

# OEQC BULLETIN PUBLICATION FORM

- 1 Project Name: **Ki'ilae Farms Subdivision**  
Type of Document (***bolded***): **Draft EA** Final EA EIS prep notice draft EIS final EIS  
Check if applicable (***bolded***): Revised Document Supplemental Document  
Legal Authority: **Chapter 343, HRS**  
Agency determination: **Anticipated FONSI**  
Applicable sections:  
☒ use of state or county lands or funds ☐ use of land in the Waikiki district  
☐ use of conservation district lands ☐ amendment to county general plan  
☐ use of shoreline area ☐ reclassification of conservation lands  
☐ use of historic site or district ☐ construction or modification of helicopter facilities
- 2 Island: **Hawai'i**  
District: **South Kona**  
Tax Map Key Number: **(3rd): 8-5-006:001-029; 8-5-007:001-019**
- 3 Applicant or Applicant Agency:  
**Ki'ilae Estates LLC**  
Address: **1885 Main Street, Suite 104**  
**Wailuku, Hawai'i 96793**  
Contact: **c/o Ron Terry** Phone: **969-7090**
- 4 Approving Agency (EAs) or Accepting Authority (EISs):  
**Hawai'i County Planning Department**  
Address: **101 Aupuni Street, Suite 103**  
**Hilo HI 96720**  
Contact: **Daryn Arai** Phone: **961-8288x204**
- 5 Consultant: **Geometrician Associates**  
Address: **PO Box 396**  
**Hilo HI 96721**  
Contact: **Ron Terry** Phone: **969-7090**
- 6 Public Comment Deadline: **not yet ascertained**
- 7 Permits required prior to implementation: **Approval for Work in State ROW**
- 8 Project Summary (*name of file on disk*): [Provided on attached CD]
- 9 Public Library Copy: **Kealakekua (will be deposited date of publication)**
- 10 This form was prepared by: **Ron Terry** Phone: **969-7090**  
Signature: \_\_\_\_\_ Date: 6/18/08

## **Draft Environmental Assessment Summary Ki'ilaie Farms Subdivision**

Ki'ilaie Farms Subdivision consists of 48 existing or planned agricultural lots of 5 to 75 acres. Tentative subdivision approval was given in May 2004, subject to conditions on environmental protection, historic sites and burials, farming and infrastructure. In June 2007, Ki'ilaie Estates signed a Subdivision Agreement with the County of Hawai'i and agreed to provide utility and other improvements, secured with an \$8.4 million bond. Ki'ilaie Estates has been working since then to complete its roads and utilities. Construction plans for work within the State Highway 11 right-of-way had previously been approved without an EA requirement, but in January 2008 the Department of Transportation informed Ki'ilaie Estates that an EA was needed. Therefore, although the subdivision infrastructure is nearly complete, an EA is required in order to obtain access and utility hookups.

Archaeological sites have been preserved or data recovered, and construction has been subject to monitoring. For archaeological preservation purposes, Ki'ilaie Estates also transferred 238 acres to the National Park Service and set aside an additional 100 acres. Biological surveys located few valuable biological resources on the property, which has a history of grazing and is dominated by alien species, aside from a single endangered loulu palm (*Pritchardia affinis*), which is being protected in a preserve. A landscape easement was also created for gathering native plants. Impacts to traffic and infrastructure were considered and mitigated where necessary by the County and utilities during subdivision approval and development. Ki'ilaie Farms has design guidelines that encourage harmonious visual elements, natural cooling and ventilation, building at grade, shaded window openings, courtyards, and muted exterior colors. The project will also encourage farming in an agriculturally-zoned property that has not been farmed for many decades.

## **Distribution List for Ki'īlae Farms Subdivision Draft Environmental Assessment**

### **OEQC**

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

(2 hardcopies; 1 pdf file)

### **APPROVING AGENCY**

Christopher J. Yuen, Director  
Hawai'i County Planning Dept.  
101 Aupuni Street, Suite 3  
Hilo HI 96720

### **OTHER AGENCIES**

Stanley Tamura  
HDOT - Hawaii District Highways  
50 Makaala Street  
Hilo HI 96720

Clyde Nāmu'o, Administrator  
Office of Hawaiian Affairs  
711 Kapiolani Blvd., Suite 1250  
Honolulu HI 96813

Ruby McDonald  
Office of Hawaiian Affairs  
75-5706 Hanama Place, Ste. 107  
Kailua-Kona HI 96740

Laura Thielen, Director  
Hawai'i State DLNR  
P.O. Box 621  
Honolulu HI 96809

Administrator  
State Historic Pres. Div.  
601 Kamokila Blvd., Rm. 555  
Kapolei HI 96707

Brenda Ford, Councilmember  
Hawai'i County Council  
25 Aupuni Street  
Hilo HI 96720

Milton Pavao, Manager  
Hawai'i County DWS  
345 Kekuanaoa Street, Suite 20  
Hilo HI 96720

Lawrence Mahuna, Chief  
Hawai'i County Police Department  
349 Kapiolani Street  
Hilo HI 96720

#### ORGANIZATIONS AND INDIVIDUALS

Kona Hawaiian Civic Club  
PO Box 4098  
Kailua-Kona HI 96745

Clarence A. Medeiros Jr.  
86-3672 Government Main Road  
Captain Cook HI 96704

#### LIBRARY COPY

Kealahkekua Public Library  
P.O. Box 768  
Kealahkekua HI 96750



**Dear Participant:**

Attached for your review is a Draft Environmental Assessment (DEA) prepared pursuant to the EIS law (Hawai'i Revised Statutes, Chapter 343) and the EIS rules (Administrative Rules, Title 11, Chapter 200).

Project Name: **Ki'ilae Farms Subdivision**

Location:                      Island: **Hawai'i**                      District: **South Kona**

Tax Map Key Number: **(3rd): 8-5-006:001-029; 8-5-007:001-019**

Your comments must be received or postmarked by: **Fill in at appropriate time**

Please send original comments to the:

Consultant:                      **Geometrician Associates**

Address:                         **PO Box 396  
Hilo HI 96721**

Contact:                         **Ron Terry**    Phone: **969-7090**

Copies of the comments should be sent to:

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

and the following:

Approving Agency:           **Hawai'i County Planning Department**

Address:                         **101 Aupuni Street, Suite 103  
Hilo HI 96720**

Contact:                         **Daryn Arai**    Phone: **961-8288x204**

If you no longer need the Draft EA, please recycle it. Thank you for your participation in the Environmental Assessment process.

# **Ki‘ilae Farms Subdivision**

## **Draft Environmental Assessment**

TMK (3rd) 8-5-006:001-029; 8-5-007:001-019  
Ki‘ilae and Kauleolī 1<sup>st</sup> & 2<sup>nd</sup>, South Kona, District, Hawai‘i Island, State of  
Hawai‘i

July 2008

Prepared for:  
Hawai‘i County  
Planning Department  
101 Pauahi Street, Suite 3  
Hilo, Hawai‘i 96720

**Ki'ila'e Farms Subdivision**  
**Draft Environmental Assessment**

TMK (3rd) 8-5-006:001-029; 8-5-007:001-019  
Ki'ila'e and Kauleolī 1<sup>st</sup> and 2<sup>nd</sup>, South Kona, District, Hawai'i Island,  
State of Hawai'i

July 2008

**APPLICANT:**

Ki'ila'e Estates LLC  
1885 Main Street, Suite 104  
Wailuku, Hawai'i 96793

**APPROVING AGENCY:**

County of Hawai'i  
Planning Department  
101 Aupuni Street, Suite 3  
Hilo, Hawai'i 96720

**CONSULTANT:**

Geometrician Associates LLC  
P.O. Box 396  
Hilo, Hawai'i 96721

**CLASS OF ACTION:**

Use of State Lands (Highway Right-of-Way)

This document is prepared pursuant to:  
The Hawai'i Environmental Policy Act,  
Chapter 343, Hawai'i Revised Statutes (HRS), and  
Title 11, Chapter 200, Hawai'i Department of Health Administrative Rules (HAR).

## TABLE OF CONTENTS

SUMMARY .....	ii
PART 1: PROJECT DESCRIPTION AND E.A. PROCESS.....	1
1.1 Project Description and Location .....	1
1.2 Environmental Assessment Process .....	7
1.3 Public Involvement and Agency Coordination .....	8
1.4 Schedule .....	8
PART 2: ALTERNATIVES.....	9
2.1 No Action Alternative .....	9
2.2 Alternative Locations.....	9
PART 3: ENVIRONMENTAL SETTING, IMPACTS AND MITIGATION .....	10
3.1 Physical Environment .....	10
3.1.1 Geology, Soils and Geologic Hazard.....	10
3.1.2 Drainage, Water Features and Water Quality .....	12
3.1.3 Flora, Fauna, and Ecosystems .....	17
3.1.4 Air Quality, Noise and Scenic Resources .....	20
3.1.5 Hazardous Substances, Toxic Waste and Hazardous Conditions .....	24
3.2 Socioeconomic and Cultural .....	25
3.2.1 Socioeconomic Characteristics .....	25
3.2.2 Cultural and Archaeological Resources .....	26
3.3 Infrastructure and Public Services and Facilities .....	37
3.3.1 Utilities, Public Facilities, and Public Services .....	37
3.3.2 Roadways and Traffic.....	38
3.4 Secondary and Cumulative Impacts.....	40
3.5 Required Permits and Approvals .....	41
3.6 Consistency with Government Plans and Policies .....	41
3.6.1 Hawai'i State Land Use Law .....	41
3.6.2 Hawai'i County SMA and Zoning.....	42
3.6.3 Hawai'i County General Plan .....	42
3.6.4 Kona Community Development Plan .....	47
PART 4: DETERMINATION, FINDINGS AND REASONS.....	48
4.1 Determination .....	48
4.2 Findings and Supporting Reasons.....	48
REFERENCES .....	50
LIST OF TABLES	
TABLE 1 Birds Detected During Botanical Survey .....	19
TABLE 2 Selected Socioeconomic Characteristics .....	25
TABLE 3 Archaeological Sites .....	29
LIST OF FIGURES	
FIGURE 1 Property Location Map .....	2
FIGURE 2 Airphoto .....	3
FIGURE 3a TMK Map, Plat 8-5-006 .....	4
FIGURE 3b TMK Map, Plat 8-5-007 .....	5
FIGURE 4 Highway Connection.....	6
FIGURE 5 Project Site Photographs .....	11
FIGURE 6 FEMA Flood Map .....	13
FIGURE 7 Scenic Views .....	23
FIGURE 8 Archaeological Sites .....	28
APPENDIX 1a Planning Department and DOT Correspondence	
APPENDIX 1b Comments in Response to Pre-Consultation	
APPENDIX 2 Biological Reconnaissance	
APPENDIX 3 Cultural Impact Assessment and Summary of Archaeological Studies	
APPENDIX 4 Visual Impact Assessment	

## **SUMMARY OF THE PROPOSED ACTION, ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES**

Ki'ilaie Farms Subdivision, which currently consists of 48 agricultural lots varying in size from about 5 to 75 acres as well as five roadway lots, obtained tentative subdivision approval in May 2004, subject to various conditions related to environmental protection, historic sites and burials, agricultural uses and construction of infrastructure. On June 28, 2007, Ki'ilaie Estates LLC (Ki'ilaie Estates) entered into a Subdivision Agreement with the County of Hawai'i and agreed to provide various utility and other improvements by June 30, 2008, which was to be secured with a surety bond for \$8.4 million. Since that time Ki'ilaie Estates has been working to complete internal infrastructure improvements, including roads, and utilities, and access points to lots. Construction plans for the work within the State Highway 11 right-of-way were approved on December 4, 2003, without any requirements for an EA. After the previous approval had expired, construction plans for the work within the right-of-way were again approved on January 18, 2008, and four days later Ki'ilaie Estates was informed by the Department of Transportation that this work triggered the need to prepare an EA for both the connection and the entire subdivision it would serve. Therefore, although the subdivision infrastructure is nearly complete, and some lots are sold and nearly ready to be occupied, an EA is required in order to obtain access and utility hookups. Subsequent to these actions, the most makai five lots have been proposed for additional subdivision into 22 lots, bringing the potential future agricultural lot total to 65 lots.

Archaeological studies were conducted prior to subdivision and a large number of sites have been preserved. In addition, there has been an extensive program of data recovery and archaeological monitoring. Through the transfer of 238 acres of Ki'ilaie Ahupua'a to the National Park Service and the setting aside of an additional 100 acres that contains the Ki'ilaie Trail, the developer has secured the preservation of roughly 338 acres of one of the densest concentrations of relatively undisturbed archaeological features in South Kona, which is a substantial voluntary mitigation for effects to historic properties. Surveys conducted for the EA located very few valuable biological resources on the property, which has a history of grazing and is dominated by alien species, aside from a single loulu palm (*Pritchardia affinis*). This endangered species has been heretofore protected and will be further protected through creation of a botanical preserve. A 10,000 square foot landscape easement in the northwest corner of the subdivision was created as a condition of subdivision approval as an area for gathering of native plants. Impacts to traffic and infrastructure were considered and mitigated where necessary by the County and the public utilities during subdivision approval and development. Ki'ilaie Farms has design guidelines that encourage harmonious visual elements, natural cooling and ventilation, building at grade, shaded window openings, courtyards, and muted exterior colors. The project will also encourage farming in an agriculturally-zoned property that has not been farmed for many decades.

## **PART 1: PROJECT DESCRIPTION AND ENVIRONMENTAL ASSESSMENT PROCESS**

### **1.1 Project Description and Location**

This Environmental Assessment (EA) is being prepared by Ki‘ilae Estates LLC (Ki‘ilae Estates), developer of the Ki‘ilae Farms Subdivision, located makai of State Highway 11 in Ki‘ilae and Kauleolī, South Kona (Figures 1-2). Ki‘ilae Farms Subdivision, which is zoned Ag-5 and has 48 agricultural lots varying in size from about 5 to 75 acres as well as five roadway lots, obtained tentative subdivision approval on May 7, 2004 (Figure 3a-b). The approval contained various conditions related to environmental protection, historic sites and burials, agricultural uses and construction of infrastructure.<sup>1</sup>

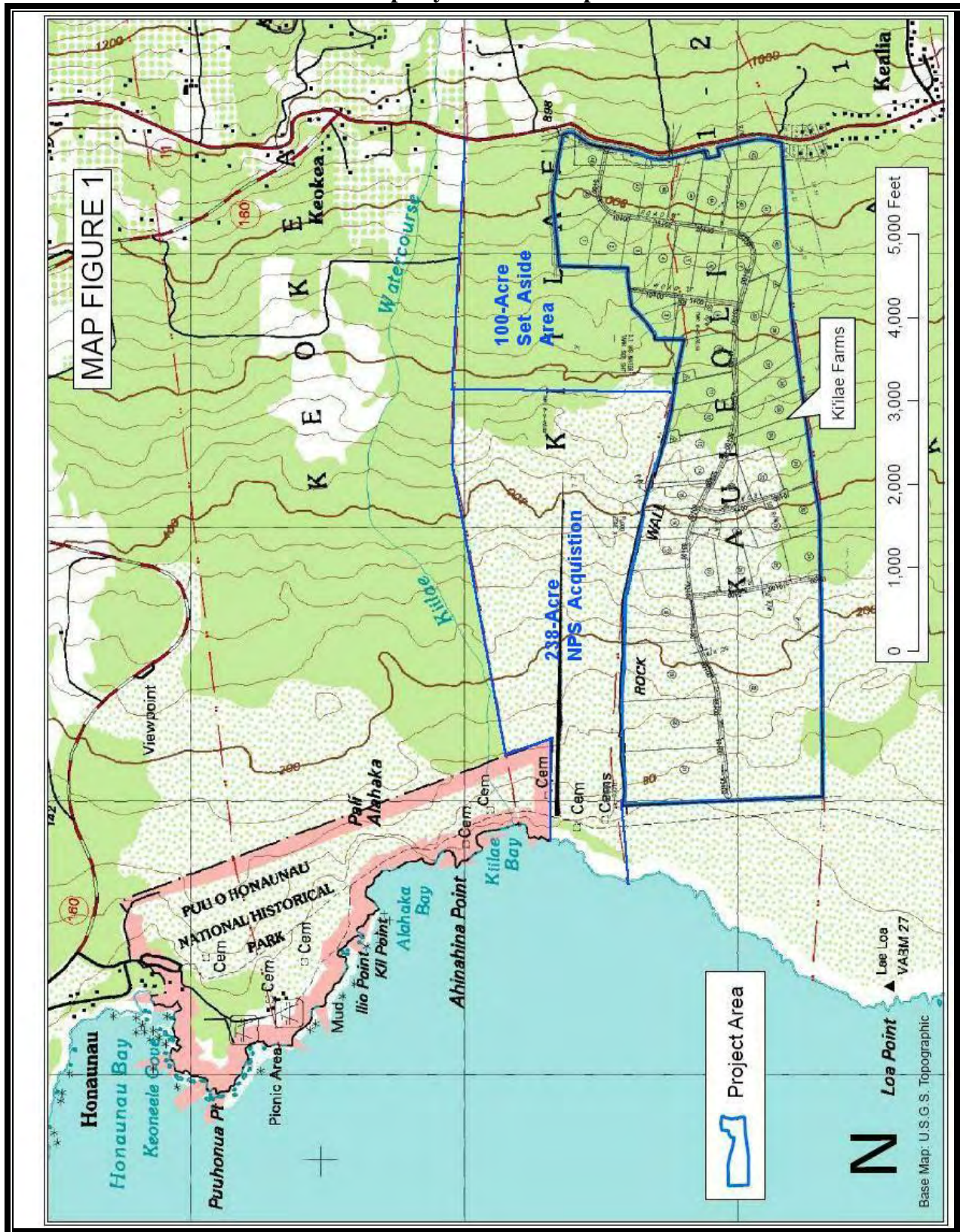
On June 28, 2007, Ki‘ilae Estates entered into a subdivision agreement with the County of Hawai‘i and agreed to provide various utility and other improvements by June 30, 2008, which was to be secured with a surety bond for \$8,410,154.28. Since that time Ki‘ilae Estates has been working to complete internal infrastructure improvements, including roads, utilities, and access points to lots. Construction plans for the work within the State Highway 11 right-of-way were approved on December 4, 2003, without any requirements for an EA. Due to the time required for the appeal process, the previous approval had expired. Construction plans for the work within the right-of-way (Figure 4) were again approved on January 18, 2008, via letter number HWY-H-08-2.0029. On January 22, 2008, Ki‘ilae Estates was informed by the State Department of Transportation (DOT) that the connection to State Highway 11 triggered the need to prepare an EA for both the connection and the entire subdivision it would serve (copies of Planning Department and HDOT letters referenced above are contained in Appendix 1a). As of June 2007, the Hawai‘i State Department of Transportation began requiring an EA before allowing subdivisions and certain other classes of activity to connect to State Highways. Therefore, although the subdivision infrastructure is nearly complete, and some lots are sold and nearly ready to be occupied, an EA is required in order to obtain access and utility hookups. Subsequent to these actions, the most makai five lots have been proposed for additional subdivision into 22 lots, bringing the agricultural lot total to 65 lots.

---

<sup>1</sup> An initial 2001 subdivision plan granted Tentative Approval by the Planning Director of the County of Hawai‘i to subdivide a larger area of the property was challenged by plaintiffs, who lost at the County Appeals Board level but prevailed in Hawai‘i 3<sup>rd</sup> circuit Court in 2003, on grounds that the Planning Director had incorrectly failed to require a Special Management Area permit and impose certain requirements of the subdivision code. This subdivision application was withdrawn. Another one was filed in October 2003 that excluded the area makai of the coastal Government Road. The Planning Director issued tentative subdivision approval in May 2004, which was also appealed by the original plaintiffs and one additional plaintiff on the grounds that the subdivision was illegally approved and would cause irreparable environmental harm. The County’s Appeals Board appointed a hearings officer who in January 2007 made findings of fact and conclusions of law (see Appendix 1a for text) which supported the Planning Director’s decision and were accepted by the Board of Appeals. Two of the plaintiffs appealed, but before the case could be heard in court, settled with Ki‘ilae Estates.



Figure 1  
Property Location Map





**Figure 2**  
**Airphoto**



Source: Google Earth

Completion of the road and utility connections would enable home-building, occupation and farming at Ki'ila Farms Subdivision. The subdivision has a *Declaration of Covenants, Conditions and Restrictions for Ki'ila Farms Subdivision* which recognizes that climate, existing landscape and natural beauty are important factors that must be considered in the design of improvements and alterations to the landscape. Various design standards have been developed to deal with the issues of site, grading, excavation and landscaping, and a detailed site and landscape plan must be submitted to the Design Review Board for approval prior to implementation. Among environmentally relevant restrictions are the following:

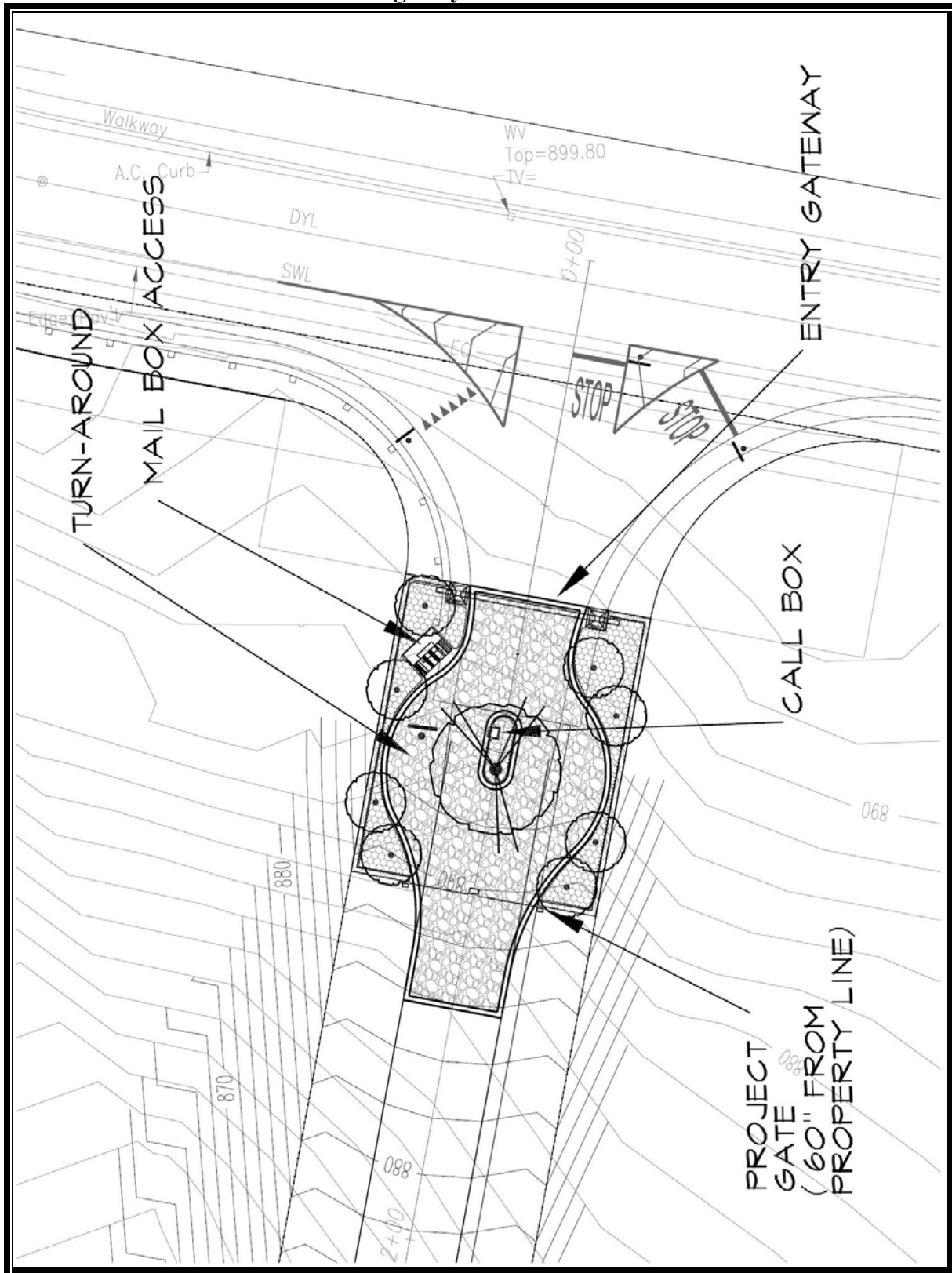
- Out of concern for invasive species and pests, no soil materials will be allowed to be imported to any lot, other than topsoil or engineered construction base course materials. Import material must be free of noxious substances, spores, seeds, plant material, insects, larva and eggs, particularly termites and carpenter ants, or other materials or organisms that may cause a nuisance or hazard to persons, property or plant life. Furthermore, no export of site material shall be allowed other than excess excavation materials.
- All exposed cut, fill and graded areas shall be landscaped with grass and ground cover plants and/or maintained in an agricultural use. In all such areas, measures shall be taken to mitigate the establishment of noxious weeds.



[illegible]

[illegible]

**Figure 4**  
**Highway Connection**



- Site runoff shall not drain to adjoining lots, except as established by natural drainage patterns, nor cause a condition that could lead to soil erosion on open spaces.
- Lighting should create a unified, natural effect that will not interfere or compete with the dramatic nighttime panorama views of the landscape and surrounding mountains. Permanent use of mercury vapor lamps or lamps which emit light of a similar character, exposed fluorescent lamps visible from adjacent lots, flashing lights, color lights, unshielded exterior lights and lights which result in excessive glare are prohibited.
- Architectural design standards are in place that encourage harmonious visual elements, natural cooling and ventilation, building at grade, shaded window openings, courtyards, and muted exterior colors instead of materials that increase glare, such as highly reflective surfaces.
- Maximum elevations for structures shall be 30 feet, to reduce visual impacts from near viewers and minimize how buildings protrude above the landscape from off-property viewpoints. Roofs must be predominantly of moderate pitch to reinforce the traditional Hawaiian ranch architecture, with colors that conform to muted, light to middle range values of the landscape.
- Solar panels are permitted on the roof of dwellings or accessory buildings if they are mounted flush on the roof (solar panels may extend above the roofs surface but may not be mounted on an angle to the roof's surface) and if they are non-reflective.

Also environmentally relevant is that Ki'ilaie Estates transferred 238 acres of Ki'ilaie Ahupua'a to the Trust for Public Land for sale to the National Park Service, and has also set aside an additional 100 acres that contain the Ki'ilaie Trail (see Figure 1). In doing so, the developer has secured the preservation of 338 acres of one of the densest concentrations of relatively undisturbed archaeological features in South Kona.

## **1.2 Environmental Assessment Process**

This Environmental Assessment (EA) process is being conducted in accordance with Chapter 343 of the Hawai'i Revised Statutes (HRS). This law, along with its implementing regulations, Title 11, Chapter 200, of the Hawai'i Administrative Rules (HAR), is the basis for the environmental impact assessment process in the State of Hawai'i. According to Chapter 343, an EA is prepared to determine impacts associated with an action, to develop mitigation measures for adverse impacts, and to determine whether any of the impacts are significant according to thirteen specific criteria. Part 4 of this document states the anticipated finding that no significant impacts are expected to occur and, based on the preliminary findings for each criterion made by the consultant in consultation with the Hawai'i County Planning Department, the approving agency. If, after considering comments to the Draft EA, the approving agency concludes that, as anticipated, no significant impacts would be expected to occur, then the agency will issue a Finding of No Significant Impact (FONSI), and the action will be permitted to occur. If the agency concludes that significant impacts are expected to occur as a result of the proposed action, then an Environmental Impact Statement (EIS) will be prepared.

### **1.3 Public Involvement and Agency Coordination**

The following agencies, organizations and individuals were consulted by letter during development of the Environmental Assessment.

Federal:

Pu‘uhonua o Hōnaunau National Historical Park

State:

Department of Health, Environmental Health Administration  
Department of Land and Natural Resources, Director  
Department of Land and Natural Resources, Historic Preservation Division  
Department of Transportation, Highways Division, Hawai‘i District  
Office of Hawaiian Affairs (Honolulu and West Hawai‘i)

County:

County Council  
Department of Parks and Recreation  
Department of Public Works  
Planning Department  
Police Department

Private:

Kona Outdoor Circle  
Kona Hawaiian Civic Club  
Sierra Club  
Clarence Medeiros  
Jack Kelly  
Jim Medeiros  
Hokukano Ranch

Responses received are contained in Appendix 1b.

### **1.4 Schedule**

As discussed in Section 1.1, the project has completed construction of most of its internal infrastructure. The only remaining task is to connect to State Highway 11 and to connect subdivision utilities to the water system, HELCO poles for electricity, telephone, and cable TV service. If the Planning Department determines that a FONSI is appropriate, the connections would be made immediately, and individual lot owners would be able to begin the development of their farms and/or construction of their homes.

## **PART 2:      ALTERNATIVES**

### **2.1      No Action Alternative**

Under the No Action Alternative, the Ki'ilae Farms Subdivision would not be allowed to connect to State Highway 11, and it would not be able to obtain water, electrical power, telephone or cable TV service from the HELCO power poles located within the State Highway 11 right-of-way. The already subdivided lots, which contain most of their internal infrastructure, would not be able to obtain the access and utilities required under the subdivision approval and as planned and approved by the State DOT, County of Hawai'i Department of Water Supply, HELCO, Hawaiian Telcom, and the CATV utility. Depending on future actions, the land might sit unused, it might be farmed in places by one owner, or there could be alternate arrangements with access through adjacent private property roads and using private electrical and water systems. This would be an inconvenience and expense to the occupants and would not benefit any public or private party. This also would trigger a default on the existing construction, default on the subdivision bond and default of the subdivision agreement and final subdivision guaranteed by the County of Hawai'i. Six of these lots have transferred to individual owners.

### **2.2      Alternative Locations**

The proposed location for the connection to State Highway 11 was selected because it was the most rational point for this connection, and the construction plans for the work within the State Highway right-of-way (Figure 4) have already been approved on two occasions, on December 4, 2003, and again on January 18, 2008. All infrastructure has been planned, approved by all governmental permitting bodies and built with the expectation of this connection point. No environmental impacts are associated with connecting in this particular location, and there are no other potential connection points with any advantages with respect to environmental impacts, costs, or any other reason. Therefore, no alternative connection points have been identified or advanced in this Environmental Assessment.

## **PART 3: ENVIRONMENTAL SETTING, IMPACTS AND MITIGATION MEASURES**

### *Basic Geographic Setting*

Ki'īlae Farms Subdivision is referred to throughout this EA as the project site or subdivision. The term *project area* is used to describe the general environs of this part of Kona. The property consists of two plats with five roadway lots and 48 agricultural lots (five of which may be subdivided in the future into 22 lots, making a total of 65 lots) totaling about 400 acres, makai of State Highway 11, within portions of Ki'īlae and Kauleolī 1<sup>st</sup> and 2<sup>nd</sup> Ahupua'a. The subdivision stretches from about 40 to 900 feet above sea level, with a fairly steep average slope of over 10% (see Figures 1-3). The average maximum daily temperature is approximately 78 degrees F, with an average minimum of 65 degrees, and annual rainfall averages about 50 inches, with a summer maximum (U.H. Hilo-Geography 1998:57). Grazing took place on the property up until 2003, which is classified in the General Plan as Extensive Agriculture. Aside from recent roadway and utility infrastructure, and an existing cottage dwelling, the site is undeveloped and contains vegetation that, although almost uniformly alien, varies somewhat in species composition and canopy height by elevation and substrate (Figure 5).

Current land uses on surrounding properties consist of the Pu'uhoonua O Hōnaunau National Historical Park makai and northwest, rural uses to the east (mauka) near Māmalahoa Highway, and mostly unused, former grazing lands on the north, west and south sides. The General Plan designation for surrounding properties includes Important Agricultural Land (to the northeast), Extensive Agriculture (to the east, south, and north-central), and Conservation (to the northwest). The land makai is in the State Land Use Conservation District. It can thus be expected that farms and residences will come to occupy some of the surrounding lands in the mauka areas, and that conservation uses will dominate in the makai surrounding lands.

### **3.1 Physical Environment**

#### **3.1.1 Geology, Soils and Geologic Hazards**

##### *Environmental Setting*

Geologically, the project site is located primarily on roughly 1,500 to 3,000-year old lava from Mauna Loa (Wolfe and Morris 1996). The soil in the Ki'īlae portion of the study area is predominantly Punaluu Extremely Rocky Peat [rPYD], with a limited occurrence of Kainaliu Extremely Stony Peat (rKED) in the northeastern corner (U.S. Soil Conservation Service 1973). In Kauleolī, the U.S. Soil Conservation Service maps define two distinct soil areas, with the upper section (above about 600 feet elevation) characterized by Punaluu Extremely Stony Peat [rPYD]. Kaimu soil is rapidly permeable, with slow runoff and slight erosion hazard, and is in Capability subclass VIIIs, which is often considered unsuitable for cultivation but may have small areas in coffee, macadamia nuts, and other crops. Punaluu soil is rapidly permeable in the peat layer but very slowly permeable within the pāhoehoe. Because of rapid water movement through cracks, the Punaluu Soil generally has slow runoff and slight erosion hazard, and is in



**Figure 5. Project Site Photographs**



**5a (Top): View Down Main Spine Road; 5b (Bottom): Typical Vegetation of Middle Section**



Capability Subclass VII as well (U.S. Soil Conservation Service 1973). The lower portion of the property (all within Kauleoli) is described as either Rough Broken Land [RB] or Lava Flows [rLW], with little or no true soil. The gentle, westward sloping terrain of the project area is punctuated at two places, at about the 650-foot elevation and at about the 250-foot elevation, where a modest bluff is present.

Volcanic hazard as assessed by the United States Geological Survey in this area of South Kona is 2 on a scale of ascending risk 9 to 1 (Heliker 1990:23). The high hazard risk is based on the fact that Mauna Loa is presently an active volcano. Volcanic hazard zone 2 areas have had 20% of their land area covered by lava or ash flows since the year 1800, and 5% since 1950. Zone 2 areas lie downslope from Mauna Loa's prominent rift zone ridges, which are potential eruption sites.

In terms of seismic risk, the entire Island of Hawai'i is rated Zone 4 Seismic Hazard Rating (*Uniform Building Code, 1997 Edition*, Figure 16-2). Zone 4 areas are at risk from major earthquake damage, especially to structures that are poorly designed or built, as the 6.7-magnitude (Richter) quake of October 15, 2006, demonstrated. The subdivision does not appear to be subject to subsidence, landslides or other forms of mass wasting.

#### *Impacts and Mitigation Measures*

Geologic conditions do not appear to impose any overriding constraints on the proposed action and the subdivision is not imprudent to construct, occupy or farm, given the County and State government commitment to such land uses as expressed in land use plans. All infrastructure has been engineered to take the soil setting and slopes into account, and home builders will be required to design homes and accessory structures in accordance with regulations in the Building Code related to the seismic setting.

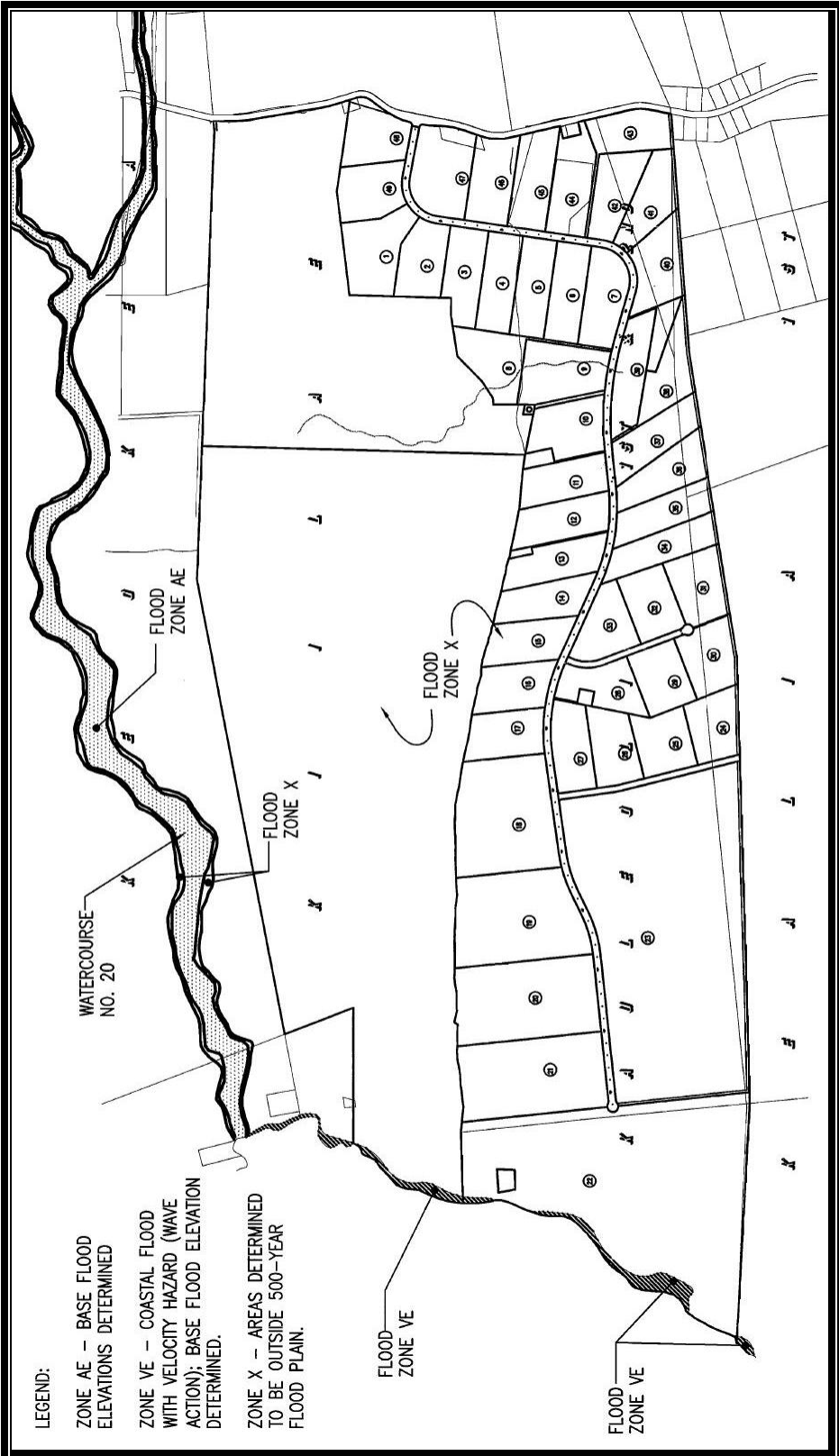
### **3.1.2 Drainage, Water Features and Water Quality**

#### *Existing Environment*

The project area has no streams, ponds, lakes, wetlands or other surface water bodies. The Flood Insurance Rate Maps (FIRM) show that the project site is in Flood Zone X, outside the 100-year floodplain (Figure 6). No known areas of local (non-stream related) flooding are present.

