the Lodge at Kōele, a Four Seasons Resort. In an April 2009 article in *The Lānaʻi Times*, Aunty Irene Perry speaks of the days when she lived at Kōʻele in a house next to the main ranch managers house. Mr. Kenne Williams, the author of the article, explains that this same pond was the source of Aunty Irene's drinking water. Aunty Irene is quoted as saying, "Sometimes when it would rain, the pond would overflow and run down the hill" (Lānaʻi Times, Williams 2009:10). This statement substantiates that this historic reservoir did, in fact, catch storm waters and shows that it was utilized for the same purpose many years after it was built. Aunty Irene recalls getting supplies of water from Maui as well, carried over on the sampan that the Kaoupuiki family ran between the islands (Dagan *et al* 2009c).

This reservoir was also dry for a time. Mrs. Nani Watanabe (CCRC) recalls playing in it as a child in the 1940's and explains that it was dry (Dagan *et al* 2009c). In a 1988 archaeological study, it was also described as being dry (Hammatt *et al*. 1988: 5). It is known that Kaihohena stream was an intermittent stream, and did not flow year round, but it is unknown if other activities had caused the stream to flow elsewhere or to not flow at all during the times when the reservoir was dry.

Another reservoir described by Mr. Munro was located "at the lower end of Kaihohena Gulch" and is described as stone-lined, with the capacity to hold 400,000 gallons (Munro 2007: 128). It is said that water from up the valley was piped into this reservoir. In addition, Mr. Munro describes a pump and waterline installed to pump water from Maunalei Gulch into Kaihohena reservoir (Munro 2007: 129). At a June 4, 2009 CCRC meeting, Mr. Steve Bumber made mention of a reservoir located behind the 17<sup>th</sup> hole at the golf course, the Experience at Kōele (Dagan *et al* 2009c). Descriptions from these two sources, coupled with research of historic and modern day photos, suggests these are the same reservoir, although it is unknown if any remnant of this reservoir exists today.

Fresh water resources also include brackish wells located in the coastal area at Kaumālapaʻu. Mrs. Sandra Ropa recalls her grandparents' home and describes a garden that they grew that could tolerate the brackish water available there (Dagan *et al* 2009c). Mr. George Munro also describes brackish wells located at Kaumālapaʻu. He noted that these ancient Hawaiian wells were shallow and sealed on the seaward side by a mixture of mud and straw in an effort to minimize salt water seepage. One of these wells was located in Kaumālapaʻu Gulch. Mr. Munro describes the water in this well as being ten feet below the surface (Munro 2007: 125).

### 7.5 Agricultural Practices

Mr. Munro begins his chapter on agriculture with the following passage:

Hawaiians are believed to have first colonized Lānaʻi about the year 1400. Their first cultivations would likely be along the shore of the east side and in taro patches in Maunalei Gulch. The shore areas got very little rainfall, but water from the mountains soaked them during the wet season. These lowlands and taro patches would not be injured by such work, as yearly freshets bring rich soil from

the mountains and deposit it on these lands. They may have found later that the extensive uplands on the west side had more rainfall but were not subject to flooding from freshets. The soil rich with the deposits of centuries from the forest that had covered it, was light enough to be easily handled with their primitive tools. As the population increased, therefore, they took up cultivation in that area (Munro 2007: 47).

The few mid-nineteenth century Land Commission Award (LCA) claims for lands within Kamoku Ahupuaʻa near the current project area may reflect the long-term effects of Kalaniʻōpuʻu's raid on Lānaʻi in 1778. It is said that Kalaniʻōpuʻu's raid was so thorough that virtually all of Lānaʻi's inhabitants were killed. His forces then raided their crops leaving nothing left to eat but the famine food of *kupala* (Kamakau 1992: 09-91). Mr. Munro goes on to explain that by killing all who farmed the western uplands, and raiding all the crops, the soils were left exposed. With no one to reestablish cultivation, these soils were blown away, thus leaving portions of the island denuded of its topsoil (Munro 2007: 47).

The four Kamoku LCA grants made at the time of the *Māhele* include LCA 3719 to Kalaihoa, LCA 6833 to Kaaiai, LCA 8556 to Kaaueacaina and LCA 10630 to the Noa Pali. These claims consisted of *moku manu* (grass lands or pastures), sweet potato plots and gourd fields. Pali was the *konohiki* of the area and his LCA extended into neighboring Kalulu and Kaunolu ahupuaʻa. Munro mentions the probable crops in these areas to have been taro, sweet potato and yams (Munro 2007: 47)

Mr. Maly also described the area as having been utilized by Hawaiians in traditional times for dry-land agriculture as well as forest resources. Today, stone artifacts such as *ulu maika*, sling stones and various lithic tools, have been found over the years despite intense cultivation of the pineapple fields.

Historic research and community consultation found that historic gardening practices also occurred adjacent to the proposed health center's location, at the present-day high and elementary school location. Not only did individual families typically have their own gardens, but a truck garden called Minami Gardens was located at the school site before the school was moved from its Kōʻele location. Mr. Jusaku Minami ran the family garden which may have extended from Fraser Avenue to where the county park is today. Mr. Minami worked at the garden after hours as he maintained a day job with the pineapple company where he worked as a *luna* for a *wahine* gang. His mother, Nami, as well as one other individual worked in the garden full-time. They grew Japanese potatoes or *araimo*, carrots lettuce, cabbage, bananas and *won bok* (Dagan *et al* 2009c).

Minami Gardens supplied Lānaʻi City with supplemental produce. Family members including daughter, Mrs. Susan Miyamoto and son Mr. Shigeto Minami, would accompany their father in an old car through the camp to sell their produce. Mr. Shigeto Minami recalls ringing a bell to let people know they were there. He explains that most families had their own smaller gardens, but that they provided vegetables to the camp stores and to the single men who had traveled from abroad to work in the pineapple plantation. It is believed that the garden operated at the current school location from about 1924, when the Minamis moved to Lānaʻi, until about 1937. Mr. Shigeto Minami explained that when plans were made to move the school from Kōʻele to the

garden location, their garden was moved about a mile away, by the Protestant church (Dagan *et al* 2009c).

The Minami family lived behind the current Senior Center, in one of the original plantation homes. When asked, Minami family members and *kāpuna* describe the landscape surrounding Lāna'i City as being uncultivated. They explained that the pineapple fields began considerably further *makai* in the 1920's, and that the school location and the ball park located west of it was Minami Gardens (Dagan *et al* 2009c).

#### 7.6 Hunting Practices and Deer Habitat

Previous research documented in the study *Cultural Impact Assessment for the Lāna'i High and Elementary School Expansion Project, Kamoku Ahupua'a, Lahaina District, Lāna'i Island* [TMK: (2) 4-9-002: 058 (por.) and TMK (2) 4-9-014: 002] (Dagan *et al* 2009b) found that the Health Center is approximately two miles southeast and east of the State of Hawaii Hunting Units 1 and 3 (public hunting areas). The game mammals and game birds that populate these areas include axis deer, mouflon sheep, *kolohala* or the Chinese ring-necked pheasant, wild turkeys, gray francolin, gambles quail, erckel francolin and doves.

Lāna'i residents, as well as other residents of the state, hunt as a subsistence practice. And this practice has become a strong tradition in some communities. While many Lānaians might agree that hunting is a strong tradition on Lāna'i and individuals such as Mrs. Sandra Ropa explained that food supplied from hunting deer was a significant part of their diet. Mrs. Alberta de Jetley notes, however, that sport hunting is not a traditional Hawaiian practice, but rather an introduced recreational sport (Dagan *et al* 2009c).

*Kamā'āina* contacted during consultation for the school expansion explained that the state leases these lands from Castle & Cooke and that sport hunting activities has continued since the 1950's. It is believed that these public hunting areas are the most popular game mammal hunting areas in the state contributing significantly to the Lāna'i lifestyle and economy.

Contacts consulted said that a small population of axis deer have made their home in the fallow pineapple fields west of the city (Dagan *et al* 2009b). Axis deer populations will not be affected by the construction of the new Health Center facilities.

#### 7.7 Honoring the Kāpuna

The proposed Lāna'i Community Health Center is directly adjacent to the Lāna'i Senior Center. The Senior Center is a place where many of the *kāpuna* on Lāna'i congregate daily. They come here to socialize, talk story with friends, have lunch, watch T.V. and relax. For those who cannot travel on their own, a Maui Economic Opportunity (MEO) bus shuttles them from their homes to the Senior Center and back each day. For seniors who cannot make the trip, Mrs. Masticampo and Mrs. Alboro deliver hot lunches to them at their homes each day.

The Lāna'i Senior Center acts as a multi-purpose center and individuals consulted refer to the Senior Center as the community Town Hall. Here a variety of classes may take place, from hula and ukulele lessons to hunter education classes. Often times these classes are free of charge. The Senior Center is the most popular location to book for celebrations such as birthdays, reunions,

graduation parties and wedding receptions. Nearly all business and community meetings take place at the Senior Center.

It was found in the cultural impact assessment for the Lāna'i Senior Center (Dagan *et al* 2009c) that the Senior Center plays a vital role in the community on Lāna'i. Mrs. de Jetley said that the community enjoys the warm and homey atmosphere of the Senior Center. Mr. Onuma explained that the Senior Center is heavily utilized by the community as a place where the seniors have lunch, socialize and attend classes and referred to the Senior Center as their "town hall", a place where families throw parties, and groups hold community meetings. Mr. Hera also mentioned that he utilized the Senior Center when teaching hunters education classes. He said the Senior Center serves the community in many ways that reach beyond the actual Senior Center services. Mr. Oyama stated that the Senior Center is constantly being used by different organizations and that there is a real need for a new and bigger center. Mrs. Ropa feels that the proposed new Senior Center is currently the most important project in Lāna'i City. It was further explained by Mr. Maly and Mr. Hokama that the population on Lāna'i is ageing and that the seniors depend on the services the Senior Center provide and are in need of additional services (Dagan *et al* 2009c).

The Senior Center which provides services to seniors, and acts as a town hall to the community, also houses the most cherished cultural resource, the *kāpuna* themselves. Traditionally, elders of most cultures are honored and cared for. Being the individuals who have given life to all others and for their knowledge and their experience, *kāpuna* at the Lāna'i Senior Center are highly respected and well cared for. The reverence and care given the *kāpuna* form a distinct cultural focal point in this community. As stated by Mr. Hutaff of the Maui County Cultural Resource Commissioner, the *kāpuna* are the cultural resource. He explains that the community must see to it that they are properly cared for and that their needs are met (Dagan *et al* 2009c).

One of the biggest needs of the *kāpuna* is healthcare. This makes the Lāna'i Community Health Center an important asset to the community of Lāna'i. Many of the *kāpuna* contacted for this cultural impact assessment stated that they themselves used the health center on a regular basis. However, a large number of the *kāpuna* also said that it was very difficult for them to reach the current health center facilities because of the location. The current location of the health center is *mauka* of town and can only be accessed by going uphill. This makes access difficult for elderly patients and patients without a car. The proposed location for the new health center facilities would be easily accessible and near other commercial establishments in Lāna'i City, adjacent to the Senior Center and the Lāna'i Art Center. This proposed location is intended to make access easier for all patients. In addition, the proposed Lanai Community Health Center would serve more patients on a daily basis by providing the necessary space for additional healthcare providers.

## Section 8 Summary and Recommendations

The story of Kauliū'āu is the story of how Lāna'i was freed from spirits and made habitable for humans. Lāna'i remains as unique as the stories of its beginnings. Historically Lāna'i was an island with resources that would support only a small population. The most extensive *lo'i* systems were located in Maunalei Gulch, the only perennial stream on the island on the northeast, while the uplands of the study area were utilized for their forest resources and seasonal cultivation of dryland crops. As described in the historic literature, Lāna'i has a connection to Maui and Lanaians have traditionally been the subject of the Maui chiefs. But a devastating raid by Hawaii's island chief, Kalani'ōpu'u, would be the catalyst for critical environmental and social changes on Lāna'i. The war of Kamokuhi was said to have left its scar on this island in the form of denuded soils and barren lands. From the time of the Kamokuhi raid in 1778 until the arrival of the first missionaries, it is said that the *ahupua'a* of Kamoku was left largely uncultivated (Munro 2007: 47). With the *Māhele aina* and the division and privatization of lands on Lāna'i, vast acreages were transferred from Kamehameha III and the *kanaka maoli* to several different property owners which included; Walter Murray Gibson, Charles Gay, W. M. Giffard, James Dole and today, David Murdoch of Castle & Cooke Resorts. These different owners saw the island through very different phases of its history; from the Mormon colonist settlement at Palawai, the ranching era of Lanai Ranch, the pineapple plantation of the Hawaiian Pineapple Company, and today the Five-Star resort vacation destination of Castle & Cooke Resorts LLC.

Today the community remains small, but the events of Lāna'i's history have shaped a unique and culturally diverse population here. It is a tightly knit community, where everyone literally knows everyone. Like the proposed new Senior Center, the High School expansion and the affordable housing projects, the Lāna'i Community Health Center is viewed by the majority of individuals contacted as a necessary improvement to their health care facilities. The proposed location, adjacent to the Senior Center, across the street from the school and at the town center, is viewed as the most appropriate location, for ease of access for their seniors and families. It could be said that the proposed new Lāna'i Community Health Center supports one of the cultural resources of the study area, the *kāpuna*.

### 8.1 Recommendation

Individuals consulted for this study largely support the construction of a new Lāna'i Community Health Center. It is recommended that the Lāna'i community remain informed about status and timelines regarding construction of the proposed health center.

There will be no adverse impacts to cultural resources or traditional cultural practices by the proposed project, to the contrary, the project is viewed as an enhancement to this community.

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# Appendix A Guidelines for Assessing Cultural Impacts from the State of Hawaii Office of Environmental Quality Control

## Guidelines for Assessing Cultural Impacts

Adopted by the Environmental Council, State of Hawaii November 19, 1997

### 1. INTRODUCTION

It is the policy of the State of Hawaii under Chapter 343, HRS, to alert decision makers, through the environmental assessment process, about significant environmental effects which may result from the implementation of certain actions. An environmental assessment of cultural impacts gathers information about cultural practices and cultural features that may be affected by actions subject to Chapter 343, and promotes responsible decision making.

Articles IX and XII of the State Constitution, other state laws, and the courts of the state require government agencies to promote and preserve cultural beliefs, practices, and resources of native Hawaiians and other ethnic groups. Chapter 343 also requires environmental assessment of cultural resources, in determining the significance of a proposed project.

The Environmental Council encourages preparers of environmental assessments and environmental impact statements to analyze the impact of a proposed action on cultural practices and features associated with the project area. The Council provides the following methodology and content protocol as guidance for any assessment of a project that may significantly affect cultural resources.

### Background

Prior to the arrival of westerners and the ideas of private land ownership, Hawaiians freely accessed and gathered resources of the land and seas to fulfill their community responsibilities. During the Mahele of 1848, large tracts of land were divided and control was given to private individuals. When King Kamehameha the III was forced to set up this new system of land ownership, he reserved the right of access to privately owned lands for Native Hawaiian ahupua'a tenants. However, with the later emergence of the western concept of land ownership, many Hawaiians were denied access to previously available traditional resources.

In 1978, the Hawaii constitution was amended to protect and preserve traditional and customary rights of Native Hawaiians. Then in 1995 the Hawaii Supreme Court confirmed that Native Hawaiians have rights to access undeveloped and under-developed private lands. Recently, state lawmakers clarified that government agencies and private developers must assess the impacts of their development on the traditional practices of Native Hawaiians as well as the cultural resources of all people of Hawaii. These Hawaii laws, and the National Historic Preservation Act, clearly mandate federal agencies in Hawaii, including the military, to evaluate the impacts of their actions on traditional practices and cultural resources.

If you own or control undeveloped or under-developed lands in Hawaii, here are some hints as to whether traditional practices are occurring or may have occurred on your lands. If there is a trail on your property, that may be an indication of traditional practices or customary usage. Other clues include streams, caves and native plants. Another important point to remember is that, although traditional practices may have been interrupted for many years, these customary practices cannot be denied in the future.

These traditional practices of Native Hawaiians were primarily for subsistence, medicinal, religious, and cultural purposes. Examples of traditional subsistence practices include fishing, picking opihī and collecting limu or seaweed. The collection of herbs to cure the sick is an example of a traditional medicinal practice. The underlying purpose for conducting these traditional practices is to fulfill one's community responsibilities, such as feeding people or healing the sick.

As it is the responsibility of Native Hawaiians to conduct these traditional practices, government agencies and private developers also have a responsibility to follow the law and assess the impacts of their actions on traditional and cultural resources.

The State Environmental Council has prepared guidelines for assessing cultural resources and has compiled a directory of cultural consultants who can conduct such studies. The State Historic Preservation Division has drafted guidelines on how to conduct ethnographic inventory surveys. And the Office of Planning has recently completed a case study on traditional gathering rights on Kaaui.

The most important element of preparing Cultural Impact Assessments is consulting with community groups, especially with expert and responsible cultural practitioners within the ahupua'a of the project site. Conducting the appropriate documentary research should then follow the interviews with the experts. Documentary research should include analysis of mahele and land records and review of transcripts of previous ethnographic interviews. Once all the information has been collected, and verified by the community experts, the assessment can then be used to protect and preserve these valuable traditional practices.

Native Hawaiians performed these traditional and customary practices out of a sense of responsibility: to feed their families, cure the sick, nurture the land, and honor their ancestors. As stewards of this sacred land, we too have a responsibility to preserve, protect and restore these cultural resources for future generations.

TEXT OF ACT 50, SLH 2000  
A BILL FOR AN ACT RELATING TO ENVIRONMENTAL IMPACT STATEMENTS  
UNOFFICIAL VERSION  
HOUSE OF REPRESENTATIVES H.B. NO. 2895 H.D.1  
TWENTIETH LEGISLATURE, 2000  
STATE OF HAWAII  
A BILL FOR AN ACT  
RELATING TO ENVIRONMENTAL IMPACT STATEMENTS.  
BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF HAWAII:

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

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

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

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

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

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

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

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

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

SECTION 4. This Act shall take effect upon its approval.

Approved by the Governor as Act 50 on April 26, 2000

2. CULTURAL IMPACT ASSESSMENT METHODOLOGY

Cultural impacts differ from other types of impacts assessed in environmental assessments or environmental impact statements. A cultural impact assessment includes information relating to the practices and beliefs of a particular cultural or ethnic group or groups.

Such information may be obtained through scoping, community meetings, ethnographic interviews and oral histories. Information provided by knowledgeable informants, including traditional cultural practitioners, can be applied to the analysis of cultural impacts in conjunction with information concerning cultural practices and features obtained through consultation and from documentary research.

In scoping the cultural portion of an environmental assessment, the geographical extent of the inquiry should, in most instances, be greater than the area over which the proposed action will take place. This is to ensure that cultural practices which may not occur within the boundaries of the project area, but which may nonetheless be affected, are included in the assessment. Thus, for example, a proposed action that may not physically alter gathering practices, but may affect access to gathering areas would be included in the assessment. An ahupua'a is usually the appropriate geographical unit to begin an assessment of cultural impacts of a proposed action, particularly if it includes all of the types of cultural practices associated with the project area. In some cases, cultural practices are likely to extend beyond the ahupua'a and the geographical extent of the study area should take into account those cultural practices.

The historical period studied in a cultural impact assessment should commence with the initial presence in the area of the particular group whose cultural practices and features are being assessed. The types of cultural practices and beliefs subject to assessment may include subsistence, commercial, residential, agricultural, access-related, recreational, and religious and spiritual customs.

The types of cultural resources subject to assessment may include traditional cultural properties or other types of historic sites, both man made and natural, including submerged cultural resources, which support such cultural practices and beliefs.

The Environmental Council recommends that preparers of assessments analyzing cultural impacts adopt the following protocol:

1. identify and consult with individuals and organizations with expertise concerning the types of cultural resources, practices and beliefs found within the broad geographical area, e.g., district or ahupua'a;
  2. identify and consult with individuals and organizations with knowledge of the area potentially affected by the proposed action;
  3. receive information from or conduct ethnographic interviews and oral histories with persons having knowledge of the potentially affected area;
  4. conduct ethnographic, historical, anthropological, sociological, and other culturally related documentary research;
  5. identify and describe the cultural resources, practices and beliefs located within the potentially affected area; and
  6. assess the impact of the proposed action, alternatives to the proposed action, and mitigation measures, on the cultural resources, practices and beliefs identified.
- Interviews and oral histories with knowledgeable individuals may be recorded, if consent is given, and field visits by preparers accompanied by informants are encouraged. Persons

interviewed should be afforded an opportunity to review the record of the interview, and consent to publish the record should be obtained whenever possible. For example, the precise location of human burials are likely to be withheld from a cultural impact assessment, but it is important that the document identify the impact a project would have on the burials. At times an informant may provide information only on the condition that it remain in confidence. The wishes of the informant should be respected.

Primary source materials reviewed and analyzed may include, as appropriate: Mahele, land court, census and tax records, including testimonies; vital statistics records; family histories and genealogies; previously published or recorded ethnographic interviews and oral histories; community studies, old maps and photographs; and other archival documents, including correspondence, newspaper or almanac articles, and visitor journals. Secondary source materials such as historical, sociological, and anthropological texts, manuscripts, and similar materials, published and unpublished, should also be consulted. Other materials which should be examined include prior land use proposals, decisions, and rulings which pertain to the study area.

### 3. CULTURAL IMPACT ASSESSMENT CONTENTS

In addition to the content requirements for environmental assessments and environmental impact statements, which are set out in HAR §§ 11-200-10 and 16 through 18, the portion of the assessment concerning cultural impacts should address, but not necessarily be limited to, the following matters:

1. A discussion of the methods applied and results of consultation with individuals and organizations identified by the preparer as being familiar with cultural practices and features associated with the project area, including any constraints or limitations which might have affected the quality of the information obtained.
2. A description of methods adopted by the preparer to identify, locate, and select the persons interviewed, including a discussion of the level of effort undertaken.
3. Ethnographic and oral history interview procedures, including the circumstances under which the interviews were conducted, and any constraints or limitations which might have affected the quality of the information obtained.
4. Biographical information concerning the individuals and organizations consulted, their particular expertise, and their historical and genealogical relationship to the project area, as well as information concerning the persons submitting information or interviewed, their particular knowledge and cultural expertise, if any, and their historical and genealogical relationship to the project area.
5. A discussion concerning historical and cultural source materials consulted, the institutions and repositories searched, and the level of effort undertaken. This discussion should include, if appropriate, the particular perspective of the authors, any opposing views, and any other relevant constraints, limitations or biases.
6. A discussion concerning the cultural resources, practices and beliefs identified, and, for resources and practices, their location within the broad geographical area in which the proposed action is located, as well as their direct or indirect significance or connection to the project site.