Concerns were expressed in the subdivision appeal process over possible effects on ocean water quality and ocean resources. In general, a new subdivision may affect coastal water quality through direct surface runoff in watercourses and through pollutants that can leach through the surface to the groundwater and ultimately to the sea. In the case of Ki'ilae Farms, environmental conditions do not favor substantial pollution from either source, as the recent lava geology has not yet developed watercourses that flow directly into the ocean, and the well-aerated column of soil and rock below the subdivision promote natural and substantial remediation of many pollutants.

Figure 6 FIRM Flood Zones



Source: M&E Pacific, from FEMA FIRM Maps, Hawai'i County, Panels 1166, 1167 and 1169

## *Impacts and Mitigation Measures*

M&E Pacific prepared a drainage report for the development of roadway areas that was reviewed and accepted by the County of Hawai‘i, in order to study and mitigate the impacts of roadway construction. The drainage report specified drywells and swales to be installed along the roadway to contain the runoff, to ensure that runoff does not encroach into more than one third the width of the nearest travel lane and that puddles must drain at all sumps created by roadway grading. These features are currently being constructed as part of the roadway infrastructure. The State Department of Health DOH has reviewed plans for drywells and granted underground injection control (UIC) permits.

Construction of roads and homes will increase the amount of impervious surfaces, thus reducing the capacity of the ground to absorb storm water. Current Department of Public Works drainage standards require drywells capable of absorbing a ten-year rainstorm. Even if every lot is eventually developed with a 5,000 square foot home and a 5,000 square foot driveway, the impervious surfaces due to home and driveway construction would only be about 5 percent of each lot. The paved portion of subdivision roads will be only about 2 percent of the total land area of the subdivision. Lot owners will be required to manage the drainage within their property, in conformance with County regulations and CC&Rs that require them to confine lot-generated drainage within their properties.

Direct surface runoff from this subdivision to the ocean caused by this development is unlikely. The subdivision itself involves ground-clearing only for roads, utilities and access points to lots, and does not involve construction of a golf course or other large-scale changes to the surface. There are no perennial or intermittent streams on the property. There is a relatively flat area, about 600 to 1,800 feet wide, between the subdivision and the sea. This flat area is within the State Land Use Conservation District. It is almost entirely pāhoehoe lava with no soil. Even if surface runoff were to reach this area it is probable that it would soak into the ground before reaching the sea.

In order to minimize the potential for sedimentation and erosion, the contractor has had to perform all earthwork and grading in conformance with Chapter 10, Erosion and Sediment Control, Hawai‘i County Code. Because the project disturbs more than one acre of soil, the contractor has been required to obtain a National Pollutant Discharge Elimination System (NPDES) permit before the project commenced. This permit required the completion of a Site-Specific Best Management Plan, which was prepared by M&E Pacific in April 2004 and is on file with the Hawai‘i State Department of Health, Clean Water Branch, File No. 0021806. The plan specified the emplacement of a number of best management practices (BMPs) for the project:

1. Fill requirements shall be satisfied from excavation locations for the project roadway; no stockpiling of dirt shall be performed. No off-site dirt material shall be used. On-site soil is generally coarse, which will be reduced in size with a crusher at the contractor staging area for use as roadway aggregate. Crushed material will be stockpiled at the staging area. A silt fence shall be installed around the perimeter of the staging area to filter runoff.

2. A contractor staging area shall be established on the makai side of Hawai'i Belt Road either in the flat area adjacent to the existing HELCO substation or within the existing on-site cottage lot (refer to the plans for locations). This area shall be used for storage of equipment, vehicles, cement, sandbags, gabions (if used), geotextile material, drip pans and/or drop cloths, adsorbent material, fertilizer and pesticide. As mentioned in item I above, no dirt shall be stockpiled, only roadway aggregate. A silt fence shall be installed around the staging area. Security fencing around the perimeter of the staging area with gate and lock may be installed at the discretion of the contractor.
3. Storage sheds or purchased/fabricated covered (plywood, wood, plastic, etc.) structures shall be used to house fertilizer, pesticides, herbicides, cement and petroleum-based fluids for refueling and maintaining construction equipment and keep them dry. An inventory of stored chemicals and materials shall be kept. Fertilizer, pesticides and herbicides shall not be used during periods of rainfall to prevent undesired, chemical-laden runoff. Only the minimum required amounts and no more than the maximum allowable quantities shall be used.
4. Equipment and vehicles shall be maintained daily (check fluid levels, tire air pressure, seals and hoses for leaks, tightness of caps and plugs, etc.) to minimize the chance of discharge. Any problems shall be resolved within 24 hours. Drip pans and/or drop cloths shall be used beneath stored equipment and vehicles during off-working times. These pans and cloths shall be stored at the staging area (also the central refueling and maintenance station) and be readily available and accessible on-site. Adsorbent material should also be readily available on-site and be used immediately for spills or leaks. Spent adsorbent, contaminated soil, and any material in contact with the spill or leak shall be removed and disposed of promptly and properly from the site. Burying or hosing down spills or leaks shall not be allowed.
5. On-site washing down of equipment and vehicles shall not be allowed. Equipment and vehicles shall be washed down at an off-site commercial washing business.
6. Crushed rock construction entrances (#2 crushed rock 30' wide x 50' long x 12" thick) shall be installed at the intersection of Hawai'i Belt Road and site access road UA for phase 1, and along road A for each subsequent phase and entrance to the stockpile area. Refer to the plans for more detail.
7. All BMPs shall be installed and functioning properly prior to the commencement of construction work. See plans for more information and details.
8. Construction shall be sequenced in phases to limit the amount of ground opened up and cleared at a time. No more than 5 acres shall be worked on and exposed at a time. Clearing and grubbing shall be held to the minimum necessary for grading and equipment operations.
9. Areas to be exposed longer than a week shall be grassed, mulched or graveled. Permanent soil stabilization shall be accomplished with perennial vegetation or pavement after final grading.
10. Exposed areas shall be watered lightly hourly during dry conditions to control dust nuisance and transport into the ocean.
11. Silt fences shall be used for the entrance road work to filter runoff.
12. Interceptor swales/ditches shall be used along the subdivision roadways to direct runoff to sedimentation basins installed for each of the phases. Interceptor swales shall also be constructed upslope of the proposed subdivision roadways in Phases 1, 2 and 5 to divert natural runoff away from project work and minimize the flow directed toward the sedimentation basins. Refer to the plans for more detail.
13. A gravel berm and silt fence shall be used along the makai edge of the Phase 5 sedimentation basin to filter runoff. Refer to the plans for more detail.
14. Existing inlets to lava tubes shall be completely surrounded by sandbags. Any openings to lava tubes encountered during construction work shall also be completely surrounded by sandbags. Should a lava tube opening be discovered during the construction of a sedimentation basin, and be located at the bottom of the basin, geotextile fabric shall be placed over the entire opening to the tube and sandbags shall be placed atop the fabric along the perimeter of the opening to act as both a filter for runoff and anchors for the fabric. Should the lava tube opening be located on the wall of the basin, geotextile fabric shall be placed over the entire opening and be anchored down with either sandbags or gravel. Refer to the plans for more detail.
15. The site will be designed to contain a 100-year storm event although County of Hawaii standards require accommodation of a 50-year rainfall event.
16. The BMPs shall be monitored, inspected and maintained daily. Any damaged BMP shall be repaired within 24 hours. A BMP status report, including discussion on any revisions, shall be developed monthly and submitted to both the owner and DOH-CWB, Honolulu.

17. Baseline samples of nearshore coastal waters adjacent to the site will be taken for comparative purposes prior to the commencement of construction work. A rainfall gauge shall be installed at the roadway terminus prior to construction work commencement, and sampling of coastal waters shall be conducted after every rainfall period of 1" or more within 24 hours for monitoring.
18. A photo log shall be maintained by the contractor, mainly of the coastal waters and construction site after 1" rainfalls or greater. Photos shall be taken weekly regardless of weather conditions.
19. Sandbags (or gabions) can be used as a contingency measure in addition to regular erosion control measures for lava tubes. These items shall be used if needed, but are otherwise not required, as a mitigation measure to divert runoff. A sufficient quantity of sandbags shall be kept on-site and be readily available for both regular BMP and contingency applications. If gabions are used as a contingency measure, a sufficient quantity shall be readily available on-site.
20. A 4' x 4' sign shall be posted with the phone numbers for the DOH Honolulu Office Clean Water Branch – (808) 586-4309, after hours emergency reporting – (808) 247-2191, and on-site personnel.
21. Any questions or problems shall be directed to the CMI Group hotline (to be determined), DOH Honolulu Office CWB (808) 586-4309, or contractor (to be determined).
22. All BMP measures and improvements shall be in accordance with an archaeological monitoring plan approved by the State of Hawai'i, Department of Land and Natural Resources, Historic Preservation Division.

According to findings made as part of the subdivision approval process (see Appendix 1), additional nutrients to the groundwater could potentially come from residential wastewater from the subdivision and from fertilizers used for agriculture or landscaping. If every lot had a home, and half of the lots had an additional farm dwelling, there could be approximately 270 individuals living on the property (using an average of 2.8 persons per dwelling, which is slightly more than the district average). The parcel is about 0.4 miles wide. In the 2000 census, the Hōnaunau-Napo'opoo COP had a population of about 2,400, in an area about 5 miles wide. Almost all existing homes in South Kona utilize cesspools for disposal of wastewater waste. The potential for nutrient contamination by human waste can reasonably be mitigated by a septic system. A septic tank with a leach field, or an aerobic septic tank, can remove most of the nitrogen present in residential wastewater. Accordingly, a condition of subdivision approval requires homeowners to install a septic system of either type, even if cesspools, which do not actively remediate wastewater, might be allowed by the Department of Health.

The concern with human waste is primarily nitrogen. Phosphorus and potassium are also present, although in lower quantities. The expected 270 residents could produce about 1,200 kg of nitrogen per year. It should be noted that farming has the potential to add much greater amounts of nutrients than human waste: recommended fertilization levels for coffee are about 70 kg/acre/yr., so even a 15-acre coffee farm would probably put more nitrogen into the ground than a subdivision with 270 residents. While agricultural crops do take up nutrients through their roots (that is the purpose of fertilizing), some nutrients invariably leach away even in a well-managed system, the amount depending on the type of fertilizer used, soil type, rainfall, and the crops involved. The findings that resulted from the appeals process of the subdivision approval recognized that pollution from farming is a very difficult issue to deal with. The potential depends greatly upon individual management techniques. It is not known at this time if nutrients leaching from fertilizers in South Kona are having a detrimental effect on ocean water quality. If nutrient leaching from farms is determined to cause an environmental problem in the area, this would have to be dealt with generally and not just in one subdivision. As a general land use policy, Ki'ila Farms is zoned for agriculture, the land use system encourages farming, and if the subdivision led to increased farming activity, that would have to be regarded, generally, as a

positive result. Importantly, even under the No Action Alternative, in which the property would not be subdivided, the cultivation (and fertilization) of crops is a permitted use and may occur.

### **3.1.3 Flora, Fauna and Ecosystems**

#### *Background*

Given the rainfall, geology, and existing vegetation, the general project area probably supported a Lowland Dry-Mesic Forest (Gagne and Cuddihy 1990) prior to human disturbance, with ‘ohi‘a (*Metrosideros polymorpha*) and/or lama (*Diospyros sandwicensis*) and alahe‘e (*Psydrax odoratum*) as co-dominants. Historical information referenced in the cultural impact assessment and archaeological study summary (Appendix 3) indicates that the project site supported traditional Hawaiian agriculture before 1850 and other farming, including coffee, later. The land was extensively grazed during the 20<sup>th</sup> century. The native vegetation communities have been entirely destroyed or heavily degraded by cattle grazing, agriculture and clearing for farms and residences, and the vegetation of both the project area and project site are now managed vegetation (i.e., farms, pasture or landscaped areas) or “communities” of various weeds.

#### *Study Methodology*

A botanical survey of the project site that also noted birds and bird habitat was conducted by Geometrician Associates. The survey is included in full as Appendix 2 and is summarized here.

Biologists Patrick Hart, Ph.D., Layne Yoshida, B.A., and Ron Terry, Ph.D., performed a botanical survey of the subdivision in April 2008, building on several efforts that had been conducted in years previous in the lower portions of the property. Because of the special circumstances on the property – infrastructure including roads, utility corridors and access points to lots in process and almost complete, and all approvals in place to grade any areas not set aside for archaeological preserves – 100 percent survey was not appropriate. Instead, the methods and goals focused on walking sufficient transects to document the existing vegetation and determining if native vegetation zones were present that might be considered for voluntary preservation by landowners. The survey also sought to locate and identify the one individual tree that had been noted by the archaeologists as potentially an endangered species.

#### *Existing Vegetation and Flora*

The current vegetation closely matches rainfall, which increases with elevation, which has in turn influenced the development of soil. Near the shoreline (which is 600 to 1,800 feet outside the project area), trees are capable of tapping groundwater, and where soil conditions are favorable, a closed-canopy forest of kiawe (*Prosopis pallida*), opiuma (*Pithecellobium dulce*) and koa haole (*Leucaena leucocephala*) is present, with an understory of guinea grass (*Panicum maximum*) and a number of other alien plants. Above the lowest elevation zone, vegetation becomes markedly shrubbier and open, with scattered trees 10-20 feet high. Above 400 feet elevation the average tree height increases, the canopy closes in, and larger trees (30-40 feet) are more common. Whereas kiawe is abundant in lower elevations, it is rarer at middle elevations. Below 600 feet elevation, the pāhoehoe and ‘a‘ā flows support a tangle of koa haole, ‘opiuma

and lantana (*Lantana camara*), with an occasional kiawe. The upper portions (above 600 feet elevation) support a tree canopy of kukui (*Aleurites moluccana*), mango (*Mangifera indica*), monkeypod (*Samanea saman*), guava (*Psidium guajava*) and avocado (*Persea americana*), with a vine growth of liliko'i (*Passiflora spp.*), kākalaioa (*Caesalpinia bonduc*), and hoi or bitter yam (*Dioscorea bulbifera*), and an understory of Christmas-berry (*Schinus terebinthifolius*), coffee (*Coffea arabica*), air plant (*Kalanchoe pinnata*), and waiawī (*Psidium cattleianum*), along with a variety of introduced weeds and grasses. Archaeologists noted the correlation of certain plants with Historic Period residential areas in upper Ki'īlae and Kauleolī, including ti (*Cordyline fruticosa*), loulu (*Pritchardia affinis*), plumeria (*Plumeria acuminata*), and a few scattered citrus trees.

A complete list of plant species observed on the property is found in Appendix 2. Native species included the trees loulu palm and hau (*Hibiscus tiliaceus*); the herbs maiapilo (*Capparis sandwichiana*), ala ala wai nui (*Peperomia leptostachya*), ilima (*Sida fallax*), sida (*Sida rhombifolia*), popolo (*Solanum americanum*), and 'uhaloa (*Waltheria indica*); the vines koali (*Ipomoea indica*), kākalaioa, kaunaoa (*Cassytha filiformis*) and huehue (*Cocculus trilobus*); and the ferns *Doryopteris decora* and *Nephrolepis exaltata*. Most of these species are extremely common, with the exception of loulu and maiapilo. One individual of the loulu palm, a listed endangered species (U.S. Fish and Wildlife Service 2008), is present. Although commonly available in nurseries and seen in landscape plantings throughout Kona, wild individuals are very uncommon and botanically valuable. Maiapilo, considered a rare species, also was represented by only one individual found directly on the southern boundary road.

### *Existing Fauna*

Although no formal zoological survey was conducted, a number of alien birds were noted during the botanical survey, as shown in Table 1. Only one native Hawaiian bird was identified during the survey, and it is extremely unlikely that many native forest birds would be expected to use the site due to its low elevation and lack of adequate forest resources. One Hawaiian Hawk (*Buteo solitarius*), which is a federally listed endangered species, was seen flying over the subdivision during the survey. Despite their endangered status, hawks are commonly seen in all forested locations on the island of Hawai'i.

Although not detected during this survey, it is possible that small numbers of the endangered endemic Hawaiian Petrel (*Pterodroma sandwichensis*), or ua'u, and the threatened Newell's Shearwater (*Puffinus auricularis newelli*), or 'a'o, overfly the project area between the months of May and November. Both species were formerly common on the island of Hawai'i. The Hawaiian Petrel is a pelagic seabird that reportedly nested in large numbers on the slopes of Mauna Loa and in the saddle between Mauna Loa and Mauna Kea, as well as at the mid- to high elevations of Hualālai. Within recent historic times it has been reduced to relict breeding colonies located at high elevations on Mauna Loa and, possibly Hualālai. Newell's Shearwaters breed on Kaua'i, Hawai'i and Moloka'i in extremely small numbers. Newell's Shearwater populations have dropped precipitously since the 1880s. This pelagic species nests high in the mountains in burrows excavated under thick vegetation, especially uluhe fern. There is no

suitable nesting habitat within the project area for these birds. Biologists believe that the leading cause of death for both these species in Hawai‘i is predation by alien mammals at the nesting colonies, followed by collision with man-made structures. Exterior lighting disorients these night-flying seabirds, especially fledglings, as they make their way from land to sea during the summer and fall. When disoriented, seabirds often collide with manmade structures and, if not killed outright, the dazed or injured birds are easy targets for feral mammals.

In addition to cats and dogs, the mammalian fauna of the project area is composed of mainly introduced species, including domestic goats (*Capra h. hircus*), domestic pigs (*Sus s. scrofa*), dogs (*Canis f. familiaris*), cats (*Felis cattus*) small Indian mongooses (*Herpestes a. auropunctatus*), roof rats (*Rattus r. rattus*), Norway rats (*Rattus norvegicus*), European house mice (*Mus domesticus*) and possibly Polynesian rats (*Rattus exulans hawaiiensis*). None are of conservation concern and all are deleterious to native flora and fauna.

The only native Hawaiian land mammal, the endangered Hawaiian Hoary Bat (*Lasiurus cinereus semotus*), may also be present in the area, as it is present in many areas on the island of Hawai‘i. Observation took place in daylight, and therefore the lack of bat observations does not signify an actual absence of bats. Although the weedy vegetation of the project site would not be expected to represent essential habitat for this endangered species, bats have been observed in kiawe, koa haole and guava-dominated vegetation in many other parts of Kona.

**Table 1**  
**Birds Detected During Botanical Survey**

Scientific Name	Common Name	Status
<i>Acridotheres tristis</i>	Common Myna	Alien Resident
<i>Buteo solitarius</i>	Hawaiian Hawk	Endemic resident*
<i>Cardinalis cardinalis</i>	Northern Cardinal	Alien Resident
<i>Carpodacus mexicanus</i>	House Finch	Alien Resident
<i>Geopelia striata</i>	Zebra Dove	Alien Resident
<i>Leiothrix lutea</i>	Red-billed Leiothrix	Alien Resident
<i>Lonchura punctulata</i>	Nutmeg Mannikin	Alien Resident
<i>Paroaria capitata</i>	Yellow-Billed Cardinal	Alien Resident
<i>Passer domesticus</i>	House Sparrow	Alien Resident
<i>Serinus mozambicus</i>	Yellow-Fronted Canary	Alien Resident
<i>Sicalis flaveola</i>	Saffron Finch	Alien Resident
<i>Streptopelia chinensis</i>	Spotted Dove	Alien Resident
<i>Zosterops japonicus</i>	Japanese White-Eye	Alien Resident

\* indicates federally listed endangered species.

### *Impacts and Mitigation Measures*

Aside from the loulu (*Pritchardia affinis*), no listed, candidate or proposed endangered plant species (USFWS 2008) were found on the project site. The maiapilo shrub (*Capparis sandwichiana*), while not protected, is considered a rare species and is somewhat uncommon in this part of Kona (if abundant, at least currently, in North Kona). The need to protect the loulu



palm has been told to the developer, who is aware of the location and has protected it up to this point. A 10-foot radius botanical preserve within Lot 40 will be created to prevent harm to the tree. The Amy Greenwell Ethnobotanical Garden, which helped identify the palm to the species level, will be invited to gather seeds for propagation, as consistent with endangered species laws and permits. Landscaping utilizing the loulu palm is also recommended. The maiapilo is found on an existing four-wheel drive road and may be difficult to preserve in place. Landscaping with maiapilo is recommended in order to encourage a greater population of this botanically interesting and culturally important plant.

The other native plants found generally on the property are common in many locations in Kona, and it would appear that no adverse impacts to botanical resources will occur from continued clearing and occupation and farming of the subdivision.

Hawaiian hoary bats and Hawaiian Hawks are common in the South Kona landscape of mixed farms and residences, and construction, occupation and farming of the subdivision is not likely to impact the health of their populations.

The following additional voluntary protocol are recommended for the farmers and homeowners clearing their lands for homes, farms, or farm buildings.

- In the unlikely event that an active Hawaiian Hawk nest is encountered during clearing and grubbing, halt any construction activity within 100 meters of the nest tree and consult with the U.S. Fish and Wildlife Service.
- In order to reduce effects to Hawaiian hoary bats, landowners should attempt to avoid clearing and other land altering activities during the period from the beginning of June to the end of August, when bats are caring for their young and most vulnerable to disturbance.
- In order to reduce the threat for downing endangered Hawaiian Petrels and threatened Newell's Shearwaters after they become disoriented by external lighting, shield any such lighting, in conformance with the Hawai'i County Outdoor Lighting Ordinance (Hawai'i County Code Chapter 9, Article 14), which requires shielding of exterior lights so as to lower the ambient glare.
- Homeowners may improve the botanical landscape of the project area by planting native Hawaiian plants, including rare and endangered species, in consultation with reputable nurseries. The Amy Greenwell Ethnobotanical Garden, located nearby in Captain Cook, provides an excellent resource for education and advice on planting natives.

### **3.1.4 Air Quality, Noise, and Scenic Resources**

#### *Environmental Setting*

Air pollution in West Hawai'i is mainly derived from volcanic emissions of sulfur dioxide, which convert into particulate sulfate and produce a volcanic haze (vog) that persistently blankets North and South Kona. Construction activities in dry parts of Kona tend to produce dust, which can be severe if unmitigated.

When construction on infrastructure is not occurring, noise on the project site is generally very low, as the project site is for the most part distant from roads, highways, or other sources of noise.

The Hawai‘i County General Plan identifies areas of natural beauty and important viewplanes for various places in Hawai‘i County. In this area, the following areas are noted:

Hōnaunau Bay & Scenic View from Ke Ala O Keawe Road	8-4-11, 12, 13	Hōnaunau, Keokea
Kealia Beach	8-5-05:1	Kealia
Ki‘ilae	8-5-05:19	Ki‘ilae

The views of Ki‘ilae listed as TMK 8-5-05:19 actually refer to TMK Plat 8-5-06; the former TMK (now subdivided into 19 of the subject lots) is within Kauleolī. The makai portion of Ki‘ilae (TMK 8-5-005:022) containing 238 acres was sold by Ki‘ilae Estates to the Trust for Public Lands for future expansion and transfer to Pu‘uhonua o Hōnaunau National Historical Park. The coastal area fronting the Ki‘ilae Farms subdivision itself, a parcel 600 to 1,800 feet deep, is in the State Land Use Conservation District and is not part of this subdivision. Any development in this area that might affect the natural beauty would require a Conservation District Use Permit. Nevertheless, there are scenic views of and across portions of Ki‘ilae and Kauleolī that require impact consideration, as discussed below.

#### *Impacts and Mitigation Measures*

During mass grading and infrastructure preparation, contractors have been required as part of their construction contracts to prepare a dust control plan and to implement measures such as water sprinkling and site housekeeping in order to minimize dust.

Development involved excavation, grading, compressors, vehicle and equipment engine operation, and construction of new infrastructure. These activities had the potential to generate noise exceeding 95 decibels at times, impacting nearby sensitive noise receptors on the margins of the subdivision. Whenever construction noise is expected to exceed the Department of Health’s (DOH) “maximum permissible” property-line noise levels, contractors are required to consult with DOH per Title 11, Chapter 46, HAR (Community Noise Control) prior to construction. DOH then reviews the proposed activity, location, equipment, project purpose, and timetable in order to decide whether a permit is necessary and what conditions and mitigation measures, such as restriction of equipment type, maintenance requirements, restricted hours, and portable noise barriers, will be necessary. The contractor consulted with DOH and determined that permit restrictions would consist of construction being limited to daylight hours. To Ki‘ilae Estates’s knowledge, no noise complaints related to the construction of subdivision infrastructure have been received.

Future noise-generating construction activities will consist of normal building of homes and farm structures. In general, they are not expected to generate any substantial noise or to require a permit. Future legal uses of the properties for homes and farms will also generate noise

consistent with expectations in areas zoned for agriculture, which is thus not considered an impact.

A Visual Impact Assessment was conducted for the project and is included as Appendix 4 and summarized below. As discussed above, the scenic value of the property for the public at present is based on views shoreward from Māmalahoa Highway (State Highway 11), and views across Ki‘ilae and Kauleolī from Ke Ala O Keawe Road (also known as Pu‘u Honua O Hōnaunau Road, State Highway 160). No specific laws, regulations or guidelines in the County of Hawai‘i determine whether a subdivision will have scenic impact. The approach taken here is to discuss scenic areas identified in the Hawai‘i County General Plan (i.e., views of Ki‘ilae and Kauleolī), and evaluate whether the development would substantially interfere with or detract from views of these resources from public viewpoints such as State Highways, scenic lookouts or park vistas.

Because of a combination of topography, intervening structures and vegetation, public views of Ki‘ilae and Kauleolī are very limited from Māmalahoa Highway (Figure 7a). In places, especially at and near the scenic lookout where Ke Ala O Keawe Highway makes its closest approach, there are good views of the truly scenic areas of Ki‘ilae and Kauleolī, which are at the coast, as well as adjacent properties (Figure 7). It is important to note that the coastal area is not included in the subdivision. From Ke Ala O Keawe Highway, views across the subdivision area are possible, especially on days with less vog (Figure 7b). The project site is mostly hidden from view from portions of the National Park currently visited by the public.

The Visual Impact Assessment (Appendix 4) used a geographic information system to analyze a series of “sightlines” across the project site from public vantage points. The analysis factored in the position and height of the ground surface, typical vegetation, and the proposed structures. The following conclusions were made about significant views:

***Views across Ki‘ilae and Kauleolī from Māmalahoa Highway.*** Views of the project site from Māmalahoa Highway are largely blocked by topography, vegetation and structures. In a few spots, gaps are present, with foreground views of monkeypod savanna and a background view of the coastal plain, but the middle-ground slopes are largely hidden because of the view angle over the steep topography and the shielding effect of foreground trees. Although in general any residences would likely be hidden from the highway by vegetation, at least in some locations where there is a clear view from the highway, there is potential for the upper part of a home to be visible. There is even one location that a home might be interposed between a viewer and the shoreline. However, this location, just south of Kealia, is heavily vegetated and there are currently no makai views. For viewers in those few gaps near the junction of Māmalahoa Highway and Ke Ala O Keawe Highway, the subdivision lots lie in a shallow hollow just mauka of a gentle slope that extends towards the sea, and homes would not likely be visible, and if visible, would not be likely to interfere with views of the shoreline. A 10-foot wide landscape easement has been created along the frontage of Māmalahoa Highway.

**Figure 7**  
**Scenic Views**



**7a (Top): View from Māmalahoa Highway; 7b (Bottom): View from Ke Ala O Keawe Highway**

***Views across Ki‘ilae and Kauleolī from Ke Ala O Keawe Highway.*** On the mauka part of this road, topography would generally shield homes in the subdivision from view. On the mile-long section from Milepost 2 to the scenic lookout where there are good views of the landscape to the south for drivers on this road, slopes drop off just south of the road and vegetation is generally lower than on Māmalahoa Highway, promoting views. However, the mile-wide interval between the road and the subdivision also contains many ridges that currently obscure views of Ki‘ilae and Kauleolī. Further down the road, at least some homes might be visible, though distant and back-dropped against vegetation or sea, not shoreline. At the scenic viewpoint on the highway, the makai homes would be hidden by topography and there would be no interference with views of the shoreline. Views across Ki‘ilae and Kauleolī on the cross-slope might contain the tops of a few homes, with a backdrop of vegetation from areas further south. Below the scenic lookout there are few views until the entrance road to Pu‘u Honua O Hōnaunau, where drivers have a brief glimpse across the landscape to the south.

In summary, because of shielding topography and existing homes and vegetation, the 65 proposed homes would interfere little with existing views from Māmalahoa Highway across Ki‘ilae and Kauleolī to the shoreline. Importantly, the substantial area makai of the Old Government Road in these ahupua‘a are not included in the subdivision. Because this area is in the State Land Use Conservation District, extensive development is unlikely and it will retain its scenic value. At a few locations on the highway, vegetation clearing might cause some homes to be visible and even interposed in front of the shoreline. In general, the long distance to the homes, averaging more than a mile away, would render any interference very minor. From Ke Ala O Keawe Highway, the tops of a few homes might be visible along the cross-slope, but there would be little or no interference with shoreline views, especially considering that no development near the shoreline is proposed. The subdivision’s covenants limit the heights of homes to 30 feet (versus the normal height limit of 35 feet in an A-5a zone) and forbid reflective finishes. These covenants, plus the distance, will reduce any visual impact from the construction of homes. The total visual impacts of the projects are generally minor, but are magnified by the context – an area that is currently undeveloped, near a National Park – where built structures represent at least some level of intrusion. The conclusions of this analysis were verified by findings during the subdivision appeal process (see Planning Department approval letter of May 4, 2007, page 6, in Appendix 1a).

### **3.1.5 Hazardous Substances, Toxic Waste and Hazardous Conditions**

#### *Environmental Setting, Impacts and Mitigation Measures*

According to officials with Ki‘ilae Estates, the site is not known to have been used for industry, modern intensive farming or as a dumping ground. This site history does not suggest the presence of hazardous materials. No hazardous substances were found on the project site prior to or during infrastructure development.

As development of home sites and farms proceeds, in the unlikely event that any evidence of hazardous materials or toxic substances such as chemical drums or petroleum stained soil/odor is discovered, the Department of Health should be contacted to determine if further investigation is warranted. Proper implementation of BMPs during construction prevents contamination.

## 3.2 Socioeconomic and Cultural

### 3.2.1 Socioeconomic Characteristics

The project would most directly affect the South Kona District. Table 2 provides information on the socioeconomic characteristics of South Kona along with those of Hawai'i County as a whole for comparison, from the 2000 U.S. Census of Population.

**Table 2. Selected Socioeconomic Characteristics**

Characteristic	Hawai'i County	South Kona	Characteristic	Hawai'i County	South Kona
Total Population	148,677	8,589	21 to 65 Years, Disabled (%)	19.2	16.3
Median Age	38.6		Disabled but Employed, 21 to 65 Years, (%)	51.8	58.4
Older Than 65 Years (%)	13.5	13.2	65 Years of Older, Disabled (%)	40.3	39.7
Race (%)			Employment in:		
White	31.5	34.1	Management	30.2	33.3
Asian	26.7	24.1	Service	22.2	18.5
Hawaiian	9.7	11.1	Sales and Office	25.1	24.3
Other Pacific Islander	1.5	1.0	Farming, Fishing and Forestry	9.9	4.5
Two or More Races	28.4	27.4	Production, Transportation	8.9	7.3
Hispanic (Any Race)	9.5	7.1			
Family Households (%)	69.6	69.5	Families Below Poverty Line (%)	11.0	8.3
Households with Female Householder, no Husband, With Children (%)	7.7	5.8	Households with Female Householder, no Husband, With Children, Below Poverty Line (%)	28.1	25.8
Householder Lives Alone (%)	23.1	22.2	Individuals Below Poverty Line (%)	15.7	12.7
Average Household Size	2.75	2.76	Over 65 Below Poverty Line	7.2	5.5
Average Family Size	3.24	3.25	Median Household Income (\$)	39,805	42,058
Over 25 Years Old With High School Diploma (%)	84.6	84.1	Housing Owner-Occupied (%)	64.5	62.2
Married Now (%)	52.0	51.1	Housing Rented (%)	34.5	37.8
Widowed (%)	6.3	6.1	Housing Vacant (%)	15.5	11.4
Divorced Now (%)	10.7	11.3	Median Home Value, 1999 (\$)	153,700	213,000
Veterans (% of adults)	14.5	14.8	Median Rent, 1999 (\$)	645	572
Over 16 in Labor Market (%)	61.7		Rent is Greater Than 25% of Income (%)	46.0	53.9
Residence in 1995 (%)					
Same Home	57.7	64.6			
Different Home, Same County	26.5	21.9			
Different County in Hawai'i	4.8	12.1			
Different State/Country	11.0	10.0			

Source: U.S. Bureau of the Census, May 2001. *Profiles of General Demographic Characteristics, 2000 Census of Population and Housing, Hawai'i*. (U.S. Census Bureau Web Page).



## *Impacts and Mitigation Measures*

Population increase as result of the subdivision's 65 farm lots is likely to be minor. If every lot had a home, and half of the lots had an additional farm dwelling, there could be approximately 270 individuals living on the property (using an average of just less than 2.8 persons per dwelling, which is slightly more than the district average of 2.76). This total is not large enough to cause any significant shifts in demographic characteristics, unemployment rates, demands on public services or infrastructure (which are discussed below in Section 3.3), or any other socioeconomic measures.

### **3.2.2 Cultural and Archaeological Resources**

#### **3.2.2.1 Archaeological Resources**

Appendix 3 is a Cultural Impact Assessment prepared by Rechtman Consulting that also contains a summary of archaeological studies. The most recent correspondence from the State Historic Preservation Division (SHPD) is included in Appendix 1a. The discussion below includes information, maps and tables generated from the data they contained.

#### *Overview*

In overview, an archaeological inventory survey of the project site (which included 100 acres that was later set aside and is not part of the subdivision request) determined that 28 archaeological sites had the potential to be impacted (Table 3 and Figure 8). Some sites were significant for information content only, but 17 were determined to be important for preservation, including two ceremonial sites, a refuge cave, a boundary wall, a cattle trap, a historic homestead, temporary habitations, and five burials (one found during data recovery work). The preserve sites have been protected by buffers and are contained within 12 archaeological easements totaling 4.494 acres that provide buyers, owners and governmental personnel who review grading, grubbing and building permits with notice of their location so that land-disturbing activities will not occur. Treatment of the burials has undergone further review and approval by the Burial Council. Furthermore, a monitoring plan was developed to ensure full compliance with the terms of preservation during construction and proper treatment of any resources that might be found during construction. Aside from the completion and SHPD approval of a data recovery report, no outstanding archaeological work or approvals are pending. Further details on the archaeology of the project site are found below.

#### *Archaeological Research and Resources*

A number of archaeological reports have been prepared for the project site and immediately surrounding areas during the last seven years:

Rechtman, R. 2004. Archaeological Preservation Plan for Twelve Sites in the Ki'īlae Farms Subdivision, Kauleolī Ahupua'a, South Kona District, Island of Hawai'i (revised June 2004). Rechtman Consulting Report RC-0138. Prepared for Mr. Steven A. Jiran, Ki'īlae Estates, LLC, Wailuku, Hawai'i.

Rechtman, R. and M. Clark. 2002. Archaeological Inventory Survey of Conservation District Land in Kauleoli Ahupua'a (TMK: 3-8-5-05:19, 20), Kauleoli Ahupua'a, South Kona District, Island of Hawai'i. Report RC-0103. Prepared for Mr. Steven Jiran, Ki'ilae Estates, LLC.

Rechtman, R., and D. Dougherty. 2002 Burial Treatment Plan for the Ki'ilae Estates Development Area (TMK:3-8-5-05:19), Kauleoli Ahupua'a, South Kona District, Island of Hawai'i. Rechtman Consulting Report RC-0065. Prepared for Ki'ilae Estates, LLC, Makawao, Hawai'i.

Rechtman, R., and L. Hauani'o. 2008 Interim Archaeological Monitoring Report: Ki'ilae Farms Subdivision (TMKs:3-8-5-05:19, 22, 26, 27), Ki'ilae and Kauleoli Ahupua'a, South Kona District, Island of Hawai'i. Rechtman Consulting Report RC-0479. Prepared for Mr. Steven Jiran, Ki'ilae Estates, LLC, Wailuku, Hawai'i.

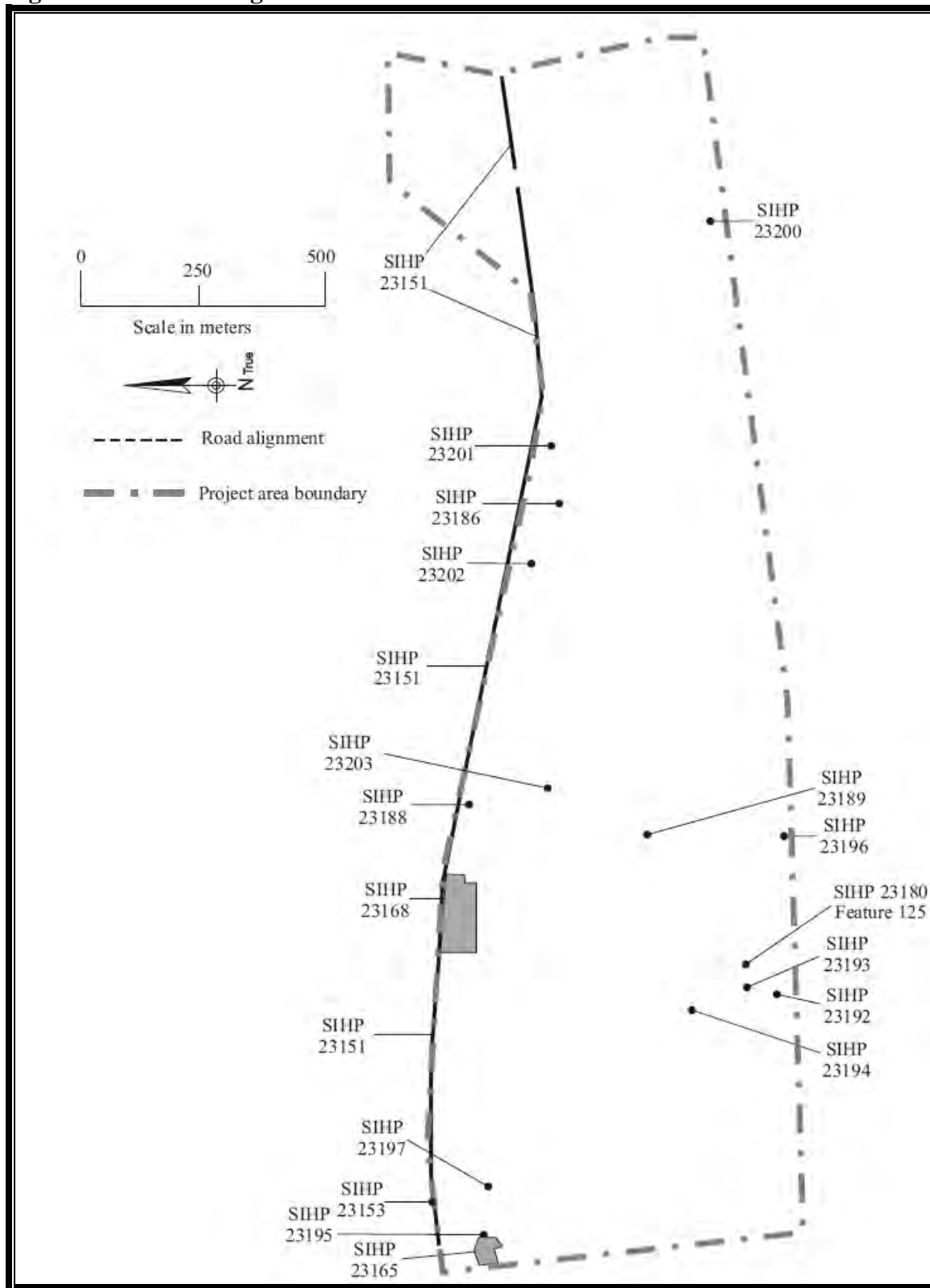
Rechtman, R., K. Maly, M. Clark, D. Dougherty, and O. Maly. 2001. Archaeological Inventory Survey of the Ki'ilae Estates Development Area (TMK:3-8-5-05:19, 22, 26, 27), Ki'ilae and Kauleoli Ahupua'a, South Kona District, Island of Hawai'i. Volumes I and II. Rechtman Consulting Report RC-0034. Prepared for Mr. Steven Jiran, Ki'ilae Estates, LLC, Makawao, Hawai'i.

As a result of the archaeological inventory survey of the subdivision, which found 69 total archaeological sites (Table 3), 28 sites were identified that had the potential to be impacted by the proposed development. These impacts could be direct, as the result of development activities; or indirect, resulting from increased access and site visitation traffic. Twelve sites (SIHP Sites 23140, 23152, 23157, 23179, 23180, 23181, 23182, 23183, 23184, 23185, 23187, and 23191), all considered significant under Criterion D (Site 23184 was also considered significant under Criteria A and C), were subject to data recovery, the successful completion of which will serve to mitigate potential impacts.

Seventeen sites were important for preservation (Figure 8). Four of these sites (SIHP Sites 23200, 23201, 23202, and 23203) are burial sites within lava tubes, all considered significant under both Criterion D and Criterion E, and all are preserved according to an approved burial treatment plan (Rechtman and Dougherty 2002). One additional burial site (SIHP Site 23180 Feature 125), also considered significant under Criteria D and E, was discovered and preserved during data recovery fieldwork. All of the previously identified burial sites are protected by the placement of iron grates blocking the tube entrances and orange construction fencing was placed along their interim preservation buffers as specified in the burial treatment plan. An additional twelve sites (SIHP Sites 23151, 23165, 23168, 23186, 23188, 23189, 23192, 23193, 23194, 23195, 23196, and 23197) were identified for preservation, and their treatment is described in an SHPD-approved archaeological preservation plan (Rechtman 2004). Two of these sites (SIHP Sites 23196 and 23197) are interpreted as heiau and are considered significant under Criteria D and E. A third site (SIHP Site 23193) is a Precontact refuge cave that embodies the distinctive attributes of such sites, possesses a tremendous research potential, and is the type of site that was of significant cultural value; thus it is considered significant under Criteria C, D, and E. Other preserve sites included a boundary wall, a cattle trap, a historic homestead, and temporary habitations.



**Figure 8 – Archaeological Preservation Sites Within Ki‘ilae Farms Subdivision**



**Table 3**  
**Archaeological Sites Recorded During Rechtman et al. (2001)**  
**Inventory Survey Within Ki'ilae Farms Subdivision**

<i>SIHP Site Number</i>	<i>Temporal Affiliation</i>	<i>Functional Interpretation</i>	<i>Recommended Treatment</i>
23065	Historic Period	Homestead	No further work
23066	Historic Period	Ranching	No further work
23067	Historic Period	Homestead	No further work
23074	Historic Period	Ranching	No further work
23075	Historic Period	Homestead	No further work
23076	Historic Period	Ranching	No further work
23077	Historic Period	Landscape Marker	No further work
23078	Historic Period	Ranching	No further work
23079	Historic Period	Ranching	No further work
23080	Historic Period	Ranching	No further work
23081	Historic Period	Ranching	No further work
23082	Historic Period	Ranching	No further work
23083	Historic Period	Animal Pen	No further work
23084	Historic Period	Ranching	No further work
23085	Historic Period	Ranching	No further work
23086	Historic Period	Ranching	No further work
23151	Historic Period	Landscape Marker	Preservation
23152	Historic/Precontact	Agricultural	Data recovery
23153	Historic Period	Burial	Preservation
23154	Historic Period	Ranching	No further work
23155	Historic Period	Ranching	No further work
23156	Historic Period	Ranching	No further work
23157	Historic Period	Agricultural	Data recovery
23158	Historic Period	Cattle Trap	No further work
23159	Historic Period	Homestead	No further work
23160	Historic Period	Homestead	No further work
23161	Historic Period	Ranching	No further work
23162	Historic Period	Animal Pen	No further work
23163	Historic Period	Ranching	No further work
23164	Historic Period	Ranching	No further work
23165	Historic Period	Cattle Trap	Preservation
23166	Historic Period	Ranching	No further work
23167	Historic Period	Landscape Marker	No further work
23168	Historic Period	Homestead	Preservation
23169	Historic Period	Ranching	No further work
23170	Historic Period	Ranching	No further work
23171	Historic Period	Cattle Trap	No further work
23172	Historic Period	Ranching	No further work
23173	Historic Period	Homestead	No further work
23174	Historic Period	Ranching	No further work
23175	Historic Period	Animal Pen	No further work
23176	Historic Period	Landscape Marker	No further work
23177	Historic Period	Ranching	No further work

*continued on next page*

Table 1, continued			
<i>SIHP Site Number</i>	<i>Temporal Affiliation</i>	<i>Functional Interpretation</i>	<i>Recommended Treatment</i>
23178	Historic Period	Ranching	No further work
23179	Precontact	Agricultural	Data recovery
23180	Precontact	Agricultural	Data recovery*
23181	Precontact	Agricultural	Data recovery
23182	Precontact	Agricultural	Data recovery
23183	Precontact	Agricultural	Data recovery
23184	Historic/Precontact	Agricultural	Data recovery
23185	Precontact	Temporary Habitation	Data recovery
23186	Precontact	Temporary Habitation	Preservation
23187	Precontact	Temporary Habitation	Data recovery
23188	Precontact	Temporary Habitation	Preservation
23189	Precontact	Temporary Habitation	Preservation
23190	Precontact	Temporary Habitation	No further work
23191	Precontact	Temporary Habitation	Data recovery
23192	Precontact	Temporary Habitation	Preservation
23193	Precontact	Refuge Cave	Preservation
23194	Precontact	Temporary Habitation	Preservation
23195	Precontact	Temporary Habitation	Preservation
23196	Precontact	Ceremonial/Religious	Preservation
23197	Precontact	Ceremonial/Religious	Preservation
23198	Precontact	Trail	No further work
23199	Precontact	Trail	No further work
23200	Precontact	Burial	Preservation
23201	Precontact	Burial/Ceremonial	Preservation
23202	Precontact	Burial	Preservation
23203	Precontact	Burial	Preservation

\*During data recovery, a feature determined to require preservation was preserved

SHPD approved the Archaeological Inventory Survey and Mitigation Plan by letter dated October 15, 2002. The Applicant's revised Archaeological Preservation Plan was submitted on December 7, 2004, was approved in 2006. The Burial Treatment Plan was approved by the Hawai'i Island Burial Council and the SHPD on December 19, 2002 and December 23, 2002, respectively. The final data recovery report is currently underway with an anticipated completion date of August 2008. During data recovery investigation one additional burial site was identified in a pavement feature, and preserved in a manner consistent with the approved in the burial treatment plan. Also during data recovery, thirty previously recorded rock mounds were investigated through controlled excavations, and an additional roughly forty-five mounds were destroyed while monitoring; no new sites or inadvertent discoveries were made during that process. Archaeological monitoring is on going as development activities are underway; an interim monitoring report (Rechtman and Hauani'o 2008) has been prepared and submitted to SHPD. To date, approximately 350 mounds have been impacted by bulldozing with an archaeological monitor present. There were no new archaeological sites or inadvertent discoveries made during this phase of monitoring.

The Archaeological Preservation Plan protects the physical integrity of significant historic sites by requiring that they be preserved with buffers. The subdivision map shows these sites as

archaeological easements, so the buyers will have notice of the sites, and governmental personnel who review grading, grubbing and building permits will also be aware that land-disturbing activities are not allowed within the buffers. As approved by the State Historic Preservation Division (SHPD), there are 12 archaeological preservation easements, varying in size from 0.052 to 3.159 acres and totaling 4.494 acres, within 6 different lots.

In response to early consultation for the EA, SHPD inquired (see Appendix 1a for letter) whether the proposed highway connection area (see Figure 3a and 4 for location) had already been covered by archaeological survey. The connection area was thoroughly surveyed during the 2001 inventory approved by SHPD, with the only archaeological features consisting of Historic-era stone walls and wall remnants that were not significant for preservation in place (SIHP Sites 23150, 23074, 23066, and 23065 Feature H). No preservation sites exist in or near the highway connection area.

Ongoing mitigation includes the provision that construction contractors and crews must be informed that at any time, if historic resources, including human skeletal remains, lava tubes, and lava blisters/bubbles are identified during the construction activities, all work needs to cease in the immediate vicinity of the find, the find needs to be protected from additional disturbance, and the State Historic Preservation Division, Hawai'i Island Section, needs to be contacted immediately at (808) 896-0514.

### **3.2.2.1 Cultural Resources**

Rechtman Consulting prepared a Cultural Impact Assessment (CIA) and summary of archaeological studies for the proposed project. The report is contained in full in Appendix 3 and is summarized below.

The CIA was prepared pursuant to Act 50, approved by the Governor on April 26, 2000; and in accordance with the Office of Environmental Quality Control (OEQC) *Guidelines for Assessing Cultural Impact*, adopted by the Environmental Council, State of Hawai'i, on November 19, 1997. The report is attached as Appendix 3 and is summarized below.

#### *Background*

The Ki'ilaie Farms subdivision consists of approximately 50 acres in Ki'ilaie Ahupua'a and 330 acres in the Kauleoli Ahupua'a. Kauleoli is relatively small and is cut off by Kealia Ahupua'a about the 1,600-foot elevation. In contrast, Ki'ilaie actually widens above this point and extends to the 6,800-foot elevation before being cut off by the Keauhou Ahupua'a, and it forms part of the boundary of the moku of Kona and Ka'u. The Ki'ilaie portion of the subdivision is bounded on the west (makai) and north by the expanded National Park and a roughly 100-acre parcel that was created for preservation, on the east (mauka) by Māmalahoa Highway, and on the south by

Kauleolī Ahupua‘a. The Kauleolī portion is bounded on the west (makai) by the Alanui Aupuni, on the east (mauka) by Māmalahoa Highway, on the south by Keālia Ahupua‘a, and on the north by Ki‘ilae Ahupua‘a.

Elevation within the subdivision ranges from 30 feet along the Alanui Aupuni to 900 feet at Māmalahoa Highway. The terrain and soil were limiting factors that ultimately influenced cultural use of the area, as reflected in the nature and distribution of archaeological resources across the landscape.

Early in the planning for the development of Ki‘ilae Farms, the landowner recognized the archaeological and cultural significance of Ki‘ilae Ahupua‘a and negotiated a transaction with the National Park Service to transfer 238 acres of land, more than doubling the size of Pu‘uhonua o Hōnaunau National Historical Park. An additional 100 acres of Ki‘ilae Ahupua‘a extending from the upper boundary of the new Park Service land to Māmalahoa Highway was also set aside by the developer for preservation purposes (see Figure 1 for both locations).

### *Methods*

While the physical study area is limited to portions of Ki‘ilae and Kauleolī Ahupua‘a that lie makai of Māmalahoa Highway and mauka of the coastal Government Road (Alanui Aupuni), in an effort to provide a comprehensive and holistic understanding of the current study area, the CIA examined the entirety of these ahupua‘a and their relationship to neighboring lands within the larger South Kona region. The comprehensive archival-historical research and oral-historical interviews that are included in this study were performed in a manner consistent with federal and State laws and guidelines for such studies. Archival-historical literature from both Hawaiian and English language sources was reviewed, including Hawaiian Land Commission Award (LCAw.) records from the Māhele ‘Āina (Land Division) of 1848; Boundary Commission Testimonies and Survey records of the Kingdom and Territory of Hawai‘i; and historical texts authored or compiled by Beaglehole (1967); Bingham (1969); Bowser (1880); Bryan and Emory (1986); Bryan et al. (1957); Ellis (1963); Fornander (1916-1919 and 1996); Greene (1993); Handy et al. (1972); I‘i (1959); Jackson (1966); Kamakau (1961, 1964, 1976, and 1991); Malo (1951); Reinecke (n.d.); Stokes and Dye (1991); and Thrum (1908).

This study also includes several native accounts from Hawaiian language newspapers (compiled and translated by Kepā Maly), historical records authored by eighteenth and nineteenth century visitors to the region, and records of the South Kona Mission Station. The archival-historical sources investigated were located in the collections of the Hawai‘i State Archives, Land Management Division, Survey Division, and Bureau of Conveyances; the Bishop Museum Archives; Hawaiian Historical Society; University of Hawai‘i-Hilo Mo‘okini Library; the collection of Pu‘uhonua o Hōnaunau National Historical Park; private family collections; and in the collection of Kepā Maly.

The primary objective of the oral historical component of this study was to identify the existing knowledge about former land use, traditions, practices, and cultural sites of the study area. Much of the research for the current study was conducted as part of a comprehensive archaeological inventory survey that was prepared for the current study area by Rechtman Consulting, LLC in 2001. Between January 22<sup>nd</sup> and May 20<sup>th</sup> 2001, Kepā Maly of Kumu Pono Associates conducted fifteen oral history interviews, including site visits and follow up discussions with twenty-four participants. Additionally, an interview conducted by Kepā Maly in 1996 with Mrs. Margaret Maunu-Keākealani (born at Ki‘ilae in 1925, since passed away) is also included in the current study. Informal (non-recorded) consultation interviews were also conducted with four individuals with ties to the lands and families of the study area. The 25 formal interviewees, who included 14 women and 11 men, ranged in age from 45 to 90 years old. Historical records pertaining to land ownership and tenure, and existing personal contacts in the South Kona area were used to help identify individuals with possible specific knowledge of, and historical ties to, the current study area. All of the interviewees can be characterized as belonging to one or more of the following categories: four have lived upon the lands of Ki‘ilae and Kauleolī, four worked as ranch hands on the lands, eleven knew the lands from traveling them with their extended family and friends, and thirteen were descended from traditional residents of the lands of Ki‘ilae and Kauleolī. The interviewees provided information gained from their personal experiences ranging from about 1915 to the present. These covered a variety of topics including historic residency and land tenure; land use; landscape and cultural features; and fishing, farming, and ranching practices. Follow-up interviews were conducted in April and May of 2008, one each with Alfred Medeiros, Clarence Medeiros Jr., and Jimmy Medeiros Sr.; the latter two individuals are full brothers and unrelated to the former individual. All of the interview participants (both past and present) have shared their personal knowledge of the land and practices of the families who lived in this portion of South Kona.

The approach taken in the CIA was to discuss the cultural and historical background for Ki‘ilae and Kauleolī Ahupua‘a using detailed archival research and archaeological studies in the context of regional patterns. Traditional and on-going cultural practices, and traditional cultural properties have been identified; and the prior archaeological study has documented several significant archaeological resources within the study area, several of which merit preservation. All of these resources and practices are described, potential impacts are discussed, and appropriate mitigation measures are outlined.

## *Identification of Cultural Practices and Resources, Impacts, and Mitigation Measures*

The OEQC guidelines identify several possible types of cultural practices and beliefs that are subject to assessment. These include subsistence, commercial, residential, agricultural, access-related, recreational, and religious and spiritual customs. The guidelines also identify the types of potential cultural resources, associated with cultural practices and beliefs that are subject to assessment. Essentially these are nature features of the landscape and historic sites, including traditional cultural properties. The origin of the concept of traditional cultural property is found in National Register Bulletin 38 published by the U.S. Department of Interior, National Park Service. “Traditional” as it is used, implies a time depth of at least 50 years, and a generalized mode of transmission of information from one generation to the next, either orally or by act. “Cultural” refers to the beliefs, practices, lifeways, and social institutions of a given community. The use of the term “Property” defines this category of resource as an identifiable place. Traditional cultural properties are not intangible, they must have some kind of boundary; and are subject to the same kind of evaluation as any other historic resource, with one very important exception. By definition, the significance of traditional cultural properties should be determined by the community that values them.

As the OEQC guidelines do not contain criteria for assessing the significance for traditional cultural properties, the CIA adopted the appropriate criteria for evaluating the significance of historic properties, of which traditional cultural properties are a subset. To be significant the potential historic property or traditional cultural property must possess integrity of location, design, setting, materials, workmanship, feeling, and association and meet one or more of the following criteria:

- A Be associated with events that have made an important contribution to the broad patterns of our history;
- B Be associated with the lives of persons important in our past;
- C Embody the distinctive characteristics of a type, period, or method of construction; represent the work of a master; or possess high artistic value;
- D Have yielded, or is likely to yield, information important for research on prehistory or history;
- E Have an important value to the native Hawaiian people or to another ethnic group of the state due to associations with cultural practices once carried out, or still carried out, at the property or due to associations with traditional beliefs, events or oral accounts—these associations being important to the group’s history and cultural identity.

While it is the practice of the DLNR-SHPD to consider most historic properties significant under Criterion D at a minimum, it is clear that traditional cultural properties by definition would also be significant under Criterion E. A further analytical framework for addressing the preservation and protection of customary and traditional native practices specific to Hawaiian communities resulted from the *Ka Pa‘akai O Ka‘āina* v Land Use Commission court case. The court decision established a three-part process relative to evaluating such potential impacts: first, to identify



whether any valued cultural, historical, or natural resources are present, and identify the extent to which any traditional and customary native Hawaiian rights are exercised; second, to identify the extent to which those resources and rights will be affected or impaired; and third, specify any mitigative actions to be taken to reasonably protect native Hawaiian rights if they are found to exist.

The cultural practices and resources identified for the current project area include: gathering practices, a sense of caring for the land, and several archaeological sites (some of which are considered individually and collectively to be traditional cultural properties).

As testified to during the administrative appeal hearings that were conducted relative to the County of Hawai'i's subdivision approval, several botanical species, including pilo (*Capparis sandwichiana*), 'uhaloa (*Waltheria indica*) and hau (*Hibiscus tiliaceus*), were identified as plants that are collected from the subdivision as part of native Hawaiian customary practices. While these rights were asserted, the testimony was unclear as to when, where and how these resources were obtained, making it difficult to assess the impact that development and use of the subdivision area for residence and farms will have on these practices. However, being fairly common to Kona, the botanical species cited are not unique to the subdivision, and there is little indication and unclear supporting documentation that the area has been actively utilized for gathering purposes. Nevertheless, as a condition of subdivision approval and as mitigation for any perceived impacts, a 10,000 square-foot easement was created adjacent to the Old Government Road where cultivation and gathering of native plants may be conducted.

It has also been suggested that the portion of Ki'īlae-Kauleoli boundary wall (SIHP Site 23151) that is visible from a boat on the ocean is used as a reference marker for locating an offshore *ko'a 'ōpelu*. While the historical record indicates that Site 23151 was built during the twentieth century, the cultural nature and antiquity of such a practice is well documented at various other locations. This wall is being preserved and the development of Ki'īlae Farms will have no impact on the use of this wall as a sighting marker.

Concerns have also been expressed, most strongly by members of the Medeiros family, that descendants of the area feel a sense of *kuleana* to care for the land. That *kuleana* could be interpreted as a traditional cultural practice, although one that may not have been continuously practiced. In any case, the developer has entered into an agreement with Jimmy Medeiros Sr. to assist in the monitoring of the land-altering activities and to provide cultural consultation with respect to the protection and preservation of cultural sites.

As discussed in Section 3.2.2.1 above, which provides details on site location and State Inventory of Historic Places numbers, 28 archaeological sites including 12 deemed significant for preservation had the potential to be impacted. Of the preserve sites, four were burials within lava tubes preserved according to an approved burial treatment plan (Rechtman and Dougherty 2002). An additional burial was discovered and preserved during data recovery fieldwork. All of the previously identified burial sites are protected by the placement of iron grates blocking the tube entrances and orange construction fencing was placed along their interim preservation buffers as specified in the burial treatment plan. Two sites were interpreted as *heiau* and are

considered significant under Criteria D and E and have been preserved and protected. A third site is a Precontact refuge cave that embodies the distinctive attributes of such sites, possesses a tremendous research potential, and is the type of site that was of significant cultural value; thus it is considered significant under Criteria C, D, and E. Although no longer utilized as a resource, this site was once a secure location during times of sociopolitical uncertainty; as such, it was clearly associated with traditional beliefs and events and was part of the former inhabitants' cultural identity. Logic dictates that this site was likely a named place and ritually imbued with supernatural power. All the sites discussed above are cultural resources, and all have been protected through preservation and other measures.

It is clear from the historical record that the native inhabitants of the Ki'īlae area made a concerted effort to maintain a traditional lifestyle in the face of westernization. Rather than participate in the *Māhele* and carve out private landholdings, they worked collectively to maintain a village and the traditional *konohiki-maka'āinana* relationship. Perhaps succumbing to western legal pressures, in 1890 they entered into a lease agreement that lasted until 1902, to use Ki'īlae Ahupua'a in a more or less traditional way, codifying the traditional relationship. It is argued here that this lease area could be considered a traditional cultural property (TCP) and be significant as a TCP under Criterion E. This area would contain many archaeological sites that were recorded during the inventory survey including four agricultural sites, two burial sites, five temporary habitation sites, eight homestead sites), and the *mauka/makai* Ki'īlae Trail (SIHP Site 23146). A TCP in and of itself, the Ki'īlae Trail, considered significant under Criteria D and E, was the major artery upon which the *ahupua'a* inhabitants transported their life sustaining resources: coastal resources (i.e., fish and salt) flowing *mauka*, and agricultural resources flowing *makai*. This pattern remained an integral part of life through the period of the native tenant lease and until the 1930s, when the last permanent resident of the area left. Although not within the subdivision, this trail is a key element to the cultural landscape that is being considered here collectively as a traditional cultural property. National Register Bulletin 38 defines such properties as significant because of their association with "cultural practices or beliefs of a living community that (a) are rooted in that community's history; and (b) are important in maintaining the continuing cultural identity of the community." The fact that that community no longer exists or has been dispersed does not diminish the significance of the formerly intact community's actions.

The boundary of the subdivision was in part defined by the distribution of significant archaeological features. The development area within Ki'īlae Ahupua'a was restricted to a roughly 50-acre portion of the ahupua'a adjacent to Māmalahoa Highway and south of the Ki'īlae Trail that contained the sparsest distribution of archaeological features, thus minimizing the impacts. The archaeological studies documented a dense distribution of features in a 238-acre area from the makai Government Road to about the 600 foot in elevation and in a roughly 100-acre area between 600 feet in elevation and Māmalahoa Highway. Through the transfer of 238 acres of Ki'īlae Ahupua'a to the National Park Service and the setting aside for preservation of an additional roughly 100-acre area that contains the Ki'īlae Trail (see Figure 1), the developer has secured the preservation of roughly 340 acres of Ki'īlae Ahupua'a containing perhaps the densest concentration of relatively undisturbed archaeological features in the South Kona region. This wholesale preservation is considered an important aspect of the mitigation efforts enacted

by the developer, and by any reasonable measure should serve to mitigate impacts to the cultural landscape of that portion of Ki'īlae Ahupua'a that extends from Māmalahoa Highway to the shore.

### **3.3 Infrastructure and Public Services and Facilities**

#### **3.3.1 Utilities, Public Facilities and Public Services**

##### *Existing Utilities, Impacts and Mitigation Measures*

The subdivision includes underground utilities. Electrical power to the site will be supplied by Hawai'i Electric Light Company (HELCO), a privately owned utility company regulated by the State Public Utilities Commission, via its island-wide distribution network. Telephone service is available from Hawaiian Telcom, and cable TV service is also available. These services are available from a pole in the right-of-way of State Highway 11, and Ki'īlae Estates has made all necessary arrangements to obtain these services. HELCO has requested that it be allowed to relocate a pole from the State Highway right-of-way onto Ki'īlae Estates land near the entry, if determined to be necessary.

Water service has been arranged and approved by the Hawai'i County Department of Water Supply, which has determined that adequate source and supply are available in the County system. The water lines are located in the right-of-way of State Highway 11. Inside the subdivision, water lines have been built and are adequate to serve all lots.

No municipal wastewater treatment service is available in this part of Kona, and households and farms must use individual wastewater treatment systems meeting with the requirements of the State Department of Health. As discussed above in Section 3.1.2, individual wastewater treatment systems are allowed according to the Department of Health. To ensure protection of the groundwater and coastal water quality, the subdivision agreement with the County of Hawai'i includes the provision that homeowners will install a septic system with leach field or aerobic septic system, even if the Department of Health may allow cesspools (see letter of May 4, 2007, in Appendix 1a). Impacts to water quality are discussed above in Section 3.1.2.

All impacts on existing public utilities have been mitigated by service agreements with the utilities and no impacts on the any of these utilities' systems or on their capacity to provide service will occur as a result of connection or use of the utilities.

##### *Existing Police, Fire, Emergency Medical and Educational Facilities, Impacts and Mitigation Measures*

The Captain Cook Police Station and Fire Station are located about seven miles away, within a reasonable distance of the property. Emergency medical services are provided by the Hawai'i County Fire Department. Acute care services are available at Kona Hospital, approximately ten miles away. Area schools include Ho'ōkena and Hōnaunau Elementary, Konawaena Intermediate and Konawaena High School.

Due to the modest size of the 65-lot subdivision, no adverse effects on police, fire, emergency medical services, County recreational facilities, or schools are expected. New housing and farming activities increase the tax base for the County, and new residents often contribute to other government revenues including general excise and income taxes. In general, higher value housing and lots provide substantial benefit-cost ratios in terms of both County and State revenues versus expenditures. The tax contributions more than compensate for extra costs of public services and also enable agencies to improve and expand their services (Decision Analysts Hawai'i, Inc. 2003). Farming also provides excise tax revenues, employment for and income tax from farm workers. These new residents, of course, also consume some level of government services.

### *Existing Recreational Resources and Facilities, Impacts and Mitigation Measures*

Recreational facilities in this part of South Kona include active recreational facilities in Captain Cook and a number of County beach parks within 10 miles. Pu'u Honua O Hōnaunau National Historical Park, a world-renowned restoration and recreation of a famous ancient site, is located almost adjacent to the subdivision.

The almost two-mile stretch of shoreline fronting Ki'īlae, Kauleolī and Kealia is used for recreational activities such as hiking, fishing, picnicking, swimming and diving (the closely related issue of cultural practices are discussed in Section 3.2.2.1). The primary access to this area is from walking along the shoreline south of Pu'u Honua O Hōnaunau National Historical Park. It also can be accessed by walking north from Ho'okena County Beach Park. The public also has lateral access along the Old Government Road (which now functions as a trail) below the subdivision and along a mauka-makai public access easement from the Old Government Road across the private parcel within Kauleolī that lies makai of the Old Government Road. Ki'īlae Farms Subdivision would not adversely impact any of this access. In addition to coastal trails, the developer created a mauka-makai easement along the northern boundary of Ki'īlae from Māmalahoa Highway to the National Park that can be used as a trail.

As discussed above, due to the modest size of the 65-lot subdivision, no adverse effects on recreational resources or facilities are expected. Residents of the subdivision may avail themselves of their enhanced ability to visit this coast, adding to existing usage. Because of the extensive length of the coastal area, no substantial stress on these areas would occur.

### **3.3.2 Roadways and Traffic**

#### *Existing Facilities*

The site is accessed by Māmalahoa Highway (State Highway 11), and this connection is the trigger for the EA for the project (see Figures 1, 2 and 4 for location).

## *Impacts and Mitigation Measures*

Subdivision access was reviewed by the Hawai‘i County Planning Department in consultation with other County agencies and the Hawai‘i State Department of Transportation during the subdivision process. As part of the process, a Traffic Impact Assessment Report (TIAR) was prepared for the project by M&E Pacific in 2001 and is on file in the Hawai‘i County Planning Department. The TIAR, which assumed 70 lots, not the current 65 lots, concluded that after full buildout, and considering the background growth in traffic, the Level of Service for the highway would be “C”, or well above the desirable minimum of “D”. For both morning and afternoon peak hours, the level of service for the access road would be “B” and the level of service for the left turn movement from Māmalahoa Highway into the access road would be “A”. The average delay time on the access road would be 6.2 seconds in the morning and 8.0 seconds in the evening, when highway traffic volumes are higher. The average delay time for the left turn movement from the highway would be less than 0.1 seconds in the morning and 0.1 seconds in the afternoon. With such low average delay times, left-turn lanes on Māmalahoa Highway were not justified. A report prepared in 2003 by M&E Pacific and on file with the Hawai‘i State DOT examined sight distance at the intersection.

These studies determined that a sight distance was adequate, that a separate right-turn lane into the subdivision was required, and that the exit from the subdivision should include separate left- and right-turn lanes. These features have been incorporated in the subdivision plans and the access met with the approval of the County of Hawai‘i, as signified in the final subdivision approval. Construction plans for the actual work within the State Highway right-of-way were also approved by the Hawaii State DOT on January 18, 2008, via letter number HWY-H-08-2.0029 (see Figure 4). In summary, access is considered adequate and no additional traffic impacts requiring mitigation were identified.

The Police Department in response to early consultation on the EA recommended additional turning and acceleration lanes along with north-south connector roads, and also expressed concern about emergency evacuation and pedestrian safety (see Appendix 1b for letter). As discussed above, turn lanes in and out of the subdivision have been reviewed by the highway agencies and Planning Department and found adequate. The main spine road and all side roads within the subdivision have been designed to be in conformance with the subdivision code for access by emergency fire and ambulance vehicles. Evacuation would be via the main road to Māmalahoa Highway. In conformance with the subdivision code, internal cross streets have been built to the edge of the property to accommodate future north-south roads that might be built by private interests or the government on properties to the north and south, accommodating future connectivity and potential evacuation routes. Pedestrian and equestrian movements within the subdivision will be accommodated by broad grassy or cindered swales.

### 3.4 Secondary and Cumulative Impacts

Cumulative impacts result when implementation of several projects that individually have limited impacts combine to produce more severe impacts or conflicts in mitigation measures. While the fast-growing North Kona District is the center of the visitor industry and real-estate development that powers the economy of the island, rural South Kona is growing more slowly. Nevertheless, there are several public projects in planning. Aside from Ki‘ilae Farms, no medium or large-scale private projects are known to be in development in this area. Although the details of these projects are subject to change, the description below is meant to provide some context for development occurring in the project area of the Ho‘okena-Kealia-Hōnaunau area.

In Captain Cook, about seven miles from Ki‘ilae, the Bishop Museum is developing a visitor education center and parking lot at the Amy Greenwell Ethnobotanical Garden with assistance from a \$1.0 million appropriation from the State of Hawai‘i. Phase 1 of the project includes development of a single-story building of approximately 1,600 square feet that will include exhibit space, offices, and restrooms; landscape improvements; and an approximately 15-space parking lot with accessible stalls. The Museum is seeking funding for a second phase to include program space and a possible expansion of the parking lot to approximately 50 spaces. The Garden, which is open to the public on weekdays, supports Hawaiian cultural traditions of plant use by on-site and outreach educational programs, school visits and activities, workshops, plant sales, and conservation.

A natural resource protection and restoration project is being undertaken at the Kona Forest Unit of the Hakalau Forest National Wildlife Refuge, about a mile south on Māmalahoa Highway. The U.S. Fish and Wildlife Service will be building about 17 miles of fencing enclosing approximately 5,300 acres, along with access roads and trails. The native forests of the Kona Forest Unit support four species of endangered forest birds, the endangered Hawaiian hoary bat, and a high diversity of native plant species, of which several are threatened or endangered. Construction will require several years, during which large vehicles will occasionally use Māmalahoa Highway.

Other developments may occur in the area as well. It is worth noting that the Kona Community Development Plan (see Section 3.6.4) seeks to restrict urban developments in South Kona, and large scale development in the area is unlikely. Although it is difficult if not impossible to systematically determine the complex interaction of environmental impacts in this region, for most categories of resources, the Ki‘ilae Farms Subdivision has rather discrete and limited impacts that will not tend to accumulate with those of other projects. As construction of infrastructure is nearly complete, the only potential cumulative adverse impacts are related to occupation of the subdivision.

Impacts to natural resources are limited because of the basically disturbed, alien nature of the vegetation. Archaeological resources have been inventoried and sites have been protected in archaeological preserve easements, adding to a very large number of preserved sites in Kona. The low density layout of 5-plus acre lots and the design guidelines of the subdivision will prevent a loss of scenic character or interference with viewplanes, even considering the development going on around the area.

Concern has also been expressed about cumulative impacts to coastal water quality. There is currently no indication that water quality is at or near levels of concern in the area makai of the subdivision. The magnitude of additional impacts from new residences is modest when it is considered that they will be served by septic systems, whereas the existing homes in this part of Kona generally are not. Concerns about additional input of nutrients from farming are more valid; this situation must continue to be monitored, and if impacts are identified, they should be dealt with in a systemically, through regional regulations that balance the importance of farming in the economy and culture of South Kona.

The addition of 65 lots and perhaps 270 residents in consideration of existing and planned future development is not likely to noticeably and adversely affect most public facilities and services such as schools, recreational facilities, or police and fire. Traffic and road infrastructure is the one aspect of Kona infrastructure that has seriously failed to keep up with growth. Traffic at the Māmalahoa Highway intersection was analyzed from a cumulative basis (see Section 3.3.2) and impacts, after mitigation, were found not be substantial. However, new residents will produce new motorists not only at the margins of the project but throughout the region, increasing demand on already stressed transportation systems. Mitigating this is the fact that increases in the tax base generated by new occupants can provide the funding for new infrastructure, services and facilities. There is often a lag time, however, between population growth and full infrastructure development, which has led many in Kona to call for restrictions or moratoriums on development to allow infrastructure to “catch up.” The imminent opening of the Māmalahoa Bypass, the widening of Queen Ka‘ahamanu Highway, and the coming construction of the La‘aloa Avenue and Lako Street Extensions are examples of projects that will begin to alleviate some traffic concerns. Ongoing improvement of the County of Hawai‘i’s mass transit program (buses are now fare-free) and a new initiative to create Park and Ride lots will also mitigate this problem. The scale of the 65-lot subdivision is such that it will not substantially contribute to new traffic, and will not likely be the “straw that breaks the camel’s back”.

In sum, there do not appear to be any significantly adverse cumulative impacts.

### **3.5 Required Permits and Approvals**

The following additional permits and approvals would be required:

- Approval for Work Within State Highway Right-of-Way

### **3.6 Consistency with Government Plans and Policies**

#### **3.6.1 Hawai‘i State Land Use Law**

All land in the State of Hawai‘i is classified into one of four land use categories – Urban, Rural, Agricultural, or Conservation – by the State Land Use Commission, pursuant to Chapter 205, HRS. The property is in the State Land Use Agricultural District and the subdivision is consistent with the regulations regarding this Land Use District.



### **3.6.2 Hawai‘i County SMA and Zoning and General Plan**

*Special Management Area.* The subdivision project site is not situated within the County’s Special Management Area (SMA).

*Hawai‘i County Zoning.* The project site is zoned A-5a, (agricultural, minimum lot size 5 acres). The project is entirely consistent with this designation.

### **3.6.3 Hawai‘i County General Plan**

The *General Plan* for the County of Hawai‘i is a policy document expressing the broad goals and policies for the long-range development of the Island of Hawai‘i. The plan was adopted by ordinance in 1989 and revised and adopted again in 2005 (Hawai‘i County Department of Planning). It contains both descriptive and map components.

The *Hawai‘i County General Plan Land Use Pattern Allocation Guide (LUPAG)* is a graphic representation of the Plan’s goals, policies, and standards as well as of the physical relationship among land uses. It also establishes the basic urban and non-urban form for areas and specifies planned public and cultural facilities, public utilities and safety features, and transportation corridors. The LUPAG map specifies this area as Extensive Agriculture, with which the project is entirely consistent.

The *General Plan* itself is organized into thirteen elements, with policies, objectives, standards, and principles for each. There are also discussions of the specific applicability of each element to the nine judicial districts comprising the County of Hawai‘i. Most relevant to the proposed project are the following Goal and Policies, and Courses of Action of particular chapters of the General Plan:

#### **ECONOMIC GOALS**

Provide residents with opportunities to improve their quality of life through economic development that enhances the County’s natural and social environments.

Economic development and improvement shall be in balance with the physical, social, and cultural environments of the island of Hawaii.

Strive for diversity and stability in the economic system.

Provide an economic environment that allows new, expanded, or improved economic opportunities that are compatible with the County’s cultural, natural and social environment.

*Discussion:* The proposed project is in balance with the natural, cultural and social environment of the County, and it has created, and will continue to create, temporary construction and permanent farming jobs for local residents and indirectly affect the

economy through construction and farm industry purchases from local suppliers. A multiplier effect takes place when these employees spend their income for food, housing, and other living expenses in the retail sector of the economy. Such activities are in keeping with the overall economic development of the island.

## ENVIRONMENTAL QUALITY GOALS

Define the most desirable use of land within the County that achieves an ecological balance providing residents and visitors the quality of life and an environment in which the natural resources of the island are viable and sustainable.

Maintain and, if feasible, improve the existing environmental quality of the island.

## ENVIRONMENTAL QUALITY POLICIES

Take positive action to further maintain the quality of the environment.

## ENVIRONMENTAL QUALITY STANDARDS

Pollution shall be prevented, abated, and controlled at levels that will protect and preserve the public health and well being, through the enforcement of appropriate Federal, State and County standards.

Incorporate environmental quality controls either as standards in appropriate ordinances or as conditions of approval.

*Discussion:* The proposed project, which occurs in an area designated for 5-acre agricultural lots that has been farmed or grazed throughout history, would not have a substantial adverse effect on the environment and would not diminish the valuable natural resources of the region. The project has obtained permits and followed the conditions designed to reduce or eliminate pollution and environmental degradation.

## HISTORIC SITES GOALS

Protect, restore, and enhance the sites, buildings, and objects of significant historical and cultural importance to Hawaii.

Appropriate access to significant historic sites, buildings, and objects of public interest should be made available.