7. A discussion concerning the nature of the cultural practices and beliefs, and the significance of the cultural resources within the project area, affected directly or indirectly by the proposed project.

8. An explanation of confidential information that has been withheld from public disclosure in the assessment.

9. A discussion concerning any conflicting information in regard to identified cultural resources, practices and beliefs.

10. An analysis of the potential effect of any proposed physical alteration on cultural resources, practices or beliefs; the potential of the proposed action to isolate cultural resources, practices or beliefs from their settings; and the potential of the proposed action to introduce elements which may alter the setting in which cultural practices take place.

11. A bibliography of references, and attached records of interviews which were allowed to be disclosed.

The inclusion of this information will help make environmental assessments and environmental impact statements complete and meet the requirements of Chapter 343, HRS. If you have any questions, please call 586-4185.

## Appendix B Formal Letter Responses

7953-01  
3/7/10  
LAUREN BRIDGES  
KAPOLIHI HAWAII  
DISTRICT

STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
STATE HISTORIC PRESERVATION DIVISION  
601 N. N. BERESIANA STREET, SUITE 400  
KAPOLIHI, HAWAII 96726

STATE OF HAWAII  
OFFICE OF HAWAIIAN AFFAIRS  
711 KAPIOLANI BOULEVARD, SUITE 500  
HONOLULU, HAWAII 96813

PHONE (808) 394-1888  
FAX (808) 584-1888

March 22, 2010  
Wilson Okamoto Corporation  
1907 South Beresiana Street #400  
Honolulu, Hawaii 96826

LOG NO. 2010.0627  
DOC NO. 1002PC008  
MAR 01 2010  
WILSON OKAMOTO CORPORATION

cc: AHL  
CSH  
JRM

Dear John L. Sabaguchi:

**SUBJECT:** Draft Environmental Assessment, Pre-Assessment Notice, Lana'i Community Health Center, CBDG Project, No. 08-04, Lana'i City, Lana'i, Hawai'i.  
TMK: 4-9-006-011

Makalo for the opportunity to comment on the above project for the Lana'i Community Health Center for Lana'i City. This project will be a welcome addition and improvement on the current health center and services for the community. Your letter for comment has also been distributed to the Māui-Lana'i Islands Rural Council for their review and comments.

The project area has been previously disturbed and the SHPD History and Culture Branch do not anticipate any burials or other related sites in the area. Our archeological branch will be studying in their separate review comments. This letter acknowledges there is probably no impact to traditional Hawaiian cultural practices for at least since the town was built in the 1920's.

Be mindful that the Lana'i Town Square and its boundaries are currently under consideration and review for nomination to the National Historic Register and this project may or may not be within those boundaries and would be impacted by those rules for design and so on.

Please call me directly at 808.692.8025 or email at [Phyllis.L.Cayan@hawaii.gov](mailto:Phyllis.L.Cayan@hawaii.gov) should you have any questions.

Sincerely,  
*Phyllis Cayan*  
Phyllis Cocyte Cayan  
History and Culture Branch Chief

cc: Ninoy McMahon, Deputy SHPO/State Archaeologist  
Ross Stepienish, Architecture Historian

7953-01  
3/5/10  
LAUREN BRIDGES  
KAPOLIHI HAWAII  
DISTRICT

STATE OF HAWAII  
OFFICE OF HAWAIIAN AFFAIRS  
711 KAPIOLANI BOULEVARD, SUITE 500  
HONOLULU, HAWAII 96813

PHONE (808) 394-1888  
FAX (808) 584-1888

March 02, 2010  
Wilson Okamoto Corporation  
Attn: John L. Sabaguchi, AICP, Senior Planner  
1907 South Beresiana Street, Suite 400  
Honolulu, HI 96826

HRDIC-4825

cc: AHL  
CSH  
JRM

Re: Draft Environmental Assessment, Pre-Assessment Notice, Lana'i Community Health Center, CBDG Project No. 08-04, Lana'i City, Lana'i, Hawai'i, TMK: 4-9-006-011; Request for Comment

Aloha e Mr. Sabaguchi:

Thank you for the opportunity to comment on the above-referenced project.

The Office of Hawaiian Affairs (OHA) is in receipt of the above-referenced Draft Environmental Assessment (DEA), Pre-Assessment Notice, Applicant Lana'i Community Health Center (LCHC) is considering construction of a new health care facility in Lana'i City which will provide accessible primary medical care, dental care, behavioral health services, prenatal, family planning, nutrition and preventive health education services open to the low- and moderate-income, uninsured, and underserved residents of Lana'i, State of Hawai'i, funds, and land leased from Center Castle & Cooke Resorts LLC, will be used for operations of the LCHC. OHA offers the following comments.

We look forward to reviewing the DEA's analysis and mitigation measures relating to the project's impact primarily on historic and cultural properties and/or resources. We note that in January 2009, the County of Maui Planning Department and the State of Hawai'i Department of Land and Natural Resources (DLNR), State Historic Preservation Division (SHPD) issued a Draft National Register of Historic Places Registration Form for Lana'i City Business Country Town historic district, a 17-block area located in the center of Lana'i City. We understand that the Draft Registration Form is still under review.

OHA further understands that the LCHC project is located on the southwestern edge of the historic district. The Draft Registration Form identifies three (3) existing buildings on the

Wilson Oshunjo Corporation  
 Attn: John L. Sategelehi, AICP, Senior Planner  
 March 02, 2010  
 Page 2 of 2

project site as non-contributing buildings, which were constructed in 1965 as among a total of 19 dormitories built by Plantation Housing Ltd. We anticipate more detailed elaboration on this matter in the completed DEA, as well as discussion on the historical context pertaining to this historic district and Lana'i Island.

Lastly, in the event that historic properties, including iwi kopuna (human burials), are encountered during construction work for the LCHC project, OHA requests to be informed and asks for applicant's compliance pursuant to Chapter 6E, HRS, and Section 13-300, H.A.R. as follows:

1. Stop all construction/disturbing activity in the immediate area.
2. Leave all remains in place.
3. Immediately notify the SHPD and the county police department.

Thank you again for the opportunity to comment on this project. Should you have any questions, please contact Jerome Yasuhara, Compliance Specialist III, at (808) 594-0239 or by email at [jerry@oha.gov](mailto:jerry@oha.gov).

'O wai iho nō, me ka ha'aha'a.

*Clayton D. Boyd*  
 Clayton W. Nāmu'o  
 Chief Executive Officer

c: Trustee Boyd P. Monsman  
 OHA Maui/Lana'i Island--CRC

PHONE: (808) 594-1983 FAX: (808) 594-1885  
 STATE OF HAWAII  
 OFFICE OF HAWAIIAN AFFAIRS  
 111 KAPICOLANI BOULEVARD, SUITE 500  
 HONOLULU, HAWAII 96813  
 HIRD:104823

March 16, 2010

Anna Cordova, Archaeologist  
 Colleen Medeiros Dagan, Archaeologist  
 Cultural Surveys Hawai'i  
 1993 Main Street  
 Wailuku, Hawai'i 96793

RE: Cultural Impact Assessment consultation  
 Lana'i Community Health Center Project  
 Kamoku Ahupua'a, Lahaina District, Lana'i Island  
 Tax Map Key: (2) 4-9-006-011

Aloha e Anna Cordova and Colleen Medeiros Dagan,

The Office of Hawaiian Affairs (OHA) is in receipt of your March 10, 2010 letter initiating consultation and seeking comments ahead of a cultural impact assessment (assessment) for the proposed construction of a new Community Health Center on the island of Lana'i. Based on the information contained within your letter, the study area for the assessment will be the ahupua'a of Kamoku. The assessment will also focus on the cultural significance of the Lana'i Community Health Center itself due to the services and activities that will be held there and the individuals who will benefit from the services it will provide.

OHA recommends that consultation be initiated with the following individuals and community organizations who may be willing to share their mana'o regarding this assessment: Ms. Pearl Ah Fio-OHA's Community Resource Coordinator, Mr. Kapa Maly, Executive Director of the Lana'i Cultural and Heritage Center, Mr. Soti Kaho'ohalahala, Ms. Nani Wamatabe and Ms. Maika Evans. Please remember that this list is not all encompassing and we are sure additional individuals will be identified as you move forward with your consultation process.

We applaud your efforts to perform a Field Inspection and Literature Review to address the project's historic preservation review process. We hope the National Register of Historic Places considers Lana'i City Business County Town a Historic District. Such recognition would put Lana'i City on a list of the Nation's significant historic places worthy of preservation. We also seek assurances that a comprehensive review of archaeological studies related to the assessment area will be conducted to determine whether an archaeological assessment or inventory survey is warranted.



Anna Cordova, Archaeologist  
Colleen Medeiros Degan, Archaeologist  
Cultural Surveys Hawaii  
March 16, 2010  
Page 2 of 2

Thank you for initiating consultation at this early stage and we look forward to the opportunity to review the draft assessment and provide additional comments. Should you have any questions, please contact Kathryn Keala, at (808) 594-1846 or [kalyk@hawaii.gov](mailto:kalyk@hawaii.gov).

‘O wai iho nō me ka ‘ōhi ‘i‘o.

*Clyde W. Namu'o*

Clyde W. Namu'o  
Chief Executive Officer

C: OHA Lanai CRC office



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
STATE HISTORIC PRESERVATION DIVISION  
601 MIAMI AVENUE, ROOM 355  
HONOLULU, HAWAII 96807

LATHEA TRITZLA  
DIRECTOR  
HONOLULU, HAWAII  
PH: 808-548-2121  
FAX: 808-548-2122  
WWW.DLN.RH.HAWAII.GOV

March 17, 2010

LOG NO: 2010.0621  
DOC NO: 1009-C002

**MEMORANDUM**

TO: Colleen Medeiros Degan, Archaeologist  
Cultural Surveys Hawaii, 1983 Main Street, Waiuku, Hawaii 96793  
*Phyllis Coocchie Cayen*

FROM: Phyllis Coocchie Cayen, History and Culture Branch Chief

SUBJECT: KAMOKU 10: Cultural Impact Assessment (CIA) Community Contact Letter for the Lanai Community Health Center Project, Kamoku Ahupua'a, Lahaina District, Lanai Island.  
[TKK: (2) 4-9-006:011]

Mahele for the opportunity to comment on this CIA regarding the proposed Lanai Community Health Center Project located at the above parcel which is just north of the Lanai Senior Center between Houston Street and Gay Street, and 6th and 7th Street.

The department notes that the current buildings built in 1985 are designated as non-contributing buildings (and will be demolished) and will not be an impact on the current nomination to the National Register of Historic Places for the Lanai City Business County Town Historic District (Lanai City BC7). The department also notes that any cultural practices in this area would be minimal and limited to current use and should be verified by the Lanai folks referenced below.

Further talk story with na kupuna and/or folks familiar with the historical use of that particular parcel may be helpful in your CIA research. Please contact these folks for more local history of possible cultural impacts:

- 1. Mr. Kea Maly, Executive Director, Lanai Culture and History Center (LCHC) Phone: 808-565-7177
- 2. Mr. Albert Morita, Retired DOCARE officer, LCHC board of director member. [amoral@lanai.net](mailto:amoral@lanai.net)
- 3. Auntie Irene Cocksett Peary, Kupuna (arrange with Kea to see her)
- 4. Uncle Soti Keopuiki, Kupuna (arrange with Kea to see him)
- 5. Na Kupuna at the Lanai Seniors Center, daily until noon. See Maggie Masicampo at the center.
- 6. Alberta Morita DeJolley, Commercial Farmer/Editor of Lanai Times. Phone: 808-649-0838

Any questions, please call me at 808-692-8025 or via email at [Phyllis.L.Cayen@hawaii.gov](mailto:Phyllis.L.Cayen@hawaii.gov)

C: Mr. Hinano Rodrigues, SHPD Maui Cultural Historian  
Mr. Ross Stephenson, SHPD Architecture Historian



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
STATE HISTORIC PRESERVATION DIVISION  
601 MIAMI AVENUE, ROOM 355  
HONOLULU, HAWAII 96807

LATHEA TRITZLA  
DIRECTOR  
HONOLULU, HAWAII  
PH: 808-548-2121  
FAX: 808-548-2122  
WWW.DLN.RH.HAWAII.GOV

March 17, 2010

LOG NO: 2010.0621  
DOC NO: 1009-C002

**MEMORANDUM**

TO: Colleen Medeiros Degan, Archaeologist  
Cultural Surveys Hawaii, 1983 Main Street, Waiuku, Hawaii 96793  
*Phyllis Coocchie Cayen*

FROM: Phyllis Coocchie Cayen, History and Culture Branch Chief

SUBJECT: KAMOKU 10: Cultural Impact Assessment (CIA) Community Contact Letter for the Lanai Community Health Center Project, Kamoku Ahupua'a, Lahaina District, Lanai Island.  
[TKK: (2) 4-9-006:011]

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- 2. Mr. Albert Morita, Retired DOCARE officer, LCHC board of director member. [amoral@lanai.net](mailto:amoral@lanai.net)
- 3. Auntie Irene Cocksett Peary, Kupuna (arrange with Kea to see her)
- 4. Uncle Soti Keopuiki, Kupuna (arrange with Kea to see him)
- 5. Na Kupuna at the Lanai Seniors Center, daily until noon. See Maggie Masicampo at the center.
- 6. Alberta Morita DeJolley, Commercial Farmer/Editor of Lanai Times. Phone: 808-649-0838

Any questions, please call me at 808-692-8025 or via email at [Phyllis.L.Cayen@hawaii.gov](mailto:Phyllis.L.Cayen@hawaii.gov)

C: Mr. Hinano Rodrigues, SHPD Maui Cultural Historian  
Mr. Ross Stephenson, SHPD Architecture Historian



**STATE OF HAWAII**  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
STATE HISTORIC PRESERVATION DIVISION  
601 KAHOKULA BOULEVARD, ROOM 555  
KAPOLEI, HAWAII 96767



SATULU KELENA  
KOMMISSIONER OF LAND AND NATURAL RESOURCES  
RETHALLA ITOH  
1875 KEEWAU  
P.O. BOX 2088  
HONOLULU, HAWAII 96808

April 19, 2010

LOG NO: 2010.0108  
DOC NO: 1004.HRO3

Ms. Colleen Medeiros Dagan  
Ms. Anne Cordova  
Cultural Surveys Hawaii  
1993 Main Street  
Wailuku, Hawaii 96793

Dear Colleen Dagan and Anna Cordevo:

**SUBJECT: Request for Information Regarding a Cultural Impact Assessment for the Lānaʻi Community Health Center Project, Kamoku Ahupuaʻa, Lahaina District, Island of Lānaʻi. TMK: (2) 4-5-006-011.**

This is in response to your request for any information that might assist your firm in gathering knowledge of traditional cultural activities and/or traditional cultural rights that may be impacted by the development of the above property.

The Maui SHPD office recommends contacting the following persons in addition to a letter sent previously by myself dated March 17, 2010 Log No. 2010.0621 Doc No. 1003PC002.

1. The Lānaʻi Archeological Committee through Martha Evans at Phone: 808.649.0629.
2. Aunty Pua Paoa, the Lānaʻi representative to the MLHRC at Phone: 808.565.7136 or P.O. Box 630761, Lānaʻi, HI 96763.
3. Albert Morita, Former DOCARE Officer at email: [amorita@aloha.net](mailto:amorita@aloha.net) or Phone: 808.565.6448.

Should you have any questions or concerns, please feel free to contact our Cultural Historian, Mr. Himano Rodrigues at 808.243.4640.

Sincerely,

*Phyllis Coehee Cayan*  
Ms. Phyllis "Coochie" Cayan  
History and Culture Branch Chief  
State Historic Preservation Division

cc: Mr. Himano Rodrigues, SHPD Cultural Historian

# Appendix C Community Contact Letters

# CULTURAL SURVEYS HAWAII

ARCHAEOLOGICAL, CULTURAL, AND HISTORICAL DOCUMENTATION SERVICES - SINCE 1982



CSH Job Code: Kamoku 10

March 22, 2010

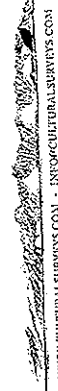
**Subject:** Cultural Impact Assessment Community Contact Letter for the Lānaʻi Community Health Center Project, Kamoku Ahupuaʻa, Lahaina District, Lānaʻi Island (TMK: (2) 4-9-006:011)

Dear Recipient:

My name is Anna Cordova and I work for Cultural Surveys Hawaii. Ms. Colleen Dagan, Ms. Tanya Lee-Greig and I will be conducting a Cultural Impact Assessment for the Lānaʻi Community Health Center Project. I am writing to introduce myself and also to familiarize you with the proposed project. Just as you have provided help for past projects in this area - the Lanai Senior Center, the high school and elementary expansions, and the affordable housing project - we are seeking your *kāhuna* and guidance for this project. We understand that, because they share the same *ohiapaʻa*, much of the traditional and historical knowledge may be the same as in past projects. For this reason, we ask for permission to use your previously given information for this project. Any additional information regarding the specific parcel on which the proposed project will be located will be very useful and appreciated.

Here are a few points containing general information about the project:

- Wilson Okamoto Corporation is the planner in this project that aims to build new facilities for the Lānaʻi Community Health Center.
- The new health center will be located just north of the Lanai Senior Center between Houston Street and Gay Street, and 6<sup>th</sup> Street and 7<sup>th</sup> Street (Figure 1).
- The project is being financed by the federally-funded Community Development Block Grant Program.
- Castle & Cooke Resorts LLC currently owns the property and will lease it to the health center.
- The project is located within an area that is being considered for nomination to the National Register of Historic Places as the Lanai City Business Country Town Historic District.
- There are three buildings located on the current project site. They were built in 1965 by Plantation Housing Ltd., and are listed as non-contributing buildings. They will be removed to make room for the new construction.



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Cultural Surveys Hawaii  
Wednesday, February 10, 2010

Page 2

- In order to serve low- and moderate-income residents of Lānaʻi, the health center would provide the following:
  - accessible primary medical care
  - dental care
  - behavioral health services
  - prenatal family planning
  - nutrition and preventive health education services

Specifically, we are seeking your *kāhuna* and guidance regarding the following aspects of our study:

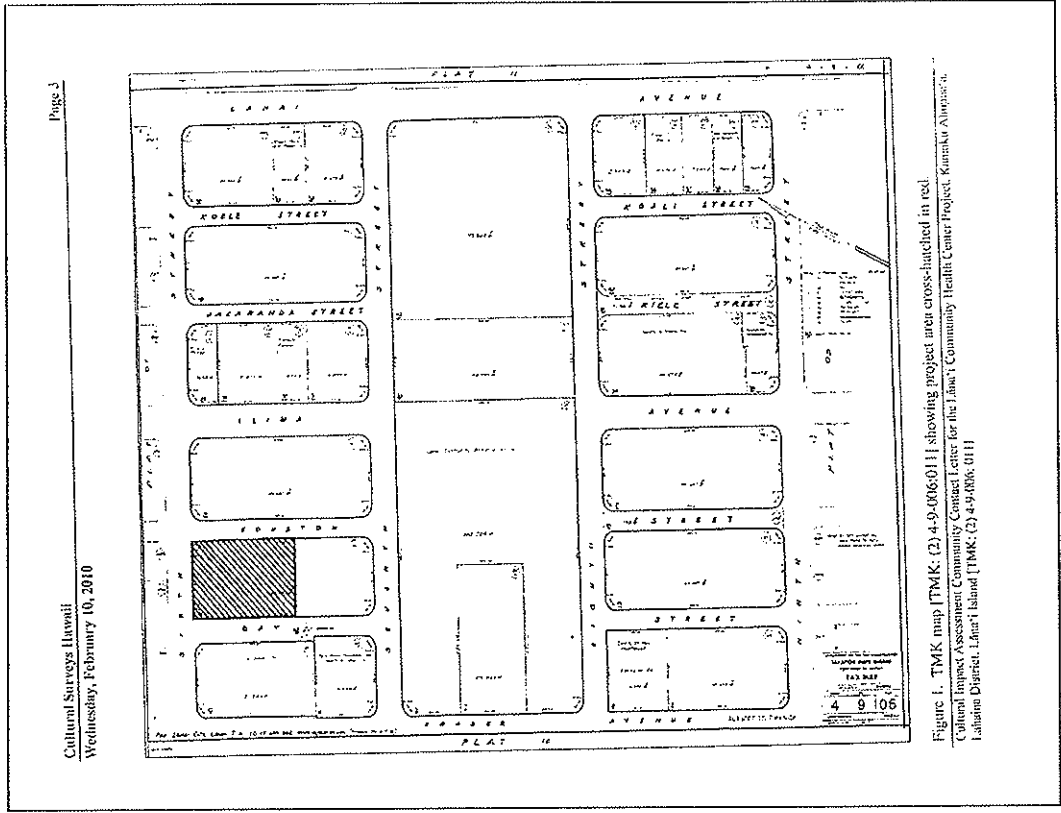
- Cultural associations of the project area, such as legends and traditional uses and/or historical land use of the study area.
- Knowledge about cultural resources and/or traditional cultural practices within and around the project area that may be impacted.

If there is anything you might like to share, please contact any one of us, Colleen Dagan B.S., Tanya Lee-Greig M.A. and/or me, Anna Cordova B.A.M. 1-808-242-9882. You may also contact us by e-mail at cdagan@culturalsurveys.com, legreig@culturalsurveys.com or acordova@culturalsurveys.com

Mahalo,

Anna Cordova, Archaeologist

Cultural Impact Assessment Community Contact Letter for the Lānaʻi Community Health Center Project, Kamoku Ahupuaʻa, Lahaina District, Lānaʻi Island (TMK: (2) 4-9-006:011)



# CULTURAL SURVEYS HAWAII

MECHANISMOLOGICAL, CULTURAL, AND HISTORICAL DOCUMENTATION SERVICES · SINCE 1982

CSI Job Code: Kamoku 10  
Wednesday, February 10, 2010

**Subject: Cultural Impact Assessment Community Contact Letter for the Lanai Community Health Center Project, Kamoku Ahupua'a, Lahaina District, Lanai Island [TMK: (2) 4-9-006(0)1].**

Dear Recipient:

On behalf of the County of Maui, Community Development Block Grant Program, the Lanai Community Health Center and Wilson Okamoto Corporation, Cultural Surveys Hawaii, Inc. is conducting a Cultural Impact Assessment (CIA) for the proposed Lanai Community Health Center (referred to as "the health center") project. The project is located in Lanai City, Kamoku Ahupua'a, Lahaina District, Lanai Island [TMK: (2) 4-9-006-011]. More specifically, the proposed health center will be just north of the Lanai Senior Center between Houston Street and Gay Street, and 6<sup>th</sup> Street and 7<sup>th</sup> Street.