## HISTORIC SITES POLICIES

Agencies and organizations, either public or private, pursuing knowledge about historic sites should keep the public apprised of projects.

Require both public and private developers of land to provide historical and archaeological surveys and cultural assessments, where appropriate, prior to the clearing or development of land when there are indications that the land under consideration has historical significance.

Public access to significant historic sites and objects shall be acquired, where appropriate.

*Discussion:* Archaeological resources have been protected through inventory survey, as well as the formulation and implementation of data recovery, monitoring and preservation actions, all of which has been reviewed and approved by the State Historic Preservation Division.

## FLOOD CONTROL AND DRAINAGE GOALS

Conserve scenic and natural resources.

Protect human life.

Prevent damage to man-made improvements.

Control pollution.

Prevent damage from inundation.

Reduce surface water and sediment runoff

## FLOOD CONTROL AND DRAINAGE POLICIES

Enact restrictive land use and building structure regulations in areas vulnerable to severe damage due to the impact of wave action. Only uses that cannot be located elsewhere due to public necessity and character, such as maritime activities and the necessary public facilities and utilities, shall be allowed in these areas.

Development-generated runoff shall be disposed of in a manner acceptable to the Department of Public Works in compliance with all State and Federal laws.

## FLOOD CONTROL AND DRAINAGE STANDARDS

Applicable standards and regulations of Chapter 27, "Flood Control," of the Hawaii County Code.

Applicable standards and regulations of the Federal Emergency Management Agency (FEMA).

Applicable standards and regulations of Chapter 10, "Erosion and Sedimentation Control" of the Hawaii County Code.

Applicable standards and regulations of the Natural Resources Conservation Service and the Soil and Water Conservation Districts.

*Discussion:* The property is within the Zone X, or areas outside the 100-year floodplain, according to the Flood Insurance Rate Maps (FIRM). The improvements were subject to review by the Hawai'i County Department of Public Works to ensure that all relevant standards of Chapter 27 and Chapter 10 were addressed, and improvements will be inspected.

## NATURAL BEAUTY GOALS

Protect, preserve and enhance the quality of areas endowed with natural beauty, including the quality of coastal scenic resources.

Protect scenic vistas and view planes from becoming obstructed.

Maximize opportunities for present and future generations to appreciate and enjoy natural and scenic beauty.

## NATURAL BEAUTY POLICIES

Increase public pedestrian access opportunities to scenic places and vistas.

Protect the views of areas endowed with natural beauty by carefully considering the effects of proposed construction during all land use reviews.

Do not allow incompatible construction in areas of natural beauty.

*Discussion:* The construction of the subdivision occurred in an area with similar residential/agricultural uses, especially around and mauka of Māmalahoa Highway. A systematic assessment determined that no substantial adverse visual impacts are expected. Ki'īlae Estates is providing a 10-foot wide landscape easement area along the entire Māmalahoa Highway frontage, which is consistent with policy in the draft *Kona Community Development Plan*.

## NATURAL RESOURCES AND SHORELINES GOALS

Protect and conserve the natural resources of the County of Hawaii from undue exploitation, encroachment and damage.

Provide opportunities for the public to fulfill recreational, economic, and educational needs without despoiling or endangering natural resources.

Protect and promote the prudent use of Hawaii's unique, fragile, and significant environmental and natural resources.

Ensure that alterations to existing landforms and vegetation, except crops, and construction of structures cause minimum adverse effect to water resources, and scenic and recreational amenities and minimum danger of floods, landslides, erosion, siltation, or failure in the event of earthquake.

## NATURAL RESOURCES AND SHORELINES POLICIES

The County of Hawaii should require users of natural resources to conduct their activities in a manner that avoids or minimizes adverse effects on the environment.

Encourage the use of native plants for screening and landscaping.

*Discussion:* The proposed project is not located on the shoreline. Impacts to existing natural landforms and vegetation have been mitigated through permit-regulated Best Management Practices to avoid any impacts related to flooding, landslides, sedimentation or other similar impacts.

## LAND USE GOALS

Designate and allocate land uses in appropriate proportions and mix and in keeping with the social, cultural, and physical environments of the County.

## LAND USE POLICIES

Allocate appropriate requested zoning in accordance with the existing or projected needs of neighborhood, community, region and County.

## LAND USE, OPEN SPACE GOALS

Provide and protect open space for the social, environmental, and economic well-being of the County of Hawaii and its residents.

Protect designated natural areas.

## LAND USE, OPEN SPACE POLICIES

Open space shall reflect and be in keeping with the goals, policies, and standards set forth in the other elements of the General Plan.

*Discussion:* The agricultural subdivision is in keeping with County and State land use plans and does not detract from important open space.

### 3.6.4 Kona Community Development Plan

The Kona Community Development Plan (CDP) encompasses the judicial districts of North and South Kona, and is being developed under the framework of the February 2005 County of Hawai‘i General Plan. Community Development Plans are intended to translate broad General Plan Goals, Policies, and Standards into implementation actions as they apply to specific geographical regions around the County. CDPs are also intended to serve as a forum for community input into land-use, delivery of government services and any other matters relating to the planning area. The General Plan now requires that a Community Development Plan shall be adopted by the County Council as an “ordinance”, giving the CDP the force of law. This is in contrast to plans created over past years, adopted by “resolution” that served only as guidelines or reference documents to decision-makers. As of June 2008, the complete pre-final April 17, 2008 version of the Kona CDP has been sent for Steering Committee review prior to approval. Therefore, the CPD has *not yet been adopted as an ordinance* and is *not in a final form*. Nevertheless, it provides a useful tool for measuring the general consistency of projects with planned community development. The version referenced in this Environmental Assessment is at: <http://www.hcrc.info/community-planning/community-development-plans/kona/cdp-draft-chapters/KCDP-pre-final-4-17-08-for-SC.pdf/view>.

The purposes of the Kona CDP are to:

- Articulate Kona’s residents’ vision for the planning area;
- Guide regional development in accordance with that vision, accommodating future growth while preserving valued assets;
- Provide a feasible infrastructure financing plan to improve existing deficiencies and proactively support the needs of future growth;
- Direct growth to appropriate areas;
- Create a plan of action where government and the people work in partnership to improve the quality of life in Kona for those who live, work, and visit;
- Provide a framework for monitoring the progress and effectiveness of the plan and to make changes and update if necessary.

The CDP emphasizes smart growth and sustainability, listing eight principles of sound development: preserving a sense of community, promoting interaction with nature, developing green building standards, minimizing energy use, avoiding environmental degradation, reducing toxic materials, achieving zero waste, and addressing climate change.

The draft CDP states that:

“Outside of the Urban Area, the character of the rural areas should prevail. This means that limited future growth should be directed to the existing rural towns and villages in a way that revitalizes and enhances the existing rural lifestyle and culture of those communities. Outside of these towns and villages, the protection of important agricultural land is a priority objective. Protecting these lands requires regulations and incentives that

will keep these lands available for agricultural use. Any development outside of the rural towns and villages should be directed to suitable areas that are not important for agriculture, in clustered patterns that will optimize the preservation of rural open space.”

As the CDP is still in flux, a detailed examination of consistency is not appropriate. However, it should be noted that the subdivision preserves historic sites, viewplanes, agricultural uses and a great deal of the open space, and it incorporates in its CC&Rs provisions to minimize visual impact and take advantage of natural ventilation and cooling.

## **PART 4: DETERMINATION, FINDINGS AND REASONS**

### **4.1 Determination**

The applicant expects that the Hawai‘i County Planning Department will determine that the proposed action will not significantly alter the environment, as impacts will be minimal, and that this agency will accordingly issue a Finding of No Significant Impact (FONSI). This determination will be reviewed based on comments to the Draft EA, and the Final EA will present the final determination.

### **4.2 Findings and Supporting Reasons**

1. *The proposed project will not involve an irrevocable commitment or loss or destruction of any natural or cultural resources.* No valuable natural or cultural resources would be committed or lost by the project. Most of the project infrastructure, including streets, drainage facilities, and mass grading for lots, has already been built or is in the process of being built. In any case, these resources were properly inventoried and a substantial number of them have been permanently preserved.
2. *The proposed project will not curtail the range of beneficial uses of the environment.* The proposed project in no way curtails beneficial uses of the environment in this area, particularly as relates to farming uses.
3. *The proposed project will not conflict with the State’s long-term environmental policies.* The State’s long-term environmental policies are set forth in Chapter 344, HRS. The broad goals of this policy are to conserve natural resources and enhance the quality of life. The project provides housing and farm lots in an appropriate area for residents of Hawai‘i County, fulfilling needed County and State goals while avoiding significant impacts to the environment. It is thus consistent with all elements of the State’s long-term environmental policies.
4. *The proposed project will not substantially affect the economic or social welfare of the community or State.* The major effects are beneficial, providing housing and jobs. Although considering the cumulative deficiency of infrastructure, all population increase in Kona involves potentially adverse effects to traffic, the access to the subdivision was designed in a way to minimize the effects of traffic on the local roadway system from the additional 65 lots.
5. *The proposed project does not substantially affect public health in any detrimental way.* No effects to public health are anticipated.



6. *The proposed project will not involve substantial secondary impacts, such as population changes or effects on public facilities.* No secondary effects are expected to result from the 65-lot subdivision, which is not large enough to directly or indirectly tax public infrastructure or facilities.
7. *The proposed project will not involve a substantial degradation of environmental quality.* The project has been regulated by permits to avoid environmental degradation, and would thus not contribute to environmental degradation.
8. *The proposed project will not substantially affect any rare, threatened or endangered species of flora or fauna or habitat.* The project site supports overwhelmingly alien vegetation. Impacts to rare, threatened or endangered species of flora or fauna will not occur. A single individual of the endangered loulu palm (*Pritchardia affinis*) will be protected through a botanical preserve.
9. *The proposed project is not one which is individually limited but cumulatively may have considerable effect upon the environment or involves a commitment for larger actions.* The 65-lot subdivision is not related to other activities in the region in such a way as to produce adverse cumulative effects or involve a commitment for larger actions.
10. *The proposed project will not detrimentally affect air or water quality or ambient noise levels.* Due to the character and density of the project, as well as the context of the project in an area set back from the shoreline, no adverse effects on these resources would occur.
11. *The project does not affect nor would it likely to be damaged as a result of being located in an environmentally sensitive area such as a flood plain, tsunami zone, erosion-prone area, geologically hazardous land, estuary, fresh water, or coastal area.* Although the project is located in an area with volcanic and seismic risk, the entire Island of Hawai‘i shares this risk, and the project is not imprudent to undertake. No floodplains are involved.
12. *The project will not substantially affect scenic vistas and viewplanes identified in county or state plans or studies.* Areas near the project site are noted for their natural beauty in the Hawai‘i County General Plan. A systematic analysis of the visual impacts determined that topography, vegetation and distance would prevent or mitigate visual impacts to very minor levels. Views of and from the coastline and the Pu‘u Honua O Hōnaunau National Historical Park will not be adversely impacted.
13. *The project will not require substantial energy consumption.* Although subdivision infrastructure construction did require the use of energy, as will home construction and farming, no major adverse effects to energy consumption would be expected, and there is no feasible way to provide housing without energy consumption. Design guidelines and CC&Rs promote and encourage energy conservation.

For the reasons above, the action would not have any significant effect in the context of Chapter 343, Hawai‘i Revised Statutes and section 11-200-12 of the State Administrative Rules.

## REFERENCES

- ACHP (Advisory Council on Historic Preservation). 1985. Guidelines for Consideration of Traditional Cultural Values in Historic Preservation Review. Draft Report. Advisory Council on Historic Preservation. Washington, D.C.
- Beckwith, M. 1970. *Hawaiian Mythology*. Honolulu: University of Hawaii Press.
- Beaglehole, J.. 1967. *The Journals of Captain James Cook*. Cambridge: Hakluyt Society.
- Bingham, H. 1969. *A Residence of Twenty-one Years in the Sandwich Islands*. Praeger Publishers, New York, Washington & London (Reprint of 1855 edition).
- Bowser, G. (compiler). 1880. The Hawaiian Kingdom Statistical and Commercial Directory and Tourists Guide. Honolulu: Bowser and Co.
- Bryan, E., and K. Emory. 1986. The Natural History of Hōnaunau, Kona, Hawai‘i. Departmental; report Series 86-2. Honolulu: Bernice P. Bishop Museum, Department of Anthropology.
- Clark, M., and R. Rechtman. 2006. An Archaeological Inventory Survey of a Proposed Road Corridor on State-Owned Land (TMK:3-7-3-010:060), Kalaoa 5<sup>th</sup> Ahupua‘a, North Kona District, Island of Hawai‘i. Rechtman Consulting Report RC-0372. Prepared for Mr. Bill Brooks, Westpro Holdings, LLC, Kailua-Kona.
- Cordy, R. 2000. Exalted Sits the Chief. The Ancient History of Hawai‘i Island. Mutual Publishing: Honolulu, Hawai‘i.
- Davis, B. 1977. Archaeological Survey of the Proposed Agricultural Park at Ke-ahole, North Kona, Hawaii Island. Report 14-122. Archaeological Research Center Hawaii, Inc. Prepared for Hawaii State Department of Agriculture.
- Decision Analysts Hawai‘i, Inc. 2003. *Property Tax Revenues From Premium Resort-Residential Homes And Condominiums In West Hawai‘i*. Prepared for: Hawai‘i Leeward Planning Conference, Kailua-Kona, Hawai‘i.
- Ellis, W. 1963. *Journal of William Ellis*. Honolulu: Advertiser Publishing Co., Ltd.
- Emerson, J. 1892. “The Lesser Hawaiian Gods.” In *Second Annual Report of the Hawaiian Historical Society for the Year 1892*, pp. 1-24. Honolulu, Hawaii.
- Fornander, A. 1916-1919. Fornander Collection of Hawaiian Antiquities and Folklore. (9 vols.). Honolulu: Bishop Museum Press.
- \_\_\_\_\_. 1959. *Selections from Fornander’s Hawaiian Antiquities and Folk-Lore*. S.H. Elbert, editor. The University Press of Hawaii.
- \_\_\_\_\_. 1973. *An Account of the Polynesian Race: Its Origin and Migrations*. Tokyo: Charles E. Tuttle Co., Inc.
- \_\_\_\_\_. 1996. *Ancient History of the Hawaiian People*. Mutual Publishing, Australia.

Gagne, W., and L. Cuddihy. 1990. "Vegetation," pp. 45-114 in W.L. Wagner, D.R. Herbst, and S.H. Sohmer, eds., *Manual of the Flowering Plants of Hawai'i*. 2 vols. Honolulu: University of Hawai'i Press.

Greene, L. 1993. *A Cultural History of Three Traditional Hawaiian Sites on the West Coast of Hawai'i Island*. United States Department of the Interior, National Park Service, Denver Service Center.

Handy, E.S.C., E.G. Handy, with M.K. Pukui. 1972. *Native Planters in Old Hawaii, Their Life, Lore, and Environment*. B.P. Bishop Museum Bulletin 233. B.P. Bishop Museum Press.

Haun, A. 2002. Archaeological Assessment Access Road Corridor, Land of Kalaoa 5<sup>th</sup>, North Kona District, Island of Hawai'i (TMK:3-7-3-10:por 6). Letter report on file at DLNR-SHPD. Prepared for Mr. Bill Brooks, Kailua-Kona.

Haun, A., and D. Henry. 2000. Archaeological Inventory Survey TMK: 3-7-3-10-03, Land of O'oma 1, North Kona District, Island of Hawaii. Haun and Associates Report 160-062802. Prepared for Mr. David DeLuz, Sr., Hilo.

Hawai'i County Planning Department. 2005. *The General Plan, County of Hawai'i*. Hilo.

Heliker, C. 1990. *Volcanic and Seismic Hazards on the Island of Hawai'i*. Washington: U.S. GPO.

Henry, J., S. Goodfellow, and K. Maly. 1993. Archaeological Assessment Study, Kailua to Keahole Region State Lands, LUC Project, Lands of Makaula, Hale'ohi'u, Hamanamana, Kalaoa 1-4, Kalaoa-O'oma, and O'oma 2, North Kona District, Island of Hawaii. PHRI Report 1275-021193. Prepared for Helber, Hastert & Fee.

I'i, J. 1959. *Fragments of Hawaiian History*. Honolulu: Bishop Museum Press.

Jackson, F. 1966. "Ki'ilae Village, South Kona, Hawaii (A Report of its Political, Economic, Social, and religions history, from Earliest Mention to Modern Times)." National Park Service Contract Study.

Kamakau, S. 1961. *Ruling Chiefs of Hawaii*. Honolulu: Kamehameha Schools Press.

\_\_\_\_\_. 1968[64]. *Ka Po'e Kahiko: The People of Old*. B.P. Bishop Museum Special Publication 51. Bishop Museum Press, Honolulu.

\_\_\_\_\_. 1976. *The Works of the People of Old*. B.P. Bishop Museum Special Publication 61. Bishop Museum Press, Honolulu.

\_\_\_\_\_. 1991. *Tales and Traditions of the People of Old, Nā Mo'olelo a ka Po'e Kahiko*. Bishop Museum Press, Honolulu.

Kelly, M. 1983. *Na Mala O Kona: Gardens of Kona. A History of Land Use in Kona, Hawai'i*. Departmental Report Series 83-2. Department of Anthropology, B.P. Bishop Museum, Honolulu. Prepared for the Department of Transportation, State of Hawaii.

M&E Pacific. 2001. *Traffic Impact Analysis Report, Ki'ilae Estates*. Prep. for Kiilae Estates LLC. On file in Hawai'i County Planning Department, Kailua-Kona. Honolulu.

- Maguire, E. 1926. *Kona Legends*. Honolulu: Paradise of the Pacific Press.
- Malo, D. 1951. *Hawaiian Antiquities*. Honolulu, B.P. Bishop Museum.
- Maly, K. (translator). ms. “*Mai Kailua a hiki i Kiholo*.” J.P. Puuokupa, in *Ku Okoa* November 27, 1875.
- \_\_\_\_ ms.. “*Kaao Hooniua Puuwai no Ka-Miki*.” J.W.H.I. Kihe, in *Ka Hoku o Hawai‘i*, January 8, 1914 - December 6, 1917.
- \_\_\_\_ ms. “*Ka Punawai o Wawaloli*.” J.W.H.I. Kihe, in *Ka Hoku o Hawai‘i*, September 23<sup>rd</sup>, October 4<sup>th</sup> & 11<sup>th</sup>, 1923.
- \_\_\_\_ ms. “*Na Hoomanao o ka Manawa*.” J.W.H. Isaac Kihe, in *Ka Hoku o Hawaii*, June 5<sup>th</sup> & 12<sup>th</sup> 1924.
- \_\_\_\_ ms. “*Ka Loko o Paaiea*.” J.W.H. Isaac Kihe, in *Ka Hoku o Hawaii*, February 5-26, 1914 and May 1-15, 1924.
- \_\_\_\_ ms. “*Ko Keoni Kaelemakule Moolelo Pono*i.” J.W.H. Isaac Kihe, in *Ka Hoku o Hawaii*, Sept. 17 & 24, & Oct. 1, 1929.
- McEldowney, H. 1979. Archaeological and Historical Literature Search and Research Design: Lava Flow Control Study, Hilo, Hawai‘i. BPBM Report, Honolulu.
- Parker, P., and T. King. 1990. Guidelines for Evaluating and Documenting Traditional Cultural Properties. *National Register Bulletin* 38. U.S. Department of the Interior, National Park Service, Washington D.C.
- Pukui, M., and A. Korn. 1973. *The Echo of Our Song. Chants and Poems of the Hawaiians*. Honolulu: University Press of Hawaii.
- Rechtman, R. 1999 Archaeological Inventory Survey of the Norrie Property, Ka‘awaloa Ahupua‘a, Island of Hawai‘i. PHRI Report 1978-090799. 2002 Archaeological Mitigation Plan for Fourteen Sites in the Ki‘ilae Estates Development Area (TMK:3-8-5-05:19,22), Ki‘ilae and Kauleolī Ahupua‘a, South Kona District, Island of Hawai‘i. Rechtman Consulting Report RC-0138. Prepared for Mr. Steven A. Jiran, Ki‘ilae Estates, Makawao, Hawai‘i.
- \_\_\_\_ 2004. Archaeological Preservation Plan for Twelve Sites in the Ki‘ilae Farms Subdivision, Kauleolī Ahupua‘a, South Kona District, Island of Hawai‘i (revised June 2004). Rechtman Consulting Report RC-0138. Prepared for Mr. Steven A. Jiran, Ki‘ilae Estates, LLC, Wailuku, Hawai‘i.
- Rechtman, R. and M. Clark. 2002. Archaeological Inventory Survey of Conservation District Land in Kauleolī Ahupua‘a (TMK: 3-8-5-05:19, 20), Kauleolī Ahupua‘a, South Kona District, Island of Hawai‘i. Report RC-0103. Prepared for Mr. Steven Jiran, Ki‘ilae Estates, LLC.
- \_\_\_\_ 2004. An Archaeological Mitigation Plan for Ten Sites on TMK:3-7-3-10:03, ‘O‘oma 1<sup>st</sup> Ahpua‘a, North Kona District, Island of Hawai‘i. Rechtman Consulting Report RC-0222. Prepared for Mr. Bill Brooks, Westpro Development, Inc, Kailua-Kona.

Rechtman, R., and D. Dougherty. 2002 Burial Treatment Plan for the Ki'īlae Estates Development Area (TMK:3-8-5-05:19), Kauleolī Ahupua'a, South Kona District, Island of Hawai'i. Rechtman Consulting Report RC-0065. Prepared for Ki'īlae Estates, LLC, Makawao, Hawai'i.

Rechtman, R., and L. Hauani'o. 2008 Interim Archaeological Monitoring Report: Ki'īlae Farms Subdivision (TMKs:3-8-5-05:19, 22, 26, 27), Ki'īlae and Kauleolī Ahupua'a, South Kona District, Island of Hawai'i. Rechtman Consulting Report RC-0479. Prepared for Mr. Steven Jiran, Ki'īlae Estates, LLC, Wailuku, Hawai'i.

Rechtman, R., K. Maly, M. Clark, D. Dougherty, and O. Maly. 2001. Archaeological Inventory Survey of the Ki'īlae Estates Development Area (TMK:3-8-5-05:19, 22, 26, 27), Ki'īlae and Kauleolī Ahupua'a, South Kona District, Island of Hawai'i. Volumes I and II. Rechtman Consulting Report RC-0034. Prepared for Mr. Steven Jiran, Ki'īlae Estates, LLC, Makawao, Hawai'i.

Reinecke, J. n.d. Survey of Hawaiian Sites, 1929-1930. Manuscript in Department of Anthropology, B.P. Bishop Museum, Honolulu.

Stokes, J., and T. Dye. 1991. *Heiau* of the Island of Hawai'i. *Bishop Museum Bulletin in Anthropology* 2. Bishop Museum Press, Honolulu.

Tatar, E. 1982. Nineteenth Century Hawaiian Chant. *Pacific Anthropological Records* No. 33. Department of Anthropology, B.P. Bishop Museum, Honolulu.

Thrum, T. 1908. Heiaus and Heiau Site Throughout the Hawaiian Islands. Island of Hawaii. *Hawaiian Almanac and Annual 1909*:38-47. Honolulu.

Tomonari-Tuggle, M. 1985. Cultural Resource Management Plan, Cultural Resource Management at the Keauhou Resort. PHRI Report 89-060185. Prepared for Kamehameha Investment Corp.

U.S. Dept. of Commerce, Economics and Statistics Administration, Bureau of the Census, 2001, <http://factfinder.census.gov/>.

U.S. Soil Conservation Service. 1973. *Soil Survey of Island of Hawai'i, State of Hawai'i*. Washington: U.S.D.A. Soil Conservation Service.

U.S. Fish and Wildlife Service (USFWS). 2007. *USFWS Threatened and Endangered Species System (TESS)*. Washington: GPO. [http://ecos.fws.gov/tess\\_public/StartTESS.do](http://ecos.fws.gov/tess_public/StartTESS.do)

University of Hawai'i at Hilo, Dept. of Geography. 1998. *Atlas of Hawai'i*. 3rd ed. Honolulu: University of Hawai'i Press.

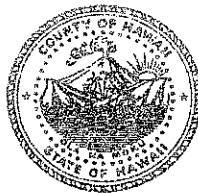
Walker, A. and P. Rosendahl. 1989. Archaeological Inventory Survey, Pu'uhonua Subdivision Development Parcel, Land of Kalaoa 5th, North Kona District, Island of Hawaii (TMK 3-7-3-10:Por.27). PHRI Report 490-053089. Prepared for Haseko Hawaii, Inc.

Wolfe, E.W., and J. Morris. 1996. *Geologic Map of the Island of Hawai'i*. USGS Misc. Investigations Series Map i-2524-A. Washington, D.C.: U.S. Geological Survey.

## **Appendix 1a**

### **Planning Department and DOT Correspondence**

Harry Kim  
Mayor



Christopher J. Yuen  
Director

Roy R. Takemoto  
Deputy Director

## County of Hawaii

### PLANNING DEPARTMENT

101 Pauahi Street, Suite 3 • Hilo, Hawaii 96720-3043  
(808) 961-8288 • Fax (808) 961-8742

May 7, 2004

Martin W. Quill  
Ki'ilae Estates LLC  
3620 Baldwin Avenue, Suite 107  
Makawao, Maui, HI 96768

Dear Mr. Quill:

**TENTATIVE APPROVAL**  
**SUBDIVIDER: KI'ILAE ESTATES LLC**  
**"KI'ILAE FARMS"**

Proposed Consolidation of Lots 2 & 3 of Kiilae Subdivision (Subdivision No. 7459),  
Being Portions of L. C. Aw. 8521-B, Ap. 3; Grant 1575; Grant 3708; R. P. 3865;  
L. C. Aw. 9459, Ap. 1 & 2,  
And Resubdivision into Lots 1 to 50, Roadway Lots A to E, Landscape Lots L-1 to L-4,  
Designation of Landscape Buffer along South Kona Belt Highway and  
Designation of Easements 1 to 23, Inclusive  
Ki'ilae & Kauleoli 1 & 2, South Kona, Island of Hawaii, Hawaii  
TMK: 8-5-005:Portions of 019 & 022 (SUB 2003-0148)

Please be informed that Tentative Approval of the preliminary plat map dated October 20, 2003, is hereby granted with modifications and conditions.

The subdivider is now authorized to prepare detailed drawings of the subdivision plan in accordance with Chapter 23, Subdivision Control Code, County of Hawaii. Before final approval can be granted, the following conditions must be met:

- 1) Water System
  - a) Provide a water system meeting with the approval of the Department of Water Supply.
  - b) Submit water system construction plans for approval by affected agencies.
  - c) Pay installation and facilities charges as required by the Department of Water Supply.

*Hawai'i County is an Equal Opportunity Provider and Employer*



- d) Inform the Department of Water Supply, in writing, as to which of the proposed lots will be assigned the excess 12 units of water, also indicating how many excess units of water will be assigned to each lot.
- 2) Drainage
  - a) The preliminary plat map indicates that there are no watercourses within the area to be subdivided. Please provide written confirmation with your transmittal of the final plat map.
  - b) Additional storm runoff due to development shall be disposed within the subdivision and shall not be discharged onto adjacent properties or roadways. For planned drywells, satisfy Department of Health (DOH) drywell requirements, including issuance of an underground injection control (UIC) permit to the subdivider.
- 3) Access and Roadway Improvements. Construct all access and roadway improvements per construction drawings as accepted by the Department of Public Works by memorandum dated November 17, 2003, and approved by the State Department of Transportation on December 4, 2003.
- 4) Wastewater Improvements. Individual wastewater treatment systems are allowed according to the Department of Health. To ensure protection of the groundwater and coastal water quality, the draft covenants submitted by transmittal dated October 30, 2003, shall be amended to require homeowners to install a septic system with leach field or aerobic septic system even if the Department of Health may allow cesspools. A copy of the revised covenants shall be submitted for review prior to final subdivision approval.
- 5) Historic/Cultural Requirements.
  - a) Burials. In lieu of "landscape lots", we will approve including the burial sites as part of the roadway lot(s) with appropriate easements over the burial areas in order to avoid private ownership of the burial sites (separate "landscape lots" corresponding to the burial sites as shown on the preliminary plat map are not possible because these lots do not meet the minimum lot size requirement). Please reflect this understanding on the final plat map.
  - b) Implement the Archaeological Preservation Plan for the Ki'ilae Farms Subdivision including any conditions or modifications required by SHPD.
  - c) Implement applicable conditions of Burial Treatment Plan.
  - d) Protection of Native Hawaiian Gathering Rights and Cultural Practices.
    - i) Identification of cultural, historical, and natural resources.

The following information is available in the Planning Department files and records to determine the identity and scope of valued cultural, historical, and natural resources in the area of the subdivision:

-- Archaeological inventory survey (Rechtman 2001).

- Oral history interviews (Vol. II of inventory survey).
- Letters on file in SUB No. 2001-0132.
- Testimony in Board of Appeals hearings on SUB No. 2001-0132 from Wayne Leslie, Sr., and Jim Medeiros, Sr.
- Letter dated Jan. 27, 2003 regarding search for pilo (maiapilo) plant.
- Aerial photos of site.

The cultural and natural resources within the subdivision are historic sites, burial sites, the possible pilo plant, and 'uhaloa plants. Within the parcel below the Old Government Road, that is not part of this subdivision, Jim Medeiros, Sr. identified a "laena", or departure point for souls of the dead. The shoreline, again not part of this subdivision, is used for gathering limu, 'opihi, and a'ama crab and for pole and thrownet fishing. The ocean fronting the property, again not part of the subdivision, is used for fishing from boats, including 'opelu fishing, and for diving.

ii) Extent to which these resources may be affected or impaired by the proposed action:

The proposed subdivision does not in itself change the uses that can be made of the property, because uses allowed by the existing A-5a zoning remain in effect. The subdivision does require the construction of roads, water lines, and drainage systems, and increases the number of homes that can be built on the property without special approval. The Zoning Code and Rule 13 of the Rules of the Planning Director allow one farm dwelling to be built per lot. Additional farm dwellings can be built upon approval of a farm plan and the signing of a farm dwelling agreement. The approval of the subdivision will increase the number of homes that can be built on the property. There will probably be areas associated with the dwellings that are cleared for driveways and accessory buildings. Areas now in brush could be developed for agriculture, that can also involve considerable land alteration, but agricultural development can occur whether the subdivision is built or not.

iii) Feasible actions to prevent or mitigate harm to resources:

The physical integrity of individual historic sites will be protected by the terms of the Archaeological Preservation Plan, which requires that significant historic sites be preserved, with buffers. The subdivision shows these sites as archaeological easements, so that buyers will have notice of the sites, and governmental personnel who review grading, grubbing, and building permits will also be aware that land-disturbing activities are not allowed within the buffers. The burials will be preserved under the terms of the approved Burial Treatment Plan.

Because the applicant could not find any pilo plants, and the testimony was not specific enough to locate the plant, it is not possible to include a condition requiring the preservation of this plant. The subdivider will, however, create an easement on the parcel mauka of the Old Government Road, which shall be shown on the final plat map, where individuals can cultivate pilo or other native plants. Pilo, or maiapilo (*Capparis sandwichiana*) is found in lowland lava areas in Kona, such as at Kohanaiki, Keopuka, Keauhou, Mahai'ula, and in the vicinity of the Kona Airport (including some plants along the right-of-way of the Queen Kaahumanu Highway). 'Uhaloa is an extremely common weed, found in vacant lots everywhere, and probably occurs along the Old Government Road as well as other publicly accessible areas. Hau is also extremely common.

Concerns were expressed in the Board of Appeals hearings involving SUB No. 2001-0132 over possible effects on ocean water quality and ocean resources from the prior subdivision. In general, a new subdivision may affect coastal water quality in two possible ways: direct surface runoff, and the possibility that nutrients might leach through the surface to the groundwater and ultimately to the sea.

Direct surface runoff from this subdivision to the ocean caused by this development is unlikely. The subdivision itself involves ground clearing only for roads. It does not involve construction of a golf course, house pads, or other major changes to the surface. Grading for roads and the construction of roads require an NPDES Permit because more than one acre is being disturbed. The NPDES Permit will have standard requirements for management practices to reduce the likelihood of surface runoff.

There are no known perennial or intermittent streams on the property. There is a relatively flat area, about 600'-1800' wide, between the subdivision and the sea. This flat area is within the State Land Use Conservation District. It is almost entirely pahoehoe lava with no soil. Even if surface runoff were to reach this area it is probable that it would soak into the ground before reaching the sea.

The 1973 Soil Survey for the Island of Hawaii classifies most of the property as rLW, which is nearly bare pahoehoe lava, RB, which is rough broken land, and, nearer the Mamalahoa Highway, as rPYD, described as a shallow soil layer of "extremely rocky peat", with 40-50% surface outcrops of pahoehoe lava. All of these soil types are well drained. The infiltration rate for rPYD is given as 6.3"-20" per hour. Grading and road construction will be occurring in lava rock.

Construction of roads and homes will increase the amount of impervious surfaces, and thus reducing the capacity of the ground to absorb storm water. Current Department of Public

Works drainage standards will require drywells capable of absorbing a ten-year rainstorm. Even if every lot is eventually developed with a 5000 square foot home and a 5000 square foot driveway, the impervious surfaces due to home and driveway construction would only be about 5% of each lot. The paved portion of subdivision roads will be only about 2% of the total land area of the subdivision.

Additional nutrients to the groundwater could potentially come from human waste from residents of the subdivision, or from fertilizers used for agriculture or landscaping. If every lot had a home, and half of the lots had an additional farm dwelling, there could be approximately 225 individuals living on the property (using an average of three persons per dwelling, which is slightly more than the island average). The parcel is about .4 miles wide. In the 2000 census, the Honaunau-Napo'opo'o CDP had a population of about 2400, in an area about 5 miles wide. Almost all existing homes in South Kona utilize cesspools for disposal of human waste.

The concern with human waste is primarily nitrogen. Phosphorus, and potassium are present in lower quantities. Two hundred twenty five (225) residents could produce about 1000 kg of nitrogen per year. (The figure of 8991 kg given by Dr. Richard Bennett in the Board of Appeals hearing appears to be the result of a misplaced decimal point and is ten times too high.) Farming has the potential adding much greater amounts of nutrients than human waste: recommended fertilization levels for coffee are about 70 kg/acre/yr., so even a 15 acre coffee farm could put more nitrogen into the ground than a subdivision with 225 residents. While agricultural crops do take up nutrients through their roots (that is the purpose of fertilizing) some nutrients will leach away even in a well-managed system, depending upon the type of fertilizer used, soil types, rainfall, and the type of plants.

The potential for nutrient contamination by human waste can reasonably be mitigated by a septic system. A septic tank with a leach field, or an aerobic septic tank, can remove a substantial percentage of the nitrogen present in human waste. Accordingly, a condition of subdivision approval will require homeowners to install either option even if cesspools might be allowed by the Department of Health. (A cesspool does not remove any nutrients in itself, although some nutrients may be removed by natural processes in rock and soil.)

The potential for pollution from farming is a very difficult issue to deal with in a subdivision approval. The potential depends greatly upon individual management techniques. It is not known at this time if nutrients leaching from fertilizers in South Kona are having a detrimental effect on ocean water quality. If nutrient leaching from farms is determined to cause an environmental problem in the area, this would have to be dealt with generally and not just in one subdivision. As a general land use policy, this land is zoned for agriculture, the land use system encourages farming, and if the subdivision led to increased farming activity, that would

have to be regarded, generally, as a positive result. Whether or not the property is subdivided, the cultivation (and fertilization) of crops is a permitted use.

6) Natural Beauty.

a. Discussion:

The 1989 Hawaii County General Plan, at p.36, in a listing of examples of natural beauty in the South Kona district, includes "Ki'ilae, T.M.K. No. 8-5-5:19." This tax map key number actually identifies the Kauleoli parcel, which is the subject of the present subdivision. The Ki'ilae portion, more northerly, T.M.K. No. 8-5-5-22, has been sold by this developer to the Trust for Public Lands and is supposed to become part of the Pu'uuhonua o Honaunau National Historical Park. Although funds have not been appropriated by Congress yet to complete the purchase, this will probably occur and the area will be kept in a largely natural state.

The coastal area fronting this subdivision, a parcel 600'-1800' deep, is in the State Land Use Conservation District and is not part of this subdivision. Any development in this area that might affect the natural beauty would require a Conservation District Use Permit.

The primary vantage point from which the public might see man-made features in this subdivision would be from the north side of Ki'ilae Bay, on the southerly side of the point that contains the Pu'uuhonua o Honaunau. The Board of Appeals record in the prior subdivision contains a photograph from this vantage point. (Most visitor activity at the National Historical Park is currently at the north side of the point, near the visitor center and the Hale o Keawe.) The subdivision area and shoreline are not very visible from Mamalahoa Highway or the Ke Ala O Keawe Rd. because of terrain and trees. (The photograph taken from Highway 11 in the record of the Board of Appeals is taken from a point approximately 2 miles from the nearest point of the subdivision.) From the vantage point across Ki'ilae Bay, the subdivision infrastructure (roads) would probably not be very visible. The subdivision does not require any streetlights. Eventually, homes will probably be visible, but at a distance of 4000' -11,000' across Ki'ilae Bay. The subdivision's proposed covenants limit the heights of homes to 30' (versus the normal height limit of 35' in an A-5a zone) and forbid reflective finishes. These covenants, plus the distance, will reduce any visual impact from the construction of homes.

b. Mitigation: Building heights and reflective finishes shall conform to Sec. 12.1 and 12.2 of the Declaration of Covenants submitted by transmittal dated October 30, 2003.

7) Compliance with Coastal Zone Management Area. The proposed subdivision does not involve land within the Special Management Area, does not constitute "development" within the SMA, and hence does not require an SMA permit. All land in Hawaii is included in the "Coastal Zone Management

Area", and is subject to the "objectives and policies" stated in H.R.S. Sec. 205A-2. These are broad policies and cannot, for example, be used to deny approval to a subdivision that is otherwise consistent with zoning and with more specific land use regulations. The proposed subdivision is, however, not inconsistent with the applicable objectives and policies in H.R.S. Sec. 205A-2.

- 8) Agricultural Use. Upon review of draft covenants, conditions, and restrictions for the subdivision, transmittal dated October 30, 2003, the subdivision covenants do not prohibit or limit agricultural activities. The land is not characterized as prime or important agricultural land under the ALISH system. Under the Land Study Bureau classification, the bulk of the property is classed as "E" or extremely poor for agriculture. The area between about the 600' elevation and Highway 11 is classified as "D", or "poor"; this area contains about 20 lots. From the oral history reports, the only agricultural use of the property for many years before this subdivision application was as a very poor quality grazing area, except that citrus and coffee were previously grown above the 600' elevation. The property is zoned A-5a and if the subdivider complies with the Subdivision Code, it is entitled to subdivide lots with a minimum of 5 acres. There are commercial coffee farms and orchards in Kona on 5 acre lots. The provision of water supply may make some agricultural use of the property more feasible.
- 9) Property tax certification. Submit written proof that all taxes and assessments on the property are paid to date.
- 10) Surveyor's certification. Place property markers in accordance with the final plat map. Surveyor shall submit certification upon completion of improvements.
- 11) Provide 10-ft. wide no access, planting screen easement along Mamalahoa Highway.
- 12) Final plat map. Submit **ten (10)** copies of the final plat map prepared in conformity with Chapter 23, Subdivisions, within one year from the date of tentative approval, on or before **May 7, 2005**. If not, tentative approval to the preliminary plat map shall be deemed null and void. Only upon written request from the subdivider and for a good cause can a time extension be granted, provided it is submitted forty-five (45) days before the expiration of said period of one year. As part of final plat map submittal, the Planning Director requests an additional copy of the final plat map be submitted as a ".dwg" or ".dxf" diskette file prepared by CAD software.
- 13) Time limit. Subdivider shall complete all requirements specified as conditions for tentative approval of the preliminary plat map within three (3) years of said tentative approval, on or before **May 7, 2007**. An extension of not more than two (2) years may be granted by the director upon timely request of the subdivider.

Martin W. Quill  
Ki'ilae Estates LLC  
Page 8  
May 11, 2004

Please be aware that if at any time during the fulfillment of the foregoing conditions, should concerns emerge such as environmental problems or other problems which were earlier overlooked or not anticipated/accounted for in data/reports available to date, this could be sufficient cause to immediately cease and desist from further activities on the proposed subdivision, pending resolution of the problems. The Planning Director shall confer with the listed officers to resolve the problems and notify you accordingly.

No final approval for recordation shall be granted until all the above conditions have been met.

Land shall not be offered for sale, lease or rent until final approval for recordation of the subdivision.

Should you have any questions, please feel free to contact Daryn Arai of this department.

Sincerely,



CHRISTOPHER J. YUEN  
Planning Director

DSA/CJY:lnm  
P:\WP60\SUBDIV\Documents\Subc2004-2\20030148KiilaeEstFarmsTA.doc  
Enc. - PPM (10-20-03)

xc:     Manager, DWS  
          Director, DPW  
          District Environmental Health Program Chief, DOH  
          District Engineer, DOT  
          DPW-ENG-KONA  
          Stephen A. Jiran, CMI Development, Inc.  
          M&E Pacific, Inc. (Oahu)  
          David Frankel, Esq.  
          Steve Kornberg, Esq.  
          Clarence Medeiros, Jr.

## **SUBDIVISION AGREEMENT**

THIS AGREEMENT, made, executed, and delivered this 28<sup>th</sup> day of June, 2007, by and between **KI'ILAE ESTATES, LLC**, a Hawaii limited liability company, hereinafter called the "Subdivider", whose business address is 1885 Main Street, Suite 104, Wailuku, Hawaii 96793, and the **COUNTY OF HAWAII**, a municipal corporation of the State of Hawaii, whose business address is 25 Aupuni Street, Hilo, Hawaii, hereinafter called the "County", through its Planning Department, Department of Public Works, and Department of Water Supply,

### **Witnesseth:**

WHEREAS, the Subdivider has undertaken to complete the construction of utilities and improvements (such as roads, drainage structures, sewer lines and water systems) in that certain subdivision development known as "KI'ILAE FARMS", situated at Ki'ilae and Kauleoli 1 & 2, District of South Kona, Island of Hawaii, State of Hawaii, and designated as Tax Map Key Nos. (3) 8-5-005:019 and 022 (portion), on or before the 30<sup>th</sup> day of June, 2008, in accordance with construction plans and specifications approved by all appropriate agencies and further approved by the Planning Department of the County of Hawaii on April 5, 2007, File No. SUB 2003-0148, and by this reference made a part of this Agreement;

WHEREAS, pursuant to Section 23-81, Chapter 23, Hawaii County Code, a subdivider may secure final subdivision approval prior to completion of construction by entering into an agreement with appropriate County agencies and filing with such agencies a surety bond or other acceptable security to assure that the actual construction and installation of the required utilities



and improvements will be completed as shown on approved construction drawings and specifications; and

WHEREAS, no interest in any lot within the subject subdivision can be conveyed until the completion of applicable state and federal subdivision registration procedures.

NOW, THEREFORE, IT IS HEREBY AGREED by and between Subdivider and the County that:

1. Subdivider shall make, install and complete all of the above-mentioned required utilities and improvements on or before the 30<sup>th</sup> day of June, 2008, in accordance with the said construction plans and specifications therefor, in accordance with the requirements and standards of the County and to the satisfaction of the Director of the Department of Public Works and, when appropriate, to the satisfaction of the Department of Water Supply, provided, however, that the County may grant an extension of this time period for circumstances preventing completion which are beyond the control of Subdivider.

2. In the event Subdivider fails to complete all required improvements and utilities within the time specified hereinabove or such extension as may be mutually agreed upon in writing, or fails to timely complete or abandons the subdivision prior to final approval, or this Agreement is terminated by the County for Subdivider's noncompliance with any provision contained in this Agreement, the County, through its Department of Public Works and, when appropriate, the Department of Water Supply, may complete the improvements and recover the full cost and expense thereof from the Subdivider.

3. Subdivider's obligations to complete the improvements and utilities as specified in this Agreement shall be secured by a good and sufficient surety bond (other than personal

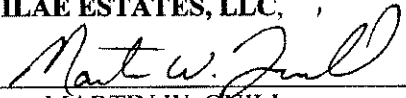
surety), certified check, or other security acceptable to the Planning Director and approved by the Corporation Counsel, such bond or other acceptable security to be payable to the County and, when appropriate, the Department of Water Supply, and conditioned upon the faithful performance of any and all work required to be done by the Subdivider in accordance with the provisions of this Agreement. Said bond or other acceptable security shall be no less than the sum of EIGHT MILLION FOUR HUNDRED TEN THOUSAND ONE HUNDRED FIFTY FOUR AND 28/100 Dollars (\$8,410,154.28).

The parties agree that this instrument may be signed in counterparts, each of which when taken together shall be considered one and the same agreement, binding upon all parties. For all purposes (including, without limitation, recordation, filing and delivery of this instrument) duplicate, unexecuted and unacknowledged pages of the counterparts may be discarded and the remaining pages assembled as one document.

IN WITNESS WHEREOF, the parties hereto have caused these presents to be executed  
as of the day and year first above written.

**SUBDIVIDER:**

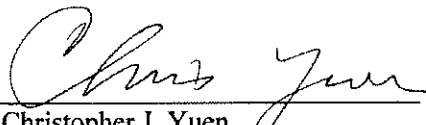
**KIILAE ESTATES, LLC,**

By   
MARTIN W. QUILL  
Its Manager

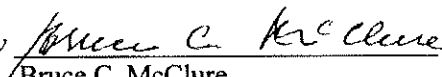
**COUNTY OF HAWAII:**

By   
DIXIE KAETSU  
Its Managing Director

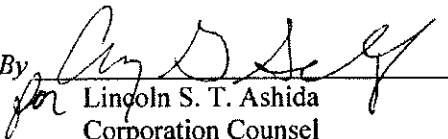
By PLANNING DEPARTMENT

By   
Christopher J. Yuen  
Its Planning Director

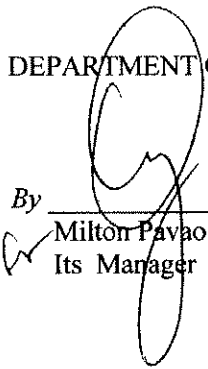
By DEPARTMENT OF PUBLIC WORKS

By   
Bruce C. McClure  
Its Director

**APPROVED AS TO FORM  
AND LEGALITY:**

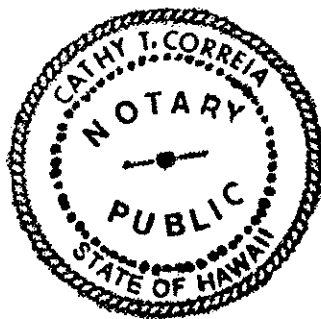
By   
Lincoln S. T. Ashida  
Corporation Counsel  
County of Hawai'i

By DEPARTMENT OF WATER SUPPLY

By   
Milton Pavao  
Its Manager

STATE OF HAWAII       )  
                                  ) SS.  
COUNTY OF HAWAII    )

On June 28, 2007, before me personally appeared DIXIE KAETSU, to me personally known, who, being by me duly sworn, did say that DIXIE KAETSU is the Managing Director of the County of Hawaii, a municipal corporation of the State of Hawaii; that the seal affixed to the foregoing instrument is the corporate seal of said County of Hawaii; that the foregoing instrument was signed and sealed in behalf of the County of Hawaii by authority given to said Mayor of the County of Hawaii by Section 5-1.3(g) of the County Charter, County of Hawaii (2000), as amended, and assigned by the Mayor to the Managing Director pursuant to Section 6-1.3(h) of the County Charter; and said DIXIE KAETSU acknowledged said instrument to be the free act and deed of said County of Hawaii.



  
CATHY T. CORREIA  
Notary Public, State of Hawaii

My commission expires: 10/13/2010

LINDA LINGLE  
GOVERNOR



BRENNON T. MORIOKA  
INTERIM DIRECTOR

Deputy Directors  
MICHAEL D. FORMBY  
FRANCIS PAUL KEENO  
BRIAN H. SEKIGUCHI

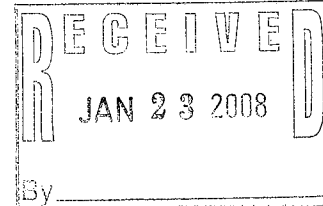
**STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION**

HAWAII DISTRICT  
50 MAKALA STREET  
HILO, HAWAII 96720  
TELEPHONE: (808) 933-8866 • FAX: (808) 933-8869

January 22, 2008

IN REPLY REFER TO:

HWY-H 08-2.0029



Ms. Diane Kodama  
M&E Pacific, Inc.  
Suite 500, Pauahi Tower  
1001 Bishop Street  
Honolulu, Hawaii 96813

Dear Ms. Kodama:

**SUBJECT: Kiilae Farms - Entrance Road Improvements  
Hawaii Belt Road, Project No. FAP 8-D**

Your plans are approved subject to the following:

1. The applicant's attention is called to the Department of Transportation's policy for the utility company's right to occupy the highway rights-of-way. A request for utility easement or access, with plans, should be submitted to our Highways Division, Rights-of-Way Branch, 601 Kamokila Boulevard, Kapolei, Hawaii 96707, telephone number (808) 692-7325.
2. Please also be apprised that the provisions of Chapter 343, Hawaii Revised Statutes apply to this work. Please submit proof of compliance when submitting the construction permit.

Construction must start within one year of this approval letter date. If it does not, the plans shall be resubmitted for review and approval.

Please submit a copy of this letter with two sets of the final plan and obtain a permit to perform work upon state highways before starting any work within the highway right-of-way.

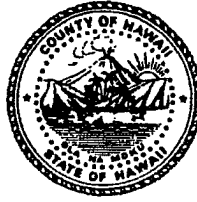
Should you have any questions, please call Mr. Robert Taira at telephone number 933-0498.

Very truly yours,

A handwritten signature in black ink, appearing to read "Stanley M. Tamura".

STANLEY M. TAMURA  
Hawaii District Engineer

Harry Kim  
Mayor



1-KK-1  
Christopher J. Yuen  
Director  
Brad Kurokawa, ASLA  
LEED® AP  
Deputy Director

County of Hawaii  
PLANNING DEPARTMENT

101 Pauahi Street, Suite 3 • Hilo, Hawaii 96720-3043  
(808) 961-8288 • FAX (808) 961-8742

July 3, 2007

Michael Moore, Esq.  
Tsukazaki Yeh & Moore  
Attorneys At Law  
85 W. Lanikaula Street  
Hilo, HI 96720-4199

Dear Mr. Moore:

**FINAL SUBDIVISION APPROVAL NO.SUB-03-000148**  
**SUBDIVISION AGREEMENT & BOND NO. 736466S**  
**AGREEMENT RE DRAINAGE IMPROVEMENTS**  
**SUBDIVIDER: KI'ILAE ESTATES, LLC**  
**"KI'ILAE FARMS"**

Proposed Consolidation of Lots 2 & 3 of Ki'ilae Subdivision (Subdivision No. 7459-Revised(2)),  
Being Portions of Land Commission Award 8521-B, Apana 3; Grant 1575; Grant 3708;  
Royal Patent 3865; Land Commission Award 9459, Apanas 1 & 2,  
And Resubdivision into Lots 1 to 50, Roadway Lots A to E,  
**Designation of No Access Planting Screen Easement** along South Kona Belt Highway and  
Designation of Easements 1 to 28, Inclusive  
Ki'ilae & Kauleoli 1st & 2nd, South Kona, Island of Hawaii, Hawaii  
**TMK: 8-5-005:Portions of 019 & 029**

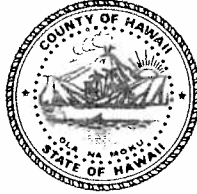
Please be informed that final subdivision approval for recordation is hereby granted to the final plat map dated October 17, 2006, as attached herewith inasmuch as the surety documents to complete construction of improvements within the subdivision have met the approval of all the listed officers.

You and the subdivider may wish to consult a surveyor for the preparation of the necessary legal documents and description of the certified final plat map for the purpose of recordation with the State of Hawaii, Bureau of Conveyances.

EXHIBIT

KK

Harry Kim  
Mayor



## County of Hawai'i

### BOARD OF APPEALS

101 Pauahi Street, Suite 3 • Hilo, Hawai'i 96720-3043  
(808) 961-8288 • Fax (808) 961-8742

January 31, 2006

David Kimo Frankel, Esq.  
P O Box 1185  
Volcano, HI 96785

Wayne Leslie  
P O Box 2151  
Kealahou, HI 96750

Jack Kelly  
Protect Keopuka Ohana  
PO Box 917  
Capt. Cook, HI 96704

Mr. Clarence A. Medeiros, Jr.  
Nellie J. Medeiros  
86-3672 Government Main Road  
Captain Cook, HI 96704

Michael W. Moore, Esq.  
Tsukazaki Yeh & Moore  
85 W. Lanikaula Street  
Hilo, Hawaii 96720-4199

Thomas W. Pace  
Pace Investments Limited Partnership  
PO Box 2240  
Kealahou, HI 96750

Bobby Jean Leithead-Todd, Esq.  
Office of the Corporation Counsel  
101 Aupuni Street, Suite 325  
Hilo, Hawaii 96720

Sherry P. Broder, Esq.  
Davies Pacific Center, Suite 800  
841 Bishop Street  
Honolulu, HI 96813

Dear Messrs. Frankel, Leslie, Kelly, C. Medeiros, Moore, Medeiros, Pace and  
Mes. N. Medeiros, Leithead-Todd, and Broder:

Board of Appeals (BOA 04-013)

Petitioner: Wayne Leslie and Protect Keopuka Ohana

Request: Appeal of Decision by the Planning Director dated May 7, 2004  
relating to the granting of Tentative Approval of the preliminary  
subdivision plat submitted by Ki'ila Estates LLC (SUB 2003-0148),  
and Appeal of Decision by the Planning Director to consider the  
makai area a Pre-existing Lot

TMK: (3) 8-5-5:Portions of 19 and 22, Ki'ila and KauleoLi 1 and 2, South Kona, Hawai'i

Board of Appeals (BOA 04-014)

Petitioner: Clarence A. Medeiros, Jr.

Request: Appeal of Decision by the Planning Director dated May 7, 2004  
relating to the granting of Tentative Approval of the preliminary  
subdivision plat submitted by Ki'ila Estates LLC (SUB 2003-0148)

TMK: (3) 8-5-5:Portions of 19 and 22, Ki'ila and KauleoLi 1 and 2, South Kona, Hawai'i

03991

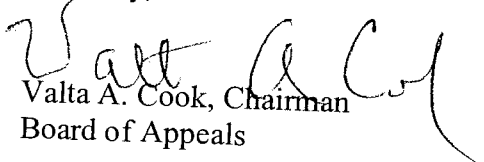
Messrs. Frankel, Leslie, Kelly,  
C. Medeiros, Moore, Medeiros, Pace and  
Mmes. N. Medeiros, Leithead-Todd, and Broder  
January 31, 2006  
Page 2

The Board of Appeals at its January 27, 2006 meeting voted to uphold the Planning Director's decision as the Board found that the Director, pursuant to Rule 8-15, was not in violation of the Code or other applicable law, or clearly erroneous in view of the reliable, probative, and substantial evidence on the whole record, or arbitrary, or capricious, or characterized by an abuse of discretion or clearly unwarranted exercise of discretion.

The Board then adopted the Hearings Officer's Findings of Fact, Conclusions of Law, and Decision and Order denying the above appeal. Attached is a certified copy of the document.

Should you have any questions in the meantime, please feel free to contact Alice Kawaha or Susan Gagorik of the Planning Department, who serve as staff to the Board, at 961-8288.

Sincerely,

  
Valta A. Cook, Chairman  
Board of Appeals

Att.

xc w/att: Board of Appeals  
Corporation Counsel, BOA Attorney  
Planning Director  
Ministerial Division – Mr. Daryn Arai  
Planning Department, West Hawaii Office  
Ki'ilae Estates LLC

63992



**SHERRY P.BRODER #1880**  
Davies Pacific Center, Suite 800  
841 Bishop Street  
Honolulu, Hawaii 96813  
Telephone No.: (808) 531-1411

Date:

**JAN 31 2006**

## COUNTY OF HAWAII

**Intervenors.**

*Sherry P. Broder, Esq.*

005846

**HEARING OFFICER'S FINDINGS OF FACT,  
CONCLUSIONS OF LAW, DECISION AND RECOMMENDED ORDER**

The Hearing Officer hereby submits her Findings of Fact, Conclusions of Law, Decision and Recommended Order.

**FINDINGS OF FACT**

If it is determined that any of the following Findings of Fact should have been set forth as Conclusions of Law, they shall be deemed as such.

**I. INTRODUCTION**

1. These are consolidated appeals to the Board of Appeals, one brought by Appellants Wayne Leslie ("Leslie") and Protect Keopuka Ohana ("PKO")(BOA 04-013), and the other by Appellant Clarence A. Medeiros, Jr. ("Medeiros")(BOA 04-014). Appellants appeal the decision of the Planning Director to issue tentative subdivision approval to the Applicant for a subdivision of property situated at Kiilae and Kauleoli, South Kona, Hawaii.

2. The Applicant submitted a subdivision application with a preliminary plat to the Planning Director on or about October 30, 2003 (SUB 2003-0148). (Record on Appeal ("ROA"), pp. 136-138).

3. The proposed subdivision comprises approximately 499.537 acres. The mauka boundary of the proposed subdivision borders Mamalahoa Highway, and it extends down to the mauka boundary of the Old Government Road, approximately 600 to 1800 feet mauka of the shoreline. The land below the Old Government Road is within the State Special Management Area. The land within the proposed subdivision is within the State Agriculture district and is zoned Agriculture-5 acres (A-5a). (ROA, pp. 104-105; 231-239).

4. The Planning Director tentatively approved the subdivision application on May 7, 2004. (ROA, pp. 231-239).
5. On June 4, 2004, Leslie and PKO filed a petition for appeal of the Planning Director's decision. (*General Petition for Appeal of Decisions By Planning Director*, (BOA 04-013)).
6. On June 4, 2004, Medeiros filed a separate petition for appeal of the Planning Director's decision. (*General Petition for Appeal of Decisions By Planning Director*, (BOA 04-014)).
7. On June 30, 2004, the Applicant petitioned to intervene in the appeals. (*Ki'ilae Estates, LLC's Petition for Intervention in BOA No. 04-013; Ki'ilae Estates, LLC's Petition for Intervention in BOA No. 04-014*).
8. On September 14, 2004, the Board of Appeals approved a stipulation allowing Pace Investments Limited Partnership ("Pace") to intervene. (*Stipulation to Allow Intervention*).
9. Sherry P. Broder, Esq. was appointed Hearing Officer in this matter by the Board of Appeals. (Hearing Transcript ("Tr."), p. 5).
10. On May 19 and 20, 2005, a contested case hearing was held before the Hearing Officer. All parties were in attendance at the Hearing. Appellants Leslie and PKO were represented by David K. Frankel, Esq. Appellant Medeiros was represented by Nellie Medeiros. Appellee Planning Director of the County of Hawaii was represented by Deputy Corporation Counsel Bobby Jean Leithead-Todd, Esq. Intervenor Applicant was represented by Michael Moore, Esq. Intervenor Pace was represented by Thomas Pace. (Tr., p. 5).
11. Three witnesses testified at the contested case hearing. Appellants Leslie and PKO did not call any witnesses. Appellant Medeiros testified on his own behalf. Appellee

Planning Director testified on his own behalf. The Applicant called one witness, Dr. Robert Rechtman. Intervenor Pace did not call any witnesses at the hearing. (Tr., pp. 14, 89 and 156).

## II. ISSUES ON APPEAL

12. In their petition for appeal, Appellants Leslie and PKO present the following arguments:

(1) The Planning Director erred by recognizing that a State roadway divided Ki'ilae's property and created a preexisting lot;

(2) The Planning Director erred because a Special Management Area Permit was required prior to granting tentative subdivision approval;

(3) The Planning Director failed to adequately protect native Hawaiian rights when he granted tentative subdivision approval;

(4) The subdivision application violated HRS Chapter 205, the Hawaii County General Plan, the public trust doctrine, and the Hawaii County Subdivision Code.

*(General Petition for Appeal of Decisions By Planning Director (BOA 04-013)).*

13. In his petition for appeal, Appellant Medeiros presents the following arguments:

(1) The title to the Kauleoli ahupuaa is in dispute and therefore the Planning Director erred in granting tentative subdivision approval;

(2) The archaeological preservation plan for the property is deficient;

(3) The issuance of tentative subdivision approval violates a Third Circuit Court order issued in connection with a prior tentative subdivision approval issued by the Planning Director.

*(General Petition for Appeal of Decisions By Planning Director (BOA 04-014)).*

## III. BACKGROUND

14. In April 2000, the Applicant acquired approximately 803 acres, which included the subject property in the ahupuaa of Kauleoli, as well as lands within the ahupuaa of Kiilae immediately to the north. (Supplemental ("Supp.") ROA, pp. 484-485; Applicant's Exhibit 5).

15. The property was formerly utilized as ranch land for grazing cattle and was a part of the McCandless Ranch. (Supp. ROA, pp.562-569, 2743-2744).

16. The Applicant initially applied for a subdivision of the property consisting of 124 five-acre lots covering an area of approximately 739 acres within the Kiilae and Kauleoli ahupuaas that lay above the Old Government Road. In connection with this application, the Applicant had an extensive archaeological reconnaissance survey conducted covering the entire 803 acres. This study revealed extensive, well-preserved archaeological features in the makai portion of Kiilae. (Supp. ROA, pp. 484, 2743-2744).

17. The Pu'uuhonua O Honaunau National Historic Park is situated immediately to the north of Kiilae along the shoreline. The National Park Service indicated an interest in acquiring a portion of the property within Kiilae for park expansion. (Supp. ROA, pp. 484, 2743).

18. Given the extensive archaeological features within the Kiilae ahupuaa, 238 acres within Kiilae were sold to the Trust for Public Lands, which in turn intends to sell this property to the National Park Service upon Congressional approval and appropriation for expansion of the Pu'uuhonua O Honaunau National Park. (Supp. ROA, pp. 484, 2743-2744).

19. In order to sell the 238 acres to the Trust for Public Lands, on October 11, 2001 the Applicant obtained approval for the consolidation and resubdivision of the property into three large lots. Lot 1 comprised the 238 acres in the makai portion of Kiilae to be sold to the Trust for Public Lands. Lot 2 comprised the lands in Kauleoli. Lot 3 comprised the remaining land within Kiilae mauka of the 238 acres sold. (Supp. ROA, p. 484; Exhibit "D", *Intervenor Ki'ilae Estate LLC's Motion to Dismiss Appeals of Planning Director's Determination of Pre-Existing Legal Lot*, filed 12/20/04 ("Pre-Existing Lot Motion").

20. Due to the archaeological features found in the remaining approximate 100 acres within Kiilae mauka of the 238 acres sold to the Trust for Public Lands (*i.e.* Lot 3 described above), the Applicant intends to ultimately sell or donate these remaining lands in Kiilae to the National Park Service for future park expansion or to some public interest entity for preservation purposes. (Supp. ROA, pp. 484, 2734-2735, 2740).

21. After the consolidation and resubdivision, on October 16, 2001 the Applicant submitted an application for subdivision approval (SUB 2001-0132), proposing the subdivision of approximately 457 acres into 55 lots, including one large 64+ acre lot situated below the Old Government Road which comprised all the land between the Old Government Road and the shoreline within Kauleoli. ("the Makai lot"), and a large 96+ acre lot comprising the mauka land within Kiilae. (Supp. ROA, pp. 126, 220).

22. The Old Government Road is the mauka boundary of the State Special Management Area. The Makai lot, situate below the Old Government Road, was therefore the only lot of this proposed subdivision which was located within the Special Management Area. (Tr. at 98, 104-05).

23. On January 9, 2002, the Planning Director issued tentative approval for the proposed subdivision. (Supp. ROA, pp. 143-145).

24. On February 7, 2002, Leslie appealed the Planning Director's issuance of tentative approval for this subdivision to the Board of Appeals. (Supp. ROA, pp. 1-10). This appeal was subsequently consolidated with a similar appeal filed by PKO and its officers, Jim Medeiros, Sr. and Jack Kelly. (Supp. ROA, pp. 42-43).

25. Following a contested case hearing, on March 5, 2003 the Board of Appeals affirmed the Planning Director's issuance of tentative subdivision approval. (Supp. ROA, pp. 2929-2952).

26. The Board of Appeals' decision was thereafter appealed to the Third Circuit Court, which reversed the decision of the Board of Appeals on November 12, 2003. (Appellant PKO's Exhibit 4, pp. 3-4).

27. The Board of Appeals appealed the Third Circuit Court's decision to the Hawaii Supreme Court. The appeal remains pending. *Wayne Leslie v. Bd. of App. County of Haw. et al.*, Civ. No. 03-1-50K, SC 26184 (2003).

28. On October 13, 2003, the Applicant withdrew its 2001 subdivision application, which withdrawal was acknowledged by the Planning Director on October 17, 2003. (Exhibits "F" and "G", Pre-Existing Lot Motion).

29. On October 14, 2003, the Applicant requested the Planning Director to confirm that the Makai lot is a separate pre-existing lot. In September 2000, then Planning Director Virginia Goldstein had made a determination that the Makai lot is a separate pre-existing legal lot of record. (ROA, pp. 123-127).

30. This request sought confirmation of the existence of the land below the Old Government Road in Kauleoli as a "pre-existing legal lot" based upon the bisection of Intervenors' property by the Old Government Road. (ROA at 123-127).

31. By letter dated September 25, 2000, then Planning Director Goldstein determined that the Applicant's property at Ki'ilae and Kauleoli consisted of 8 pre-existing legal lots of record. One of these lots was the land makai of the Old Government Road (Alanui Aupuni).

(Tr. at 91, ROA at 123-127.)

32. The Old Government Road predates 1892 and the Highways Act of 1892. It was laid out by the Kingdom of Hawai'i as part of the South Kona Road System. The archeological report of Dr. Robert Rechtman includes a copy of an 1853 survey map of Kauleoli, which shows the road and refers to it as the South Kona Road. (Intervenors' Exhibit "H.") In his report, Dr. Rechtman indicates that the Old Government Road was part of the Alanui Aupuni (literally "Government Road" in Hawaiian). (Exhibit "K," Pre-existing Lot Motion; *Hawaiian Dictionary*, Pukui and Elbert © 1971, University of Hawai'i Press.)

33. Appellants presented no evidence to contradict the existence of the road prior to 1892 or its ownership by the State of Hawai'i.

34. On October 16, 2003, the Planning Director confirmed the Makai lot is a separate pre-existing lot, and stamped and signed the back of a survey map of the lot. The stamp includes the words "pre-existing lot subdivision." (ROA, pp. 128-132; Exhibit "I", Pre-Existing Lot Motion).

35. The makai land is a pre-existing lot, as it is physically separated from the other lands in Kauleoli by the Old Government Road, which is owned in fee simple by the State of Hawai'i. The physical separation of the land occurred prior to 1944, when the County's first subdivision code was adopted. (Tr. at 91-98).

36. Recognition of pre-existing lots is a standard County practice. (Tr. at 91.)

37. The County regularly recognizes similar pre-existing lots that existed prior to 1944 throughout the island. (Testimony of Christopher Yuen, Tr. at 91-98; Affidavit of Christopher Yuen, attached to Pre-existing Lot Motion as Exhibit "E".)

38. The County has been recognizing pre-existing lots since at least the 1970's and



probably as far back as 1944. (Tr. at 94-97; Testimony of Christopher Yuen.)

39. Director Yuen has a bachelor's degree in human biology, a master's degree in environmental science, and has been an attorney since 1982. (Tr. at 89-90.)

40. Director Yuen was a member of the Board of Land and Natural Resources from 1990 to 1998. (Tr. at 90).

41. Director Yuen has been involved in land use matters since 1971 and has been active as a lawyer specializing in land use cases prior to his appointment as Planning Director in December 2000. (Tr. at 90.)

42. The Director testified that it was a mistake to approve the earlier consolidation and resubdivision, as the Old Government Road separates the makai lot from the rest of Kauleoli. (Tr. at 93-94).

43. People have been buying and selling lots based upon the creation of separate lots by bisection of land grants by government roads for many years. (Tr. at 96-97; Testimony of Christopher Yuen.)

44. The original Subdivision ordinance in Hawai'i County was enacted in 1944. Before enactment of the subdivision code, except for territorial laws regulating the sale of lots by lot number or tract, landowners were generally allowed to sell portions of their properties without formal subdivision approval. (Tr. at 94-96, testimony of Christopher Yuen.)

45. Enactment of the 1944 subdivision code did not destroy the existence of existing separate lots. In Hawai'i County these are called "pre-existing lots." (Tr. at 94-97, testimony of Christopher Yuen.)

46. Examples of pre-existing lots would be original land grants, or sales of portions of

these original grants that were legally made prior to the first subdivision law. (Tr. at 94-97; Exhibit "E" of Pre-existing Lot Motion).

47. County subdivisions code did not regulate the creation of lots of more than 20 acres in size before the 1960's. (Exhibit "E," Pre-existing Lot Motion).

48. Tax maps are not a definitive expression of what constitutes a pre-existing lot, because in many cases several grants were put into one tax map parcel for administrative and billing purposes. (Exhibit "E," Pre-existing Lot Motion).

49. The Hawai'i County Planning Department has consistently taken the position that placing several grants within one tax map parcel does not create a consolidation of the grants and therefore does not destroy the pre-existing lot status of the various grants. (Exhibit "E," Pre-existing Lot Motion).

50. It has been the consistent practice of the Hawai'i County Planning Department that when a public highway across a grant bisects that parcel, and if the public highway was created before the subdivision code, the land areas on either side of the highway are separate pre-existing lots of record. (Tr. at 94-97; Exhibit "E," Pre-existing Lot Motion.)

51. While under the current code, the creation of a public street does require a formal subdivision action (Hawai'i County Code Section 23-39), this was not the case prior to enactment of subdivision laws. Parcels on either side of the older public highways on the island are routinely recognized as being separate lots, even though they were, before construction of the highway, part of a single grant. Such properties are routinely bought and sold as separate lots. (Tr. at 94-97, Exhibit "E," Pre-existing Lot Motion).

52. The current subdivision, SUB 2003-148, primarily involves Grant 1575 in the

ahupua'a of Kauleoli. In the area in question, the old tax maps show a pair of parallel dashed lines running across TMK No. 8-5-5-19, labeled in some maps as "Old Government Road." (Tr. at 91-93).

53. In a prior consolidation and resubdivision undertaken primarily to create a lot that could be sold to the Trust For Public Lands, the makai lot was mistakenly consolidated with the land mauka of the Old Government Road. (Tr. at 91-97; Exhibit "E," Pre-existing Lot Motion.)

54. It was an error to consolidate the land makai of the Old Government Road (Alanui Aupuni) with the land mauka of the road, because the two parcels are separated by a public highway. The map submitted with the earlier consolidation and resubdivision incorrectly listed the Old Government Road as an easement rather than public road. (Tr. at 91-97; Exhibit "E," Pre-existing Lot Motion).

55. On October 16, 2003, in conjunction with the letter of Virginia Goldstein, the Planning Director Christopher Yuen signed a map recognizing a "pre-existing lot subdivision," showing the area makai of the Old Government Road as a pre-existing lot of approximately 59 acres. (Tr. at 91-97, ROA 128).

56. The Hawai'i County Code does not specifically define the term "Subdivision."

57. The Hawai'i County Code defines a "lot" as a "parcel of land intended as a unit for transfer of ownership or for development." HCC Section 23-3(16)(A).

58. The Hawai'i County Code defines "pre-existing lot" as "a specific area of land that will be treated as a legal lot of record based upon criteria" set forth in the subdivision code. HCC Section 23-3(22).

59. Article 11 of Chapter 23 of the Hawai'i County Code provides that the director

shall certify that a lot is a pre-existing lot if the lot was created and recorded prior to November 22, 1944, and has never been legally consolidated. HCC Section 23-118.

60. According to Hawai‘i County Code Section 23-3(a)(31), “Subdivided Lands” are defined as follows: “‘Subdivided land’ means improved or unimproved land or lands divided into two or more lots, parcels, sites, or other divisions of land for the purpose, whether immediate or future, of sale, lease, rental, transfer of title to or interest in, any or all such parcels, includes re-subdivision, and when appropriate to the context, relates to the process of subdividing of the land or territory subdivided. Easements for the purpose of road and utilities shall not be construed as subdivided land.”

61. In addition to recognizing that an easement does not create subdivided lands, the Hawai‘i County Code restricts the County’s acceptance of new public roadways to situations where the requirements of the Subdivision Code have been satisfied. Hawai‘i County Code at Section 23-10.

62. Through its definition of “Subdivided lands” and the restrictions imposed on acceptance of public roadways, the County Code reflects the Hawai‘i County Council’s intent to recognize that pre-existing roadways create de facto subdivisions.

63. The Highways Act of 1892 recognizes that all roadways existing prior to its enactment became “Public Highways” owned by the State in fee simple. HRS §§ 264-1(a) and 264-2; *see also In re Application of Kelley*, 50 Hawai‘i 567, 579, 445 P.2d 538 (1968) (describing the practical effect of the Highways Act). “All roads, alleys, streets, ways, lanes, bikeways, and bridges in the State, laid out, or built by the government are declared to be public highways.” HRS § 264-1(a). “The ownership of all public highways and the land, real estate

and property of the same shall be in the government in fee simple.” HRS § 264-2.

64. Because the “Old Government Road” predates 1892, it is a public highway.

65. As a public highway, the “Old Government Road” created a de facto subdivision that made the makai lot a pre-existing lot.

66. The Planning Director’s recognition of the makai lot as a pre-existing lot conformed to both the County Code and Hawai‘i law.

67. On or about April 16, 2004, the Applicant sold the Makai lot to Intervenor Pace Investments Limited Partnership. (Exhibit “J”, Pre-Existing Lot Motion).

68. On or about October 30, 2003, the Applicant filed the instant subdivision application (SUB 2003-0148). (ROA, pp. 136-138).

69. The subject subdivision application proposes a subdivision nearly identical to the one proposed in 2001, except that the Makai lot is not included. (ROA, p. 171; Supp. ROA, p. 220).

70. In connection with the prior subdivision application (SUB 2001-132), the Applicant commenced an extensive archeological inventory survey prepared by Rechtman Consulting for the subject property, together with a detailed archival search of the archaeological, cultural, and historical literature, and a comprehensive oral history interview program. The survey covers all of the property contained in the current subdivision application. (Supp. ROA, pp. 522 to 1854).

71. The preparation of a full archaeological inventory survey is unusual for a proposed subdivision which does not require a Special Management Area Use Permit. (Tr. at 99-101).

#### **IV. APPELLANTS WAYNE LESLIE AND PROTECT KEOPUKA OHANA'S CLAIMS**

##### **A. The Makai Lot/HRS Chapter 205A**

72. Appellants Leslie and PKO allege that the Planning Director erred in recognizing the Makai lot as a pre-existing separate legal lot, on the grounds that (1) the 2001 consolidation and resubdivision of the property designated the Makai lot as part of Lot 2 of that subdivision and therefore the Applicant had waived its rights with respect to the Makai lot being separate; and (2) Appellants failed to request a Declaratory Ruling by the Planning Director on this issue and therefore Appellants were denied due process by not being given notice of and a right to participate in the Planning Director's determination. As a result, Appellants argue that a SMA Permit was required prior to the issuance of tentative subdivision approval. (Tr., pp. 249-251)

73. The Old Government Road predates 1892, and was laid out by the Hawaiian government in the mid-1800's as part of the south Kona road system. The archaeological report of Dr. Robert Rechtman includes a copy of a 1853 survey map of Kauleoli which shows the road and refers to it as the "South Kona Road." In his report, Dr. Rechtman indicates that the Old Government Road was part of the Ala Nui Aupuni, or the system of government roads. (Exhibit "K", Pre-Existing Lot Motion).

74. On the plat map submitted with the application for the consolidation and resubdivision of the property into three large lots in 2001, the Old Government Road is designated as an easement, *i.e.* "Easement 2," instead of a road. (Exhibit "D", Pre-Existing Lot Motion; Tr., pp. 92-93).

75. The consolidation of the land in Kauleoli above and below the Old Government Road in 2001 was an error which was the result of the Old Government Road being designated as and therefore being assumed to be an easement rather than a public roadway owned in fee by the State of Hawaii. (Tr. pp. 93-94, 97).

76. The Makai lot was a pre-existing lot of record prior to 1944, the year the first subdivision code was adopted by the County of Hawaii. (Tr. Pp. 94-95).

77. There is no requirement that members of the public request a declaratory ruling when seeking information from the Planning Director, nor is the Planning Director required to issue a declaratory ruling upon request. (Tr. pp. 243-244).

78. Most inquiries to the Planning Department from the public for information, including information as to the determination of pre-existing lots, are made by the public and responded to by the Planning Department in letter form and not by a formal declaratory ruling. (Tr. Pp. 244-245).

79. The Planning Director did not require a Special Management Area Permit for the proposed subdivision because there is no part of the proposed subdivision within the Special Management Area. (Tr. p. 98).

**B. Native Hawaiian Rights**

80. In the appeal of the tentative subdivision approval issued in 2002, Appellants Leslie and PKO claimed that the Planning Director in issuing tentative subdivision approval for the proposed subdivision failed to identify and protect native Hawaiian rights. (Supp. ROA, p. 4).