The area is approximately 42,857 square feet, and is currently owned by Castle & Cooke Resorts LLC who will lease it to the health center. The parcel will be subdivided, and the health center will use approximately 25,067 square feet of the western portion for the new facility. Currently existing on the property are three buildings which were once used as dormitories by workers employed by the plantation. Two of these buildings are now abandoned, and a portion of the third building houses the existing administration offices for the Lanai Community Health Center and the activity room for the Lanai An Center. The health center has been given a grant from the County of Maui, through the federally-funded Community Development Block Grant Program. This grant was issued so that the health center could plan and design a new health center in order to serve low- and moderate-income residents of Lanai. The health center would provide the following:

- accessible primary medical care
- dental care
- behavioral health services
- prenatal and family planning
- nutrition and preventive health education services

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Cultural Surveys Hawaii  
 Wednesday, February 10, 2010

In addition to the CIA, Cultural Surveys Hawaii is also currently performing a field inspection and Literature Review in order to address the project's historic preservation review process. The project area is located in Lāna'i City within an area that is being considered for nomination to the National Register of Historic Places as the Lāna'i City Business Community Town historic district. In the registration form submitted to the National Register of Historic Places, the three buildings located on the current project site are listed as non-contributing buildings. Because they are non-contributing buildings, they will be removed to make room for the new construction.

The purpose of the CIA is to evaluate potential impacts to traditional cultural practices as a result of the proposed project.

We are seeking your *ākau* or help and guidance regarding the following aspects of our study:

- General history and present and past land use of the project area.
- Knowledge of cultural resources which may be impacted by the Lāna'i Community Health Center area - for example, traditional plant gathering sites, historic sites, archaeological sites and burials.
- Knowledge of traditional gathering practices in the area - both past and ongoing.
- Cultural associations of the project area, such as legends and traditional uses.
- Referrals of *āpūana* or elders who might be willing to share their cultural knowledge of the project area and the surrounding *āupāna* lands.
- Any other cultural concerns the community might have related to Hawaiian cultural practices within or in the vicinity of the proposed Lāna'i Community Health Center area.

We invite you to contact us, Anna Cordova and/or Colleen Medeiros Dagan, at 1-808-242-9882. You may also contact us by e-mail at [acordova@culturalsurveys.com](mailto:acordova@culturalsurveys.com) and [cdagan@culturalsurveys.com](mailto:cdagan@culturalsurveys.com) if you have any information you would like to share.

Māhalo,

Anna Cordova, Archaeologist  
 Colleen Medeiros Dagan, Archaeologist

Cultural Impact Assessment Community Contact Letter for the Lāna'i Community Health Center Project, Kamoku Ahupua'a, Lāna'i District, Lāna'i Island [TMK: (2) 4-9-006: 011]

Cultural Surveys Hawaii  
 Wednesday, February 10, 2010

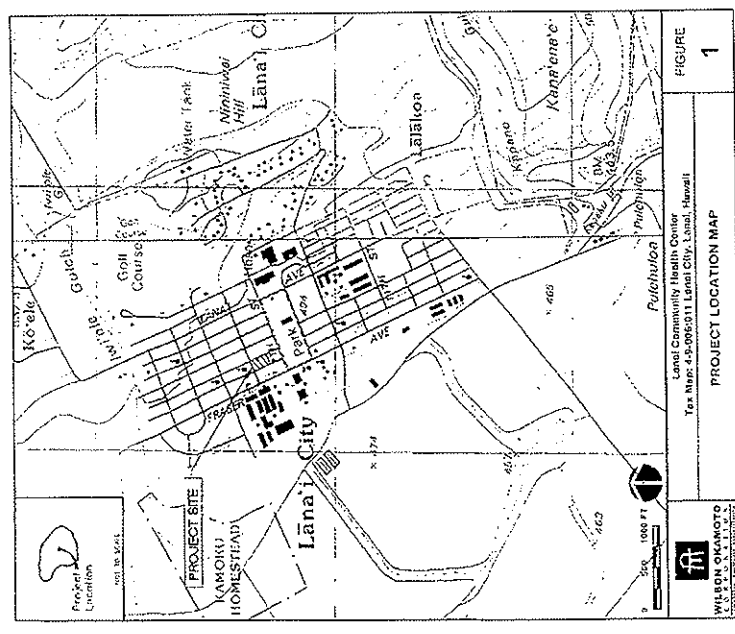
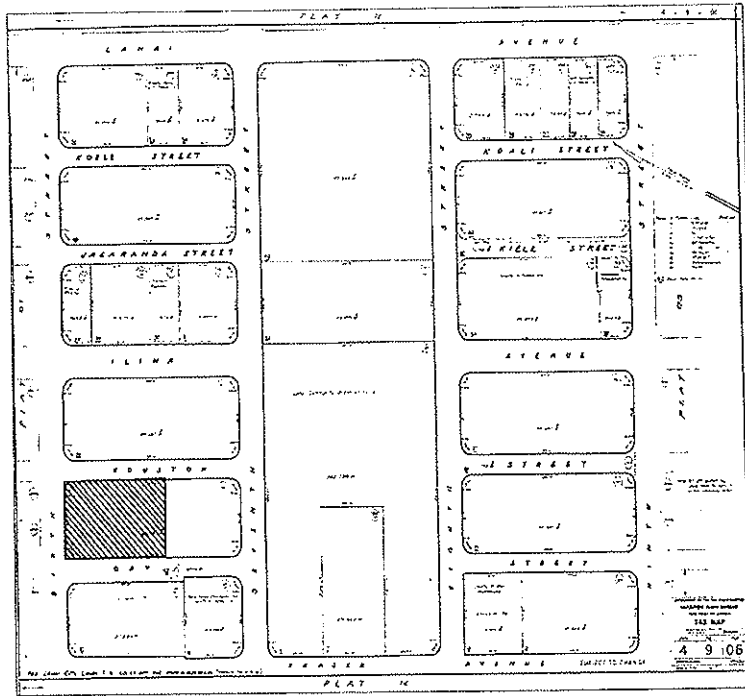


Figure 1. Project location map, courtesy of Wilson Okamoto, with project site indicated by the red cross-hatched area.

Cultural Impact Assessment Community Contact Letter for the Lāna'i Community Health Center Project, Kamoku Ahupua'a, Lāna'i District, Lāna'i Island [TMK: (2) 4-9-006: 011]

Page 4  
Cultural Surveys Hawaii  
Wednesday, February 10, 2010



Cultural Impact Assessment Community Contact Letter for the Lanai Community Health Center Project, Kamoku Ahupua'a, Lahaione District, Lanai Island [TMK: (2) 4-9-006: 011]

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## Appendix D

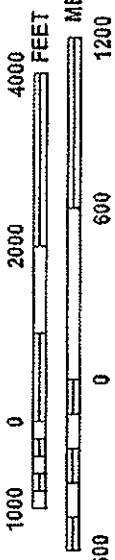
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### Appendix D Supporting Information

- D-1 FEMA, FIRM Map
- D-2 2008 Air Quality Data (State of Hawaii Annual Summary 2008 Air Quality Data)
- D-3 Sole Source Aquifer Designations in EPA, Region 9, June 2000
- D-4 Designated National Wild & Scenic Rivers List
- D-5 Airport Runway Clear Zone Map
- D-6 2004 Noise Exposure Map
- D-7 Hazardous Site Information



MAP SCALE 1" = 2000'



NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0500E

**FIRM**  
 FLOOD INSURANCE RATE MAP  
 MAUI COUNTY,  
 HAWAII

PANEL 500 OF 825  
 (SEE MAP INDEX FOR FIRM PANEL LAYOUT)

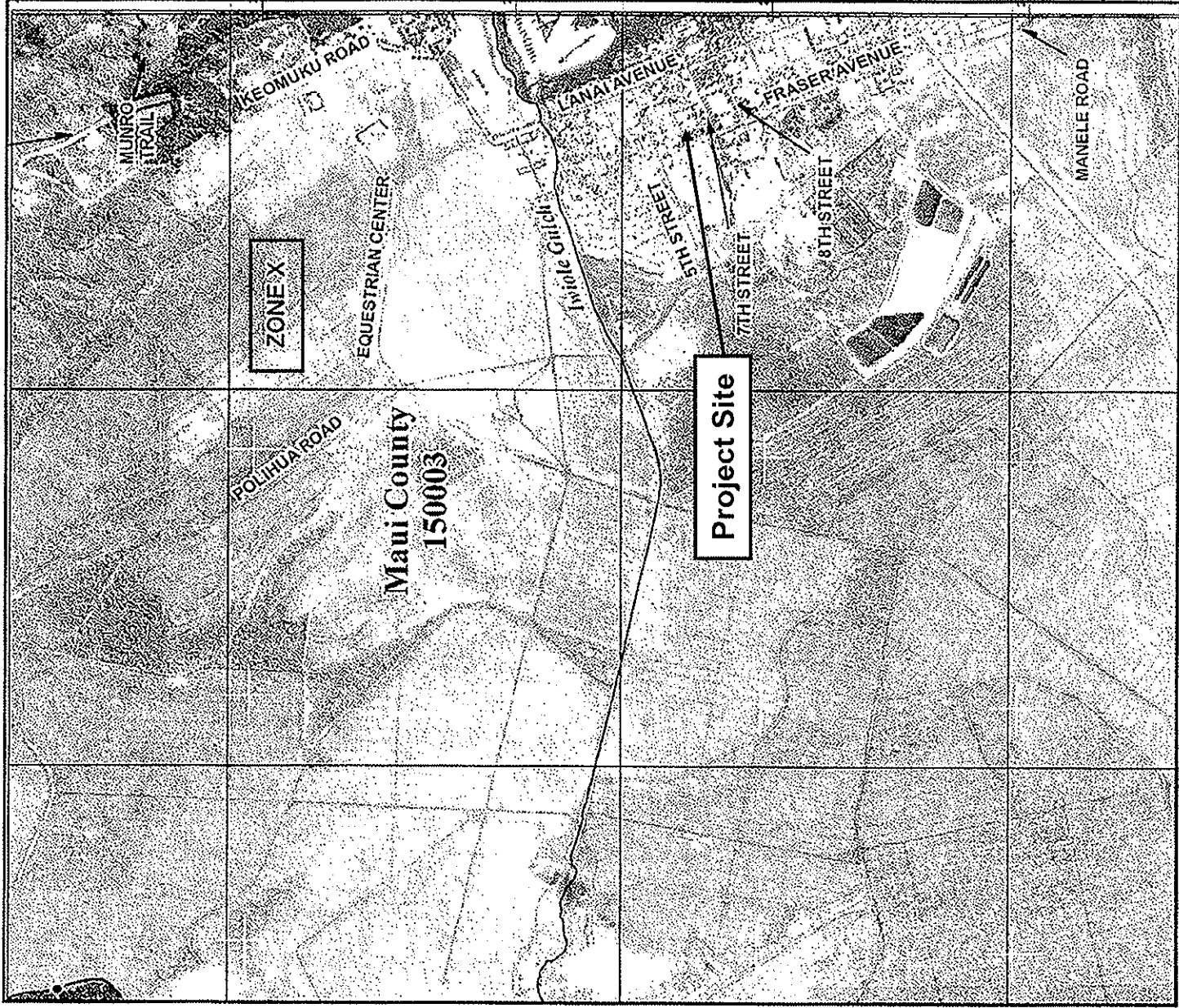
COMMUNITY NUMBER 150003  
 PANEL NUMBER 0500  
 MAP NUMBER 1500030500E

Notice to User: The Map Number shown below should be used when placing map orders. The Community Number shown above should be used on insurance applications for the subject community.

SEPTEMBER 25, 2009  
 Federal Emergency Management Agency



This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.nsc.fema.gov





## Section 4

# 2008 AIR QUALITY DATA

To protect the state's air quality from degradation, the Department of Health's Clean Air Branch is responsible for regulating and monitoring pollution sources to ensure that the levels of criteria pollutants remain well below the state and federal ambient air quality standards. Data collected from the ambient air network is validated by the Air Surveillance and Analysis Section to ensure that the reported data is of good quality and meets all quality control and assurance requirements.

In March 2008, a second vent opened at the Kilauea volcano causing the SO<sub>2</sub> emissions to double. Consequently, the Special Purpose monitoring stations in communities near the volcano recorded higher levels of SO<sub>2</sub> and PM<sub>2.5</sub>, with occasional exceedances of the NAAQS for those pollutants.

The EPA considers the volcano a natural, uncontrollable event and therefore the state is requesting exclusion of these NAAQS exceedances from attainment/non-attainment determination.

Excluding the exceedances due to the volcano, in 2008 the state of Hawaii was in attainment of all NAAQS.

### **Explanation of Summary Tables 4-1 through 4-14:**

- Summaries are by pollutant and averaging period, with the number of occurrences exceeding the NAAQS or, in Table 4-14, the number of exceedances of the state H<sub>2</sub>S standard (there is no federal H<sub>2</sub>S standard);
- The "Annual Statistics Maximum" is the highest and second highest valid values recorded in the year for the averaging period. For PM<sub>2.5</sub>, the maximum and 98<sup>th</sup> percentile concentrations are provided and for O<sub>3</sub>, the 4<sup>th</sup> highest daily maximum value is also displayed;
- The "Annual Statistics Annual Mean" is the arithmetic mean of all valid values recorded in the year;
- "Possible Periods" is the total number of possible sampling periods in the year for the averaging period;
- "Valid Periods" is the total number of acceptable sampling periods after data validation;
- "Percent Recovery" represents the amount of quality data reported;
- Attainment with the NAAQS is determined according to 40 CFR 50.

### **Explanation of Tables 4-15 through 4-23:**

- For each pollutant and averaging period, the lowest and highest concentrations for each month is presented;
- The month with the highest value recorded in the year for each site is highlighted.



## Sole Source Aquifer Designations in EPA, Region 9

The U.S. EPA's Sole Source Aquifer Program was established under Section 1424(e) of the U.S. Safe Drinking Water Act (SDWA.) Since 1977, it has been used by communities to help prevent contamination of groundwater from federally-funded projects. It has increased public awareness of the vulnerability of groundwater resources.

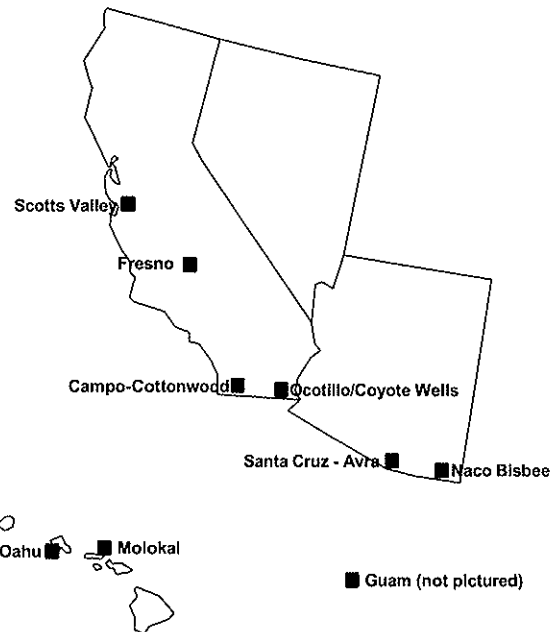
**How did this program start?** SDWA regulations implementing the sole source aquifer statute were first proposed in 1977 for the Edwards Underground Reservoir in San Antonio, Texas. These regulations guided U.S. EPA in the subsequent designation of 64 sole source aquifers across the United States.

**What does the Sole Source Aquifer Program do?** The Sole Source Aquifer program allows for EPA environmental review of any project which is financially assisted by federal grants or federal loan guarantees. These projects are evaluated to determine whether they have the potential to contaminate a sole source aquifer. If there is such a potential, the project should be modified to reduce or eliminate the risk, or federal financial support may be withdrawn. This doesn't mean that the Sole Source Aquifer program can delay or stop development of landfills, roads, publicly owned wastewater treatment works or other facilities. Nor can it impact any direct federal environmental regulatory or remedial programs, such as permit decisions.

The Sole Source Aquifer Program's review authority extends only to projects funded with **federal assistance** that are to be implemented in designated sole source aquifer areas. (For regulations applicable to new private development, you should consult with your local, county or state environmental health agency.)

Typical projects reviewed by the U.S. EPA include housing projects undertaken by Housing and Urban Development, and highway construction and expansion projects undertaken by the Federal Highway Administration. In 1991, the U.S. EPA reviewed 152 federal assistance projects totaling \$571 million; of these projects, 25 had to be modified to prevent contamination of sole source aquifers. Modifications included the redesign of bridges and highways to prevent spills of hazardous materials.

**How do you designate an aquifer as a "Sole Source" Aquifer?** As the name implies, only a "sole source" aquifer can qualify for the program. To be a sole source, the aquifer must supply more than 50% of a community's drinking water. Any individual, corporation, association, or federal, state or



local agency may petition the U.S. EPA for sole source aquifer designation, provided the petition includes sufficient hydrogeologic information. An outline describing how such petitions should be prepared is contained in *The Sole Source Aquifer Designation Petitioner Guidance*, copies of which are available at EPA Regional offices (see contact information below.)

**What about Boundaries?** Determination of sole source aquifer boundaries is a difficult aspect of the designation process since the "designated area includes the surface area above the aquifer and its recharge area." Thus, some sole source aquifers extend across state boundaries. The 10,000 square-mile Eastern Snake River Aquifer, for example, includes portions of Idaho, Nevada, Utah, and Wyoming.

In Region 9: nine sole source aquifers have been designated in the following areas as shown on the map: Upper Santa Cruz and Avra Basin Aquifer, covering parts of Pima, Pinal, and Santa Cruz Counties, Arizona; Naco-Bisbee Aquifer, Arizona; Ocotillo-Coyote Wells, Imperial County, California; Fresno Aquifer, California; Scotts Valley Aquifer, Santa Cruz County, California; Campo-Cottonwood Aquifer, San Diego County, California; Northern Guam Aquifer, Guam; Southern Oahu Aquifer, Hawaii; and Molokai Aquifer, Hawaii.

Region 9 SSA maps are on the web at [www.epa.gov/safewater/ssanp.html](http://www.epa.gov/safewater/ssanp.html). For more information about SSA designation and project reviews, please call David Albright, manager of the Ground Water Office, at (415) 972-3971 or email [albright.david@epa.gov](mailto:albright.david@epa.gov).

**National Wild & Scenic Rivers**

National System Management Information Publications Site Navigation Rivers & Trails Contact Us

Select State

**Designated Wild & Scenic Rivers**

Rivers that pass through several states may have segments in each state designated. For example, the Klamath River has designations in California and Oregon. Many rivers also have numerous tributaries designated (e.g., Washington's Skagit River). Multiple listings of some rivers indicate more than one segment of the river is designated (e.g., the Missouri River in Nebraska).