81. Appellants Leslie and PKO did not submit any new evidence in the instant appeal concerning native Hawaiian rights.

82. At the hearings in the appeal of the 2002 tentative subdivision approval, Appellant Leslie testified that he fishes for opelu in the nearshore waters off Kauleoli, engages in throw net and pole fishing from the shoreline, and picks opihi, limu, and a'ama along the shoreline. (Supp. ROA, pp. 2713-2716).

83. There are over 100 opelu koa, or opelu fishing grounds, between Kaiwi Point near Kailua-Kona and South Point. Leslie fishes for opelu at most of these opelu koa. (Supp. ROA, p. 2720).

84. On a good fishing day, Leslie harvests between 800 to 1,100 lbs. of opelu, although he claims he fishes opelu for subsistence purposes and a little for sale. For one meal, his family may consume approximately 5 lbs. of opelu. (Supp. ROA, pp. 2721-2722)

85. Leslie accesses the shoreline area of Kiilae and Kauleoli for fishing and gathering either by boat or by walking along the coastline from Pu'uhonua O Honaunau National Park. He does this about 2 to 3 times per year. (Supp. ROA, pp. 2724-2726).

86. Leslie testified that there is one pilo plant which he utilizes for medicinal purposes which is in Kauleoli ahupuaa. He claimed the plant is located approximately 100 yards mauka of the Old Government Road. He testified he has gathered from this pilo plant 4 times in the last 15 years. He stated there are also pilo plants in the ahupuaas of Kaloko and Keauhou. (Supp. ROA, pp. 2723-2725, 2729-2730).

87. Leslie testified that he is a lineal descendant of an ancestor buried either in Kiilae or Kauleoli ahupuaas. He has never been to the burial site and does not know if the burial



site is among the burial sites identified in the Applicant's Archaeological Inventory Survey and Burial Treatment Plan. He admits it could very possibly be among the burials identified. At the time of his testimony, he had not presented a claim as a lineal descendant to the Hawaii Island Burial Council. (Supp. ROA, pp. 2716-2720).

88. At the hearings in the appeal of the 2002 tentative subdivision approval, Jim Medeiros also testified that he gathers medicinal plants on the property -- uha loa and pilo, as well as hao wood. He testified he utilizes the alaloa, or Old Government Road, to access the property for gathering hao. (Supp. ROA, pp. 2797-2798, 2801).

89. Jim Medeiros also claimed that there is a "spiritual place" on the property referred to as a "laena," but he refused to disclose its location other than that it is makai of the Old Government Road. (Supp. ROA, pp. 2801-2802).

90. At the time of the contested case hearings in the appeal of the 2002 tentative subdivision approval, Jim Medeiros testified that in the prior 5 years he had gathered uha loa on the property 3 to 4 times. He refused to identify what he utilized uha loa for other than as "medicine." The uha loa is located on both Kauleoli and Kiilae ahupuaas. It is also found in many other areas in South Kona. Most ahupuaa have it. (Supp. ROA, pp. 2818-2819).

91. Jim Medeiros also testified that in the prior 5 years, he had gathered pilo on the property 2 times. He stated there are over 100 pilo plants at Kauleoli. He refused to identify how he prepares the pilo for medicinal purposes. Pilo is also found in Kiilae. Medeiros also gathers pilo in other ahupuaas in South Kona, including Keopuka, Ka'awaloa and Keokea. Many ahupuaa have pilo scattered in the lower to mid elevations. He has gathered pilo in these other ahupuaa. (Supp. ROA, pp. 2103, 2819-2822).

92. Hao wood is also found in other ahupuaa, including Kiilae and Keokea.

There are many places in Kona with hao. (Supp. ROA, p. 2825).

93. Jim Medeiros claimed that he is a lineal descendant of an ancestor who is buried at a site along the Kauleoli-Kiilae boundary. This burial site has been identified in the Applicant's Archaeological Inventory Survey. (Supp. ROA, pp. 2818, 2828).

94. Prior to the issuance of the 2002 tentative subdivision approval, Jim Medeiros had discussions with the Planning Director and the Applicant's archaeologist. During those discussions, he did not inform the Planning Director of the gathering practices he testified to at the hearing, nor did he inform the archaeologist of his lineal descendancy with respect to any burials on the property. Jim Medeiros also accompanied the Hawaii Island Burial Council on a site visit to the identified burials on the property, but did not inform the Council or identify any other burials on the property at that time. (Supp. ROA, pp. 2668, 2782, 2784-2786).

95. Uhaloa is a medicinal plant that can be used to treat a variety of ailments, especially sore throats. It has an extremely broad range in both North and South Kona. Uhaloa has been found in the large majority of botanical surveys conducted in Kona. It is readily apparent in many areas of Kiilae and Kauleoli, as well as surrounding ahupuaa, near the coastline, on and adjacent to trails, and in many other locations. (Applicant's Exhibit 27).

96. Kou has a more restricted range than uhaloa. During a systematic search for kou along the Kona coast in 2004 in the ahupuaa of Honaunau, Keokea, Kiilae, Kauleoli, and Kealia, a few plants were observed near the canoe club in the bay at Honaunau, and planted specimens were observed in the National Park. Otherwise, it appeared to be absent in this area, although it may have been formerly more abundant. (Applicant's Exhibit 27).

97. Pilo is found in dry lowlands throughout the State of Hawaii, often in coral or a'a outcrops, from sea level to approximately 100 meters in elevation, although it may be found as high as 575 meters. It is used traditionally as a poultice to joints to cure broken bones. Pilo is fairly abundant in Ka'awaloa, along Ali'i Drive in Kailua-Kona, and south of Ho'okena Beach in along the coast from Milolii through Kapua. In the vicinity of Kiilae, there appears to be one plant known from within the park boundary, and six more on the 676-acre property just mauka. Field surveys identified a total of eight pilo between Hookena and Napoopoo (all in Honaunau), versus 41 more plants observed at Ka'awaloa within Kealakekua Bay State Park, and 41 more plants observed near Kamehameha III Road and the south end of Ali'i Drive. A survey of Kiilae and Kauleoli resulted in no pilo plants being observed within a hundred yards of the Old Government Road. It is possible that a few individual plants are present in this area, but they would likely be small and confined under the vegetation canopy, and would also likely be unhealthy. It is unlikely that any substantial population is present, and it is probable that no pilo is present within the 100 yard corridor of the Old Government Road. (Applicant's Exhibit 27).

98. There is no provision in the Subdivision Code specifically addressing the protection of traditional and customary native Hawaiian rights, other than the general statement in HCC §23-26 that "[o]utstanding natural or cultural features such as scenic spots, water courses, fine groves of trees, heiaus, historical sites and structures shall be preserved as provided by the [Planning Director]". (HCC Section 23-26).

99. Nevertheless, the Planning Director followed the criteria regarding native Hawaiian rights set forth in Hawaii Supreme Court decisions (*Public Access Shoreline Hawaii v. Planning Commission* and *Ka Pa'akai O Ka Aina v. Land Use Commission*). The Planning

Director evaluated what the significant resources were, determined the potential impacts of the proposed subdivision on those resources, and considered what mitigation measures would be appropriate to protect those resources. (Tr., pp. 99-100).

100. Prior to the issuance of tentative subdivision approval for the instant subdivision application, the Planning Director had available the following information:

- \* Archaeological Inventory Survey (Rechtman 2001)
- \* Oral history interviews (Vol. II of Inventory Survey)
- \* Letters on file (SUB 2001-0132)
- \* Testimony in Board of Appeals hearings on SUB No. 2001-0132 from Wayne Leslie, Sr. and Jim Medeiros, Sr.
- \* Letter dated Jan. 27, 2003 regarding search for pilo (maipilo) plant
- \* Aerial photos of site

(ROA, pp. 232-233).

101. The cultural and natural resources within the proposed subdivision are historic sites, burial sites, the possible pilo plant, and uhaloa plants. Within the parcel located makai of the Old Government Road, that is not part of this subdivision application, Jim Medeiros, Sr. identified a "laena", or departure point for souls of the dead. The shoreline makai of the proposed subdivision is used for gathering limu, opihi, and a'ama crab and for pole and throw net fishing. The ocean fronting the land makai of the proposed subdivision is used for fishing from boats, including opelu fishing and for diving. (ROA, p. 233).

102. The proposed subdivision does not itself change the uses that can be made of the property, because uses allowed by the existing A-5a zoning remain in effect. The subdivision does require the construction of roads, water lines, and drainage systems, and increases the number of homes that can be built on the property without special approval. The Zoning Code and Rule 13 of the Rules of the Planning Director allow one farm dwelling to be

built per lot. Additional farm dwellings can be built upon approval of a farm plan and the signing of a farm dwelling agreement. The approval of the subdivision will increase the number of homes that can be built on the property. There will probably be areas associated with the dwellings that are cleared for driveways and accessory buildings. Areas now in brush could be developed for agriculture, that can also involve considerable land alteration, but agricultural development can occur whether the subdivision is built or not. (ROA, p. 233).

103. The physical integrity of individual historic sites will be protected by the terms of the Archaeological Preservation Plan, which requires that all significant historic sites be preserved, with buffers. The subdivision shows these sites as archaeological easements, so that buyers will have notice of the sites, and governmental personnel who review grading, grubbing and building permits will also be aware that land-disturbing activities are not allowed within the buffers. The burials will be preserved under the terms of the approved Burial Treatment Plan. (ROA, p. 233).

104. The Applicant could not locate any pilo plants within the subdivision area and the testimony of Appellants in the prior appeal was not specific enough to locate them. It is therefore not possible to include a condition requiring preservation of a specific plant. The Applicant shall be required to create an easement on the parcel mauka of the Old Government Road, which shall be shown on the final plat map, where individuals can cultivate pilo or other native plants. Pilo or maiapilo (*Capparis sandwichiana*) is found in lowland lava areas, such as Kohanaiki, Keauhou, Mahai'ula and in the vicinity of the Kona airport (including some plants along the right of way of the Queen Kaahumanu Highway). Uhaloa is an extremely common

weed, found in vacant lots everywhere and probably occurs along the Old Government Road as well as other publicly accessible areas. Hau is also extremely common. (ROA, p. 234).

105. Before final subdivision approval can be granted, as a condition of tentative approval the applicant is required to submit a Mitigation Plan for the treatment of any burial site on the property approved by the DLNR-HPD's Hawaii Island Burial Council. (ROA, p. 18). The Planning Director conditioned final approval upon inclusion of an easement to ensure access for persons to gathering and cultivating native plants. (ROA, pp. 234).

**C. HRS Chapter 205, the General Plan, Public Trust Doctrine and the Subdivision Code**

106. In the appeal of the tentative subdivision approval issued in 2002, Appellants Leslie and PKO raised concerns over possible effects of the proposed subdivision on ocean water quality and ocean resources in violation of the "public trust doctrine." (ROA p. 234; Supp. ROA, pp. 2518-2520; Tr., p. 103).

107. Appellants Leslie and PKO did not submit any new evidence in the instant appeal concerning possible effects of the proposed subdivision on ocean water quality and ocean resources.

108. In general, a new subdivision may affect coastal water quality and ocean resources in two possible ways: direct surface runoff, and the possibility that nutrients might leach through the surface to the groundwater and ultimately to the sea. (ROA, p. 234).

109. Direct surface runoff from this subdivision to the ocean caused by this development is unlikely. The subdivision itself involves ground clearing only for roads. It does not involve construction of a golf course, house pads, or other major changes to the surface. There are no known perennial or intermittent streams on the property. There is a relatively flat

area, about 600 to 1800 feet wide, between the subdivision and the sea. This flat area is within the State Land Use Conservation District. This flat area is almost entirely pahoehoe lava with no soil. Even if surface runoff were to reach this area, it is probable that it would soak into the ground before reaching the sea. (ROA p. 234).

110. Grading for roads and the construction of roads require a National Pollutant Discharge Elimination System (NPDES) permit. The State Department of Health issued a NPDES permit to the Applicant on July 23, 2004, effective August 24, 2004. The NPDES permit contains standard requirements for management practices to reduce the likelihood of surface runoff. (ROA, p. 234; Applicant's Exhibits 30-32).

111. Construction of roads and homes will increase the amount of impervious surfaces, and thus reduce the capacity of the ground to absorb storm water. Current Department of Public Works drainage standards will require drywells capable of absorbing a ten-year rainstorm. Even if every lot is eventually developed with a 5000 square foot home and a 5000 square foot driveway, the impervious surfaces due to home and driveway construction would only be about 5% of each lot, and the paved portion of subdivision roads will only be about 2% of the total land area of the subdivision. (ROA, pp. 234-235).

112. Additional nutrients to the groundwater could potentially come from human waste from residents of the subdivision, or from fertilizers used for agriculture or landscaping. (ROA, p. 235).

113. The concern with human waste is primarily nitrogen. Phosphorus and potassium are present in lower quantities. Two hundred twenty five residents could produce about 1000 kg of nitrogen per year. The potential for nutrient contamination by human waste

can reasonably be mitigated by a septic system. A septic tank with a leach field, or an aerobic septic tank, can remove a substantial percentage of the nitrogen present in human waste. (ROA, p. 235; Applicant's Exhibits 33, 38-39).

114. The requirements for wastewater disposal systems for the proposed subdivision are regulated by the State Department of Health. Cesspools are not permitted within the proposed subdivision, and individual septic systems which meet the requirements of the Department of Health are required. A wastewater system is not required to be constructed prior to final approval. Lot owners will be required to apply for and obtain wastewater system permits from the Department of Health prior to the construction of residences on the lots. (Supp. ROA, pp. 495, 2673, 2688).

115. As a condition of subdivision approval, homeowners will be required to install either a septic tank with leach field or an aerobic septic tank, even if cesspools might be allowed by the State Department of Health. (ROA, p. 235).

116. The potential for pollution from farming activities is greater than from human waste. The potential depends greatly upon individual management techniques. It is not known at this time if nutrients leaching from fertilizers in the South Kona are having a detrimental effect on ocean water quality. If so, this would have to be dealt with generally and not in one subdivision. The land is zoned for agriculture and the land use system encourages farming. Whether or not the property is subdivided, the cultivation and fertilization of crops is a permitted use. (ROA, pp. 234-236).

117. In the appeal of the tentative subdivision approval issued in 2002, Appellants Leslie and PKO claimed that the Planning Director erred in issuing tentative



subdivision approval because the proposed subdivision was inconsistent with the County General Plan's identification of "Kiilae" as an example of natural beauty, and the subdivision would detrimentally affect the views of the area. (Supp. ROA, pp. 2542-2543).

118. Appellants Leslie and PKO did not submit any new evidence in the instant appeal concerning this claim.

119. The County General Plan provides a list of sites as examples of natural beauty on the Island of Hawaii. Among those sites is listed "Kiilae," designated by tax map as "8-5-05:19." The proposed subdivision is within the Kauleoli ahupuaa and comprises a portion of tax map key 8-5-05:19. Kiilae is the name of the ahupuaa to the north of Kauleoli. Approximately 238 acres of the Kiilae ahupuaa, including the shoreline area, are designated for future acquisition by the National Park Service as an expansion of the Pu'uuhonua O Honaunau National Historic Park. The Applicant also intends to donate an additional 100 acres within Kiilae to the National Park or a non-profit entity for preservation. (Supp. ROA, pp. 2691-2692, 2740).

120. Two hundred thirty-eight acres of the Kiilae lands have been sold by the Applicant to the Trust for Public Lands, which lands are eventually intended to become part of the Pu'uuhonua O Honaunau National Historic Park, and this area will be kept in its natural state. (ROA, p. 236).

121. The coastal area fronting the proposed subdivision, a parcel 600 to 1800 feet deep, is in the State Land Use Conservation District and is not part of the subdivision. Any development in this area that might affect the natural beauty would require a Conservation District Use Permit. (ROA, p. 236).

122. The primary vantage point from which the public might see man-made features in the subdivision would be from the north side of Kiilae Bay, on the southerly side of the point that contains the Pu'uohonua O Honaunau. The subdivision area is not very visible from Mamalahoa Highway or the Ke Ala O Keawe Road because of terrain and trees. The proposed subdivision would interfere little with existing views from Mamalahoa Highway across Kiilae and Kauleoli to the shoreline. From the Ke Ala O Keawe Road, the tops of a few homes might be visible along the cross-slope, but there would be little or no interference with shoreline views. From the vantage point across Kiilae Bay, the subdivision infrastructure would probably not be very visible. The subdivision does not require any streetlights. Homes will probably be visible, but from a distance of 4,000 to 11,000 feet across Kiilae Bay. The subdivision's proposed covenants limit the height of homes to 30 feet, versus the permitted height limit of 35 feet in an A-5a zone, and forbid reflective finishes. As a condition of subdivision approval, these covenants shall be conformed to. The total visual impacts of the project are generally minor. (ROA, p. 236; Applicant's Exhibit 40).

123. Appellants Leslie and PKO claim that the proposed subdivision violates HRS Chapter 205. (*General Petition for Appeal of Decisions By Planning Director* (BOA 04-013)).

124. The proposed subdivision covenants do not prohibit or limit agricultural activities. The land is not characterized as prime or important agricultural land under the ALISH system. Under the Land Study Bureau classification, the bulk of the property is classed as "E" or extremely poor for agriculture. The area between about 600 feet elevation and Highway 11 is classified as "D", or "poor"; this area contains about 20 lots. From the oral history reports, the

only agricultural use of the property for many years before this subdivision application was as a very poor quality grazing area, except that citrus and coffee were previously grown above the 600 foot elevation. The property is zoned A-5a and may be subdivided into lots with a minimum of 5 acres. There are commercial coffee farms and orchards in Kona on 5-acre lots. The provision of water supply may make some agricultural uses of the property more feasible. (ROA, p. 237).

125. Appellants Leslie and PKO did not submit any evidence in the instant appeal in support of their claim that the subject subdivision application fails to comply with the requirements of the Hawaii County Subdivision Code.

#### **V. APPELLANT CLARENCE MEDEIROS' CLAIMS**

##### **A. Title**

126. At the time of the submittal of the application for approval of the earlier subdivision in 2001, Medeiros submitted a letter to the Planning Department asserting that title to the property within Kauleoli was in dispute. (Supp. ROA, pp. 154).

127. The Planning Director responded by requesting the Applicant to submit copies of title insurance and a title report. The Subdivision Code does not require the submission of a title report, but one may be required by the Planning Director. (Supp. ROA, p.165; HCC Section 23-63(7)).

128. The Applicant submitted a copy of its title insurance policy to the Planning Director, which insured that title to the property is vested in the Applicant in fee simple. (Tr. at 135; Applicant's Exhibit 12).

129. The Planning Director determined that the title insurance policy was sufficient to establish the Applicant's title to the property for purposes of the Subdivision Code. (Tr., pp. 144-145).

**B. Archaeological Preservation Plan/Burial Treatment Plan.**

130. Appellant Medeiros asserts that the Archaeological Preservation Plan and the Burial Treatment Plan for the proposed subdivision are inadequate in that they fail to preserve certain archaeological sites and burials. (Tr. pp. 24-42; Appellant Medeiros' Exhibits R-17, R-18, R-19).

131. Medeiros asserts that a boundary wall between the Kiilae and Kauleoli ahupuaas is not being preserved under the Archaeological Preservation Plan. This wall, designated as Site 23151 in the Archaeological Inventory Survey, is a post-contact wall constructed for ranching purposes. Initially not recommended for preservation, after an exchange of comments with the Department of Land and Natural Resources - State Historic Preservation Division ("SHPD"), and comments by Medeiros, Site 23151 is now designated for preservation, with the condition that breaches will be allowed for access and will be stabilized, under a revised Archaeological Preservation Plan submitted for approval on December 7, 2004. (Tr., pp. 172-174; Applicant's Exhibits 18, 23, 26).

132. Medeiros asserts that a mausoleum burial in this ahupuaa wall (Site 23151), designated as Site 23153 in the Archaeological Inventory Survey, is not being preserved under the Archaeological Preservation Plan. Medeiros asserts that his great-great-great grandfather John Ahu is buried there. (Tr., p. 30, 39-41).

133. Site 23153 is outside of the proposed subdivision property and is located within the 238 acres sold by the Applicant to the Trust for Public Lands for inclusion in the National Park. The site was duly recorded by Dr. Rechtman and its treatment will ultimately fall under Federal jurisdiction. (Tr., pp. 174-175; Applicant's Exhibit 16, p. 5).

134. Medeiros asserts that a burial cave, designated as Site 23200 in the Archaeological Inventory Survey and Burial Treatment Plan, contains burials that are not identified. Despite ample opportunity to do so, Medeiros never brought this information to the attention of Dr. Rechtman prior to the approval of the Burial Treatment Plan by the Hawaii Island Burial Council and DLNR-SHPD. (Tr., pp. 44-49).

135. Descendants are not required to divulge information to the archaeologist and some Hawaiians are reluctant to provide that information. Descendants are also not required by law to disclose the location of burials. (Rechtman Test. p.195) Medeiros declined to identify any of the burial sites and has not been on the property since 1970.

136. Site 23200 is designated for preservation under the Archaeological Preservation Plan and Burial Treatment Plan. (Tr., pp. 177-178; Applicant's Exhibit 16, pp. 5-8, and Exhibit 18).

137. Medeiros asserts that a rock wall between the boundaries of Grant 3708 and Grant 1575 in the southeast corner of Kauleoli was not identified in the Archaeological Inventory Survey or Preservation Plan. Medeiros testified that the wall was used to locate the burial cave (Site 23200). Medeiros has not been on the property since 1970. (Tr., pp. 28-29, 45).

138. Dr. Rechtman testified that in the area where this boundary wall allegedly existed, he conducted an extensive survey and extensively recorded the archaeological features present, including the burial cave (Site 23200), and no such wall exists at the present time. (Tr. pp. 176-178; Applicant's Exhibit 41).

139. Medeiros asserts that a mauka-makai trail which he refers to as the "Keanapaakai Trail", designated as Site 23146 in the Archaeological Inventory Survey, is not designated for preservation in the Archaeological Preservation Plan. (Tr., pp. 31-32).

140. Dr. Rechtman testified that this mauka-makai trail is known as the Kiilae trail. This trail is located within the 238 acres sold to the Trust for Public Lands in the makai area of Kiilae and within Lot 23 of the proposed subdivision in mauka Kiilae. Lot 23 is an approximate 100-acre lot which the Applicant intends to sell or donate to the National Park or to a non-profit entity for preservation. The trail is a public right-of-way. (Tr. pp. 181-183, 191, 239; Applicant's Exhibits 5, 41).

141. Medeiros had numerous opportunities to present evidence of burial and other historic sites to the Applicant and its representatives, to DLNR-SHPS, and to the Burial Council prior to the issuance of tentative subdivision approval, but either refused or has been unable to do so. (Tr. at 44, 52).

142. Medeiros was first made aware that the Hawaii Island Burial Council was considering a Burial Treatment Plan for the proposed subdivision by public notice on or about April, 2001. (Tr., pp. 22, 45-46).

143. Medeiros was interviewed by Kepa Maly concerning his knowledge of the property in May 2001. Medeiros did not provide Mr. Maly with any

information concerning burials on the property at that time, except for one burial in Kiilae near the National Park. (Tr., pp. 46-47).

144. Medeiros spoke and met with Dr. Robert Rechtman on several occasions, including at Medeiros' home in North Kona. Medeiros did not take those opportunities to communicate to Dr. Rechtman his concerns about burials on the property. (Tr., pp. 47-48).

145. Medeiros submitted a letter to DLNR-SHPD on or about December 5, 2001 concerning the proposed development of the property. He did not raise any concerns about burials on the property in this letter. His sole concern was with his claims concerning title to Kauleoli. (Supp. ROA, p. 211).

146. Medeiros submitted a letter to the Hawaii Island Burial Council on or about December 19, 2001 concerning the proposed development of the property. He did not raise any concerns about unidentified burials on the property in this letter. His sole concern was with his claims concerning title to Kauleoli. (Supp. ROA, p. 155).

147. The Hawaii Island Burial Council discussed Medeiros' claims concerning title to Kauleoli at its meeting on December 20, 2001. There was no discussion concerning any information about burials regarding Medeiros' claim. (Exhibit "X", *Motion to Address the Issue of Title to the Ahupua'a of Kauleoli South Kona, County and Island of Hawaii and to Reverse Tentative Approval by Planning Director for Ki'ilae Estates LLC's Proposed Subdivision*, filed 12/13/04).

148. Medeiros submitted a letter to the Hawaii Island Burial Council on or about April 16, 2002. He expressed concerns about the title to the property and also stated in the letter that there were many burials on the property that were not being addressed by the developer.

(Exhibit "Y", *Motion to Address the Issue of Title to the Ahupua'a of Kauleoli South Kona, County and Island of Hawaii and to Reverse Tentative Approval by Planning Director for Ki'ilae Estates LLC's Proposed Subdivision*, filed 12/13/04).

149. Medeiros claims that the Burial Treatment Plan for the property fails to identify at least 80 burials on the property. Medeiros will not disclose the location of these burials to the Applicant, but alleges that he identified the location of these burials to the Hawaii Island Burial Council on August 19, 2004 and on April 10, 2005, after tentative subdivision approval and after the approval of the Burial Treatment Plan. (Tr., pp. 38, 53, 58).

150. Medeiros was given many opportunities during the extensive consultation process associated with the proposed subdivision to disclose significant historic sites that he knew about. He indicated during both informal and formal interviews that he knew of no such sites within the project area. It was only after the subdivision approval was granted that he came forward claiming knowledge of such sites. (Applicant's Exhibit 41).

151. Dr. Rechtman testified that almost all of the families from the area were involved in the consultation process, including Medeiros, and that two large public consultation meetings were held relating to burials. (Tr., pp. 162-163).

152. Dr. Rechtman testified that the later discovered burials will be treated in connection with any proposed development of the land where they are located, as they are outside the project development area. (Tr., pp. 167-68).

153. Prior to the issuance of tentative subdivision approval, the Applicant commenced an extensive archaeological inventory survey prepared by Rechtman Consulting for



the subject property, together with a detailed archival search of the archaeological, cultural and historical literature, and a comprehensive oral history interview program. (Supp. ROA, p. 488).

154. The preparation of a full archaeological inventory survey is unusual for a proposed subdivision which does not require a Special Management Area Use Permit. (Supp. ROA, p. 2668).

155. As conditions of tentative subdivision approval, the Applicant is required to implement the Archaeological Preservation Plan, including any conditions or modifications required by SHPD, and to implement applicable conditions of the approved Burial Treatment Plan. (ROA p. 232).

156. Pursuant to State law, HRS Chapter 6E, at any site where burials are discovered or are known to be buried, the remains and associated burial goods shall not be moved without the approval of the Department of Land and Natural Resources, and shall be preserved in place until compliance with Chapter 6E. (HRS Chapter 6E).

157. The DLNR-SHPD approved of the Applicant's Archaeological Inventory Survey and Mitigation Plan by letter from its Administrator, Don Hibbard, dated October 15, 2002. The Applicant's revised Archaeological Preservation Plan was submitted on December 7, 2004, and approval is pending. The Applicant's Burial Treatment Plan was approved by the Hawaii Island Burial Council and the SHPD on December 19, 2002 and December 23, 2002, respectively. (Applicant's Exhibits 6, 18).

## **VI. SMA AND COUNTY REQUIREMENTS**

158. The proposed subdivision comprises approximately 499.537 acres. The mauka boundary of the property borders Māmalahoa Highway. The makai boundary lays mauka of and borders the Old Government Road. It is within the State Agriculture district and is zoned Agriculture-5 acres (A-5a). (ROA, pp. 104-105; 205-239).

159. The subdivision is consistent with the County's general plan and County zoning. (Tr. at 103, testimony of Christopher Yuen).

160. There is no land in the proposed 499.537 acres that lies within the Special Management Area. All of the 499.537 acres lay at least 600 to 1800 feet mauka of the shoreline. (Tr. at 98-99.)

161. The only land within the Special Management Area lies below the Old Government Road. (Tr. at 91-97.)

162. As a condition of tentative approval, the Applicant is required to address drainage issues by providing written confirmation that there are no water courses within the area to be subdivided. The Applicant is also required to dispose of additional storm runoff due to development within the subdivision and is not to discharge onto adjacent properties or roadways. The Applicant is also required to satisfy Department of Health requirements for any planned drywells, including issuance of an underground injection control (UIC) permit. (ROA at 231-232.)

163. As a condition of approval, the Applicant is required to ensure protection of groundwater and coastal water quality, by amending the draft covenants submitted by transmittal dated October 30, 2003, to require the homeowners to install a septic system with leach field or

aerobic septic system even if the Department of Health allows cesspools. Copies of the revised covenants are to be submitted for review before final subdivisions approval. (ROA at 232.)

164. As a condition of approval, the Applicant is required to include the burial sites as part of the roadway lots, with appropriate easements over the burial areas in order to avoid private ownership of the burial sites, as separate landscape lots corresponding to the burial sites are not possible because they do not meet the minimum lot size requirements of the property's zoning. This condition was in deference to lineal descendants' concerns that the burial sites not be privately owned by the individual homeowners. (ROA at 232-234; Tr. at 137-138 and 240-243, Testimony of Christopher Yuen.)

165. As a condition of approval, the Applicant is required to implement the Archaeological Preservation Plan approved by the State Historic Preservation Division ("SHPD"), including any conditions or modification required by SHPD. (ROA at 232-234.)

166. As a condition of approval, the Applicant is required to implement the Burial Treatment Plan. (ROA at 232.)

167. Within the proposed subdivision, the cultural and natural resources are historic sites, burial sites, the possible pilo plant and uhaloa plants. Within the parcel located makai of the Old Government Road that is not part of this subdivision application, Jim Medeiros, Sr. identified a "laena," or departure point for the souls of the dead. The shoreline makai of the proposed subdivision is used for gathering limu, 'opihi, and a`ama crab and for pole and throw net fishing. The ocean fronting the makai land (not part of the subdivision application) below the Old Government Road is used for fishing from boats, including `opelu fishing and for diving. (ROA at 232-234.)

168. The proposed subdivision does not itself change the uses that can be made of the property, as uses currently allowed by A-5A (agricultural 5 acres) zoning remain in effect. The subdivision does require the construction of roads, water lines, and drainage systems and increases the number of homes that can be built on the property without special approval. The Zoning Code and Rule 13 of the Rules of the Planning Director allow one farm dwelling to be built per lot. Additional farm dwellings can be built upon approval of a farm plan and the signing of a farm dwelling agreement. Areas now in brush could be developed for agriculture; however, agricultural development can occur whether the subdivision is built or not. (ROA at 233-237.)

169. The Archaeological Preservation Plan protects the physical integrity of significant historic sites by requiring that they be preserved with buffers. The subdivisions map shows these sites as archaeological easements, so the buyers will have notice of the sites, and governmental personnel who review grading, grubbing and building permits will also be aware that land-disturbing activities are not allowed within the buffers. (ROA at 233-234.)

170. The Applicant could not locate the pilo plants, and the testimony of Appellants was not specific enough to locate the plant. It is not possible to include a condition requiring preservation of the plant. The Applicant is instead required to create an easement on the parcel mauka of the Old Government Road which shall be shown on the final plat map where individuals can cultivate pilo or other native plants. Pilo or maiapilo (*capparris sandwichiana*) is found in lowland lava areas, such as at Kohanaiki, Keauhou, Mahai`ula, and in the vicinity of the Kona airport (including some plants along the right-of-way of the Queen Kaahumanu Highway). `Uhaloa is an extremely common weed, found in vacant lots everywhere, and probably occurs

along the Old Government Road as well as other publicly accessible areas. Hau is also extremely common. (ROA at 234-237.)

171. The Planning Director noted in the tentative approval that concerns had been raised in the earlier Board of Appeals hearings involving SUB No. 2001-0132, over the possible effects on ocean water quality and ocean resources that subdivision of the land might have. The Director noted that there were two possible ways that a new subdivision could affect coastal water, directly through surface runoff and indirectly through nutrients that might leach through the surface to groundwater and ultimately reach the sea. The Director noted that the subdivision did not involve construction of a golf course, house pads, or other major changes to the surface and that grading and construction for roads requires an NPEDES Permit, since more than one acre was being disturbed. An NPEDES Permit will include standard requirements for management practices to reduce the likelihood of surface runoff. (ROA at 231-237.)

172. The Director further noted that there are no perennial or intermittent streams on the property and that there is a relatively flat area of about 600' -1800' wide between the subdivision and the sea. The flat area is within the State Land Use Conservation district and is almost entirely pahoehoe lava with no soil. The Director noted that the 1973 Soil Survey for the Island of Hawai'i classifies most of the property as rLW, which is nearly bare pahoehoe lava; RB, which is rough broken land, and nearer the Mamalahoa Highway; and as rPYD, described as a shallow soil layer of "extremely rocky peat", with 40-50% surface outcrops of pahoehoe lava. The Director noted that all of these soil types are well drained and the infiltration rate for rPYD is given as 6.3' - 20' per hour. Based upon his knowledge of the soil and the topography of the land, the Director concluded that even if surface runoff were to reach the flat area of land below

the subdivision application , the land nearest the ocean, it was probable that any surface runoff would soak into the ground before reaching the sea. (ROA at 231-237.)

173. The Director also noted that the construction of roads and homes would increase the amount of impervious surfaces, reducing the capacity of the ground to absorb water. County of Hawai'i Public Works drainage standards require drywells capable of absorbing a ten-year rainstorm. Assuming every lot is eventually developed with a 5,000 square foot home and a 5,000 square foot driveway, the impervious surfaces due to homes and driveways would only be about 5% of a five-acre lot. The paved portions of the subdivision roads will be about 2% of the total land area of the subdivision. (ROA at 231-237.)

174. The tentative subdivision approval indicated that additional nutrients to the groundwater could come from human waste or from fertilizers used for agriculture or landscaping. The approval noted that if every lot had a home and half the lots had an additional farm dwelling, there would be approximately 225 people living on the property (using an average of three persons per dwelling, which is slightly more than the island average). The parcel of land is .4 miles wide. In the 2000 census, the Honaunau-Napo'opo'o CDP had a population of about 2,400, in an area about 5 miles wide. The approval noted that almost all existing homes utilize cesspools for disposal of human waste. To mitigate the potential for nutrient contamination by human waste, the approval requires septic systems. (ROA at 231-237.)

175. The potential for pollution from farming depends upon individual management techniques. There is no substantive information on whether nutrients leaching from fertilizers in South Kona are having a detrimental effect on ocean quality. If such a problem is determined to

exist, it would require mitigation addressed at all farms in South Kona and not just one subdivision. The use of the subject land for agriculture is consistent with the County's General Plan and the State land Use Classification. If the subdivision increases the amount of farming that occurs on the land, it would be consistent with and promote the goals of both the County General Plan and the State land use classification of the property. Even without subdivision, the cultivation and fertilization of crops is a permissible use of the property. (ROA at 231-237.)

176. The 1989 County General Plan at p. 36 lists as an example of natural beauty in the South Kona District, Ki'ilae, TMK. No. 8-5-5:19. The tax map key actually identifies the Kauleoli parcel, which is the subject of the present subdivisions. Ki'ilae is located northerly of Kauleoli and is actually TMK No. 8-5-5-22. The Ki'ilae property has been sold by the Applicant to the Trust For Public Lands and will ultimately become part of the Pu'u honua o Honaunau National Historic Park. Ki'ilae will be kept in a largely natural state. (ROA at 231-237.)

177. The coastal area fronting this subdivision, a parcel that is 600' - 1800' deep is in the State Land Use Conservation District and is not part of this subdivision. Any development in the land makai of the Old Government Road would require a Conservation District Use Permit. (ROA at 231-237.)

178. The Applicant is also required to implement the conditions which shall be submitted to the Planning Director before final subdivision approval and/or prior to any approval for any land alteration permits. Additionally, proposed mitigation treatment (preservation in place for disinterment/re-interment) for any burial site within the subject property shall be approved by the Historic Preservation Division's Hawai'i Island Burial Council before final subdivision approval. If any remains of historic sites, such as rock walls, terraces, platforms,

marine shell concentrations or human burials, are encountered, work in the immediate area must cease and the DLNR-HPD must be immediately notified. Subsequent work shall proceed upon an archaeological clearance from the DLNR-HPD when it finds that sufficient mitigative measures have been taken. (ROA at 231-237.)

### **CONCLUSIONS OF LAW**

1. The Board of Appeals has jurisdiction to consider these appeals pursuant to Article VI, Chapter 10, §6-10.2, of the Hawaii County Charter, and HCC §23-5.
2. Pursuant to HCC §23-5, and Rule 8-14, Board of Appeals Rules of Practice and Procedure ("BOA Rules"), the Board of Appeals shall render its decision in an appeal proceeding by either affirming the decision appealed from, or reversing or modifying the decision, or remanding the case to the Planning Director for further proceedings and action.
3. Pursuant to HCC §23-5, the Board of Appeals may affirm the decision of the Planning Director, or it may reverse, modify or remand the decision if the decision is:
  - (a) In violation of HCC Chapter 23 or other applicable law; or
  - (b) Clearly erroneous in view of the reliable, probative and substantial evidence on the whole record; or
  - (c) Arbitrary, or capricious, or characterized by an abuse of discretion or clearly unwarranted exercise of discretion.
4. Unless clearly erroneous based on substantial evidence taken from the entire record, the Board of Appeals will not disturb the Planning Director's factual findings. BOA Rule 8-15(2). A factual finding is clearly erroneous where a review of the entire record creates a definite and firm conviction that error has been committed. *Associates Financial Services Inc. v.*



*Mijio*, 87 Hawaii 19, 28, 950 P.2d 1219 (1998). A finding is also clearly erroneous when unsupported by substantial evidence. Substantial evidence is defined as "credible evidence which is of sufficient quality and probative value to enable a person of reasonable caution to support a conclusion." *Bremer v. Weeks*, 104 Hawaii 43, 51, 85 P.3d 150 (2004).

5. The Planning Director had jurisdiction to render a decision on the subject application for subdivision approval pursuant to Article VI, Chapter 4, §6-4.2(f), of the Hawai'i County Charter.

6. The scope of the Planning Director's authority with respect to the review and approval of subdivision applications is set forth in the County Subdivision Code.

7. The Subdivision Code does not require that the Planning Department make any assessment regarding traditional and customary native Hawaiian practices prior to tentative subdivision approval and it does not provide for any public hearings for subdivision applications.

8. The Planning Director gave such consideration to ecological, cultural, historical, aesthetic, regional, scenic and open space values and coastal zone hazards as is required at the Tentative Subdivision Approval level.

9. While the Planning Department did not use §205A-2 of Hawai'i Revised Statutes as a checklist, the Planning Director's approval of the tentative subdivision plan was not inconsistent with the objectives and policies of Chapter 205A of Hawai'i Revised Statutes in its application to subdivisions of agricultural lands.

10. A Special Management Area Use Permit was not required for this project, as no part of the subject property is located within the special management area.

11. The Planning Director considered protected resources as a part of the tentative

subdivision approval process that may be considered public trust, but they have not been judicially acknowledged to be public trust natural resources.

12. The Planning Director's implementation of the Subdivision Code and granting of tentative approval subject to conditions was consistent with the customs and practices of the Planning Department that had been developed to implement the Subdivision Code and the need to protect the public welfare and to meet the reasonable expectations of the applicant.

13. The Planning Director did not approve the subdivision application. He gave tentative approval subject to conditions. If the Applicant complies with the conditions, it will get final subdivision approval and the subdivision will comply with the Subdivision Code.

14. The Planning Director's determination of pre-existing lot was consistent with the prior determination of then Planning Director Virginia Goldstein on September 25, 2000, that there were 8 pre-existing lots of legal record, one of which was the land makai of the Old Government Road and with State ownership of the Old Government Road.

15. The Planning Director's recognition of pre-existing lot was consistent with the requirements of Article 11 of the Hawai'i County Code regarding recognition of pre-existing lots and the past practice of the Department, as the makai lot was created prior to November 22, 1944, by the construction of a government road and clearly recorded in maps of the area.

16. Two lots separated by a government road, or other parcel of land owned in fee simple by another party, cannot be consolidated into one lot. The makai land and the land mauka of the Old Government Road could not be consolidated into one lot, as they are physically divided by the road which is owned in fee simple by the State of Hawai'i.

17. The prior consolidation of the land makai of the Old Government Road and the

land mauka of the road in Kauleoli was physically and legally impossible, based upon a mistake of fact, and therefore did not constitute a legal consolidation.

18. The Planning Director's approval was consistent with the requirements of the subdivision code regarding title, as sufficient information was provided to the Director regarding title, and disputed title is not within the jurisdiction of the Board of Appeals

19. The Planning Director has the discretion to interpret and implement the County Subdivision Code in a way that meets the practical needs of the public and the Planning Department, meets the justifiable expectations of those dealing with the Planning Departments, avoids economic waste, protects the public health and welfare, and insures that the goals and objectives of the County Subdivision Code are met prior to final subdivision approval.

20. The Subdivision Code does not require the Planning Director to consider or to impose conditions upon the Applicant to protect customary and traditional Hawaiian rights and practices as part of the tentative subdivision approval process.

21. The Subdivision Code does not require that the Planning Director do anything when the Planning Department receives a preliminary plat map and application for subdivision, other than transmit copies to the appropriate agencies. If the Planning Director does not act (approve, disapprove, modify or defer) within 45 days or such longer time as has been agreed to in writing, then the preliminary plat is deemed approved.

22. The Hawai'i Supreme Court has made it clear that all agencies are obligated to protect customary and traditional rights to the extent feasible under the Hawai'i Constitution and relevant statutes. *PASH v. County Planning Commission*, 79 Haw. 425 (1995). In situations where there are hearings as a part of the approval process, the court has indicated that customary

and traditional rights must be inquired into and the agency must make findings on the extent of their exercise, their impairment, and the feasibility of their protection. *Ka Pa 'akai O Ka 'aina v. Land Use Commission*, 94 Haw. 31 (2000). In *Ka Pa 'akai* the Hawai'i Supreme Court imposed duties on the Land Use Commission. This matter was not before the Land Use Commission

23. When the Subdivision Code is silent on a matter that the Supreme Court imposes as a duty upon the County's Planning Department, the Planning Director has inherent discretion to determine how and when to satisfy the obligation during the subdivision process.

24. If the impact of the proposed subdivision on traditional and customary native Hawaiian rights has not been previously investigated by the Planning Department or some other State or County agency, then the Planning Director must use his discretion in deciding how and when to consider the impact of the proposed subdivision on traditional and customary native Hawaiian rights and practices and how to mitigate any impact with appropriate, feasible, and reasonable conditions.

25. Those members of the Hawaiian community exercising such rights on lands where they know development is planned have an obligation to come forward and make their practices known so that the Planning Director and others similarly situated can determine to what extent it is feasible to protect such practices.

26. The Planning Director adequately protected Native Hawaiian rights through the conditions imposed in the tentative subdivision approval that required implementation of applicable conditions of the Burial Treatment Plan, implementation of the Archaeological Preservation Plan, and creation of an easement where native plants can be cultivated.

27. HRS § 205A-4(b) provides that "[t]he objectives and policies of [Chapter 205A]

and any guidelines enacted by the legislature shall be binding upon actions within the coastal zone management area by all agencies, within the scope of their authority.”

28. The coastal zone management area encompasses all lands of the State and the area extending seaward from the shoreline to the limit of the State’s police power and management authority, including the United States territorial sea. HRS §205A-1.

29. HCC §23-26 of the Subdivision Code provides that “[o]utstanding natural or cultural features such as scenic spots, water courses, fine groves of trees, heiaus, historical sites and structures shall be preserved as provided by the [Planning Director].”

30. Pursuant to HRS §205A-28, “[n]o development shall be allowed . . . within the special management area without obtaining a [special management area] permit.

31. Under the County Charter, the Planning Director is charged with the responsibility to “[a]dminister the subdivision and zoning ordinances and regulations adopted thereunder,” and to “render decisions on proposed subdivision plans pursuant to law.” [County Charter, §6-4.2(e) & (f) (2000).]

32. The Planning Director sufficiently considered the objectives and policies of HRS Chapter 205A in granting tentative subdivision approval.

33. The proposed subdivision does not trigger the requirement of a Special Management Area Use Permit, because there is no property located within the special management area as that term is defined in HRS §205A-22.

34. In order to trigger the requirement for a Special Management Area Use Permit, development must occur on land or in or under water that is within the special management area.

35. The Planning Director considered and placed limitations and controls on the

Applicant, and the Planning Director protected resources as a part of the tentative subdivision approval process that may be considered public trust but have not been judicially acknowledged to be public trust public natural resources.

36. In accepting applications for subdivision approval and issuing tentative approval, the Planning Director has the discretion to accept an application and issue tentative approval of an application that initially does not have all the information and data required in Chapter 23, Article 4 of the Subdivision Code. The objectives of the Subdivision Code are met if the Planning Director requires that all of the coded requirements be complied with prior to final subdivision approval.

37. All remaining proposed findings of fact, conclusions of law, exceptions and proposed additions to findings of fact and conclusions of law submitted by all parties which have not heretofore been adopted are specifically rejected and not made a part of this decision.

38. The Planning Director is accorded a presumption of validity to his decisions made within the sphere of his expertise.

39. The party seeking to overturn the Director's decision bears the burden of making a convincing showing that the decision is unjust and unreasonable in the consequences.

40. The Planning Director's granting of tentative subdivision approval was not in violation of constitutional or statutory provisions.

41. The Planning Director's granting of tentative subdivision approval was not in excess of his statutory authority or jurisdiction.

42. The Planning Director's granting of tentative subdivision approval was not made upon unlawful procedure.

43. The Planning Director's granting of tentative subdivision approval was not affected by any other error of law.
44. The Old Government Road is a public highway owned in fee simple by the State of Hawaii. HRS §§264-1(a), 264-2.
45. The 2001 consolidation and resubdivision of the land above and below the Old Government Road was based on a mistake of fact that the Old Government Road was an easement.
46. The Makai lot is physically separated from the remaining land of Kauleoli by the Old Government Road and existed as such prior to November 22, 1944, and therefore could not be legally consolidated with the land above the Old Government Road into one lot.
47. The Applicant was not required to obtain a declaratory ruling pursuant to HRS Section 91-8 nor was the Planning Director required to issue a declaratory ruling that the Makai lot is a pre-existing separate legal lot.
48. The Planning Director's recognition of the Makai lot as a pre-existing lot conformed to the requirements of the County Subdivision Code and other applicable law.
49. The Planning Director did not err in not requiring a SMA Use Permit for the proposed subdivision.
50. The Planning Director's granting of tentative subdivision approval did not violate the order of the Third Circuit Court as the order applied to a different subdivision application which was withdrawn.
51. The Planning Director sufficiently considered the potential impact of the proposed subdivision on traditional and customary native Hawaiian rights and practices and sufficiently

mitigated any impact with appropriate, feasible and reasonable conditions of approval in granting tentative subdivision approval.

52. The Planning Director's granting of tentative subdivision approval was not in violation of HRS Chapter 205, the Hawaii County General Plan or the public trust doctrine.

53. The Planning Director's granting of tentative subdivision approval was not in violation of HCC Chapter 23 or other applicable law.

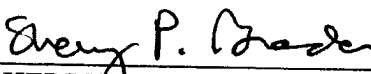
54. The Planning Director's granting of tentative subdivision approval was not clearly erroneous in view of the reliable, probative and substantial evidence on the whole record.

55. The Planning Director's granting of tentative subdivision approval was not arbitrary, or capricious, or characterized by an abuse of discretion or clearly unwarranted exercise of discretion.

#### **DECISION AND RECOMMENDED ORDER**

Based upon the foregoing Findings of Fact and Conclusions of Law, the Planning Director's granting of tentative subdivision approval is hereby affirmed, and the consolidated appeals are hereby denied.

DATED: Honolulu, Hawaii, September 30, 2005.

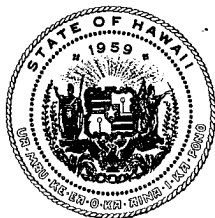
  
\_\_\_\_\_  
SHERRY P. BRODER  
Hearing Officer



## **Appendix 1b**

### **Comments in Response to Pre-Consultation**

LINDA LINGLE  
GOVERNOR OF HAWAII



**STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES**

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

LAURA H. THIELEN  
CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE MANAGEMENT

RUSSELL Y. TSUJI  
FIRST DEPUTY

KEN C. KAWAHARA  
DEPUTY DIRECTOR - WATER

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

February 29, 2008

Ron Terry, Principal  
Geometrician Associates, LLC  
PO Box 396  
Hilo, HI 96721

LOG NO: 2008.0374  
DOC NO: 0802MD88  
Archaeology

Dear Mr. Terry:

**SUBJECT: Chapter 6E-42 Historic Preservation Review –  
Request for Early Consultation for Environmental Assessment for Ki'ilae Farms  
Agricultural Subdivision  
Ki'ilae Ahupua'a, South Kona District, Island of Hawai'i  
TMK: (3) 8-5-005:019 and 022 (pors.)**

---

Thank you for the opportunity to comment on the aforementioned project. Unfortunately we are unable to comment on the status of historic/archaeological sites at this location at this time.

Please note that this is a very large subdivision with a number of archaeological sites on it, including burials. We are still awaiting the Data Recovery Report for this location. At the time any maps are created for the proposed connection to the State highway, please submit them to SHPD for review so we can then ascertain if historic properties are affected. At any time, if historic resources, including human skeletal remains, lava tubes, and lava blisters/bubbles are identified during the construction activities, all work needs to cease in the immediate vicinity of the find, the find needs to be protected from additional disturbance, and the State Historic Preservation Division, Hawaii Island Section, needs to be contacted immediately at (808) 896-0514.

Please contact Morgan Davis at (808) 896-0514 if you have any questions or concerns regarding this letter.

Aloha,

*for Bryan T. Hawes*  
Nancy McMahon, Acting Archaeology Branch Chief  
State Historic Preservation Division

# geometrician

A S S O C I A T E S , L L C

integrating geographic science and planning

phone: (808) 969-7090 fax: (866) 316-6988 PO Box 396 Hilo Hawaii 96721  
rterry@hawaii.rr.com

May 31, 2008

Nancy McMahon, Acting Chief  
Archaeology Branch  
State Historic Pres. Div.  
601 Kamokila Blvd., Rm. 555  
Kapolei HI 96707

Dear Ms. McMahon:

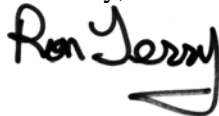
**Subject: Response to Environmental Assessment Early Consultation Letter,  
Ki'ilae Farms Subdivision, TMK 8-5-006:001-029; 8-5-007:001-019,  
South Kona, Island of Hawai'i**

Thank you for the letter you sent in response to early consultation for the Environmental Assessment (EA). As the author of the EA, I am taking this opportunity to explain how the information you provided was used in its preparation, on a point-by-point basis:

1. *Data Recovery Report.* According to the consulting archaeologist for the project, that report is forthcoming.
2. *Historic properties at Highway Connection Area.* This area was thoroughly surveyed during the 2001 inventory that was approved by your office, and the only archaeological features at the Highway Connection Area were Historic stone walls and wall remnants (SIHP Sites 23150, 23074, 23066, and 23065 Feature H). There are no preservation sites in the Highway Connection Area, nor are there any near this area.
3. *Precautions on finds during construction activities.* The procedures you specify, which are already part of standard operating procedure for the construction on this subdivision, have been explicitly listed in the EA in Section 3.2.2.

We appreciate your comments and look forward to any additional ones you may have on the Draft EA, a copy of which is attached, along with instructions for comment.

Sincerely,

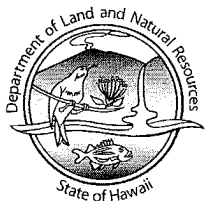


Ron Terry, Principal  
Geometrician Associates

LINDA LINGLE  
GOVERNOR OF HAWAII



LAURA H. THIELEN  
CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE MANAGEMENT



**STATE OF HAWAII**  
**DEPARTMENT OF LAND AND NATURAL RESOURCES**  
**LAND DIVISION**

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

March 3, 2008

Geometrician Associates, LLC  
Box 396  
Hilo, Hawaii 96721

Attention: Mr. Ron Terry

Gentlemen:

Subject: Early consultation for Environmental Assessment for Ki'ilae Farms  
Agricultural Subdivision, South Kona, Hawaii, Tax Map Key: (3) 8-5-  
5:19, por 22

Thank you for the opportunity to review and comment on the subject matter. The Department of Land and Natural Resources' (DLNR) 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  
Administrator

# geometrician

A S S O C I A T E S , L L C

integrating geographic science and planning

phone: (808) 969-7090 fax: (866) 316-6988 PO Box 396 Hilo Hawaii 96721  
rterry@hawaii.rr.com

May 31, 2008

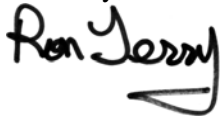
Morris Atta, Administrator  
Land Division  
Hawai'i State DLNR  
P.O. Box 621  
Honolulu, HI 96809

Dear Mr. Atta:

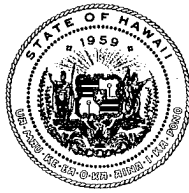
**Subject: Response to Environmental Assessment Early Consultation Letter,  
Ki'ilae Farms Subdivision, TMK 8-5-006:001-029; 8-5-007:001-019,  
South Kona, Island of Hawai'i**

Thank you for the letter you sent in response to early consultation for the Environmental Assessment (EA), in which you stated your division had no comments at this time. We appreciate your review and look forward to any additional comments you may have on the Draft EA, a copy of which is attached, along with instructions for comment.

Sincerely,

A handwritten signature in black ink that reads "Ron Terry". The signature is stylized with a large, sweeping "R" and a long, horizontal stroke at the end.

Ron Terry, Principal  
Geometrician Associates



**STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION**

HAWAII DISTRICT  
50 MAKAAALA STREET  
HILO, HAWAII 96720  
TELEPHONE: (808) 933-8866 • FAX: (808) 933-8869

IN REPLY REFER TO:

HWY-H 08-2.0166

March 5, 2008

Mr. Ron Terry  
Principal  
Geometrician Associates  
P.O. Box 396  
Hilo, Hawai'i 96721

Dear Mr. Terry:

SUBJECT: Early Consultation for Environmental Assessment for Ki'ilae Farms  
Agricultural Subdivision  
T.M.K. 3<sup>rd</sup> Div. 8-5-005:019 and 022 (por.)  
Project No. 8-D  
Route 11, Mamalahoa Highway  
Ki'ilae and Kauleoli, South Kona, Island of Hawai'i, Hawai'i

The subject property is adjacent to the State highway route 11 Mamalahoa Highway. According to our records the construction plans prepared by M&E Pacific for the work within the State highway right of way were approved on January 18, 2008 via letter number HWY-H 08-2.0029. However, no permit will be issued until such time as HRS 343 has been complied with.

Please send copies of the Environmental Assessment to our Department for review and comment.

Our Department will then further distribute the copies to the appropriate divisions and branches at which time we will review and provide comments. After all comments are received and coordinated, a response from the director will be sent to the County Department approving agency.

Please note that at this time we will not be able to provide comments without pre-empting the departmental response.

If you have any questions please call Mr. Clinton Yamada at 933-1951.

Very truly yours,

A handwritten signature in black ink, appearing to read "Stanley M. Tamura".

STANLEY M. TAMURA  
Hawai'i District Engineer

# geometrician

A S S O C I A T E S , L L C

integrating geographic science and planning

phone: (808) 969-7090 fax: (866) 316-6988 PO Box 396 Hilo Hawaii 96721  
rterry@hawaii.rr.com

May 31, 2008

Stanley Tamura  
HDOT - Hawaii District Highways  
50 Makaala Street  
Hilo HI 96720

Dear Mr. Tamura:

**Subject: Response to Environmental Assessment Early Consultation Letter,  
Ki'īlae Farms Subdivision, TMK 8-5-006:001-029; 8-5-007:001-019,  
South Kona, Island of Hawai'i**

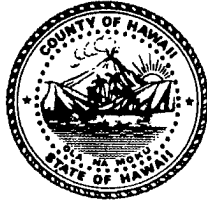
Thank you for the letter you sent in response to early consultation for the Environmental Assessment (EA). The information you provided on the approval process has been incorporated in Section 1.1 of the Draft EA, a copy of which is attached, along with instructions for comment.

Sincerely,

A handwritten signature in black ink that reads "Ron Terry". The signature is stylized with a large, sweeping "R" and a distinct "T".

Ron Terry, Principal  
Geometrician Associates

Harry Kim  
Mayor



Lawrence K. Mahuna  
Police Chief

Harry S. Kubojiri  
Deputy Police Chief

## County of Hawaii

### POLICE DEPARTMENT

349 Kapiolani Street • Hilo, Hawaii 96720-3998  
(808) 935-3311 • Fax (808) 961-2389

February 28, 2008

Mr. Ron Terry  
Principal  
Geometrician Associates  
P.O. Box 396  
Hilo, Hawaii 96721

Dear Mr. Terry:

SUBJECT: Early Consultation on Environmental Assessment for Ki'ilae Farms  
Agricultural Subdivision, South Kona, Island of Hawaii  
TMK: 8-5-005:019 and 022

This responds to your February 24, 2008 letter requesting comments on any special environmental conditions or impacts related to the development.

Staff has reviewed the above referenced documents and submits the following comments:

- Recommend development address issues or concerns related to traffic safety and flow.
- Ensure traffic design addresses emergency response plans and evacuations.
- Implement strategies to address pedestrian safety.
- Install turning and acceleration lanes on Hawaii Belt Road at the entry to the subdivision.
- Develop north-to-south connector roads to allow for connections to future subdivisions.

Should you have any questions, please contact Acting Captain Chad Basque, Commander of Kona Patrol, at 326-4646 extension 249.

Mahalo,

LAWRENCE K. MAHUNA  
POLICE CHIEF

  
JOHN E. DAWRS  
ACTING ASSISTANT CHIEF  
AREA II OPERATIONS

Hawaii's County is an Equal Opportunity Provider and Employer"



# geometrician

A S S O C I A T E S , L L C

integrating geographic science and planning

phone: (808) 969-7090 fax: (866) 316-6988 PO Box 396 Hilo Hawaii 96721  
rterry@hawaii.rr.com

May 31, 2008

Lawrence Mahuna, Chief  
Hawai'i County Police Department  
349 Kapiolani Street  
Hilo HI 96720

Dear Chief Mahuna:

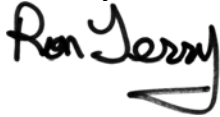
**Subject: Response to Environmental Assessment Early Consultation Letter,  
Ki'ilae Farms Subdivision, TMK 8-5-006:001-029; 8-5-007:001-019,  
South Kona, Island of Hawai'i**

Thank you for the letter you sent in response to early consultation for the Environmental Assessment (EA). As the author of the EA, I am taking this opportunity to explain how the information you provided was used in its preparation, on a point-by-point basis:

1. *Traffic safety and emergency evacuation.* These subjects have been addressed in Section 3.3.2 of the Draft EA.

We appreciate your comments and look forward to any additional ones you may have on the Draft EA, a copy of which is attached, along with instructions for comment.

Sincerely,

A handwritten signature in black ink that reads "Ron Terry". The signature is stylized with a large, looped "R" and a cursive "Terry".

Ron Terry, Principal  
Geometrician Associates



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

HRD08/3538

April 10, 2008

Ron Terry  
Geometrician Associates  
P.O. Box 396  
Hilo, HI 96721

**RE: Early consultation for Environmental Assessment for Ki'ilaie Farms Agricultural Subdivision, in South Kona, Hawai'i Island, TMK: 8-5-005:019 and 022.**

Dear Ron Terry,

The Office of Hawaiian Affairs (OHA) is in receipt of the above-referenced pre-consultation request. Ki'ilaie Estates LLC is proposing to develop a 49-lot agricultural subdivision on about 500 acres in Ki'ilaie and Ka-ule-o-Li, south of Pu'u Honua o Hōnaunau National Park in South Kona. The environmental assessment is necessary because the proposed subdivision would require access and improvements to a state highway, which constitutes the use of state land. OHA has reviewed the project and offers the following comments.

OHA requests that a comprehensive archaeological inventory survey for the 500-acre project area be conducted and submitted to the Department of Land and Natural Resources' Historic Preservation Division for review and approval. OHA should be allowed the opportunity to comment on the criteria assigned to any cultural or archaeological sites identified within the archaeological inventory survey. Consideration should also be afforded to any individuals accessing the project area for constitutionally protected traditional and customary purposes. We also request that the applicant complete a Cultural Impact Statement for the proposed project.

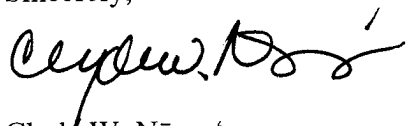
OHA also asks for the applicant's assurances that should iwi kūpuna or Native Hawaiian cultural or traditional deposits be found during the construction of the project, work will cease, and the appropriate agencies will be contacted pursuant to applicable law.

Ron Terry  
Geometrician Associates  
April 10, 2008  
Page 2

In addition, OHA recommends that the applicant use native vegetation in its landscaping plan for subject parcel. Landscaping with native plants furthers the traditional Hawaiian concept of mālama 'āina and creates a more Hawaiian sense of place.

Thank you for the opportunity to comment. If you have further questions, please contact Sterling Wong (808) 594-0248 or e-mail him at [sterlingw@oha.org](mailto:sterlingw@oha.org).

Sincerely,

A handwritten signature in black ink, appearing to read "Clyde W. Nāmu'o", with a stylized flourish at the end.

Clyde W. Nāmu'o  
Administrator

# geometrician

ASSOCIATES, LLC

integrating geographic science and planning

phone: (808) 969-7090 fax: (866) 316-6988 PO Box 396 Hilo Hawaii 96721  
rterry@hawaii.rr.com

May 31, 2008

Clyde Nāmu‘o, Administrator  
Office of Hawaiian Affairs  
711 Kapiolani Blvd., Suite 1250  
Honolulu HI 96813

Dear Mr. Nāmu‘o:

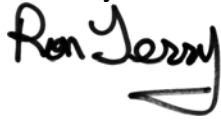
**Subject: Response to Environmental Assessment Early Consultation Letter,  
Ki‘ilae Farms Subdivision, TMK 8-5-006:001-029; 8-5-007:001-019,  
South Kona, Island of Hawai‘i**

Thank you for the letter you sent in response to early consultation for the Environmental Assessment (EA). As the author of the EA, I am taking this opportunity to explain how the information you provided was used in its preparation, on a point-by-point basis:

1. *Data Recovery Report.* According to the consulting archaeologist for the project, that report is forthcoming.
2. *Archaeological inventory survey, cultural impact assessment and traditional practices.* A number of archaeological studies have been completed or are ongoing for the area. SHPD approved the Archaeological Inventory Survey and Mitigation Plan by letter dated October 15, 2002. The Applicant's revised Archaeological Preservation Plan was submitted in 2004 and was approved in 2006. The Burial Treatment Plan was approved by the Hawai‘i Island Burial Council and the SHPD on December 19, 2002 and December 23, 2002, respectively. A Cultural Impact Assessment that also summarizes archaeological work is contained in Appendix 3 and discussed in Section 3.2.2 of the Draft EA.
3. *Precautions on finds during construction activities.* The procedures you specify, which are already part of standard operating procedure for the construction on this subdivision, have been explicitly listed in the EA in Section 3.2.2.
4. *Native plants.* Applicants are strongly encouraged to utilize native plants and landscaping by CC&Rs, which also list proscribed plants that may be invasive.

We appreciate your comments and look forward to any additional ones you may have on the Draft EA, a copy of which is attached, along with instructions for comment.

Sincerely,

A handwritten signature in black ink that reads "Ron Terry". The signature is written in a cursive style with a large, stylized "R" and a long, sweeping underline.

Ron Terry, Principal  
Geometrician Associates

DATE: March 27, 2008

TO: Ron Terry, Geometrician Associates

FROM: Clarence A. Medeiros, Jr.

SUBJECT: Early Consultation for Environmental Assessment for Ki'ilae Farms Agricultural Subdivision, TMK 8-5-005-019 and 022 (Pors.), South Kona, Island of Hawaii

I would like to provide input on site conditions and other issues and concerns that will impact cultural and historic sites due to the proposed development project and attach documentation to support those issues and concerns.

Before going on, I'd like to clarify some statements you made in your letter of February 24, 2008. You state that the project has received final subdivision approval. You failed to disclose that the final subdivision approval was granted because of an \$8,410,144.28 bond posted by the developer, Ki'ilae Estates, LLC (**EXHIBIT A**). The approval is also contingent upon and subject to meeting all conditions outlined in the County of Hawaii's tentative approval letter dated May 7, 2004 (**EXHIBIT B**).

This project has generated much concern and has been opposed and debated from the beginning of this millennium, in the media, in the government agencies, and in the courts.

**EXHIBIT C:** Hawaii Island Journal 2003

Authored by Protect Keopuka Ohana (PKO) member, Jack Kelly. He and A Hawaiian identified as Kahunanui detail their issues and concerns over the Ki'ilae development project:

- Sitings of numerous burial sites, agricultural mounds, petroglyphs, remnants of extensive agricultural terracing, intact kuaiwi walls, heiau, house sites, platforms.
- Hawaiians have the right to walk these lands, care for the graves, clean around the sites, practice our religion. It is a right and a duty.
- The archaeological remains are abundant and unique and the local community was immediately up in arms about the proposed development.
- Former Legal Aid attorney and current Native Hawaii Legal Corporation attorney, Kimo Frankel, stated "The preliminary subdivision application was unlawfully granted because it failed to protect native Hawaiian rights, was inconsistent with the objectives and policies of HRS 205A, was made without the requisite SMA permit, and was incomplete and failed to comply with the subdivision code".

- Frankel also stated that “the Subdivision will adversely impact the resources and uses protected by HRS 205A”. And that “any subdivided lot on this open, wild coastline, adjacent to a significant national park, has to be considered as having an impact”.
- Jim Medeiros and PKO also contend that the archaeological survey was deficient, that the developer already violated terms of the tentative approval by bulldozing on weekends without required archaeological monitors and that the Burial Treatment plan for the project was developed without the input of the descendants as required.

**EXHIBIT D: West Hawaii Today - January 2004**

- PKO raises questions about Ki ‘ilae Estates’ burial treatment plan.
- Wayne Leslie was born and raised in the area and he is concerned about the protection of his traditional gathering rights on the Ki‘ilae property; concerned about his ability to protect native medicinal plants he had collected in the area over the years; concerned about the impact the development may have on the area that he fishes.
- Jack Kelly of PKO stated that Ki‘ilae Estates’ burial treatment plan was insufficient; sweeps of the Ki‘ilae property by PKO members have revealed archaeological sites not shown on development documents.

**EXHIBIT E: Hawaii Free Press – September 2007**

- The project has bull-dozed a one mile road that is only 40 ft. away from the historic “1871 Trail”.
- The subdivision is zoned Ag-5 but is advertised as a gated luxury subdivision.
- Ki‘ilae is rich in historic sites and contains hundreds of unexplored “mounds”, burials identified and not, and possible sections of the Kauleoli Trail and the Ki‘ilae-Keanapaakai Trail.
- Jack Kelly quotes Jim Medeiros as saying, “ the area (Ki‘ilae) is too special for development”.

**EXHIBIT F: County of Hawaii Board of Appeals, BOA 02-03 and 02-04, Wayne Leslie, PKO, Jim Medeiros & Jack Kelly vs. County of Hawaii and Ki‘ilae Estates, Proposed Findings of Facts & Conclusions of Law and Order**

- Jim Medeiros witnessed land clearing activities on weekends with no monitors, one such time that breached a burial tube.
- Construction activity occurred before tentative approval; grubbing and land clearing activities occurred without permit application.
- Developer dozed up to a burial tomb.
- Road were cut 30 ft. wide, wider than necessary for survey roads.
- Medeiros had no chance to protect Hawaiian cultural sites before bulldozing occurred.

- The rights of native Hawaiians have been interfered with by bulldozing of archaeological sites.
- Wayne Leslie and Jim Medeiros have never heard of a theory of segregation of habitation and mortuary activities as claimed by Dr. Rechtman.
- Medeiros testifies that Mr. Rechtman entered burial caves and removed funerary objects.
- Mr. Rechtman testifies that a preservation plan was not available nor has one been prepared to cover burials and other sites located on individual subdivision lots.
- The Archaeology Survey prepared by the developer was incomplete. All the sites are not marked. Sites have been missed. Dozens of unmarked sites were located.
- Medeiros took photos of several possible platforms and burials had been left unmarked while similar features were marked as sites. One photo showed a stone petroglyph that was left unrecorded in the Archaeological Survey and unmarked in the field.
- Medeiros states that he believes that the ancestors are buried throughout the ahupua'a and the four burials found by the developer's archaeologist does not show all the burials located in the area.
- Rechtman testifies that he never specifically asked anyone if they were actively engaged in native Hawaiian practice currently nor did he ask anyone at the descendants meeting if practice was being engaged in on the property.
- Gathering rights of native Hawaiians have not been addressed by the developer.
- Native Hawaiian trails are not depicted on the subdivision map.
- Two trail segments of smooth ala stones are visible in Kauleoli.
- The public has a right to use the trail and access the shoreline.
- No mauka-makai access would deny descendants the right to gather above the Old Government Road.
- There is no provision for access to burial sites or historical sites.
- Clarence and Jim Medeiros claim that the title is not clear in Kauleoli.

**EXHIBIT G:** Circuit Court of the Third Circuit, State of Hawaii, Notice of Appeal  
Wayne Leslie vs. Count of Hawaii Board of Appeals

- Wayne Leslie is a native Hawaiian who engages in customary and traditional practices on and around the subject property.
- Leslie has cultural, recreational, aesthetic and environmental interests that would be directly and indirectly affected by the Ki'ilae Estates development. The development will also jeopardize his ability to exercise his rights.
- No effort was made by the developer to preserve the pre-contact trails found in Kauleoli other than the Old Government Road and to protect the petroglyph found in Kauleoli.
- Leslie fishes at the four opelu koa right off the ahupua'a of Kauleoli that was established by his kupuna 1,000 years ago.



- Leslie fishes and gathers food from the Kauleoli shoreline and gathers medicinal plants from the ahupua'a of Kauleoli.
- Native Hawaiians have used the lands of Kauleoli and Ki'ilae for traditional and customary practices.
- The native Hawaiian cultural practice of fishing is dependent on clean water. Degradation of water quality and marine life adversely affects traditional Hawaiian practices dependent on clean water.
- The total annual flows of water and human waste from the Ki'ilae Estates development is estimated to be at least 9.8 million gallons per year. Sediment runoff from another Kona development damaged corals and marine life. Sediment from eroded soils increase turbidity in coastal waters and can accumulate on critical habitats such as coral reefs. Wastewater effluent includes the nutrients nitrogen and phosphorus. Because of the porous nature of the lava and the number of lava tubes in the area, waste material and other nutrients will likely reach the ocean. Nutrients and toxic chemicals entering coastal waters jeopardize coastal water quality and marine life. The Ki'ilae Estates development jeopardizes coastal water quality.
- The proposed Ki'ilae Estates subdivision development will have a significant and negative scenic impact. Houses built in the area will degrade the rugged, wild and natural vista and will detract from the line of sight toward the sea from the state highway and toward the mountain from the ocean.

**EXHIBIT H:** County of Hawaii Board of Appeals, BOA 04013 AND 04-014,  
Clarence A. Medeiros, Jr. vs. County of Hawaii and Ki'ilae Estates, et al.,  
Motion to Address Issue of Title

- Land ownership of Kauleoli has never been judicially determined by a quiet title action.
- The archaeological plan by Ki'ilae Estates is deficient. It fails to recognize and/or identify in-ground burials and the survey must be revised to include these sites and interim preservation measures need to be developed for these sites.
- Due to no quiet title action and the numerous outstanding owners and lawful heirs to the lands of Kauleoli, the developer does not have exclusive ownership of Kauleoli.
- The archaeological survey fails to recognize and/or identify certain sites as being significant.
- Cultural and natural resources survey is deficient by not identifying plants such as the inika plant, tobacco, pineapple, kaunaoa, and kukui.
- The burial treatment plan is deficient because it fails to recognize and/or identify in-ground burials. Medeiros has personal knowledge through oral family histories, kama'aina testimony and documentation that proves there are additional burials in Ki'ilae and Kauleoli that are not cave burials.

- The Ki'ilae Estates burial treatment plan proposes to preserve burials in place by establishing permanent preservation easements which states that no construction, land modification, or other activities of any type would be permitted to occur within the preservation easements. However, Ki'ilae Estates' subdivision map shows that the proposed subdivision road will encroach within the preservation easement area for the multiple burials that exist within the Joseph Kaai house site.
- Many names were absent from the Notice seeking descendants to the project area. The project area involves both the ahupua'a of Ki'ilae and Kauleoli yet it listed only the Kauleoli claimants and failed to list the Ki'ilae claimants. This excluded crucial information and indispensable parties to the project area who may have knowledge of burial and historical sites.
- With information of additional known burials that are in-ground and the identification of known burials in the cave and in the pu'o'a, Ki'ilae's archaeological inventory, archaeological survey and the burial treatment plan is deficient and violates the procedures for proper treatment of burial sites and human skeletal remains as mandated by the Hawaii Administrative Rules of the Dept. of Land and Natural Resources, Title 13, Subtitle 13, Chapter 300.
- The Planning Director based his lack of concern with possible run-off on the premise that the subdivision involves ground clearing only for roads so direct surface run-off is unlikely. The ultimate use of the lots is for home construction and land-clearing will inevitably occur. The cumulative land clearing of 139 lots would significantly increase the probability of flooding and run-off into the ocean and into the burial caves.
- Native Hawaiian Tenant Rights cannot be properly preserved and practiced if cultural, historic, and natural sites and resources within the project have not been accurately and properly identified.

**EXHIBIT I:** County of Hawaii Board of Appeals Hearing Transcript, November 2005

Nicole Lui, Joe Lui, and Marvin Naihe give testimony in opposition to the Kiilae subdivision development.

**EXHIBIT J:** County of Hawaii Board of Appeals Hearing Transcript, January 2006

- Clarence Medeiros provided documentation of 80 burials that are within the project development area and the issue was dismissed because they were not reviewed by a certain date. Medeiros is not aware of any time limit on disclosing burial information. Knowledge of the existence of these 80 burials was also dismissed because Medeiros released confidential burial information to the HIBC and to SHPD-BSP, but not to the developer.
- SHPD denied the archaeological plan and had the developer submit a corrected plan at least four times.

- With tentative approval, the developer can do land clearing activities to grub and grade. However, these activities can and do destroy historical and burial sites permanently. Historic sites and burials run the risk of destruction during grubbing and grading that is allowed with tentative approval.

**EXHIBIT K:** Circuit Court of the Third Circuit, Civil No. 060100027K, August 22, 2006  
Protect Keopuka Ohana and Wayne Leslie, vs.  
County of Hawaii Board of Appeals, Kiilae Estates, et al.,  
Stipulation for Dismissal with Prejudice of All Claims and All Parties

All the previous claims by Protect Keopuka Ohana have been dismissed With Prejudice. Simply put, it means that a settlement/agreement between the developer and PKO has satisfied the previous concerns and issues voiced by PKO regarding the development.

**EXHIBIT L:** Kona Tobacco Article, The Honolulu Advertiser

Many residents of Keokea and the neighboring ahupua'a of Ki'ilae and Kauleoli, lost their lives to the "flu" epidemic and the second epidemic took 100 deaths, in several instances, wiping out whole families.

**EXHIBIT M:** Assessment on Traditional Cultural Practices Related to Burial Sites

The practice of keeping portions of your loved ones remains in close proximity is a traditional Hawaiian practice. Iwi of family members were often buried in or around the place of dwelling to provide a sense of proximity for both security and companionship. Occasionally they buried their dead in sequestered places, at a short distance from their habitations, but frequently in their gardens, and sometimes in their houses. These views are supported by archaeological evidence today when burials are found directly incorporated into house platforms. Burying loved ones under or near ones home is a traditional Hawaiian practice. Traditionally, a family had an area where they would lay to rest member of their 'ohana. Such a place could be under or near the home, in a family cave or in a portion of a sand dune.

**EXHIBIT N:** Hawaii Island Burial Council Meeting Minutes, December 20, 2001

- Mr. Rechtman said that there were burial sites discovered in the Kauleoli portion. and burials discovered in Ki'ilae in a portion of the project.
- Steve Jiran, said there's an additional 96 acres that the developer cut out because it is a really good representation of the agricultural Kona field system, as well as other archaeological features including historic burials.
- Clarence A. Medeiros, Jr. brought up the issue of the unperfected title of Kauleoli. Clarence supports the protection and preservation of the cultural, archaeological, and historical sites in Kauleoli and feels the best way to do that is to enlarge Pu'uhonua O Honaunau through the acquisition of Kauleoli.

- Jiran said within the 96 acres in Ki'ilae, he did an agricultural reconnaissance and also had the National Park archaeologist go down in that area and there are many burials in that section.

**EXHIBIT O:** Affidavit of Clarence Medeiros, Sr.

Medeiros, Sr. attests that "I and my son, Clarence, Jr. have spent a generation and tens of thousands of dollars searching government, church and other records, interviewing and recording kupuna information, and recollections, studying Hawaiian history sources, obtaining title reports from Security Title Corporation and elsewhere, obtaining deeds to us in litigation and otherwise, involving the ahupua'a of Ho'okena, Kalahiki, Waiea, and Honokua as well as related kuleana and other lands" (Ki'ilae and Kauleoli).

**EXHIBIT P:** County of Hawaii Board of Appeals, BOS 02-03 and 02-04,  
Wayne Leslie, PKO, Jim Medeiros, and Jack Kelly vs.  
County of Hawaii and Kiilae Estates, Affidavit of Jim Medeiros, Sr.