- Alabama
  - Black Warrior River (Sisqoy Fork) [Top of the Page](#)

- Alaska
  - Alagnak River — National Park Service Site
  - Alutna River
  - Androskiok River
  - Aniakchak River
  - Barrow Creek — Bureau of Land Management Site
  - Becharof River — Bureau of Land Management Site
  - Charley River — National Park Service Site
  - Chikiladzhina River
  - Delta River — Bureau of Land Management Site
  - Fortymile River — Bureau of Land Management Site
  - Gulkana River — Bureau of Land Management Site
  - Ivishak River
  - John River
  - Kobuk River
  - Kovukuk River (North Fork)
  - Mutchings River
  - Nosatak River
  - Nowina River
  - Prudhoe River
  - Savak River
  - Shenick River
  - Tinayuk River
  - Tlekaina River
  - Unalakleet River — Bureau of Land Management Site
  - Wind River

[Top of the Page](#)

[Top of the Page](#)

**Arizona**

- Fossil Creek
- Yarder River — U.S. Forest Service Site

[Top of the Page](#)

[Top of the Page](#)

**Arkansas**

- Big Piney Creek
- Buffalo River
- Cossatot River
- Hammons Creek
- Imperial River
- Mulberry River
- North Sylamore Creek
- Richland Creek

[Top of the Page](#)

**California**

- Anamoose River
- American River (Lower)
- American River (North Fork) — Bureau of Land Management Site
- Banister Creek
- Big Sur River
- Big Chico River
- Colusa River
- Contra Costa Creek
- Eel River
- Fishler River
- Fuller Mill Creek
- Kern River
- Kings River
- Klamath River — U.S. Forest Service Site
- Marcedo River — Bureau of Land Management Site
- Owens River Headwaters
- Palm Canyon Creek
- Pinn Creek
- San Jacinto River (North Fork)
- Shasta Creek
- Sycamore River
- Tule River
- Tule River
- Tulelume River — Bureau of Land Management Site

[Top of the Page](#)

**Colorado**

- Coches In Poudre River

[Top of the Page](#)

**Connecticut**

- Eichonile River
- Farmington River (West Branch) — Farmington River Committee Site

[Top of the Page](#)

**Delaware**

- White Clay Creek (See also Pennsylvania)

[Top of the Page](#)

**Florida**

- Loxahatchee River
- Yeehwa River

[Top of the Page](#)

**Georgia**

- Chattahoochee River (See also North Carolina, South Carolina — U.S. Forest Service Site, Chattahoochee Natl

[Top of the Page](#)

**Idaho**

- Battle Creek
- Big Jacks Creek
- Bruneau River
- Bruneau River (West Fork)
- Cleanwater River (Middle Fork)
- Saltwood Creek
- Deer Creek
- Dickshooter Creek
- Duncan Creek
- Jupiter River
- Little Jacks Creek

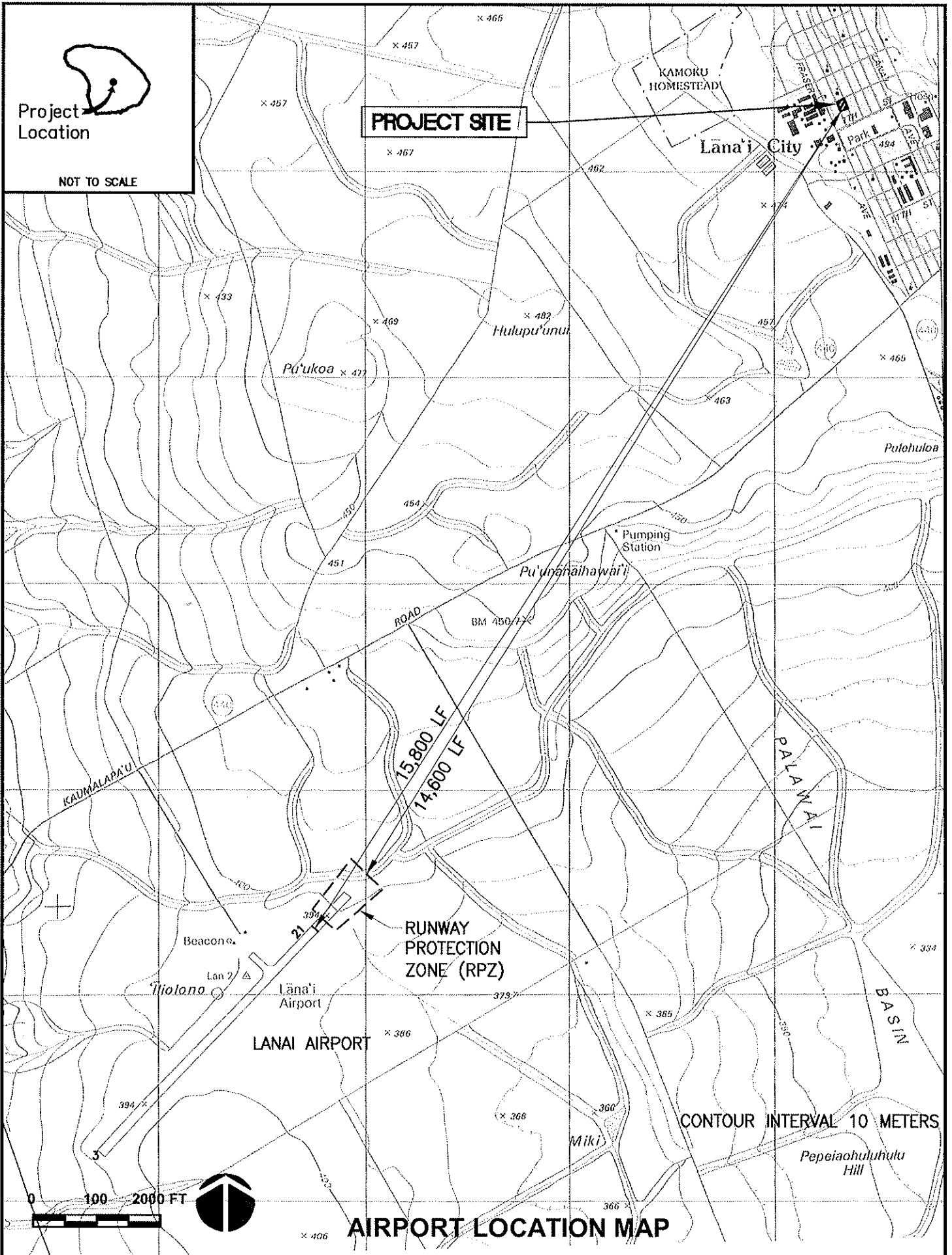
Hawaii - none

Project Location



NOT TO SCALE

PROJECT SITE



AIRPORT LOCATION MAP



Airports Division  
Department of Transportation

DATE: 12/15/99 DRAWN: C.M.C. CHECKED: J.P.C.

KEY PLAN / NOTES:

NOTE:  
THIS DRAWING IS FOR PLANNING PURPOSES ONLY AND IS NOT INTENDED FOR CONSTRUCTION OR MANUFACTURING PURPOSES.

THE PREPARATION OF THIS DRAWING WAS FINANCED IN PART THROUGH AN AIRPORT IMPROVEMENT PROGRAM GRANT FROM THE FEDERAL AVIATION ADMINISTRATION UNDER THE PROVISIONS OF SECTION 405 OF THE AIRPORT AND AIRWAY REAUTHORITY ACT OF 1982.

LEGEND:

- C CONSERVATION
- A AGRICULTURAL
- SF SINGLE FAMILY
- R RURAL
- OS OPEN SPACE
- PD PROJECT DISTRICT
- HI HEAVY INDUSTRIAL
- LI LIGHT INDUSTRIAL
- P PUBLIC/QUASI PUBLIC
- AP AIRPORT
- AIRPORT PROPERTY

PREPARED BY:

SCALE:

GRAPHIC SCALE IN FEET  
2000' 4000'

PROJECT TITLE:

LANAI AIRPORT  
MASTER PLAN UPDATE  
FAR PART 150 NOISE  
COMPATIBILITY PROGRAM

PROJECT NO.:

AMA011-02

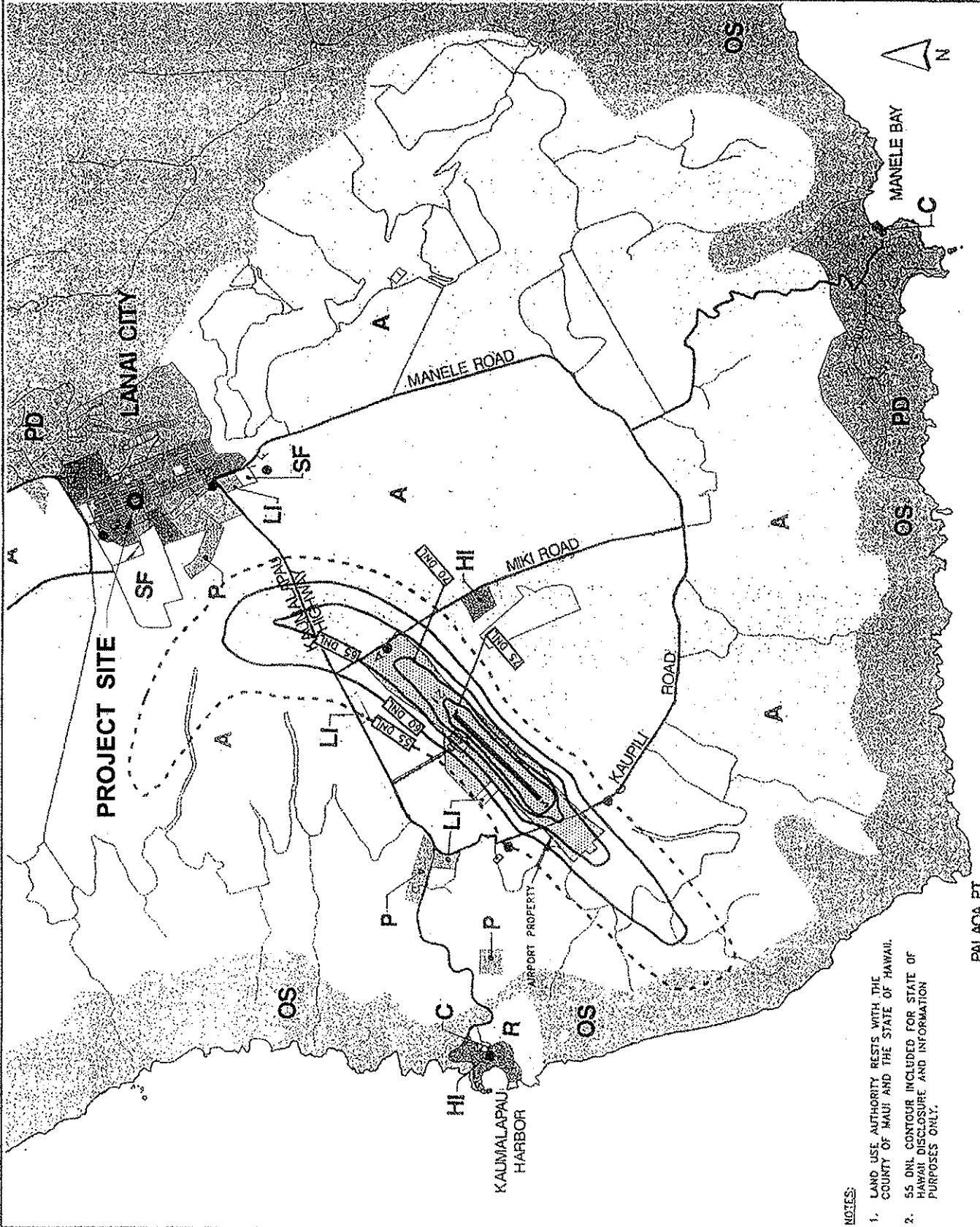
SHEET TITLE:

FIVE YEAR (2004)  
NOISE EXPOSURE MAP  
LANAI AIRPORT

DATE: 12/15/99

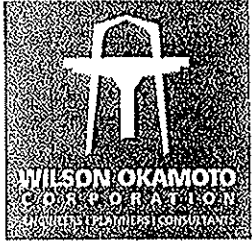
DATE: 12/15/99

FIGURE



- NOTES:
1. LAND USE AUTHORITY RESTS WITH THE COUNTY OF MAUI AND THE STATE OF HAWAII.
  2. 55 DNL CONTOUR INCLUDED FOR STATE OF HAWAII DISCLOSURE AND INFORMATION PURPOSES ONLY.

SOURCE: "LANAI AIRPORT MASTER PLAN UPDATE FAR PART 150 NOISE COMPATIBILITY PROGRAM" DEPARTMENT OF TRANSPORTATION, AIRPORT DIVISION, DECEMBER 1999



1007 South Beretania Street  
Artesian Plaza, Suite 400  
Honolulu, Hawaii, 96826 USA  
Phone: 808-946-2277  
FAX: 808-946-2253  
www.wilsonokamoto.com

7953-01  
May 14, 2010

7953-01

FILE

Captain Paul Haake  
County of Maui  
Fire Prevention Bureau  
Department of Fire and Public Safety  
313 Manea Place  
Wailuku, Hawaii 96793

Subject: Request for Locations of Above Ground Storage Tanks  
Lanai Community Health Center, CBDG Project No. 08-04  
Lanai City, Lanai, Hawaii; TMK: 4-9-006:011

Dear Captain Haake:

Wilson Okamoto Corporation is preparing an Environmental Assessment (EA) under 24 Code of Federal Regulations Part 58.36 and Chapter 343, Hawaii Revised Statutes, as amended, and Hawaii Administrative Rules Title 11, State of Hawaii Department of Health, Chapter 200, Environmental Impact Statement Rules, for the Lanai Community Health Center, CBDG Project No. 08-04, Lanai City, Lanai, Hawaii project for the County of Maui Office of the Mayor Community Development Block Grant office.

We need your assistance in identifying existing above ground storage tanks (ASTs) within a 1 mile radius of the project site located on Sixth, Gay and Houston Streets. Based on our telephone conversation (May 13, 2010), attached is a project location map and a list of tax map key (TMK) parcels that fall within a 1 mile radius of the project site. Please provide us a list of the parcels that have ASTs.

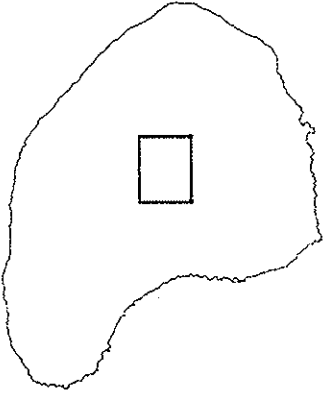
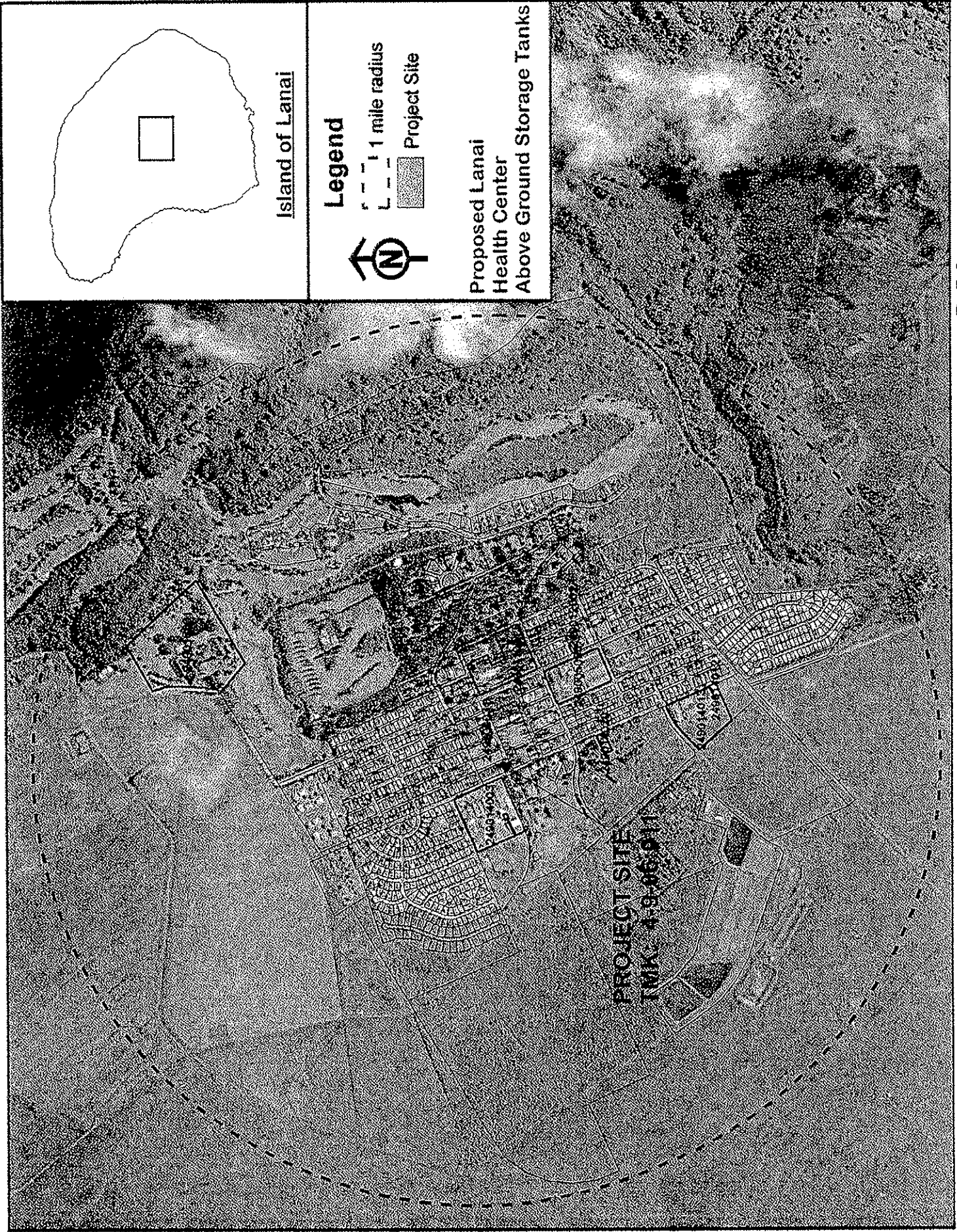
If you have any questions, please call me at 808.946.2277 or email [tfukuda@wilsonokamoto.com](mailto:tfukuda@wilsonokamoto.com).

Sincerely,

Tracy Fukuda, Senior Planner



Attachments

D-7-1



Island of Lanai

**Legend**

-  1 mile radius
-  Project Site



Proposed Lanai  
Health Center  
Above Ground Storage Tanks

PROJECT SITE  
TWK 4-9-06-011

**PROPOSED LANAI HEALTH CENTER  
PARCELS WITHIN 1 MILE OF PROJECT SITE**

TMK	TMK	TMK	TMK
249001018	249004044	249004101	249005063
249001019	249004045	249004102	249005064
249001020	249004046	249004103	249005065
249001021	249004047	249004104	249005066
249001022	249004048	249004105	249005067
249001023	249004049	249004106	249005068
249001024	249004050	249004107	249005069
249001025	249004051	249004108	249005071
249001026	249004055	249004109	249005072
249001027	249004056	249004999	249005073
249001029	249004057	249005001	249005074
249001030	249004058	249005002	249005075
249001031	249004062	249005003	249005079
249001032	249004063	249005004	249005080
249001033	249004064	249005005	249005082
249001034	249004065	249005006	249005083
249002001	249004066	249005007	249005085
249002058	249004067	249005008	249005088
249004001	249004068	249005009	249005090
249004002	249004069	249005010	249005091
249004003	249004070	249005011	249005092
249004004	249004071	249005012	249005093
249004005	249004072	249005015	249005094
249004006	249004073	249005018	249005095
249004007	249004074	249005019	249005096
249004008	249004075	249005020	249005097
249004009	249004076	249005026	249005098
249004010	249004077	249005029	249005099
249004011	249004078	249005030	249005100
249004012	249004079	249005031	249005101
249004013	249004080	249005032	249005102
249004014	249004081	249005033	249005103
249004015	249004082	249005034	249005104
249004016	249004083	249005035	249005105
249004017	249004084	249005036	249005106
249004018	249004085	249005037	249005107
249004019	249004086	249005038	249005108
249004023	249004087	249005039	249005109
249004024	249004088	249005040	249005110
249004028	249004089	249005042	249005111
249004031	249004090	249005044	249005112
249004032	249004091	249005045	249005113
249004033	249004092	249005047	249005114
249004035	249004093	249005049	249005115
249004036	249004094	249005051	249005116
249004037	249004095	249005052	249005117
249004038	249004096	249005055	249005118
249004039	249004097	249005056	249005119
249004040	249004098	249005057	249005120
249004041	249004099	249005059	249005121
249004043	249004100	249005060	249005999



**PROPOSED LANAI HEALTH CENTER  
PARCELS WITHIN 1 MILE OF PROJECT SITE**

TMK		TMK		TMK		TMK
249006003		249007031		249007086		249007159
249006004		249007032		249007087		249007160
249006005		249007033		249007088		249007161
249006006		249007034		249007089		249007162
249006007		249007035		249007090		249007163
249006010		249007036		249007091		249007164
249006011		249007038		249007093		249007165
249006015		249007039		249007094		249007166
249006021		249007040		249007095		249007167
249006026		249007041		249007097		249007168
249006027		249007044		249007098		249007169
249006028		249007045		249007099		249007170
249006030		249007046		249007101		249007171
249006031		249007047		249007102		249007172
249006033		249007048		249007103		249007173
249006034		249007049		249007104		249007174
249006038		249007050		249007105		249007175
249006042		249007051		249007107		249007176
249006043		249007052		249007108		249007999
249006049		249007053		249007111		249008001
249006050		249007054		249007112		249008003
249006053		249007055		249007116		249008004
249006054		249007056		249007119		249008006
249006055		249007057		249007120		249008007
249006056		249007058		249007121		249008008
249006057		249007059		249007122		249008012
249006058		249007060		249007123		249008013
249006059		249007061		249007124		249008015
249006060		249007062		249007125		249008016
249006061		249007063		249007126		249008017
249006062		249007064		249007127		249008018
249006063		249007065		249007128		249008019
249006064		249007066		249007129		249008020
249006999		249007067		249007131		249008021
249007001		249007068		249007136		249008022
249007002		249007069		249007139		249008023
249007003		249007070		249007144		249008024
249007004		249007071		249007145		249008025
249007005		249007072		249007146		249008026
249007006		249007073		249007147		249008027
249007007		249007074		249007148		249008028
249007008		249007075		249007149		249008029
249007009		249007076		249007150		249008030
249007010		249007077		249007151		249008031
249007011		249007078		249007152		249008032
249007012		249007079		249007153		249008033
249007018		249007080		249007154		249008035
249007025		249007082		249007155		249008036
249007027		249007083		249007156		249008037
249007028		249007084		249007157		249008038
249007029		249007085		249007158		249008039

**PROPOSED LANAI HEALTH CENTER  
PARCELS WITHIN 1 MILE OF PROJECT SITE**

TMK		TMK		TMK		TMK
249008040		249009039		249010029		249011018
249008041		249009040		249010030		249011019
249008042		249009041		249010031		249011020
249008043		249009042		249010032		249011021
249008044		249009043		249010034		249011999
249008045		249009044		249010035		249012001
249008046		249009045		249010036		249012002
249008047		249009046		249010037		249012003
249008048		249009047		249010038		249012004
249008049		249009048		249010039		249012005
249008999		249009049		249010040		249012008
249009001		249009050		249010041		249012009
249009002		249009051		249010042		249012011
249009003		249009052		249010043		249012012
249009004		249009053		249010044		249012013
249009005		249009054		249010045		249012014
249009006		249009055		249010046		249012015
249009007		249009056		249010047		249012016
249009008		249009057		249010050		249012017
249009009		249009058		249010058		249012018
249009010		249009059		249010059		249012020
249009011		249009060		249010060		249012021
249009012		249009061		249010061		249012022
249009013		249009062		249010062		249012025
249009014		249009063		249010063		249012026
249009015		249009064		249010064		249012029
249009016		249009065		249010065		249012030
249009017		249009066		249010066		249012031
249009018		249009999		249010067		249012034
249009019		249010001		249010068		249012035
249009020		249010002		249010069		249012036
249009021		249010003		249010070		249012039
249009022		249010004		249010071		249012041
249009023		249010005		249010072		249012042
249009024		249010006		249010073		249012043
249009025		249010007		249010074		249012044
249009026		249010008		249010075		249012047
249009027		249010010		249010999		249012048
249009028		249010011		249011001		249012057
249009029		249010012		249011003		249012059
249009030		249010013		249011004		249012060
249009031		249010014		249011005		249012061
249009032		249010015		249011006		249012062
249009033		249010016		249011007		249012063
249009034		249010017		249011008		249012064
249009035		249010018		249011012		249012065
249009036		249010019		249011013		249012066
249009037		249010020		249011014		249012067
249009038		249010023		249011015		249012068
		249010027		249011016		249012069
		249010028		249011017		249012070

**PROPOSED LANAI HEALTH CENTER  
PARCELS WITHIN 1 MILE OF PROJECT SITE**

TMK		TMK		TMK		TMK
249012071		249013046		249014005		249015036
249012072		249013047		249014006		249015037
249012073		249013048		249014007		249015038
249012074		249013049		249014008		249015039
249012075		249013050		249014009		249015040
249012076		249013051		249014010		249015041
249012077		249013053		249014011		249015042
249012078		249013054		249014012		249015043
249012079		249013055		249014013		249015044
249012080		249013056		249014015		249015045
249012081		249013057		249014016		249015046
249012999		249013058		249014017		249015047
249013001		249013059		249014018		249015048
249013005		249013060		249014019		249015049
249013006		249013061		249014020		249015050
249013008		249013062		249014021		249015051
249013009		249013065		249014999		249015052
249013012		249013066		249015001		249015053
249013013		249013067		249015002		249015054
249013014		249013068		249015003		249015055
249013015		249013069		249015004		249015056
249013016		249013070		249015005		249015057
249013017		249013071		249015006		249015058
249013018		249013072		249015007		249015059
249013019		249013073		249015008		249015060
249013020		249013076		249015009		249015061
249013021		249013077		249015010		249015062
249013022		249013078		249015011		249015063
249013023		249013079		249015012		249015064
249013024		249013080		249015013		249015065
249013025		249013081		249015014		249015066
249013026		249013082		249015015		249015067
249013027		249013083		249015016		249015068
249013028		249013084		249015017		249015069
249013029		249013085		249015018		249015070
249013030		249013086		249015019		249015071
249013031		249013087		249015021		249015072
249013032		249013088		249015022		249015073
249013033		249013089		249015023		249015074
249013034		249013090		249015024		249015075
249013035		249013091		249015025		249015076
249013036		249013092		249015026		249015077
249013037		249013093		249015027		249015078
249013038		249013094		249015028		249015079
249013042		249013095		249015029		249015999
249013043		249013096		249015030		249016001
249013044		249013999		249015031		249016002
249013045		249014001		249015032		249016003
		249014002		249015033		249016004
		249014003		249015034		249016005
		249014004		249015035		249016006

**PROPOSED LANAI HEALTH CENTER  
PARCELS WITHIN 1 MILE OF PROJECT SITE**

TMK		TMK		TMK		TMK
249016007		249016054		249016102		249016149
249016008		249016055		249016103		249016999
249016009		249016056		249016104		249018001
249016010		249016057		249016105		249018002
249016011		249016058		249016106		249018003
249016012		249016059		249016107		249018004
249016013		249016060		249016108		249019001
249016014		249016061		249016109		249019002
249016015		249016062		249016110		249019003
249016016		249016063		249016111		249019004
249016017		249016064		249016112		249019005
249016018		249016065		249016113		249019006
249016019		249016066		249016114		249019007
249016020		249016067		249016115		249019008
249016021		249016068		249016116		249019009
249016022		249016069		249016117		249019010
249016023		249016070		249016118		249019011
249016024		249016071		249016119		249019012
249016025		249016072		249016120		249019013
249016026		249016073		249016121		249019014
249016027		249016074		249016122		249019015
249016028		249016075		249016123		249019016
249016029		249016076		249016124		249019017
249016030		249016077		249016125		249019018
249016031		249016078		249016126		249019019
249016032		249016079		249016127		249019020
249016033		249016080		249016128		249019021
249016034		249016081		249016129		249019022
249016035		249016082		249016130		249019023
249016036		249016083		249016131		249019024
249016037		249016084		249016132		249019025
249016038		249016085		249016133		249019026
249016039		249016086		249016134		249019027
249016040		249016087		249016135		249019028
249016041		249016088		249016136		249019029
249016042		249016089		249016137		249019030
249016043		249016090		249016138		249019031
249016044		249016091		249016139		249019032
249016045		249016092		249016140		249019033
249016046		249016093		249016141		249019034
249016047		249016094		249016142		249019035
249016048		249016095		249016143		249019036
249016049		249016096		249016144		249019037
249016050		249016097		249016145		249019038
249016051		249016098		249016146		249019039
249016052		249016099		249016147		249019040
249016053		249016100		249016148		249019041
		249016101				

**PROPOSED LANAI HEALTH CENTER  
PARCELS WITHIN 1 MILE OF PROJECT SITE**

TMK		TMK		TMK		TMK
249019042		249019091		249021001		
249019043		249019092		249021002		
249019044		249019093		249021003		
249019045		249019094		249021004		
249019046		249019095		249021005		
249019047		249019096		249021006		
249019048		249019097		249021007		
249019049		249019098		249021008		
249019050		249019099		249021009		
249019051		249019100		249024001		
249019052		249019101		249024002		
249019053		249019102		249024003		
249019054		249019103		249024004		
249019055		249019104		249024005		
249019056		249019105		249024006		
249019057		249019106		249024007		
249019058		249019107		249024008		
249019059		249019108		249024009		
249019060		249019109		249024010		
249019061		249019110		249024011		
249019062		249019111		249024012		
249019063		249019112		249024013		
249019064		249019113		249024014		
249019065		249019114		249024015		
249019066		249019115		249024016		
249019067		249019116		249024017		
249019068		249019117		249024018		
249019069		249019118		249024019		
249019070		249019119		249024020		
249019071		249019120		249024021		
249019072		249019999		249024022		
249019073		249020001		249024023		
249019074		249020002		249024024		
249019075		249020003		249024025		
249019076		249020004		249024026		
249019077		249020005		249024027		
249019078		249020006		249024028		
249019079		249020007		249024029		
249019080		249020008		249024030		
249019081		249020010		249024031		
249019082		249020011		249024032		
249019083		249020012		249024033		
249019084		249020013		249024034		
249019085		249020015		249024035		
249019086		249020016		249024036		
249019087		249020017		249024037		
249019088		249020018				
249019089		249020019				
249019090		249020020				

John Sakaguchi

7953-01

From: Paul Haake [Paul.Haake@co.maui.hi.us]  
Sent: Friday, July 23, 2010 3:33 PM  
To: John Sakaguchi  
Subject: Re: LCHC - tanks

FILE [Signature]

Categories: Filed by Newforma  
Attachments: Lanai AG Tank Info.xls



Lanai AG Tank Info.xls

John,

Here's what we found out. Hope it works for you.

Paul Haake  
Fire Prevention Bureau Captain  
313 Manea Place Wailuku, HI 96793  
244-9161 ext. 23  
244-1363 fax

>>> "John Sakaguchi" <jsakaguchi@wilsonokamoto.com> 7/14/2010 2:43 PM  
>>> >>>

Captain: Here is the list of TMKs for the 9 sites we discussed. We are looking for aboveground fuel and propane tanks and about where the tanks are in relation to the building, if you know. Also, are the Police and Fire stations double wall tanks?  
Thank you  
John Sakaguchi

\* \* \* \* \* This message contains information that might be confidential and privileged. Unless you are the addressee or are authorized by the sender, you may not use, copy or disclose the information contained in this message. If you have received this message in error, please delete it and advise the sender.

Original message sent by:  
Wilson Okamoto Corporation  
1907 South Beretania Street, Suite 400  
Honolulu, HI 96826  
Phone 808-946-2277 - FAX: 808-946-2253

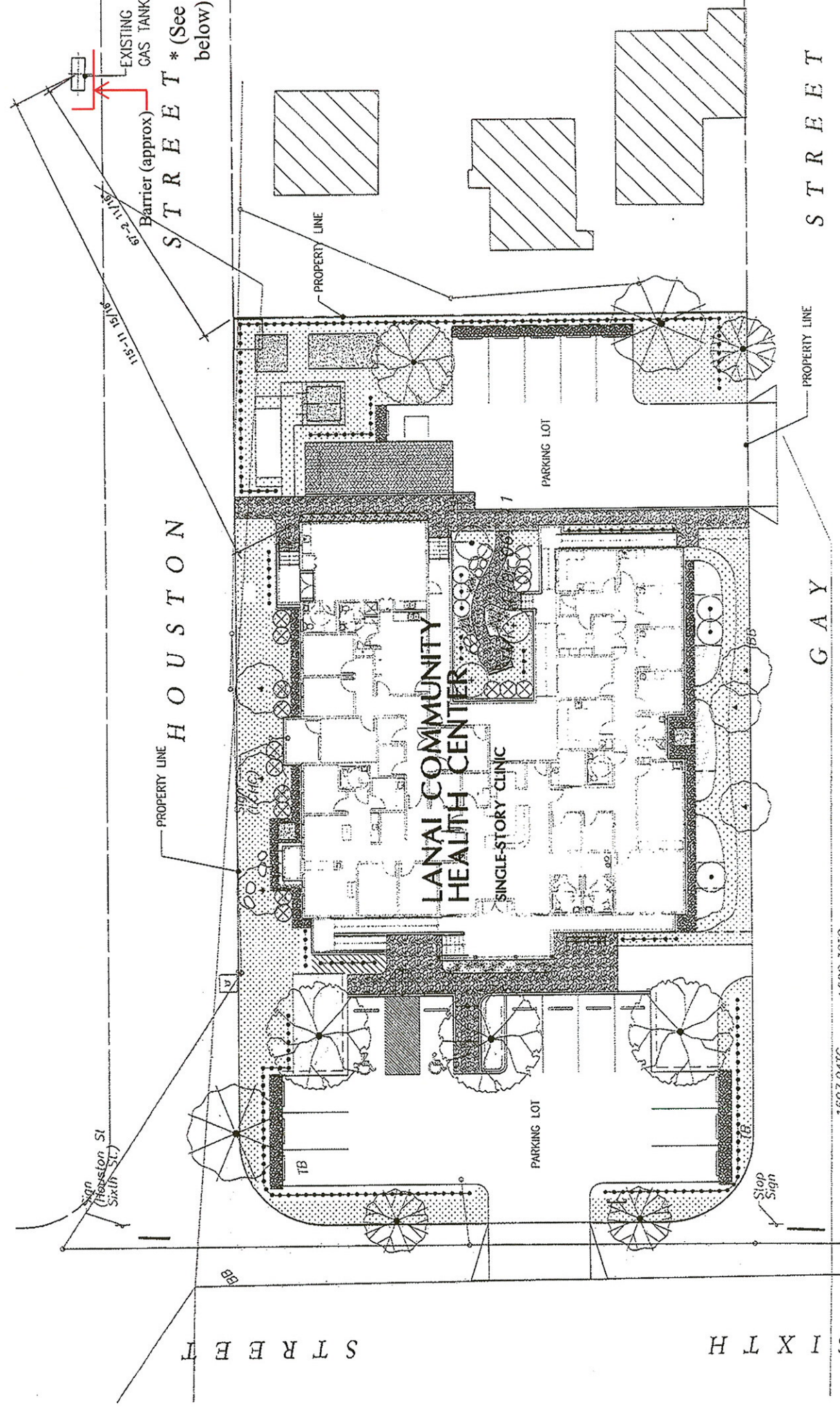
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County of Maui.  
IT Security measures will reject attachments larger than 12 MB, and will block or quarantine high-risk file types in attachments.

BUSINESS NAME	ADDRESS	TAX MAP KEY #	TANK (Gallons)	# of Tanks	Product
Blue Ginger Café	409 7th Street	2-4-9-006:031	499	1	LPG
Café 565	408 8th Street	2-4-9-006:034	124	1	LPG
Canoe's Lanai Restaurant	419 7th Street	2-4-9-006:031	288	1	LPG
Castle & Cooke Resorts, LLC. - Richards Market (not in use)	434 8th Street	2-4-9-006:042	124	1	LPG
Castle & Cooke Resorts, LLC. (?)	436 Puulani Street		55	1	LPG
County of Maui - Lanai Fire Station	1345 Fraser Avenue	2-4-9-014:012	124	1	LPG
First Hawaiian Bank	644 Lanai Avenue	2-4-9-011:018	124	1	LPG
Four Seasons Resort at Koele	1 Keomoku Road	2-4-9-014:001	2,000	1	LPG
Ganofisi Plate Lunch	831 B Houston Street	2-4-9-006:015	55	1	LPG
Holder ULH - Pines at Koele	Kaunoa Street	Off of Kaunaoa St	1,150	1	LPG
Hotel Lanai	828 Lanai Avenue	2-4-9-011:001	499	1	LPG
Lanai City Service (Gas Station)	1036 Fraser Avenue		124	1	LPG
Lanai Community Hospital	628 7th Street	2-4-9-011:003	499	1	LPG
Lanai Community Pool	1311 Fraser Avenue	2-4-9-011:013	2,000	1	LPG
Lanai Family Health Center	628 7th Street	2-4-9-006:011	124	1	LPG
Lanai Fire Station	1345 Fraser Avenue	2-4-9-014:012	550	AST	Diesel
Lanai High & Elementary School - Home Economics Building	Fraser Avenue	2-4-9-014:003	124	1	LPG
Lanai High & Elementary School Cafeteria	Fraser Avenue	2-4-9-014:003	499	1	LPG
Lanai High & Elementary School Physical Education Building	Fraser Avenue	2-4-9-014:003	124	1	LPG
Lanai Hongwanji Mission	1364 Fraser Avenue	2-4-9-004:001	124	1	LPG
Lanai Ohana Poke Market	834 A Gay Street	2-4-9-006:015	124	1	LPG
Lanai Police Station	855 Fraser Avenue	2-4-9-014:001	2,500	AST	Diesel
Lauderette Lanai	353 7th Street	2-4-9-006:026	499	1	LPG
Pele's Other Garden Deli Bistro	811 Houston Street		124	1	LPG
Sacred Hearts Church	815 Fraser Avenue	2-4-9-014:008	124	1	LPG
The Gas Company (800-828-9359)	730 Lanai Avenue			1	
	Storage & Fueling Area			2	
	Baseyard Below Police Station		6,400	2	LPG

FM: COM FD

D-7-10



EXISTING GAS TANK  
Barrier (approx.)  
STREET \* (See below)

STREET

HOUSTON

GAY

SIXTH STREET

\* Tank dimensions (approx)  
7.75 ft long  
3.0 ft diameter  
4.0 to 4.5 ft high

D-7-11





Photo1: Existing Health Center office and propane gas tank – looking east on Houston Street



Photo 2: Existing Health Center office and propane gas tank – looking northeast across Houston Street



WILSON OKAMOTO  
CORPORATION  
ENGINEERS - PLANNERS

LANAI COMMUNITY HEALTH CENTER  
LANAI CITY, LANAI, HAWAII

SITE PHOTOS

Photos  
D-7-12



Photo 3: Propane gas tank (499-gallon) behind launderette



Photo 4: Propane gas tank – looking southwest to existing Health Center office



WILSON OKAMOTO  
CORPORATION  
ENGINEERS - PLANNERS

LANAI COMMUNITY HEALTH CENTER  
LANAI CITY, LANAI, HAWAII

SITE PHOTOS

Photos  
D-7-13

## Acceptable Separation Distance (Thermal Radiation)

Volume In Gallons				Area In Square Feet			
Undiked	Fire Width	ASD Bldgs	ASD People	Diked	Fire Width	ASD Bldgs	ASD People
100	29	17	107	100	10	10	60
200	28	24	140	200	14	17	80
300	25	29	174	300	17	25	90
400	40	35	190	400	20	17	107
(*) 500	45	37	219	500	22	18	115
600	49	40	230	600	24	21	122
700	53	43	240	700	26	23	130
800	57	46	250	800	28	24	140
900	60	48	270	900	30	25	150
1,000	62	50	275	1,000	32	27	160
2,000	69	68	365	2,000	48	37	210
3,000	110	84	420	3,000	55	44	245
4,000	129	89	440	4,000	63	50	275
5,000	141	100	550	5,000	71	58	305
6,000	155	115	580	6,000	77	60	325
7,000	167	120	620	7,000	84	65	350
8,000	179	135	655	8,000	89	68	365
9,000	190	140	710	9,000	95	73	390
10,000	200	145	720	10,000	100	78	400
20,000	280	200	960	20,000	141	105	565
30,000	350	250	1,120	30,000	170	125	640
40,000	400	275	1,300	40,000	200	145	720
50,000	447	310	1,430	50,000	224	165	800
60,000	480	335	1,510	60,000	245	175	865
70,000	509	360	1,630	70,000	265	190	905
80,000	566	380	1,720	80,000	283	200	960
90,000	600	400	1,800	90,000	300	215	1,020
100,000	625	415	1,875	100,000	316	220	1,050
200,000	694	590	2,550	200,000	447	310	1,430
300,000	1,095	700	3,000	300,000	548	370	1,700
400,000	1,265	800	3,400	400,000	632	415	1,875
500,000	1,414	890	3,600	500,000	707	470	2,005
600,000	1,549	980	4,000	600,000	775	510	2,250
700,000	1,672	1,050	4,200	700,000	837	550	2,460
800,000	1,789	1,120	4,500	800,000	894	590	2,550
900,000	1,897	1,180	4,800	900,000	949	620	2,650
1,000,000	2,000	1,200	5,000	1,000,000	1,000	650	2,750

ASD is Dependent upon the accuracy of reading the graph.

Fire width has been calculated for the gallons/area shown. The formula for undiked fire width is two times the square root of gallons; for diked fire width, the formula is the square root of the area in square feet.

## Acceptable Separation Distance (Blast Overpressure)

## Worksheet No. 4 (Without Blast Barrier)

Tank Volume	ASD
100	115
200	125
300	145
400	160
(*) 500	170
600	180
700	190
800	200
900	210
1,000	220
2,000	275
3,000	320
4,000	350
5,000	370
6,000	400
7,000	420
8,000	435
9,000	450
10,000	465
20,000	520
30,000	660
40,000	750
50,000	800
60,000	850
70,000	900
80,000	925
90,000	975
100,000	1,000
200,000	1,275
300,000	1,420
400,000	1,600
500,000	1,710
600,000	1,810
700,000	1,900
800,000	2,000
900,000	2,100
1,000,000	2,150

ASD is dependent upon the accuracy of reading the graph.

(7953-01)

John Sakaguchi

9/20/11 JS

From: Marni Murdock [MMurdock@ahldesign.com]  
Sent: Wednesday, September 21, 2011 12:22 AM  
To: John Sakaguchi  
Subject: FW: LCHC - New Facility EA

FILE

see below

-----Original Message-----

From: Diana Shaw [mailto:DSshaw@lanaicommunityhealthcenter.org]  
Sent: Tuesday, September 20, 2011 9:55 PM  
To: Wayne Ishizaki  
Cc: Marni Murdock  
Subject: RE: LCHC - New Facility EA

Thank you, Wayne. D.

-----Original Message-----

From: Ishizaki, Wayne [mailto:WIshizaki@castlecooke.com]  
Sent: Tuesday, September 20, 2011 3:30 PM  
To: Diana Shaw  
Cc: Marni Murdock  
Subject: RE: LCHC - New Facility EA

We have no problem with the LCHC constructing a barrier as long as we have an opportunity to review the plans and that all required permits are obtained and the Gas Company has access to the tank.

From: Diana Shaw [mailto:DSshaw@lanaicommunityhealthcenter.org]  
Sent: Tuesday, August 30, 2011 2:25 PM  
To: Ishizaki, Wayne  
Cc: 'Marni Murdock'  
Subject: LCHC - New Facility EA  
Importance: High

Confidentiality Notice: The information contained in this message and any attachments may contain confidential or proprietary material and is intended solely for the use of the person or entity to which it is addressed. Any unauthorized review, use, disclosure or distribution of this communication is strictly prohibited. If you have received this communication in error, please immediately notify the sender by reply e-mail and destroy all copies of this communication and any attachments.

This message has been scanned for viruses and dangerous content using Worry-Free Mail Security and is believed to be clean.

This message is intended solely for the recipient identified above and should not be opened, read or utilized by any other party. This message is intended as above and shall not be construed as official project information or direction except as expressly provided in the contract documents.

D-7-16

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## Appendix E

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Draft Environmental Assessment Consultation Letters

LINDA LINGHE  
OFFICER  
STATE OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF HAWAIIAN HOME LANDS

P.O. BOX 1879  
HONOLULU, HAWAII 96826

June 30, 2010

Mr. John Sakaguchi, AICP  
Wilson Okamoto Corporation  
1907 South Beretania St., Ste. 400  
Honolulu, HI 96826

Subject: Draft Environmental Assessment (DEA)  
Lāna'i Community Health Center  
Lāna'i City, Lāna'i, Hawai'i  
Tax Map Key 4-9-06:011

Aloha Mr. Sakaguchi:

Thank you for the opportunity to comment on the Draft Environmental Assessment (DEA) for the Lāna'i Community Health Center. The Department of Hawaiian Home Lands (DHHL) owns approximately 50 acres on the island of Lāna'i and just finished developing a Lāna'i Regional Plan that was approved by the Hawaiian Homes Commission on June 22, 2010.

As adjacent landowners on island, engaging in our own planning process, it is our responsibility to participate and plan appropriately for the larger region. In addition, it is our priority to ensure that DHHL's plans are as consistent as possible with other plans in the area.

In general, we support the development of a community health center for the island of Lāna'i that will ultimately help our beneficiaries and the community at large. We have no further comments.

We will continue, as an adjacent landowner, to do what we can to assist in your planning efforts. If you have any questions, please contact Kaleo Manuel at our Planning Office at 620-9485.

Aloha and mahalo,

Kaulana H.R. Park, Chairman  
Hawaiian Homes Commission

Enclosures



WILSON OKAMOTO  
CORPORATION  
1907 South Beretania Street  
Artisan Plaza, Suite 400  
Honolulu, Hawaii, 96826 USA  
Phone: 808-946-2277  
FAX: 808-946-2253  
www.wilsonokamoto.com

7953-01

August 2, 2011

Mr. Albert "Alapaki" Nahale-a, Chairman  
Department of Hawaiian Home Lands  
State of Hawaii  
P.O. Box 1879  
Honolulu, Hawaii 96805

Subject: Draft Environmental Assessment (EA)  
Lana'i Community Health Center, CDBG Project No. 08-04  
Tax Map Key (TMK): 4-9-006: 011, Lana'i City, Lana'i, Hawaii  
Response to Comment

Dear Mr. Nahale-a:

Thank you for your Department's letter dated June 30, 2010 on the Draft Environmental Assessment (EA) for the Lana'i Community Health Center, CDBG Project No. 08-04. The Final EA will indicate that the Department of Hawaiian Home Lands (DHHL) owns approximately 50 acres on the Island of Lana'i and just completed developing a Lana'i Regional Plan that was approved by the Hawaiian Homes Commission on June 22, 2010.

As adjacent landowners on the Island, DHHL is engaging in its own planning process, and has responsibility to participate and plan appropriately for the larger region. In addition, it is a priority to ensure that DHHL's plans are as consistent as possible with other plans in the area.

The Final EA will note, in general, that DHHL supports the development of a community health center for the Island of Lana'i, and that the facility will ultimately help DHHL's beneficiaries and the community at large.

We appreciate your participation in the Draft EA review process.

Sincerely,

John L. Sakaguchi, AICP, Senior Planner

cc: H. Matsumoto, CDBG  
M. Murdock, Architects Hawaii, Ltd.  
D. Shaw, Lana'i Community Health Center

LINDA LINGLE  
GOVERNOR OF HAWAII



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

July 20, 2010

Mr. John Sakaguchi, AICP  
Wilson Okamoto Corporation  
1907 South Beretania Street, Suite 400  
Honolulu, Hawaii 96826

Dear Mr. Sakaguchi:

**Subject: Draft Environmental Assessment (DEA) for  
Lanai Community Health Center  
Lanai City, Island of Lanai, Hawaii  
Tax Map Key: (2) 4-9-006:011**

The Department of Health (DOH), Clean Water Branch (CWB), has reviewed the subject document and has no comments at this time. The DOH-CWB provided DEA Pre-Assessment Notice comments on this project (Letter No. 03016PSS.10, dated March 8, 2010). Your responses to this letter were included in the DEA.

As a reminder, all discharges related to the project construction or operation activities, whether or not National Pollutant Discharge Elimination System permit coverage and/or Section 401 Water Quality Certification are required, must comply with the Water Quality Standards. Noncompliance with water quality requirements contained in HAR, Chapter 11-54, and/or permitting requirements, specified in HAR, Chapter 11-55, may be subject to penalties of \$25,000 per day per violation.

If you have any questions, please visit our website at <http://www.hawaii.gov/health/environmental/water/cleanwater/index.html>, or contact the Engineering Section, CWB, at (808) 586-4309.

Sincerely,

*John Wong*  
JOHN WONG, P.E., CHIEF  
Clean Water Branch

SW:ml

cc: Mr. Roland Asakura, CWB, Maui District Health Office [via email only]  
DOH-EPO #1-3221 [via email only]



WILSON OKAMOTO  
CORPORATION  
1907 South Beretania Street  
Artesian Plaza, Suite 400  
Honolulu, Hawaii 96826 USA  
Phone: 808-946-2277  
FAX: 808-946-2253  
www.wilsonokamoto.com

7953-01  
August 2, 2011

Mr. Alex Wong, P.E., Chief  
Clean Water Branch  
Environmental Planning Office  
Department of Health  
State of Hawaii  
P.O. Box 3378  
Honolulu, Hawaii 96801-3378

**Subject: Draft Environmental Assessment (EA)  
Lanai Community Health Center, CDBG Project No. 08-04  
Tax Map Key (TMK): 4-9-006: 011, Lanai City, Lanai, Hawaii  
Response to Comment**

Dear Mr. Wong:

Thank you for your Department's letter (Ref: EMD/CWB 07031PSW.10) dated July 20, 2010 on the Draft Environmental Assessment (EA) for the Lanai Community Health Center, CDBG Project No. 08-04. The Final EA will note that the Clean Water Branch has no comments at this time. Further, the Final EA will indicate that all discharges related to the project construction or operation activities, whether or not National Pollutant Discharge Elimination System permit coverage and/or Section 401 Water Quality Certification are required, must comply with the Water Quality Standards. Noncompliance with water quality requirements contained in HAR, Chapter 11-54, and/or permitting requirements, specified in HAR, Chapter 11-55, may be subject to penalties of \$25,000 per day per violation.

We appreciate your participation in the environmental review process.

Sincerely,

*John Sakaguchi*  
John Sakaguchi, AICP, Senior Planner

cc: H. Matsumoto, CDBG  
M. Murdock, Architects Hawaii, Ltd.  
D. Shaw, Lanai Community Health Center

*10/2/10*  
*Chiyome L. Fukuro*  
CHIYOME L. FUKURO, M.D.  
DIRECTOR OF HEALTH

In reply, please refer to  
EMD/CWB  
07031PSW.10

RECEIVED  
JUL 23 2010

WILSON OKAMOTO CORPORATION



LINDA LINGLE  
GOVERNOR OF HAWAII



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

July 27, 2010

Mr. John Sakaguchi, AICP  
Project Manager  
Wilson Okamoto Corporation  
1907 South Beretania Street  
Artesian Plaza Suite 400  
Honolulu, Hawaii 96826

Dear Mr. Sakaguchi:

Subject: Draft Environmental Assessment – Lanai Community Health Center  
640 Gay Street, Lanai City, Lanai, Hawaii 96763 TMK: (2) 4-9-006: 011

Thank you for allowing us the opportunity to review the above subject project which proposes the development of the Lanai Community Health Center in Lanai City. We have the following comments and information on the above subject property:

We offer our approval of said development as domestic wastewater treatment and disposal will be through existing 8-inch wastewater lines located along Houston Street, Gay Street, Sixth Street and Seventh Street and ultimately serviced at the Lanai Wastewater Reclamation Facility.

We encourage the developer to utilize recycled water for irrigation and other non-potable water purposes such other open spaces or landscaping areas. Further, any means to reduce green house gas emissions, practice renewable energy and a reduction in waste is highly recommended.

All wastewater plants 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 at 586-4294.

Sincerely,

SINA PRUDER, P.E., ACTING CHIEF  
Wastewater Branch

c: DOH's Environmental Planning Office (EPO 1-3221)  
DOH-WWB'S Maui Staff – Mr. Roland Iejano



WILSON OKAMOTO  
CORPORATION  
1907 South Beretania Street  
Artesian Plaza, Suite 400  
Honolulu, Hawaii 96826 USA  
Phone: 808-946-2277  
FAX: 808-946-2253  
www.wilsonokamoto.com

7953-01  
August 2, 2011

Ms. Sina Pruder, P.E., Acting Chief  
Wastewater Branch  
Department of Health  
State of Hawaii  
P.O. Box 3378  
Honolulu, Hawaii 96801

Subject: Draft Environmental Assessment (EA)  
Lanai Community Health Center, CDBG Project No. 08-04  
Tax Map Key (TMK): 4-9-006: 011, Lanai City, Lanai, Hawaii  
Response to Comment

Dear Ms. Pruder:

Thank you for your Department's letter (Ref: EMD/WB 640 Gay Street, LUD-2 4 9 006 011 ID#442) dated July 27, 2010 on the Draft Environmental Assessment (EA) for the Lanai Community Health Center, CDBG Project No. 08-04.

The Final EA will note the Department of Health has offered approval of the Health Center project as wastewater treatment and disposal will be serviced at the Lanai Wastewater Reclamation Facility.

The Final EA will also include that, at this time, Lanai City does not have a system to use recycled water for irrigation and other non-potable uses. As stated in the Draft EA, the Health Center will be designed for certification under Leadership in Energy & Environmental Design (LEED) and incorporate various conservation measures.

We appreciate your participation in the environmental review process.

Sincerely,

John Sakaguchi, AICP, Senior Planner

cc: H. Matsumoto, CDBG  
M. Murdock, Architects Hawaii, Ltd.  
D. Shaw, Lanai Community Health Center

(7953-01)  
08/10  
CHRYME LEINAALA FUKINO, M.D.  
DIRECTOR OF HEALTH

cc: AHL  
S. Tom  
5701 Kalaniana'olaha Hwy  
640 Gay Street  
Honolulu, HI 96826  
LUD-2 4 9 006 011 ID#442

WILSON OKAMOTO CORPORATION  
AUG 02 2010

LINDA LINGLE  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF HEALTH  
MAUI DISTRICT HEALTH OFFICE  
54 HIGH STREET  
WAILUKU, MAUI, HAWAII 96793-2102

July 6, 2010

Mr. John Sakaguchi, AICP  
Wilson Okamoto Corporation  
1907 South Beretania Street, Suite 400  
Honolulu, Hawaii 96826

Dear Mr. Sakaguchi:

**Subject: Draft Environmental Assessment  
Lanai Community Health Center  
Lanai City, Lanai, Hawaii  
TMK: 4-9-06:011**

Thank you for the opportunity to comment on this project. We have the following comments to offer:

1. The noise created during the construction phase of the project may exceed the maximum allowable levels as set forth in Hawaii Administrative Rules, Chapter 11-46 "Community Noise Control." A noise permit may be required and should be obtained before the commencement of this project.
2. All wastewater generated by the Health Center shall be discharged to existing County sewer lines which connect to the Lanai Wastewater Reclamation Facility.

It is strongly recommended that the Standard Comments found at the Department's website: <http://hawaii.gov/health/environmental/srv-planning/landuse/landuse.html> be reviewed and any comments specifically applicable to this project should be adhered to.

Should you have any questions, please call me at 808 984-8230.

Sincerely,

Patti Kittowski  
Acting District Environmental Health Program Chief

7953-01

7/6/10  
CHYOMEL L. FUNNO, M.D.  
DIRECTOR OF HEALTH  
LORRIE W. PANG, M.D., M.P.H.  
DISTRICT HEALTH OFFICER



7953-01  
August 2, 2011

Ms. Patti Kittowski, District Chief  
Environmental Health Program  
Maui District Health Office  
Department of Health  
State of Hawaii  
54 High Street  
Wailuku, Hawaii 96793-2102

**Subject: Draft Environmental Assessment (EA)  
Lanai Community Health Center, CDBG Project No. 08-04  
Tax Map Key (TMK): 4-9-006: 011, Lanai City, Lanai, Hawaii  
Response to Comment**

Dear Ms. Kittowski:

Thank you for your Department's letter dated July 6, 2010 on the Draft Environmental Assessment (EA) for the Lanai Community Health Center, CDBG Project No. 08-04. Our responses follow:

1. The Final EA will indicate that construction of the Health Center will, most likely, occur during daytime working hours. However, should the contractor elect to work during other hours, a noise permit will be necessary.
2. The Draft EA, Section 3.14.3, Wastewater, states that the sewer system from the Health Center will connect to the existing County lines, and flows will be directed to the Lanai Wastewater Reclamation Facility.

We appreciate your participation in the Draft EA review process.

Sincerely,

John L. Sakaguchi, AICP, Senior Planner  
cc: H. Matsumoto, CDBG  
M. Murdock, Architects Hawaii, Ltd.  
D. Shaw, Lanai Community Health Center



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
LAND DIVISION

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

June 8, 2010

RECEIVED JUN 09 10 08 59 ENGINEERING  
LAND DIVISION  
2010 JUN 29 P 12:55  
DEPT. OF LAND & NATURAL RESOURCES  
STATE OF HAWAII

MEMORANDUM

TO: DLNR Agencies:  
 Div. of Aquatic Resources  
 Div. of Boating & Ocean Recreation  
 Engineering Division  
 Div. of Forestry & Wildlife  
 Div. of State Parks  
 Commission on Water Resource Management  
 Office of Conservation & Coastal Lands  
 Land Division --Gavin Chiu

FROM: *Charlene Uroki*  
Charlene Uroki, Assistant Administrator  
SUBJECT: Draft Environmental Assessment for Lanai Community Health Center  
LOCATION: Island of Lanai  
APPLICANT: Wilson Okamoto Corporation

Transmitted for your review and comment on the above referenced document. We would appreciate your comments on this document. Please submit any comments by July 5, 2010.

If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact my office at 587-0433. Thank you.

Attachments

( ) We have no objections.  
( ) We have no comments.  
(X) Comments are attached.  
Signed: *Charlene Uroki*  
Date: *6/29/10*



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
LAND DIVISION

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

July 7, 2010

RECEIVED  
JUL 09 2010  
WILSON OKAMOTO CORPORATION

Wilson Okamoto Corporation  
1907 South Beretania Street  
Artesian Plaza Suite 400  
Honolulu, Hawaii 96826

Attention: Mr. John Sakaguchi, AICP

Ladies and Gentlemen:

Subject: Draft Environmental Assessment for Lanai Community Health Center

Thank you for the opportunity to review and comment on the subject matter. The Department of Land and Natural Resources' (DLNR), Land Division distributed or made available a copy of your report pertaining to the subject matter to DLNR Divisions for their review and comment.

Other than the comments from Commission on Water Resource Management, Engineering Division, the Department of Land and Natural Resources has no other comments to offer on the subject matter. Historic Preservation will be submitting comments through a separate letter. Should you have any questions, please feel free to call our office at 587-0433. Thank you.

Sincerely,

*Charlene Uroki*  
Charlene Uroki  
Acting Administrator

*JS*



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
LAND DIVISION

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809



DEPARTMENT OF LAND AND NATURAL RESOURCES  
ENGINEERING DIVISION

LD/CharleneUnoki  
Ref: DEALanaiComHealthCenter  
Maui.501

- We confirm that the project site, according to the Flood Insurance Rate Map (FIRM), is located in Flood Zone \_\_\_\_\_.
- Please take note that the project site, according to the Flood Insurance Rate Map (FIRM), is located in Zone \_\_\_\_\_.
- Please note that the correct Flood Zone Designation for the project site according to the Flood Insurance Rate Map (FIRM) is \_\_\_\_\_.
- Please note that the project must comply with the rules and regulations of the National Flood Insurance Program (NFIP) presented in Title 44 of the Code of Federal Regulations (44CFR), whenever development within a Special Flood Hazard Area is undertaken. If there are any questions, please contact the State NFIP Coordinator, Ms. Carol T'yeu-Beam, of the Department of Land and Natural Resources, Engineering Division at (808) 587-0267.
- Please be advised that 44CFR indicates the minimum standards set forth by the NFIP. Your Community's local flood ordinance may prove to be more restrictive and thus take precedence over the minimum NFIP standards. If there are questions regarding the local flood ordinances, please contact the applicable County NFIP Coordinators below:
  - Mr. Robert Sumitomo (808) 768-8097 or Mr. Mario Siu Li at (808) 768-8098 of the City and County of Honolulu, Department of Planning and Permitting.
  - Mr. Frank DeMarco at (808) 961-8042 of the County of Hawaii, Department of Public Works.
  - Mr. Francis Cerizo at (808) 270-7771 of the County of Maui, Department of Planning.
  - Mr. Mario Antonio at (808) 241-6620 of the County of Kauai, Department of Public Works.
- The applicant should include water demands and infrastructure required to meet project needs. Please note that projects within State lands requiring water service from the Honolulu Board of Water Supply system will be required to pay a resource development charge, in addition to Water Facilities Charges for transmission and daily storage.
- The applicant should provide the water demands and calculations to the Engineering Division so it can be included in the State Water Projects Plan Update.
- Additional Comments: \_\_\_\_\_
- Other: Our previous comments dated February 19, 2010 which was attached in the Draft Environmental Statement, still apply.**

Should you have any questions, please call Ms. Suzie S. Agraan of the Planning Branch at 587-0258.

Signed:  CARY CHANG  
ACTING CHIEF ENGINEER

Date: 6/29/10



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Aiehae Plaza, Suite 400  
Honolulu, Hawaii, 96826 USA  
Phone: 808-946-2277  
FAX: 808-946-2253  
www.wilsonokamoto.com

7953-01  
August 2, 2011

Mr. Russell Y. Tsuji, Administrator  
Land Division  
Department of Land and Natural Resources  
State of Hawaii  
P.O. Box 621  
Honolulu, Hawaii 96809

Subject: Draft Environmental Assessment (EA)  
Lanai Community Health Center, CDBG Project No. 08-04  
Tax Map Key (TMK): 4-9-006: 011  
Lanai City, Lanai, Hawaii  
Response to Comment – Engineering Division

Dear Mr. Tsuji:

Thank you for your Division's letter dated July 7, 2010 on the Draft Environmental Assessment (EA) for the Lanai Community Health Center, CDBG Project No. 08-04.

The Draft EA, Section 3.5, Flood Hazard, includes information about regulations related to development in Zone X, as discussed in your February 19, 2010 letter. The Final EA will include this same information.

We appreciate your participation in the Draft EA review process.

Sincerely,



John L. Sakaguchi, AICP, Senior Planner

cc: H. Matsumoto, CDBG  
M. Murdock, Architects Hawaii, Ltd.  
D. Shaw, Lanai Community Health Center

LINDA LINGLE  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
LAND DIVISION  
POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

LINDA LINGLE  
GOVERNOR OF HAWAII



July 7, 2010

Wilson Okamoto Corporation  
1907 South Beretania Street  
Artesian Plaza Suite 400  
Honolulu, Hawaii 96826

Attention: Mr. John Sakaguchi, AICP

Ladies and Gentlemen:

Subject: Draft Environmental Assessment for Lanai Community Health Center

Thank you for the opportunity to review and comment on the subject matter. The Department of Land and Natural Resources' (DLNR), Land Division distributed or made available a copy of your report pertaining to the subject matter to DLNR Divisions for their review and comment.

Other than the comments from Commission on Water Resource Management, Engineering Division, the Department of Land and Natural Resources has no other comments to offer on the subject matter. Historic Preservation will be submitting comments through a separate letter. Should you have any questions, please feel free to call our office at 587-0433. Thank you.

Sincerely,

*Charles Ellinor*  
for Morris M. Atta  
Acting Administrator

LINDA LINGLE  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE MANAGEMENT  
HONOLULU, HAWAII 96829

July 1, 2010

TO: Morris Atta, Administrator  
Land Division

FROM: Lenore N. Ohye, Acting Deputy Director  
Commission on Water Resource Management

SUBJECT: Lanai Community Health Center Draft EA

FILE NO.: N/A  
TMK NO.: (2) 4-9-006:001

RECEIVED  
LAND DIVISION  
2010 JUL 16 A 9:33  
DEPT. OF LAND & NATURAL RESOURCES  
STATE OF HAWAII

*Lenore N. Ohye*

Thank you for the opportunity to review the subject document. The Commission on Water Resource Management (CWRM) is the agency responsible for administering the State Water Code (Code). Under the Code, all waters of the State are held in trust for the benefit of the citizens of the State, therefore, all water use is subject to legally protected water rights. CWRM strongly promotes the efficient use of Hawaii's water resources through conservation measures and appropriate resource management. For more information, please refer to the State Water Code, Chapter 174C, Hawaii Revised Statutes, and Hawaii Administrative Rules, Chapters 13-167 to 13-171. These documents are available via the internet at <http://www.hawaii.gov/dlnr/cwrmi>.

Our comments related to water resources are checked off below.

- 1. We recommend coordination with the county to incorporate this project into the county's Water Use and Development Plan. Please contact the respective Planning Department and/or Department of Water Supply for further information.
- 2. We recommend coordination with the Engineering Division of the State Department of Land and Natural Resources to incorporate this project into the State Water Projects Plan.
- 3. We recommend coordination with the Hawaii Department of Agriculture (HDOA) to incorporate the reclassification of agricultural zoned land and the redistribution of agricultural resources into the State's Agricultural Water Use and Development Plan (AWUDP). Please contact the HDOA for more information.
- 4. We recommend that water efficient fixtures be installed and water efficient practices implemented throughout the development to reduce the increased demand on the area's freshwater resources. Reducing the water usage of a home or building may earn credit towards Leadership in Energy and Environmental Design (LEED) certification. More information on LEED certification is available at <http://www.usgbc.org/leed>. A listing of fixtures certified by the EPA as having high water efficiency can be found at <http://www.epa.gov/watersense/gp/index.htm>.
- 5. We recommend the use of best management practices (BMP) for stormwater management to minimize the impact of the project to the existing area's hydrology while maintaining on-site infiltration and preventing polluted runoff from storm events. Stormwater management BMP's may earn credit toward LEED Certification. More information on stormwater BMP's can be found at <http://hawaii.gov/dlnr/initiative/led.php>.

Morris Atta, Administrator  
Page 2  
July 1, 2010

6. We recommend the use of alternative water sources, wherever practicable.
7. There may be the potential for ground or surface water degradation/contamination and recommend that approvals for this project be conditioned upon a review by the State Department of Health and the developer's acceptance of any resulting requirements related to water quality.

**Permits required by CWRM:**

- Additional information and forms are available at [http://hawaii.gov/dnr/cwrmit/resources\\_permits.htm](http://hawaii.gov/dnr/cwrmit/resources_permits.htm).
8. The proposed water supply source for the project is located in a designated water management area, and a Water Use Permit is required prior to use of water.
9. A Well Construction Permit(s) is (are) required any well construction work begins.
10. A Pump Installation Permit(s) is (are) required before ground water is developed as a source of supply for the project.
11. There is (are) well(s) located on or adjacent to this project. If wells are not planned to be used and will be affected by any new construction, they must be properly abandoned and sealed. A permit for well abandonment must be obtained.
12. Ground water withdrawals from this project may affect streamflows, which may require an instream flow standard amendment.
13. A Stream Channel Alteration Permit(s) is (are) required before any alteration(s) can be made to the bed and/or banks of a stream channel.
14. A Stream Diversion Works Permit(s) is (are) required before any stream diversion works is (are) constructed or altered.
15. A Petition to Amend the Interim Instream Flow Standard is required for any new or expanded diversion(s) of surface water.
16. The planned source of water for this project has not been identified in this report. Therefore, we cannot determine what permits or petitions are required from our office, or whether there are potential impacts to water resources.
- OTHER:

If there are any questions, please contact Charley Ice at 587-0218.



1907 South Boctania Street  
Ariston Plaza, Suite 406  
Honolulu, Hawaii, 96826 USA  
Phone: 808-946-2277  
FAX: 808-946-2253  
www.wilsonokamoto.com

7953-01  
August 2, 2011

Mr. Russell Y. Tsuji, Administrator, Land Division  
Department of Land and Natural Resources  
State of Hawaii  
P.O. Box 621  
Honolulu, Hawaii 96809

Subject: Draft Environmental Assessment (EA)  
Lanai Community Health Center, CDBG Project No. 08-04  
Tax Map Key (TMK): 4-9-006: 011, Lanai City, Lanai, Hawaii  
Response to Comment – Commission on Water Resource Management

Dear Mr. Tsuji:

Thank you for your Division's letter dated July 7, 2010 on the Draft Environmental Assessment (EA) for the Lanai Community Health Center, CDBG Project No. 08-04. Our responses follow:

1. The Draft EA was provided to the County of Maui Department of Water Supply.
2. The Draft EA, Section 2.3.5, Leadership in Energy & Environmental Design, states that the Health Center project will be submitted to the US Green Building Council for certification under Building Design & Construction.
3. The Draft EA, Section 3.14.2, Drainage, includes discussion that drainage from the project site will be detained on-site, utilizing landscaped areas along Gay Street as detention basins and swales within the site.
4. The Draft EA, Section 3.14.1, Water, states that the Health Center will be serviced by the Lanai Water Company, Inc. The Final EA will indicate that alternative water resources are not provided by the Lanai Water Company, Inc. in the Lanai City area.
5. The Final EA will indicate that anticipated demand using Statewide system standards would range from 3,450 - 5,880 gallons per day. This will account for other activities and events to be held at the Health Center as well as the adjoining Lanai Art Center, and site improvements which include landscaping.



7953-01  
 Letter to Mr. Russell Y. Tsuji, Administrator  
 Page 2  
 August 2, 2011

We appreciate your participation in the Draft EA review process.

Sincerely,

*John L. Sakaguchi*

John L. Sakaguchi, AICP, Senior Planner

cc: H. Matsumoto, CDBG  
 M. Murdock, Architects Hawaii, Ltd.  
 D. Shaw, Lanai Community Health Center



STATE OF HAWAII  
 DEPARTMENT OF LAND AND NATURAL RESOURCES  
 STATE HISTORIC PRESERVATION DIVISION  
 601 KAMOKILA BOULEVARD, ROOM 555  
 KAPOLEI, HAWAII 96707

Laura B. Tierley  
 Director  
 State Historic Preservation Division  
 Department of Land and Natural Resources  
 601 Kamokila Boulevard, Room 555  
 Kapolei, Hawaii 96707  
 Phone: (808) 673-2000  
 Fax: (808) 673-2001  
 Email: laura.tierley@hawaii.gov

DATE: June 30, 2010

LOG: 2010.2190  
 DOC: 1006RS16  
 Architecture

TO: John Sakaguchi  
 Project Manager  
 Wilson, Okamoto Corporation  
 1907 South Beretania Street, Unit 400  
 Honolulu, HI

SUBJECT: Chapter 6E-42 / Draft EA Lanai Community Health Center  
 Permit # (None)  
 Owner: Castle and Cooke Resorts, LLC  
 Location: Lanai City, bounded by Houston, Sixth, and Gay Streets  
 Tax Map Key: (2) 4-9-006:011

RECEIVED  
 JUL 07 2010

JS

cc: CA

This letter to acknowledge submission of a *Draft Environmental Assessment, Lanai Community Health Center, CDBG Project 08-04*, prepared by Wilson, Okamoto Corporation, dated June 2010, and received by our office on June 4, 2010. The project entails construction of a one story clinic to be located on the Honolulu side of the block bounded by Houston, Sixth, and Gay Streets in Lanai City. The clinic building would contain 6,800 square feet, have a hipped roof, be "C" in shape, and contain examination rooms, consultation rooms, a mini laboratory, and offices. Services to be provided at the site include primary care and preventive services; communicable disease testing; dental; mental health services; pre-natal services; counseling and treatment; insurance eligibility; and medical outreach. The area of potential effect would be the lot and, during work, the streets immediately adjacent.

The project is located within the potential boundaries of the Lanai City Historic District, which as of 2010 is under consideration by the Hawaii Historic Places Review Board for listing on the Hawaii Register of Historic Places. The County of Maui has prepared such a nomination and the Board is considering the action because Lanai City was one of only a limited number of planned communities in the State's history, has unique architecture, and represents the most intact plantation community remaining in the state. (We had previously reviewed this project and determined it would have no effect on historic property. See enclosed June 17<sup>th</sup> letter, LOG: 2010.2353 DOC: 1006RS47.)

Any questions should be addressed to Ross W. Stephenson, SHPD Historian, at 692-8028 or ross.w.stephenson@hawaii.gov.

Māhalo for the opportunity to comment.

*Ross W. Stephenson*

Pua-Ahu, Administrator, Hawaii Historic Preservation Division, DLNR

7/2/10  
 Date

In the event that historic resources, including human skeletal remains, lava tubes, and lava blisters/bubbles are identified during construction activities, all work should cease in the immediate vicinity of the find, the find should be protected from additional disturbance, and the State Historic Preservation Division should be contacted immediately at (808) 692-8015.





be protected from additional disturbance, and the State Historic Preservation Division should be contacted immediately at (808) 692-8013.

7953-01  
August 2, 2011



1987 South Beretania Street  
Hawaii Plaza, Suite 1100  
Honolulu, Hawaii 96818 USA  
Phone: 808-946-2277  
FAX: 808-946-2253  
www.wilsonokamoto.com

Ms. Pua Aiu, Administrator  
State Historic Preservation Division  
Department of Land and Natural Resources  
State of Hawaii  
601 Karmokla Boulevard, Room 555  
Kapolei, Hawaii 96707

Subject: Draft Environmental Assessment (EA)  
Lanai Community Health Center, CDBG Project No. 08-04  
Tax Map Key (TMK): 4-9-006: 011, Lanai City, Lanai, Hawaii  
Response to Comment

Dear Ms. Aiu:

Thank you for your Department's letter dated June 30, 2010 (LOG NO: 2010.2190/DOC NO: 1006RS16) on the Draft Environmental Assessment (EA) for the Lanai Community Health Center, CDBG Project No. 08-04.

The Draft EA, Section 1.3, discusses the Lanai City Business Country Town Historic District nomination and its relation to the Health Center project site. The Draft EA also discusses that the Historic District nomination is still under review. The Final EA will indicate that the nomination remains under review.

The Final EA will indicate that the State Historic Preservation Division has determined the proposed project would have "no effect on historic properties." This determination was also reiterated in the Division's letter dated June 17, 2010 (LOG NO: 2010.2353/DOC NO: 1006RS47) which also indicated that after examination of the plans and conferral with the Maui County Planning Office, the Historic Preservation Division concurs that the project will "not affect historic properties."

We appreciate your participation in the Draft EA review process.

Sincerely,

A handwritten signature in black ink, appearing to read 'John L. Sakaguchi'.

John L. Sakaguchi, AICP, Senior Planner

cc: H. Matsumoto, CDBG  
M. Murdock, Architects Hawaii, Ltd.  
D. Shaw, Lanai Community Health Center

CHARMAINE TAVARES  
Mayor  
CHERYL K. OKUMA, Esq.  
Director

GREGG KRESGE  
Deputy Director



COUNTY OF MAUI  
DEPARTMENT OF  
ENVIRONMENTAL MANAGEMENT  
2200 MAIN STREET, SUITE 100  
WAILUKU, MAUI, HAWAII 96793

July 2, 2010

Mr. John Sakaguchi  
Wilson Okamoto Corporation  
1907 South Beretania Street  
Honolulu, Hawaii 96826

Dear Mr. Sakaguchi,

SUBJECT: LANAI COMMUNITY HEALTH CENTER  
DRAFT ENVIRONMENTAL ASSESSMENT  
TMK (2) 4-9-006:011, LANAI CITY, LANAI

WILSON OKAMOTO CORPORATION

RECEIVED  
JUL 07 2010

TRACY TAKAMINE, P.E.  
Solid Waste Division  
DAVID TAYLOR, P.E.  
Wastewater Reclamation  
Division

7/2/10  
7/5/10

Mr. John Sakaguchi  
July 2, 2010  
Page 2

f. Non-contact cooling water and condensate should not drain to the wastewater system.

If you have any questions regarding this memorandum, please contact Gregg Kresge at 270-8230.

Sincerely,

CHERYL K. OKUMA  
Director of Environmental Management

We reviewed the subject project as a pre-application consultation and have the following comments:

1. Solid Waste Division comments:
  - a. Discuss management of solid waste generated by the project.
2. Wastewater Reclamation Division (WWRD) comments:
  - a. Although wastewater system capacity is currently available as of 7/2/2010, the developer should be informed that wastewater system capacity cannot be ensured until the issuance of the building permit.
  - b. Wastewater contribution calculations are required before building permit is issued.
  - c. Developer is not required to pay assessment fees for this area at the current time.
  - d. Plans shall show the existing property sewer service manhole near the property line. If a property sewer service manhole does not exist, one shall be installed.
  - e. Commercial kitchen facilities and medical related discharges within the proposed project shall comply with pre-treatment requirements (including grease interceptors, sample boxes, screens etc.)

7953-01  
August 2, 2011



907 South Beretania Street  
Irestara Plaza, Suite 400  
Honolulu, Hawaii, 96826 USA  
Phone: 808-946-2277  
Fax: 808-946-2233  
www.wilsonokamoto.com

Mr. Kyle Ginoza, Director  
Department of Environmental Management  
County of Maui  
2200 Main St.  
One Main Plaza Bldg., Suite 100  
Wailuku, Hawaii 96793-2155

Subject: Draft Environmental Assessment (EA)  
Lanai Community Health Center, CDBG Project No. 08-04  
Tax Map Key (TMK): 4-9-006: 011, Lanai City, Lanai, Hawaii  
Response to Comment

Dear Mr. Ginoza:

Thank you for your Department's July 2, 2010 comment letter on the Draft Environmental Assessment (EA) for the Lanai Community Health Center, CDBG Project No. 08-04. Our responses follow:

1. Solid Waste Division comments:

The Draft EA, Section 3.14.5, Solid Waste, includes discussion of solid waste generated from the Health Center project, and the County's Integrated Solid Waste Management Plan.

2. Wastewater Reclamation Division (WWRD) comments:

- a. The Final EA will indicate that although wastewater system capacity is currently available as of 7/2/10, the developer should be informed that wastewater system capacity cannot be ensured until the issuance of the building permit.
- b. The Final EA will indicate that wastewater contribution calculations are required before the building permit is issued.
- c. The Final EA will indicate that the developer is not required to pay assessment fees for this area at the current time.

7953-01  
Letter to Mr. Kyle Ginoza, Director  
Page 2  
August 2, 2011



WILSON OKAMOTO  
CORPORATION  
907 SOUTH BERETANIA STREET  
HONOLULU, HAWAII 96826 USA

- d. The Draft EA, Section 3.14.3, Wastewater, includes discussion that the County's sewer lines are located along Houston Street, Gay Street, Sixth Street, and Seventh Street. The Final EA will indicate that design plans will need to show the existing property sewer service manholes near the property boundary and installation of a manhole, if needed.
- e. The Final EA will indicate that no commercial kitchen facilities are part of the Health Center project. The Draft EA, Section 3.14.5, Solid Waste, indicates that bio-hazards waste is taken to the Lanai Community Hospital for disposal.
- f. The Final EA will indicate that the Health Center will use split air-conditioning systems with on-site drywells to dispose condensate. Thus, since there will be no disposal of condensate to the County wastewater system, there will be no adverse affects to the County wastewater system.

We appreciate your participation in the Draft EA review process.

Sincerely,

John L. Sakaguchi, AICP, Senior Planner

cc: H. Matsumoto, CDBG  
M. Murdock, Architects Hawaii, Ltd.  
D. Shaw, Lanai Community Health Center

CHARMAINE TAVARES  
Mayor



**DEPARTMENT OF PARKS & RECREATION**  
700 Hall'a Nakoa Street, Unit 2, Wailuku, Hawaii 96793

June 14, 2010

John L. Sakaguchi, AICP  
Wilson Okamoto Corporation  
1907 South Beretania Street, Suite 400  
Honolulu, Hawaii 96826

RE: Draft Environmental Assessment  
Lanai Community Health Center  
CDBG Project No. 08-04  
Lanai City, Lanai, Hawaii  
TMK: (2) 4-9-006:011

Dear Mr. Sakaguchi:

Thank you for the opportunity to review and comment on the Draft Environmental Assessment document for the Lanai Community Health Center on the Island of Lanai.

At this time we have no additional comment to offer regarding this proposed development.

Should you have any questions, please feel free to call me, or Patrick Matsui, Chief of Parks Planning & Development at 808-270-7931.

Sincerely,

*Tamara Horcajo*  
TAMARA HORCAJO  
Director of Parks and Recreation

c: Patrick Matsui, Chief of Parks Planning & Development

TH:PTM:rh



1907 South Beretania Street  
Aristotle Plaza, Suite 400  
Honolulu, Hawaii, 96826 USA  
Phone: 808-946-2277  
FAX: 808-346-2253  
www.wilsonokamoto.com

7953-01  
August 2, 2011

Mr. Glenn Correa, Director  
Department of Parks & Recreation  
County of Maui  
700 Hall'a Nakoa Street, Unit 2  
Wailuku, Hawaii 96793

Subject: Draft Environmental Assessment (EA)  
Lanai Community Health Center, CDBG Project No. 08-04  
Tax Map Key (TMK): 4-9-006: 011  
Lanai City, Lanai, Hawaii  
Response to Comment

Dear Mr. Correa:

Thank you for your Department's letter dated June 14, 2010 on the Draft Environmental Assessment (EA) for the Lanai Community Health Center, CDBG Project No. 08-04. The Final EA will note that the Department of Parks & Recreation does have not comments regarding the proposed development.

We appreciate your participation in the Draft EA review process.

Sincerely,

*John L. Sakaguchi*

John L. Sakaguchi, AICP, Senior Planner  
cc: H. Matsumoto, CDBG  
M. Murdock, Architects Hawaii, Ltd.  
D. Shaw, Lanai Community Health Center

7953-01  
6/19/10  
TAMARA HORCAJO Director  
ZACHARY Z. HELM Deputy Director

JS

RECEIVED  
JUN 18 2010  
WILSON OKAMOTO CORPORATION

CHARMAINE TAVARES  
Mayor  
KATHLEEN ROSS AOKI  
Director  
ANN T. CUA  
Deputy Director



COUNTY OF MAUI  
**DEPARTMENT OF PLANNING**

July 26, 2010

Mr. John Sakaguchi, AICP  
Wilson Okamoto Corporation  
1907 South Beretania Street, Suite 400  
Honolulu, Hawaii 98828

Dear Mr. Sakaguchi:

**SUBJECT: COMMENTS ON THE DRAFT ENVIRONMENTAL ASSESSMENT (EA)  
FOR THE PROPOSED LANAI HEALTH CENTER, LOCATED IN LANAI  
CITY, LANAI, HAWAII; TMK: (2) 4-9-006:011 (POR.) (EAC 2010/0002)**

The Department of Planning (Department) is in receipt of the above-referenced request for comments on the Lanai Health Center Draft EA. The Department understands the proposed action includes the following:

- Demolition of three (3) one-story apartment buildings that were formerly used for plantation worker housing;
- The subdivision of TMK: (2) 4-9-006:011; and
- The development and operation of a new Lanai Health Center building and associated parking lot.

The Department appreciates the incorporation of the comments sent on April 15, 2010 regarding the pre-assessment notice. The Department took the Draft EA to the Lanai Planning Commission (Commission) for review and comment on July 21, 2010, and received the following additional comments.

1. In the analysis of competition with existing facilities, the Commission would like to see the EA address the competitive impact the new facility will have on the existing Straub services;
2. The Commission also asked about the staffing capacity available for the x-ray and laboratory facilities and requested the EA address whether or not the staffing capacity of the new facility and the hospital will be adequate to support Medicare requirements; and
3. Finally, the Commission received written testimony from Fairfax A. Riley regarding some clarifications he personally would like addressed in the EA.

250 SOUTH HIGH STREET, WAILUKU, MAUI, HAWAII 96790  
MAIN LINE (808) 270-7735; FACSIMILE (808) 270-7634  
CURRENT DIVISION (808) 270-9235; LONG RANGE DIVISION (808) 270-7214; ZONING DIVISION (808) 270-7255

1453-01  
7/27/10

Mr. John Sakaguchi, AICP  
July 26, 2010  
Page 2

Thank you for the opportunity to comment. Should you require further clarification, please contact Small Town Planner Erin Wade at [erin.wade@mauicounty.gov](mailto:erin.wade@mauicounty.gov) or at 270-5517.

Sincerely,

ERIN K. WADE  
CLAYTON I. YOSHIDA, AICP  
Planning Program Administrator

for KATHLEEN ROSS AOKI  
Planning Director

cc: Erin K. Wade, AICP, Small Town Planner  
Jocelyn Pereira, Tri-Hale Main Street Resource Center  
Marnie Murdoch, Architects Hawaii Limited  
Project File  
General File

KRA:CIY:EKW:sg  
K:\WP\_DOCS\PLANNING\EA\2010\0002\_LanaiHealthCmnt\CommentLtr.doc



1307 South Beretani Street  
 Hialeah, FL 33149  
 Phone: 808-948-2277  
 FAX: 808-948-2253  
 www.wilsonokamoto.com

7953-01  
 August 2, 2011

Mr. William Spence, Director  
 Department of Planning  
 County of Maui  
 250 South High Street  
 Kalana Pakui Bldg., Suite 200  
 Wailuku, Hawaii 96793

Attention: Ms. Erin Wade, Small Town Planner  
 Subject: Draft Environmental Assessment (EA)  
 Lanai Community Health Center, CDBG Project No. 08-04  
 Tax Map Key (TMK): 4-9-006: 011  
 Lanai City, Lanai, Hawaii  
 Response to Comment

Dear Mr. Spence:

Thank you for your Department's letter dated July 26, 2010 on the Draft Environmental Assessment (EA) for the Lanai Community Health Center, CDBG Project No. 08-04 project. Our responses follow:

- As stated in the Draft EA, since September 2007, Lanai Community Health Center has been a Federally Qualified Health Center (FQHC) whose mission is to care for the community of Lanai. The Health Center's target population consists of those with incomes below 200% of the Federal poverty level, which is currently nearly 70% of the Island's households. No one is turned away by the Health Center due to lack of funds for necessary care. The Health Center serves individuals of all ages, ethnicity, gender, and residency - old timers, part-timers, and newcomers. Further, the Draft EA states that the Health Center services will include primary care and preventive health services, communicable disease testing, dental, mental health services, pre-natal services, counseling and treatment, insurance eligibility, and medical "enabling" services, such as outreach, case management, and language interpretation.

As stated in the Draft EA, Straub Clinic is a for-profit facility which also uses services from Lanai Hospital. The Final EA will include Straub Clinic is the only source, other than the Health Center, of primary care by a medical provider on the island. It is owned by Hawaii Pacific Health, a hospital



7953-01  
 Letter to Mr. William Spence, Director  
 Page 2  
 August 2, 2011

corporation headquartered on Oahu. The clinic is staffed by two family practice physicians, who are also responsible for emergency room management for the Lanai Community Hospital,

Straub Clinic employs no nurses and does not include the support staff, such as case managers. In the past, Straub Clinic has primarily served the large number of privately insured individuals employed by the two luxury hotels on Lanai. Straub Clinic is generally not in a position to serve large numbers of uninsured and/or Medicaid patients for long periods of time and often refers these patients to the Health Center.

The Health Center and Straub Clinic currently work cooperatively, and plan to continue to do so in the future. The Health Center offers critical specialty services on island -- which Straub Clinic does not. Straub Clinic sends their patients to the Health Center for these specialty services. Since Straub Clinic usually does not have female providers, Straub often sends its female patients to the Health Center for their pap smears.

In addition to the services the Health Center provides that Straub does not provide, the Health Center will continue to complement Straub and offer the residents of Lanai a choice in where to obtain care.

- The Final EA will include information that the Health Center will provide its staff for its services, including lab services and dental x-ray (the only type of x-ray services LCHC plans to provide). Both the Health Center and Straub Clinic use the Lanai Hospital for its routine, non-dental x-rays -- and plans to continue to do so in the future. A community the size of Lanai cannot support more than one x-ray facility at this time, and the Health Center is being careful not to duplicate such costly services

In addition to x-rays, the Health Center has been using Lanai Hospital for blood draws. Recently, the Hospital asked the Health Center to find an alternate method for its blood draws as was placing a burden on their one phlebotomist and does not provide the Hospital with any financial benefit. Towards that end, the Health Center is already in the process training its staff to do their own blood draws, and plans to continue to provide this service internally once the new facility is constructed.



7953-01

Letter to Mr. William Spence, Director

Page 3

August 2, 2011

In terms of Medicare staffing regulations, as an ambulatory practice, the health center is not under any such staffing regulations. All tests are CLIA Waived approved and the Health Center maintains proper licensure for CLIA Waived testing. As stated in the Draft EA, staffing at the Health Center will be established to meet the needs of the community.

- 3. The Final EA will include a response to clarifications from Fairfax A. Reilly.

We appreciate your participation in the Draft EA review process.

Sincerely,

John Sakaguchi, AICP, Senior Planner

- cc: H. Matsumoto, CDBG
- M. Murdoch, Architects Hawaii, Ltd.
- D. Shaw, Lanai Community Health Center



CHARMAINE TAVARES  
MAYOR

OUR REFERENCE  
YOUR REFERENCE

# POLICE DEPARTMENT COUNTY OF MAUI

55 MAHALANI STREET  
WAILUKU, HAWAII 96793  
(808) 244-6400  
FAX (808) 244-6411

June 23, 2010

7953-01  
6/24/10

GARY A. YABUTA  
CHIEF OF POLICE  
CLAYTON N.Y.W. TOM  
DEPUTY CHIEF OF POLICE

RECEIVED  
JUN 23 2010

WILSON OKAMOTO CORPORATION

Mr. John Sakaguchi, AICP  
Project Manager  
Wilson Okamoto Corporation  
1907 S. Beretania Street, Suite 400  
Honolulu, HI 96826

Dear Mr. Sakaguchi:

SUBJECT: Draft Environmental Assessment  
Lanai Community Health Center

Thank you for your letter of June 3, 2010, requesting comments on the above subject.

We have reviewed the report. Please refer to the enclosed copy of the communication from Officer John Sang of our Lanai District. Thank you for giving us the opportunity to comment on this project.

Very truly yours,

  
Assistant Chief Danny J. Matsuura  
for:  
GARY A. YABUTA  
Chief of Police

Enclosure

c: Kathleen Ross Aoki, Director, Maui County Planning Department

COPY

TO : GARY YABUTA, CHIEF OF POLICE, MAUI POLICE DEPARTMENT  
*At D. Shaw*  
VIA : CHANNELS 6/23/10  
FROM : JOHN K. SANG, POLICE OFFICER II, LANAI PATROL DIVISION  
SUBJECT : DRAFT ENVIRONMENTAL ASSESSMENT - LANAI COMMUNITY HEALTH CENTER

Sir, this TO/FROM is written in response to a request by Wilson Okamoto Corporation for input from the Maui Police Department with regards to the proposed Lanai Community Health Center.

The Lanai Community Health Center is proposing to build a new facility on a piece of property bordered by Sixth, Seventh, Houston and Gay streets in Lanai City. The greatest impact on the community this project poses, as it relates to law enforcement responsibilities, is in the area of traffic flow and control. After reviewing the proposed layout of the project and in speaking with D. SHAW from the Lanai Community Health Center I have identified one issue of concern with this project.

The current plans show two parking lots on the property which accommodates approximately eighteen stalls. The main parking lot is accessed through a driveway on Sixth street and currently poses little impact on traffic in the area.

The second parking lot has a driveway which is accessed from Gay Street. There are a few things that should be set forth before going any further.

1. Gay street is approximately twelve feet wide
2. Gay street is currently a two-way road
3. The size and shape of Gay street is currently dictated by the Lanai Master plan and will likely not increase in size so as to keep with the character of Lanai City
4. Lanai City Apartments, which is south of the proposed project site, has two driveways which are accessed through Gay Street
5. The secondary driveway for LCHC is slightly off-set from the second driveway of Lanai City Apartments
6. Lanai Senior Center uses Gay Street as an access route for its senior citizen transport.

With these facts in mind it is my belief that the position of the secondary parking lot for LCHC may pose traffic problems in the future as it will likely compete for road usage with both Lanai City Apartments and the Lanai Senior Center. After some discussion with D. SHAW regarding this I have come to the following conclusions. The secondary parking lot should be designated as an employee or staff parking lot only. This is to minimize the amount of traffic flowing to and from this parking lot as it will be limited to the hours of operation as well as the amount of staff

the facility will employ. Also, that the hours of operation should not exceed those currently employed. This will spread the usage of Gay Street through the day minimizing the competition for road space between Lanai Senior Center, Lanai City Apartments and the proposed LCHC. This will hopefully avoid "rush hour" situations in the future.

After speaking with SHAW about this project she estimated that this project may not see groundbreaking in the next five years. If this proves to be true I suggest a re-assessment at that time as the situation may change for the betterment or detriment of the project.


Sir these are my recommendations regarding this matter. If you have any questions regarding them please feel free to contact me at the Lanai Police station.

Respectfully Submitted,



SANG, JOHN K. #11799  
@N 061510 AT 0015 HOURS

Officer John SANG has suggested good recommendations which should be considered before breaking ground. I recommend that this report be forwarded to the appropriate representative for review and consideration.



Ernest SOARES  
6/15/10 @ 0950 Hrs.





1907 South Beretania Street  
Aiea, Hawaii 96825 USA  
Phone: 808-946-2277  
FAX: 808-946-2253  
www.wilsonokamoto.com

7953-01  
August 2, 2011

Chief Gary A. Yabuta, Chief of Police  
Police Department  
County of Maui  
55 Mahalani Street  
Wailuku, Hawaii 96793

Attention: Assistant Chief Danny J. Matsuura

Subject: Draft Environmental Assessment (EA)  
Lanai Community Health Center, CDBG Project No. 08-04  
Tax Map Key (TMK): 4-9-006: 011  
Lanai City, Lanai, Hawaii  
Response to Comment

Dear Chief Yabuta:

Thank you for your Department's letter dated June 23, 2010 on the Draft Environmental Assessment (EA) for the Lanai Community Health Center, CDBG Project No. 08-04.

In response to the one issue of concern, the Final EA will indicate that the Health Center will designate the 6-stall parking lot with ingress and egress from Gay Street for employee and staff parking only. This will minimize the vehicle traffic from the parking lot to staff personnel only. Further, this will limit vehicle traffic to the hours of operations of the Health Center, and reduce conflicts with other users of Gay Street.

The Final EA will include construction of the Health Center will proceed when funding for the project has been secured. At this time, no date has been determined for start of construction.

We appreciate your participation in the Draft EA review process.

Sincerely,

John L. Sakaguchi, AICP, Senior Planner

cc: H. Matsumoto, CDBG  
M. Murdock, Architects Hawaii, Ltd.  
D. Shaw, Lanai Community Health Center

CHARMAINE TAVARES  
Mayor  
MILTON M. ARAKAWA, A.I.C.P.  
Director  
MICHAEL M. MIYAMOTO  
Deputy Director  
Telephone: (808) 270-7845  
Fax: (808) 270-7955



COUNTY OF MAUI  
DEPARTMENT OF PUBLIC WORKS  
200 SOUTH HIGH STREET, ROOM NO. 434  
WAILUKU, MAUI, HAWAII 96793

July 2, 2010

Mr. John Sakaguchi, A.I.C.P.  
WILSON OKAMOTO CORPORATION  
1907 South Beretania Street, Suite 400  
Honolulu, Hawaii 96826

Dear Mr. Sakaguchi:

**SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT FOR THE  
PROPOSED LANAI COMMUNITY HEALTH CENTER**  
TMK: (2) 4-9-006:011

We reviewed the subject application and have the following comments:

1. A road-widening lot may be required for the adjoining half of Houston and Gay Streets to provide for a future 44 foot wide right of way and Sixth Street to provide for a future 50 foot wide right of way and improved to County standards to include, but not be limited to pavement widening, construction of curb, gutter and sidewalk, street lights and relocation of utilities underground. Development Services Administration shall determine whether the aforementioned are enforceable by the Maui County Code. If applicable, said lot shall be dedicated to the County upon completion of the improvements.
2. The applicant shall be responsible for all required improvements as required by Hawaii Revised Statutes, Maui County Code and rules and regulations.
3. As applicable, construction plans shall be designed in conformance with Hawaii Standard Specifications for Road and Bridge Construction dated 2005 and Standard Details for Public Works Construction, 1984, as amended.

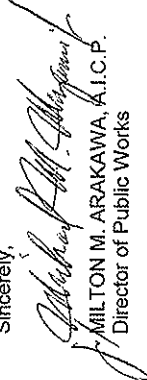
7953-01  
7/9/10  
RICH NAGAMINE, L.S., P.E.  
Development Services Administration  
CARY YAMASHITA, P.E.  
Engineering Division  
BRIAN HASHIRO, P.E.  
Highways Division

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JUL 08 2010  
MAIL DELIVERY CENTER

Mr. John Sakaguchi, A.I.C.P.  
July 2, 2010  
Page 2

4. As applicable, worksite traffic-control plans/devices shall conform to Manual on Uniform Traffic Control Devices for Streets and Highways, 2003.
5. The plans submitted for this project do not adequately show sufficient details to determine whether the project is compliant with building codes. We will review the project for building code requirements during the building permit application process.
6. When your project is financed with State or County funds, the requirements of Hawaii Revised Statutes, Chapter 103-50 will apply to this project.
7. Pages 2-3 indicate that many of the patients and staff will walk to the health center. This page also states that no curbs or sidewalks would be constructed in conjunction with the development of the new health center. Please clarify this conflict.
8. Landscape plantings along the street frontages shall be provided with root barriers to minimize the potential damage that the landscaping roots could do to curbs, gutters, sidewalks and pavement.
9. Use correct name for the Department of Public Works. No longer Department of Public Works and Environmental Management.

Please call Michael Miyamoto at (808) 270-7845 if you have any questions regarding this letter.

Sincerely,  
  
MILTON M. ARAKAWA, A.I.C.P.  
Director of Public Works

MMA:MMM:is  
xc: Highways Division  
Engineering Division  
S:\UACZM\prop\_lana\_i\_comm\_jhll\_cir\_dea\_49006011\_is.wpd



7953-01  
August 2, 2011

Mr. David Goode, Director  
Department of Public Works  
County of Maui  
200 South High Street, Room 434  
Wailuku, Hawaii 96793

Attention: Mr. Michael Miyamoto  
Subject: Draft Environmental Assessment (EA)  
Lana'i Community Health Center, CDBG Project No. 08-04  
Tax Map Key (TMK): 4-9-006: 011  
Lana'i City, Lana'i, Hawaii  
Response to Comment

Dear Mr. Goode:

Thank you for your Department's letter dated July 2, 2010 on the Draft Environmental Assessment (EA) for the Lana'i Community Health Center, CDBG Project No. 08-04. Our responses follow:

1. As stated in the Draft EA, the Health Center will be designed to comply with the Lana'i City Community Design Guidelines, including those related to streets. The Final EA will include that the Guidelines indicate the Lana'i Community Plan calls for design standards which maintain the existing scale and street layout pattern. Further, the Guidelines state curbs and gutters exist in only a few areas in Lana'i City, notably in the commercial district around Dole Park, and that the character of much of Lana'i City is not well-paved. The Guidelines also indicate shoulders of most roads are unimproved, grass swales are used for drainage, and in the frequently wet weather, pedestrians walk in the street. The sidewalk master plan in the Guidelines shows no sidewalks on the three streets fronting the project site. Lastly, the Final EA will note that the Development Services Administration will determine the need for roadway widening lots along Sixth Street, Gay Street and Houston Street.
2. The Final EA will include that the Health Center will be responsible for all improvements as required by Hawaii Revised Statutes (HRS), Maui County Code and rules and regulations, as applicable.
3. As applicable, the proposed project will be designed in compliance with Hawaii Standard Specifications for Road and Bridge Construction (2005) and Standard Details for Public Works Construction (1984, amended).



7953-01  
 Letter to Mr. David Goode, Director  
 Page 2  
 August 2, 2011

CHARMAINE TAVARES  
 Mayor



JEFFREY K. ENG  
 Director

7953-01  
 6/19/11  
 JKE

DEPARTMENT OF WATER SUPPLY  
 COUNTY OF MAUI  
 200 SOUTH HIGH STREET  
 WAILUKU, MAUI, HAWAII 96793-2155  
 www.mauiwater.org

June 10, 2010

Mr. John Sakaguchi, Sr. Planner  
 Wilson Okamoto Corporation  
 1907 S Beretania Street  
 Honolulu, Hawaii 96826

RECEIVED  
 JUN 18 2010  
 HAWAII DEPARTMENT OF WATER SUPPLY

SUBJECT: Draft Environmental Assessment for the Proposed Lanai Community Health Center - demolish three existing buildings and construct a new facility on TMK: (2) 4-9-006:011

Dear Mr. Sakaguchi:

Thank you for the opportunity to provide additional comments on the proposed development. We note that our comment letter of March 9, 2010 is included in the DEA document.

The DEA indicates that anticipated daily demand for the facility is 1,600 gallons based on fixture count. This may be an underestimate considering other activities and events to be held at the center as well as the adjoining Lanai Art Center and site improvements which include landscaping. Anticipated demand using statewide system standards would range from 3,450 - 5,880 gallons per day.

Should you have any questions, please contact our Water Resources and Planning Division at 808-244-8550.

Sincerely,

Jeffrey K. Eng  
 Director

eam

"By Water All Things Find Life"

The Department of Water Supply is an Equal Opportunity provider and employer. To file a complaint of discrimination, write: USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington DC 20250-9410. Or call (202) 720-5864 (voice and TDD)

Printed on recycled paper

4. The Final EA will indicate that a traffic control plan will be required for work within the County right-of-way. As applicable, worksite traffic control plans/devices will conform to the Manual on Uniform Traffic Control Devices for Streets and Highways (2003).
5. The Draft EA indicated that a building permit will be required for the proposed project. The appropriate design plans will be submitted at that time.
6. The Final EA will indicate that the project design will comply with HRS, Chapter 103-50, as applicable. The building design will consider the needs of persons with disabilities, and with the Americans with Disabilities Act Accessibility guidelines, including for on-site walkways.
7. As noted above, the shoulders of most roads are unimproved, and grass swales in Lanai City are used for drainage. Observations show that the streets and swales are also used for walkways by pedestrians. As previously stated, the site plan for the Health Center shows the on-site walkways.
8. The project's landscaping plans will show details of the necessary root barriers.
9. The department will be corrected to Department of Public Works in the Final EA.

We appreciate your participation in the Draft EA review process.

Sincerely,

John L. Sakaguchi, AICP, Senior Planner

cc: H. Matsumoto, CDBG  
 M. Murdock, Architects Hawaii, Ltd.  
 D. Shaw, Lanai Community Health Center



1907 South Beretania Street  
 Artesian Plaza, Suite 400  
 Honolulu, Hawaii, 96826 USA  
 Phone: 808-946-2277  
 FAX: 808-946-2253  
 www.wilsonokamoto.com

7953-01

August 2, 2011

Mr. Dave Taylor, Director  
 Department of Water Supply  
 County of Maui  
 200 South High Street  
 Kalana O Maui Bldg., 5th Floor  
 Wailuku, Hawaii 96793-2155

Subject: Draft Environmental Assessment (EA)  
 Lanai Community Health Center, CDBG Project No. 08-04  
 Tax Map Key (TMK): 4-9-006: 011, Lanai City, Lanai, Hawaii  
 Response to Comment

Dear Mr. Taylor:

Thank you for your Department's letter dated June 10, 2010 on the Draft Environmental Assessment (EA) for the Lanai Community Health Center, CDBG Project No. 08-04.

The Draft EA states that anticipated daily demand for the facility of 1,600 gallons per day was based on the fixture count for the Health Center. The Final EA will indicate landscape irrigation of about 360 gallons per day using a drip system. The Final EA will also indicate that anticipated demand using Statewide system standards would range from 3,450 - 5,880 gallons per day.

We appreciate your participation in the Draft EA review process.

Sincerely,

John L. Sakaguchi, AICP, Senior Planner

cc: H. Matsumoto, CDBG  
 M. Murdock, Architects Hawaii, Ltd.  
 D. Shaw, Lanai Community Health Center

Maui Electric Company, Ltd. • 210 West Kamehameha Avenue • PO Box 398 • Kahului, Maui, HI 96733-6998 • (808) 871-9461



7953-01  
 6/15/10  
 JS TF

RECEIVED

JUN 14 2010

STATE UNIVERSITY OF HAWAII

Mr. John L. Sakaguchi, AICP  
 Wilson Okamoto Corporation  
 1907 South Beretania Street, Suite 400  
 Honolulu, Oahu, Hawaii, 96826

Subject: Draft Environmental Assessment for the Lanai Community Health Center  
 Gay Street and Sixth Street  
 Lanai City, Lanai, Hawaii  
 Tax Map Key: (2) 4-9-006:011

Dear Mr. Sakaguchi,

Thank you for allowing us to comment on the Draft Environmental Assessment for the subject project.

In reviewing our records and the information received, Maui Electric Company has no additional comments to the subject project at this time.

Should you have any questions or concerns, please call me at 871-2341.

Sincerely,

Kyle Tamori  
 Staff Engineer

File



7953-01  
August 2, 2011

Mr. Kyle Tamori, Staff Engineer  
Maui Electric Company, Ltd.  
210 West Kamehameha Avenue  
P.O. Box 398  
Kahului, Hawaii 96733-6898

Subject: Draft Environmental Assessment (EA)  
Lanai Community Health Center, CDBG Project No. 08-04  
Tax Map Key (TMK): 4-9-006: 011  
Lanai City, Lanai, Hawaii  
Response to Comment

Dear Mr. Tamori:

Thank you for your letter dated June 10, 2010 on the Draft Environmental Assessment (EA) for the Lanai Community Health Center, CDBG Project No. 08-04. The Final EA will indicate that Maui Electric Company, Ltd. has no additional comments to the subject project at this time.

We appreciate your participation in the Draft EA review process.

Sincerely,

John L. Sakaguchi, AICP, Senior Planner

cc: H. Matsumoto, CDBG  
M. Murdock, Architects Hawaii, Ltd.  
D. Shaw, Lanai Community Health Center

7953-01  
7/22/10 JS  
TF  
FUE  
cc: AHL

Fairfax A. Reilly  
468 Ahakea Street  
P.O. Box 630111  
Lanai City, HI 96763-0111

Lanai Planning Commission  
County of Maui, Planning Department  
2200 Main St.  
One Main Plaza Bldg Ste 619  
Wailuku, HI 96793

July 21, 2010

Dear Chair Rabaino and Commissioners,

Thank you for the opportunity to comment on the Draft Environmental Assessment for the proposed Lanai Community Health Center. I strongly support the construction proposed to benefit the residents of Lanai.

3.3 Noise/dust abatement: Apartments, churches, homes, school, library and retail operations bound within reasonable distance the proposed site. Due to the nature of the visitor industry and services provided during the daylight hours, I am recommending a "daytime noise/dust abatement mitigation" to permit these functions to continue during their regular hours of sleep and operations.

3.4.1 Drainage: Please note that storm events result in significant flow of water moving down grade from Lanai Avenue to Fraser Avenue along Sixth Street directed to the Lanai High & Elementary School/Library property. Retaining run-off during a significant storm event may be a challenge. Please consider reviewing the R. M. Towill Master Drainage Plan(Draft) for Lanai City to prepare for significant event run-off.

3.4.2 Aquifer: The comments related to the description of aquifers do not seem to conform to the current descriptions provided in the Draft Lanai Water Use and Development Plan available on-line through County of Maui Department of Water Supply. The significance of the differences is not clear to me.

3.7 Traffic control: As noted Sixth Street is a main access to Lanai High & Elementary School especially during the early morning and mid-afternoon as parents convey children to a drop-off point at Sixth Street and Fraser Avenue in front of Lanai Public/School Library. I recommend for safety and relief of congestion a mitigation to manage safety and congestion.

Sincerely,

Fairfax A. Reilly



7953-01  
August 2, 2011

Mr. Fairfax A. Reilly  
468 Ahakea Street  
P.O. Box 630111  
Lanai City, Hawaii 96793-0111

Subject: Draft Environmental Assessment (EA)  
Lanai Community Health Center, CDBG Project No. 08-04  
Tax Map Key (TMK): 4-9-006: 011,  
Lanai City, Lanai, Hawaii  
Response to Comment

Dear Mr. Reilly:

Thank you for your letter dated July 21, 2010 on the Draft Environmental Assessment (EA) for the Lanai Community Health Center, CDBG Project No. 08-04. We appreciate your expressed support for the proposed project to benefit the residents of Lanai. Our responses follow:

**3.3 Noise/dust abatement:** The Draft EA includes discussion of Noise Quality, Section 3.8, which states that construction noise will be mitigated by compliance with State Department of Health (DOH) Administrative Rules, Title 11, Chapter 46, "Community Noise Control". Typically, the construction work would occur during daytime hours (7:00 a.m. to 3:30 p.m.) Mondays through Fridays. The Draft EA also states if the construction work is expected to cause excessive noise, the contractor will be responsible for obtaining a noise variance according to Chapter 46 and compliance with conditions attached to the permit.

The Draft EA, Section 3.9 Air Quality, states that during construction, activities such as clearing, grubbing, grading, and excavation at the project site will generate dust, while vehicles and equipment will produce exhaust emissions. Dust control measures stipulated by Department of Health, Administrative Rules, Title 11, Chapter 60, "Air Pollution Control" regulations will be employed, as appropriate, during construction.

**3.4.1 Drainage:** The Draft EA, Section 3.1.4.2 Drainage, states that drainage on the project site will generally sheet flow from Houston Street towards Gay Street. The increased drainage from the project site will be detained on-site, utilizing landscaped areas along Gay Street as detention basins and swales within the site. The swales and basins would also function as bio-swales, which will capture the runoff and allow percolation to the subsurface. Use of bio-swales and basins would act to retain surface flows within the project site. The Final EA will indicate that the drainage design



7953-01  
Letter to Mr. Fairfax A. Reilly  
Page 2  
August 2, 2011

criteria is based on the "Rules for the Design of Storm Drainage Facilities in the County of Maui". The hydrologic criteria used for the design is based on a 50-year, 1-hour storm event.

The Final EA will indicate that the Drainage Master for Lanai City (February 2005) shows the existing drainage system for Lanai City consists of swales, basins, and drain lines along the roadways. The Lanai City drainage system was generally designed to convey most of the large flows via surface swales and roadways, and smaller flows via underground drain lines. The Lanai School system, one of three separate systems which provides drainage for the multi-family and single-family parcels in Lanai City, serves the single-family residences between 5<sup>th</sup> Avenue and the Park. The system empties into an existing drainage way that flows south, then turns west towards Iwiolo Gulch via an existing interceptor ditch.

**3.4.2 Aquifer:** The Draft EA, Section 3.4.2 Groundwater, states that the Health Center project site overlies the Central Aquifer Sector and is within the Leeward Aquifer System (S0102). The total sustainable yield of the Central Aquifer Sector is 6 million gallons per day (MGD) and 3 MGD for the Leeward Aquifer. Page 3-7 of the Water Use Development & Protection Plan Lanai, 06/28/2010 Draft, confirms this same information.

**3.7 Traffic control:** The Draft EA, Section 3.7 Traffic and Parking, includes traffic analysis from the Lanai High and Elementary School project. This analysis was based on peak hour time periods to identify the traffic impacts resulting from the Lanai High and Elementary School project. At the intersection with Sixth Street, Fraser Avenue carries 47 vehicles northbound and 104 vehicles southbound during the AM peak hour of traffic. During the PM peak hour, traffic volumes are higher with 145 vehicles traveling northbound and 124 vehicles traveling southbound. The critical traffic movement on the Fraser Avenue approach is the southbound left-turn and through traffic movements which operate at LOS "A" during the AM peak period. The PM peak hour also operates at LOS "A" at this intersection.

The traffic analysis also includes future conditions, or after the Lanai High and Elementary School enrollment had increased from 640 to 780 students. This future condition showed the Fraser Avenue and Sixth Street intersection would continue to operate at LOS "A". This would indicate additional mitigation related to congestion is not warranted. As stated in the Draft EA, the Health Center is anticipated to have 20 to 30 visitors per day.



7953-01  
Letter to Mr. Fairfax A. Reilly  
Page 3  
August 2, 2011

We appreciate your participation in the Draft EA review process.

Sincerely,

A handwritten signature in black ink, appearing to read 'John L. Sakaguchi'.

John L. Sakaguchi, AICP, Senior Planner

cc: H. Matsumoto, CDBG  
M. Mirdock, Architects Hawaii, Ltd.  
D. Shaw, Lanai Community Health Center