- Jim Medeiros attests that no approval of Ki'ilae Subdivision Estates be given by the county, state or any other agencies until, when and if, his concerns have been addressed.
- There is no clear title to the lands of Ki'ilae and Kauleoli.
- The Archaeological Survey is not complete and does not count all the site of possible burials. Many areas of Kauleoli show no evidence of any archaeology being conducted. He feels that Rechtman did not sweep the property properly. He has personal knowledge of multiple possible burials that have been left unrecorded in the Rechtman survey. He and others have visited these sites.
- Jim states that Rechtman is not culturally sensitive and has been robbing or removing artifacts and funerary objects from burial caves. He wants Rechtman removed and a new survey conducted.
- Jim says he is a Hawaiian practitioner and he uses these ahupua'a as a place for collecting medicines, different woods, plants, and materials. He goes to certain sites to pray because of it's great spiritual presence.
- Jim says he is lineally related to burials in these ahupua'a and will be visiting and protecting them.
- He has witnessed the damage done by the developer before any proper permits were obtained. The developer also exceeded land clearing limits on their grubbing permit. He witnessed bulldozers working on the weekends with no archaeological monitors present. He witnessed the developer dozing up to burial tubes and built cross roads that go over burial tubes.
- He said there were no monitors, no burial treatment plan, no Archaeological Survey, no clear title to the land, no protection for his family or any of the many other families from Ki'ilae and Kauleoli.

- Jim's family goes back many generations using these lands for living, growing crops, aquaculture, burials, religious practices, medicinal and spiritual purposes. He declares the right to protect the burials, sacred religious and cultural sites, ancient trails, ahu, and other significant historical sites for himself and his children and his grandchildren.
- Jim opposes any and all permits and approvals for this project until all his concerns as well as the concerns of the other families involved and the member of PKO are addressed to everyone's satisfaction.

**EXHIBIT Q:** Circuit Court of the Third Circuit, Civil No. 03-1-0050K,  
Wayne Leslie vs. County of Hawaii Board of Appeals,  
Declaration of Clarence A. Medeiros, Jr.

Declaration of the use of the mauka-makai trail in Kealia and Kauleoli, the use of the Ala Loa to access Ki'ilae and Kauleoli, and our care and maintenance of the trail. His father and grandfather raised cattle in Kealia and they would follow the wild bulls into Kauleoli. His grandmother, Violet Leihulu Mokuohai Parker Medeiros, had an interest in Kauleoli. Her great-great-grandfather is Henry Clark, the owner of Grant 1575 in Kauleoli.

**EXHIBIT R:** Declaration of Linda Kaleo-o-kalani Gerda Paik, January 21, 2007

Declaration of a known burial and its location on the ahupua'a of Kauleoli.

**EXHIBIT S:** Certificate of Marriage, Charles Hua and Annie Aman Sing

Charles Hua and Annie Aman Sing are the maternal grandparents of Clarence A. Medeiros, Jr. At the time of her marriage, Annie Aman Sing was a resident of Ki'ilae.

**EXHIBIT T:** Ahupuaa map of Ki'ilae and Kauleoli

Map is annotated with families and locations of their residences in Ki'ilae and Kauleoli identified by Annie Aman Sing Hua Weeks from an oral interview with her in 1978.

**EXHIBIT U:** Probate No. 91-187, Estate of Annie Ah Sing Weeks aka Annie Hua

Probate No. 91-187, Estate of Annie Hua aka Annie Ah Sing Weeks. Annie Hua is my maternal grandmother and her probate lists her undivided interest in numerous real property, to include an undivided interest in Ki'ilae.

**EXHIBIT V:** Notice of Violation & Order

The developer once again was cited for a permit violation by grading without proper permits as recent as August 24, 2007.

**EXHIBIT W:** Ki'ilae Estates letter dated June 14, 2007

This letter documents a visit to the Ki'ilae Farms project site attended by Martin Quill, Peter Anderson, and Robert Rechtman of Ki'ilae Estates, Jenny Pickett and Kaleo Paik of SHPD, and Clarence A. Medeiros, Jr. We visited the burial sites.

**EXHIBIT X:** Letter dated October 15 2007 to Christopher Yuen, County of Hawaii,  
Planning Director

This letter opposes the developers efforts to consolidate subdivision lots in Ki'ilae and resubdivide lots in Kauleoli that are a part of the Ki'ilae Farms subdivision.

- A major issue is that Ki'ilae Estates does not have exclusive ownership of Kauleoli because it has never been judicially determined by a quiet title action.
- Ki'ilae Estates has submitted title insurance which is not a title report.
- Attached is a Chain to Title report prepared by Title Guaranty of Hawaii that includes Clarence A. Medeiros, Jr. as a party having a fee simple interest in and to TMK 8-5-005-019, being the same lands involved in the subdivision application.
- Another major issue is one of historic sites. Two historic sites, the Ki'ilae Trail aka Keanapaakai Trail, and the Kauleoli Trail are located within the proposed subdivision. The subdivision application will adversely affect the protection and preservation of the Kauleoli Trail as 5 proposed lots abut and /or encroach upon this historic trail. This trail runs along the south side of the Ki'ilae-Kauleoli boundary stone wall and was enclosed by another stone wall to form an "alley". The Kauleoli boundary wall and the Kauleoli Trail need to be preserved and protected.
- Another major issue is about the burial sites. The developer's burial treatment plan lists only four burials, all being cave burials. Don Hibbard, former SHPD Administrator, questioned the plan and the inventory report. But he was even more concerned that only 3 out of 1,020 mounds were tested.
- Two out of the three tested mounds, which were inaccurately identified by Mr. Rechtman as agricultural mounds, were later found with burial remains.
- Historical and burial sites need to be protected by buffers.

**EXHIBIT Y:** Letter to Irving Kawashima, Na Ala Hele

Submitted documentation to support the existence of the Ki'ilae-Keanapa'akai Trail and the use of the trail by my family.

Aerial photos

- Photo #1: An aerial photo taken in 2001 that shows the Keanapa'akai Trail being breached by a middle access road created by the developer sometime after 1995.

- Photo #2: An aerial photo taken in 1995 showing no breach of the Keanapa'akai Trail.
- Photo #3: An aerial photo taken in 1995 showing no breach of the Keanapa'akai Trail.

**EXHIBIT Z:** Letter dated November 26, 2007 to Michael Moore

This is a very comprehensive letter with attachments that details my major issues and concerns regarding the subdivision project and corrects erroneous information by the developer:

- Genealogy
- Title Insurance vs. Title Repoert
- Kauleoli Trail and Ki'ilae-Keanapa'akai Trail
- Burials
- Disclosure to potential lot buyers

**EXHIBIT AA:** January 1996, Vicinity Map, TMK 8-5-005-019  
Proposed Addition, HELCO's Sub-station Site

The north and south boundary walls of Kauleoli were still intact in 1966.

**EXHIBIT BB:** Royal Patent Grant 1575

The north boundary wall of Kauleoli needs to be put back as per Melanie Chinen's directive dated March 30, 2005. The original metes and bounds of the Kauleoli boundaries are described in RP No. 1575.

**EXHIBIT CC:** TMK Map 8-5-05 & Photos of Flooding at Kiilae

In the 1950's and 1960's I remember the culvert in Keokea overflowing and causing flooding on the road into northern section of the ahupua'a of Ki'ilae, traveling the same path of the recent floodings. The recent flooding in South Kona has diverted away from the normal flood paths and has impacted neighboring areas. The northern boundary of Ki'ilae, specifically, TMK 8-5-6-34, has been in the flood path of the recent flooding in South Kona when the flood waters crossed the highway and flowed into the Ki'ilae development area.

**Issues that need to be satisfactorily addressed and/or resolved:**

- \* Additional vehicles from this development will exacerbate the current overload of traffic in South Kona.
- \* County water that is to be dedicated to this subdivision will adversely affect the water flow and pressure that is already slow/low in Ho'okena mauka and makai, Kealia mauka and makai, and at Ho'okena Beach Park.

- \* The burial sites that I have been recognized to as a lineal descendant to and the access to them must be preserved and protected.
- \* The original boundary wall between Kauleoli and Ki'ilae needs to be restored as directed by Melanie Chinen's March 30, 2005 letter because a burial is within the boundary wall. The boundary wall was used as a marker to locate the burial that even a blind person could locate. Another burial is located next to the wall.
- \* The developer needs to draft a new drainage plan to address the recent flooding on the northern boundary of Ki'ilae and to address the planned revision of the FEMA flood maps that could possibly designate the project area as being within a flood zone area.
- \* The developer needs to address and/or acknowledge the issue of title.
- \* These outstanding issues must be disclosed in writing to potential buyers of the subdivision lots.
- \* Any resubdivision and reconsolidation applications must be deferred until all of these issues are resolved satisfactorily.
- \* This development does not offer or bring any benefits to the community.
- \* Descendants of Ki'ilae and Kaeloli, as well as the general public, should be consulted and kept abreast on all related aspects of this EA.



DATE: August 29, 2008

TO: Ron Terry, Geometrician Associates

FROM: Clarence A. Medeiros, Jr.

SUBJECT: Addendum to my March 27, 2008 response to Early Consultation for Environmental Assessment for Ki'ilae Farms Agricultural Subdivision, TMK 8-5-005-019 and 022 (pors.), South Kona, Island of Hawaii

I would like to provide additional input on the proposed improvements to a portion of Highway 11, aka Hawaii Belt Road, to allow access to the Ki'ilae Farms Agricultural Subdivision.

I would like to reiterate that the final subdivision approval for this project was granted because of an \$8,410,144.28 bond paid by the developer, Ki'ilae Estates, LLC, and is contingent upon and subject to meeting all conditions outlined in the County of Hawaii's tentative approval letter dated May 7, 2004.

To follow are the issues and concerns I have about the subdivision's proposed improvements to gain access to Highway 11:

**EXHIBIT A: Hawaii County Tax Map 8-5-06**

This is a revised tax map that reflects the newly assigned tax map key numbers to lots in the Ki'ilae Farms Agricultural Subdivision. Lot 28 is located at the northern top of the subdivision bordering Highway 11 and contains a burial site that I am a recognized lineal descendant to. Lot 28 is located within Site 23140.

Land clearing activities have already negatively impacted this burial site and the proposed road improvements to access Highway 11 will further damage the burial site and the area around it.

**EXHIBIT B: Ki'ilae Farms Subdivision Road Improvements Entrance Road Best Management Practices Overall Plan & Details**

The star on this entrance road detail identifies the approximate location of a burial site situated within Site 23140 that I am a recognized lineal descendant to. Further improvements to Highway 11 and the subdivision entrance road will negatively impact the burial site and the surrounding area.

I am a lifetime resident of the South Kona community and I have traveled past the section of Highway 11 fronting the Ki'ilae Farms Agricultural Subdivision for over 50 years. I drive by the site of the entrance road to the subdivision on a daily basis and am familiar with the highway traffic in that area. Whether you are coming from the Kohala or Ka'u direction, there are blind turns in the highway before the entrance to the subdivision. The traffic along this corridor of Highway 11 is very heavy being the only access to and from "town" for the "deep South" and Ocean View residents. The current access to the project poses a traffic hazard and promotes dangerous traffic conditions.

The road improvements must at least include:

- an additional lane for turn-off or ingress/egress traffic to and from the subdivision;
- realignment of Highway 11 to mitigate the danger of the blind turns to the north and south of the subdivision entrance;
- allow for a shoulder lane for potential school and community bus service for the subdivision residents.

**EXHIBIT C: Ki'ilae Farms Agricultural Subdivision aerial photo**

This aerial photo of the Ki'ilae Farms Agricultural Subdivision was taken on January 23, 2007, shortly after the developer was cited for a grubbing permit violation. The entrance road was not to exceed a width of 60'. However, sections of the road well exceeds the 60' width limitation, especially the section of the road near the burial site within Site 23140.

**EXHIBIT D: West Hawaii Today article dated October 10, 2007**

In October 2007, a bull-dozer operator at the subdivision site hit a utility pole located at the entrance of the subdivision bringing down the wires, causing a loss of power to customers and forced the closure of the road to all traffic for about 6 hours. This is how crucial a poorly designed road improvement plan will greatly impact the already heavy traffic along the highway fronting the project area.

**EXHIBIT E: Ki'ilae Farms Agricultural Subdivision aerial photo**

A bull-dozer in operation at the subdivision caused the down utility pole. The excess width of the entrance road in this section coupled by the bull-dozer activity in the area of the downed utility pole caused an encroachment into the burial site area and destroyed it. The burial site is located between the bull-dozed entrance road and the mango tree to the north of it, just below Highway 11.

**EXHIBIT F: Map 28a – Ki'ilae Archaeological Site Map**

This map illustrates the approximate location of a burial site that I am a recognized lineal descendant to that is located within Site 23140.

**EXHIBIT G: E-mail from Benjamin Keola Lindsey to Melanie Chinen dated April 25, 2007**

Mr. Lindsey's e-mail confirms that I was previously recognized as a lineal descendant to certain burials within the Ki'ilae Farms Agricultural Subdivision, one being a burial within Site 23140 that is in close proximity to the entrance road at the top of the subdivision.

**EXHIBIT H: County of Hawaii Board of Appeals, BOA 02-03 & 02-04, Wayne Leslie, Protect Keopuka 'Ohana, Jim Medeiros & Jack Kelly vs. County of Hawaii and Ki'ilae Estates, LLC, Proposed Findings of Facts & Conclusions of Law and Order**

Jim Medeiros, Sr. gives testimony in opposition of the subdivision:

- During the preliminary road construction, monitors were not always on site as required by the grading permit;
- He testifies that burials were breached during bulldozing without monitors;
- Roads were cut 30' wide, wider than necessary for survey roads;
- He witnessed dozing with no monitor present;
- Archaeological sites were bulldozed;
- The archaeological survey prepared by the developer was incomplete. All the sites were not marked;
- He states that several possible burials had been left unmarked;
- He and Clarence, Jr. both claim that the title is not clear for the lands of Kauleoli.

**EXHIBIT I: COUNTY OF HAWAII, Department of Public Works, Engineering Division, Grubbing Violation Investigation and Report dated March 16, 2004.**

Filed by David Kimo Frankel. The investigator's report stated that there was no monitor present and that the roadway clearing could have been done with a tractor mower.

**EXHIBIT J:** County of Hawaii, Department of Public Works, Engineering Division,  
Grubbing Violation Investigation and Report Dated March 18, 2004.

Filed by Clarence A. Medeiros Jr.

**EXHIBIT K:** County of Hawaii, Department of Public Works, Engineering Division,  
Grubbing Violation Investigation and Report Dated January 8, 2007

Filed by Clarence A. Medeiros Jr. The investigative report stated that grubbing was done without a permit.

**EXHIBIT L:** Department of Public Works, Notice of Violation & Order dated  
August 29, 2007

The developer violated Section 10-9, Erosion & Sedimentation Control and was ordered to correct the violation at their own expense.

**NOTE CONCERNING CLARENCE MEDEIROS LETTERS**

**ATTACHMENTS TOTAL APPROXIMATELY 300 PAGES  
AND ARE NOT INCLUDED**

# geometrician

A S S O C I A T E S , L L C

integrating geographic science and planning

phone: (808) 969-7090 fax: (866) 316-6988 PO Box 396 Hilo Hawaii 96721  
rterry@hawaii.rr.com

May 31, 2008

Clarence A. Medeiros Jr.  
86-3672 Government Main Road  
Captain Cook HI 96704

Dear Mr. Medeiros:

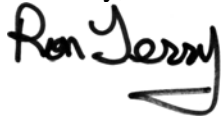
**Subject: Response to Environmental Assessment Early Consultation Letter,  
Ki'īlae Farms Subdivision, TMK 8-5-006:001-029; 8-5-007:001-019,  
South Kona, Island of Hawai'i**

Thank you for the letters and detailed material you sent in response to early consultation for the Environmental Assessment (EA). I especially appreciate the time you took to personally meet with me. As the author of the EA, I am taking this opportunity to explain how the information you provided was used in its preparation, on a point-by-point basis. Please note that the voluminous nature of the material you sent prevented it from being reproduced completely in the Draft EA. However, it has all been studied, considered, and the issues addressed, where they are relevant to environmental analysis. I note that many of your issues ultimately have to do with the ownership title for the property. Although I acknowledge the arguments you have presented, the strong presumption among government agencies who grant approval and permits is that Ki'īlae Estates LLC is the legal owner of the property and is entitled to utilize it in any manner that is approved by permitting authorities. Without making any judgment on the validity of your title claims, the EA has operated under the same presumption.

Because there were so many issues raised in your letter, many of which note incidents that have already been dealt with or are moot, or for which I cannot ascertain a direct connection to environmental impacts, I have attempted to summarize your concerns, and the responses of the developer, the archaeologist, and myself, in the attached table, for easier reference. Please note that the attached Draft EA contains in Appendix 1a, the January 31, 2006 Findings of Fact from the tentative subdivision approval appeal process, some of which is referenced in the table.

We appreciate your comments and look forward to any additional ones you may have on the Draft EA, a copy of which is attached, along with instructions for comment.

Sincerely,

A handwritten signature in black ink that reads "Ron Terry". The signature is written in a cursive, slightly stylized font. The "R" is large and loops around the "on". The "Terry" is written in a more fluid, connected script. The signature is positioned above the printed name.

Ron Terry, Principal  
Geometrician Associates

Attach:           Table of Responses  
                      Draft EA

### Summary of Clarence Medeiros Comments and Responses

No.	Comment	Response
01	Any lot on this open, wild coastline, adjacent to a significant national park, will have an impact.	The lots in question are 600-1,800 feet minimum away from the coast. The National Park accepted the portion of Ki'ilaie adjacent to Ki'ilaie Farms in full knowledge that adjacent land was zoned for agriculture and that an agricultural subdivision was planned.
02	Rights of native Hawaiian have been interfered with by bulldozing archaeological sites.	An extensive process of evaluating the archaeological sites that included consultation with many individuals from the area and review by the State Historic Preservation Division determined which sites were significant for preservation. Seventeen sites have been preserved.
03	Dr. Rechtman's theory of the segregation of habitation and mortuary sites is not a valid idea – there are likely many burials around houses.	Dr. Rechtman replied that his observation about this segregation was based on the recording of roughly 5,000 archaeological features within the project area that burial sites (found in the project area primarily in lava tubes) and habitation sites seemed not to be co-located. This observation was relative to the Precontact burial sites. During the Historic Period people, were buried in either formal cemeteries or near their houses. Aside from the Historic Period burial in the crypt along the Ki'ilaie-Kauleoli boundary, which is in a habitation context, no other Historic Period burials have been identified within the development area.
04	Dr. Rechtman removed funerary objects from caves, including land crabs.	Dr. Rechtman replied that no funerary objects were removed from any context. A few claws of an extinct species of land crab were collected from a lava tube that also contained burials. The crab claws in the tube are not related to the burials. Lava tubes appear to be the habitat for this long extinct species.
05	There is no preservation plan for burials found outside of individual subdivision lots.	There is a preservation plan for all of the burials found within the Ki'ilaie Farms Subdivision.
06	<p>The Archaeological Inventory Survey (AIS) is incomplete, and qualified local cultural practitioners located a petroglyph and numerous platforms and mounds that were unrecorded. The AIS acknowledges only four burials, and there are many more, perhaps as many as 80 burials, most of them in-ground.</p> <p>Of 3 tested mounds (of 1,020 total) asserted by Rechtman to have no burials, two did. Comment provides a map showing exact site of a burial for which CM is a lineal descendant. Work has already damaged this burial site and further improvements to subdivision road and Hwy 11 entrance will adversely impact it more.</p>	Dr. Rechtman replied that the AIS was one of the most complete documents of its type ever prepared in the State of Hawai'i. While it cannot be claimed that every single archaeological feature within the project area as was found, to date following data recovery and extensive monitoring, there has been only one new site identified (a habitation blister found during data recovery), and only one additional burial found (in a pavement feature that was subject to data recovery). No burials were found in any mounds. While these claims of "numerous additional burials" were and continue to be proffered, no physical evidence of burials has been identified, nor has there been any corroborating oral information provided by other interviewees. In fact, approximately 500 archaeological features, including 350 mounds, have already been impacted by bulldozing with an archaeological monitor present and there have been no burials encountered. The assertion of former and future damage to burials from construction of the subdivision road and Hwy 11 access is unsupported by evidence.



07	The rights of Hawaiians to gather plants, to walk trails, and to protect and honor cultural sites including ahu, sacred sites, trails, burials and other features are being violated. Several individuals who may use these resources are named, as are the specific resources of uhaloa, wood, tobacco, inika, and kaunaoa.	The physical integrity of significant historic sites and trails and identified burials will be protected by the terms of the approved Archaeological Preservation and Burial Treatment Plans. The gathering materials cited are fairly common and available in the Kona area generally and are not unique to the development area. The developer believes that there is little indication that the development area was actively utilized in recent times for gathering purposes. Nevertheless, as a condition of subdivision approval, an easement has been created adjacent to the Old Government Road where cultivation and gathering of native plants may be conducted.
08	The public has a right to a trail to access the shoreline	Public access to the shoreline is available by walking from the National Park, which provides a far shorter route to the shoreline. The public also has lateral access across the Old Government Road below the development area and along a mauka-makai public access easement from the Old Government Road across to the shoreline area.
09	Markers for opelu koa off Kauleolī will be destroyed	Dr. Rechtman states that the <i>makai</i> portion of the Ki‘ilae/Kauleolī boundary wall was used as a marker for the offshore <i>ko‘a opelu</i> and that this site is being preserved.
10	The project will degrade coastal waters through sewage and polluted runoff and thereby impact Native Hawaiian fishing and gathering, which has traditional and cultural aspects.	The findings in the subdivisions appeals process correctly noted that almost every existing home in South Kona has a cesspool and that most homes, farms, and public facilities lack drainage facilities that direct runoff to drywells or detention ponds, which act to filter water. If this assertion were true, the water quality of all parts of Kona would already be substantially degraded, which it is not. By contrast, the subdivision will have septic systems and drywells.
11	Cultural resource evaluation is deficient because it does not ID and protect inika, tobacco, pineapple, kaunaoa, and kukui.	As discussed in response to No. 07, the gathering materials cited are fairly common and available in the Kona area generally and are not unique to the development area.
12	“Proposed” subdivision road will encroach into the multiple burials that exist within the Joseph Kaai house site.	No burials are known within that house site.
13	The public burial notices for descendants failed to include many names, making the process flawed, which crucial information and indispensable parties were omitted.	The archaeologist and developer responded that although the notice may not have included every single name with any association with the ahupua‘a, it included enough names so that no parties were excluded from the process, which has been open and inclusive.
14	Flooding from the subdivision will enter and desecrate the burial caves.	The developer responds that the buffer zones, whose size and placement were reviewed and approved by SHPD, are sufficiently wide to protect the caves from any reasonable expectation of flooding.
15	Even protected historic sites will be damaged by grading, despite the protection.	The protected sites are surrounded by buffers and during project grading have been and will continue to be marked by orange fencing. The Archaeological Preservation Plan protects the physical integrity of significant historic sites by requiring that they be preserved with buffers. The subdivision map shows these sites as archaeological easements, so the buyers will have notice of the sites, and governmental personnel who

		review grading, grubbing and building permits will also be aware that land- disturbing activities are not allowed within the buffers. (FOF 169)
16	Comment claims CMJr ownership interest in the land, and states that in the absence of quiet title, he has special rights. He cites a Chain of Title report by Title Guaranty that names him as having a fee simple interest in TMK 8-5-5:19.	According to the developer, Ki'ilae Estates LLC received fee simple title by Warranty Deed in March 2000 and its fee simple title has been fully insured by Title Guaranty of Hawaii, Inc. The attorney for the developer says that CMJr's claim to an interest in the title is a misinterpretation of the Chain of Title report.
17	As there has been no quiet title action, all permits and activities on the process undertaken by the developer must be considered unauthorized. Says Ticor Title Insurance policy has many exclusions, including ones that cover his situation; therefore, title insurance should not be relied on.	According to the FOF, "[t]he Planning Director's approval was consistent with the requirements of the subdivision code regarding title, as sufficient information was provided to the Director regarding title." The developer is not aware of any exclusions in its title policy supporting this.
18	The entire subdivision should be acquired by the National Park.	There is no indication that the National Park wishes to acquire the subdivision.
19	The Ki'ilae-Keanapa'akai Trail was breached by the developer sometime after 1995. He cites before and after airphotos as proof of the road being built.  Na Ala Hele program is interested in project due to two trails. Ki'ilae-Keanapa'akai, Site 23146, and the Kauleoli Trail and has given a request to abstractor.	The developer believes that the breach you are referring to relates to clearing of a pre-existing ranch road that occurred sometime in 2000 and that did not involve destruction of the trail. Regarding Na Ala Hele interest in the two historic trails, these trails were identified as ancient trails and designated for preservation in the Archaeological Preservation Plan prepared in connection with the subdivision, which has been approved by the SHPD. Na Ala Hele was apparently unaware of this when it issued its April 2, 2007 memo, and has since been advised that the trails will be preserved.
20	Ki'ilae is prone to flooding, especially TMK 8-5-6:34. The new flood zones from the planned revision of FEMA FIRM maps must be addressed.	Developer is unaware of any flood problems within the subdivision or of any plans by FEMA to place additional area within the subdivision into a flood zone.
21	Traffic will exacerbate the overload of traffic in Kona. Blind curves make the entrance/egress point is dangerous; the intersection needs an additional lane into subdivision, plus a shoulder lane.	The Department of Public Works and the Department of Transportation reviewed the plan during the subdivision and work within State Highway right-of-way process and determined that the Traffic Impact Assessment Report and sight distance study adequately demonstrated that with the planned improvements, which include a right-turn lane and two egress lanes on the access road, traffic would not be adversely affected.
22	Use of water for the subdivision will lower water flow and pressure in Ho'okena and Kealia.	The integrity of the DWS system, including the amount and pressure of water available to other users, will not be affected
23	Developer has allowed unauthorized grubbing and grading, including on 1/8/07, for which a complaint was filed; developer did not hold a valid permit; this demonstrates that the developer is untrustworthy and has destroyed sites. The developer dozed up to a tomb and opened it, which had to be resealed by a citizen..	Developer acknowledges and regrets that unauthorized grading occurred during times when the developer did not have a valid permit. Concerning the alleged tomb destruction, Dr. Recthman states that this did not occur.

24	Developer's bulldozer operator hit a utility pole in October 2007, causing a power loss and snarling traffic, demonstrating how a poorly designed road can impact the traffic	Developer acknowledges and regrets this accident.
25	Arch. monitors were not present at all times as required by the grading permit; e.g., dozing occurred on Sat-Sun, with no monitors. A DPW complaint on 3/16/04 incident says no monitor present.	Dr. Rechtman stated that he is not aware of any archaeological monitoring requirement that would have been active in March of 2004. Furthermore, he is unaware of <i>any</i> time during which arch monitors were required but were not present.
26	Developer has been cited, and even paid fines for, violating erosion control ordinance of County.	Developer acknowledges and regrets these violations.
27	Rechtman never asked if anyone was currently engaged in native Hawaiian traditional practice, and failed to ask makua (adults), only kupuna.	Dr. Rechtman stated that he talked to a number of people about traditional practices past and present, incorporated relevant information in the AIS, and has included additional information on current practices in the CIA that was prepared for the EA.
28	Rechtman missed trails, including obvious segments with smooth ala stones.	Dr. Rechtman stated that he was unaware of any trails that were missed, and that none have been subsequently shown to him or his crew.
29	AIS fails to recognize Site 23151, the ahupua'a boundary wall, as a significant site.	Dr. Rechtman stated that the AIS recognized Site 23151 as significant under State Criterion D for information content. The AIS recommended, and SHPD concurred, that no further work would be required for this site. It was not until several years after the AIS was approved that SHPD revised their opinion of the treatment of this site based on input from CMJr. The developer agreed to preserve this site as specified in the SHPD-approved Preservation Plan for the Ki'ilae Farms Subdivision.
30	Rechtman failed to recognize inika as a culturally important plant – a source of ink for tattoos for battles.	CMJr. claimed that historically the inika plant found within the development area was used by Hawaiian warriors prior to battle for tattoo dye. However, inika is Hawaiian for the English word ink and the inika plant refers to Malabar Nightshade or Ceylon Spinach ( <i>Basella alba</i> ). <i>Basella alba</i> is an alien species introduced to Hawai'i in the 19th century, at a period of time subsequent to the era of Hawaiian conquest warfare, and it is thus mistakenly associated with the Precontact Period by Mr. Medeiros. A native plant in the plumbago family, called 'ilie'e, which is common in lowland Kona, was traditionally used in tattooing practices.

Initials: CMJr. Clarence Medeiros Jr.

Abbreviations: FOF Findings of Fact  
SHPD State Historic Preservation Division

## **Appendix 2**

### **Biological Reconnaissance**

**Biological Reconnaissance**  
**Ki'īlae Farms (TMK 8-5-006:001-029; 8-5-007:001-019)**  
**Ki'īlae and Kauleolī, South Kona, District, Hawai'i Island, State of**  
**Hawai'i**

**By Ron Terry, Ph.D., and Patrick Hart, Ph.D., and Layne Yoshida, B.A.**  
**Geometrician Associates, LLC**  
**April 2008**

Ki'īlae Farms Subdivision consists of 48 agricultural lots (some of which may be further subdivided in the near future) varying in size from about 5 to 75 acres as well as 5 roadway lots, totaling about 400 acres, makai of State Highway 11, within portions of Ki'īlae and Kauleolī ahupua'a (Map Figure 1). The average maximum daily temperature is approximately 78 degrees F, with an average minimum of 65 degrees, and annual rainfall averages about 50 inches, with a summer maximum (U.H. Hilo-Geography 1998:57).

The subdivision stretches from about 40 to 900 feet above sea level, with a somewhat steep average slope of over 10%. Geologically, the project site is located primarily on roughly 1,500 to 3,000-year old lava from Mauna Loa (Wolfe and Morris 1996). The soil in the Ki'īlae portion of the study area is predominantly Punaluu Extremely Rocky Peat, with a limited occurrence of Kainaliu Extremely Stony Peat in the northeastern corner (U.S. Soil Conservation Service 1973). In Kauleolī, the U.S. Soil Conservation Service maps define two distinct soil areas, with the upper section (above about 600 feet elevation) characterized by Punaluu Extremely Stony Peat. Kaimu soil is rapidly permeable, with slow runoff and slight erosion hazard, and is in Capability subclass VIIc, which is often considered unsuitable for cultivation but may have small areas in coffee, macadamia nuts, and other crops. Punaluu soil is rapidly permeable in the peat layer but very slowly permeable within the pāhoehoe.

Given the rainfall, geology, and existing vegetation, the general project area probably supported a Lowland Dry-Mesic Forest (Gagne and Cuddihy 1990) prior to human disturbance, with 'ohi'a (*Metrosideros polymorpha*) and/or lama (*Diospyros sandwicensis*) and alahe'e (*Psychotria odoratum*) as co-dominants.

The project site supported traditional Hawaiian agriculture before 1850 and other farming, including coffee, later. Grazing took place on the property up until 2003. The native vegetation communities have been entirely destroyed or heavily degraded by cattle grazing, agriculture and clearing for farms and residences, and the vegetation of both the project area and project site are now managed vegetation (i.e., farms, pasture or landscaped areas) or "communities" of various weeds.

## *Study Methodology*

A botanical survey of the project site that also noted birds and bird habitat was conducted by Geometrician Associates. Biologists Patrick Hart, Ph.D., Layne Yoshida, B.A., and Ron Terry, Ph.D., performed a botanical survey of the subdivision in April 2008, building on several efforts that had been conducted in years previous in the lower portions of the property. Because of the special circumstances on the property – infrastructure including roads, utility corridors and access points to lots in process and almost complete, and all approvals in place to grade any areas not set aside for archaeological preserves – 100 percent survey was not appropriate. Instead, the methods for the survey focused on walking sufficient transects to document the existing vegetation, determining if native vegetation zones were present that might be considered for voluntary preservation by landowners, and paying attention to the one individual tree that had been noted by the archaeologists as potentially an endangered species.

## *Existing Vegetation and Flora*

Aside from recent infrastructure building, the site is undeveloped and contains vegetation that, although almost uniformly alien, varies somewhat in species composition and canopy height by elevation and substrate. The current vegetation closely matches rainfall, which has in turn influenced the development of soil. Near the shoreline (which is 600 to 1,800 feet outside the project area), trees are capable of tapping groundwater, and where soil conditions are favorable, a closed-canopy forest of kiawe (*Prosopis pallida*), opiuma (*Pithecellobium dulce*) and koa haole (*Leucaena leucocephala*) is present, with an understory of guinea grass (*Panicum maximum*) and a number of other alien plants. Above the lowest elevation zone, vegetation becomes markedly shrubbier and open, with scattered trees 10-20 feet high. Above 400 feet elevation the average tree height increases, the canopy closes in, and larger trees (30-40 feet) are more common. Whereas kiawe is abundant in lower elevations, it is rarer at middle elevations. Below 600 feet elevation, the pāhoehoe and ‘a‘ā flows support a tangle of koa haole (*Leucaena leucocephala*), ‘opiuma (*Pithecellobium dulce*), and lantana (*Lantana camara*), with an occasional kiawe (*Prosopis pallida*).

The upper portions (above 600 feet elevation) support a tree canopy of kukui (*Aleurites moluccana*), mango (*Mangifera indica*), monkeypod (*Samanea saman*), guava (*Psidium guajava*) and avocado (*Persea americana*), with a vine growth of liliko‘i (*Passiflora spp.*), kākalaioa (*Caesalpinia bonduc*), and hoi or bitter yam (*Dioscorea bulbifera*). and an understory of Christmas-berry (*Schinus terebinthifolius*), coffee (*Coffea arabica*), air plant (*Kalanchoe pinnata*), and waiawī (*Psidium cattleianum*), along with a variety of introduced weeds and grasses. Archaeologists noted the correlation of certain plants with Historic Period residential areas in upper Ki‘ilae and Kauleolī, including ti (*Cordyline fruticosa*), loulou (*Pritchardia affinis*), plumeria (*Plumeria acuminata*), and a few scattered citrus trees.

A complete list of plant species observed on the property is provided in Table 1. Native species included the trees loulu palm (*Pritchardia affinis*) and hau (*Hibiscus tiliaceus*); the herbs maiapilo (*Capparis sandwichiana*), ala ala wai nui (*Peperomia leptostachya*), ilima (*Sida fallax*), sida (*Sida rhombifolia*), popolo (*Solanum americanum*), and 'uhaloa (*Waltheria indica*); the vines koali (*Ipomoea indica*), kākalaioa (*Caesalpinia bonduc*), kaunaoa (*Cassytha filiformis*) and huehue (*Cocculus trilobus*); and the ferns *Doryopteris decora* and *Nephrolepis exaltata*.

Most of these species are extremely common, with the exception of loulu and maiapilo. One individual of the loulu palm, a listed endangered species (U.S. Fish and Wildlife Service 2008), is present. Although commonly available in nurseries and seen in landscape plantings throughout Kona, wild individuals are very uncommon and botanically valuable. Maiapilo, considered a rare species, also was represented by only one individual found directly on the southern boundary road.

### *Existing Fauna*

Although no formal zoological survey was conducted, a number of alien birds were noted during the botanical survey, as shown in Table 2. Only one native Hawaiian bird was identified during the survey, and it is extremely unlikely that many native forest birds would be expected to use the site due to its low elevation and lack of adequate forest resources. One Hawaiian Hawk (*Buteo solitarius*), which is a federally listed endangered species, was seen within the project site during the survey. Despite their endangered status, hawks are commonly seen in all forested locations on the island of Hawai'i.

Although not detected during this survey, it is possible that small numbers of the endangered endemic Hawaiian Petrel (*Pterodroma sandwichensis*), or ua'u, and the threatened Newell's Shearwater (*Puffinus auricularis newelli*), or 'a'o, overfly the project area between the months of May and November. Both species were formerly common on the island of Hawai'i. The Hawaiian Petrel is a pelagic seabird that reportedly nested in large numbers on the slopes of Mauna Loa and in the saddle between Mauna Loa and Mauna Kea, as well as at the mid- to high elevations of Hualālai. Within recent historic times it has been reduced to relict breeding colonies located at high elevations on Mauna Loa and, possibly Hualālai. Newell's Shearwaters breed on Kaua'i, Hawai'i and Moloka'i in extremely small numbers. Newell's Shearwater populations have dropped precipitously since the 1880s. This pelagic species nests high in the mountains in burrows excavated under thick vegetation, especially uluhe fern. There is no suitable nesting habitat within the project area for these birds. Biologists believe that the leading cause of death for both these species in Hawai'i is predation by alien mammals at the nesting colonies, followed by collision with man-made structures. Exterior lighting disorients these night-flying seabirds, especially fledglings, as they make their way from land to sea during the summer and fall. When disoriented, seabirds often collide with manmade structures and, if not killed outright, the dazed or injured birds are easy targets for feral mammals.

In addition to cats and dogs, the mammalian fauna of the project area is composed of mainly introduced species, including domestic goats (*Capra h. hircus*), domestic pigs (*Sus s. scrofa*), dogs (*Canis f. familiaris*), cats (*Felis cattus*) small Indian mongooses (*Herpestes a. auropunctatus*), roof rats (*Rattus r. rattus*), Norway rats (*Rattus norvegicus*), European house mice (*Mus domesticus*) and possibly Polynesian rats (*Rattus exulans hawaiiensis*). None are of conservation concern and all are deleterious to native flora and fauna.

The only native Hawaiian land mammal, the endangered Hawaiian Hoary Bat (*Lasiurus cinereus semotus*), may also be present in the area, as it is present in many areas on the island of Hawai'i. Observation took place in daylight, and therefore the lack of bat observations does not signify an actual absence of bats. Although the weedy vegetation of the project site would not be expected to represent essential habitat for this endangered species, bats have been observed in kiawe, koa haole and guava-dominated vegetation in many other parts of Kona.

### *Impacts and Mitigation Measures*

Aside from the loulu (*Pritchardia affinis*), no listed, candidate or proposed endangered plant species (USFWS 2008) were found on the project site. The maiapilo shrub (*Capparis sandwichiana*), while not protected, is considered a rare species and is somewhat uncommon in this part of Kona (if abundant, at least currently, in North Kona). The need to protect the loulu palm has been told to the developer, who is aware of the location and has protected it up to this point. The plant may be a century or more old, and judging from the "steps" carved on the trunk, it may have been used for gathering very young leaves for weaving loulu hats, which were popular in the early 20<sup>th</sup> century, and perhaps for its seeds, which can be eaten when slightly unripe. A 10-foot radius botanical preserve within Lot 40 will be created to prevent harm to the tree. The Amy Greenwell Ethnobotanical Garden, which helped identify the palm as *Pritchardia affinis*, will be invited to gather seeds for propagation, as consistent with endangered species laws and permits. Landscaping utilizing the loulu palm is also recommended. The maiapilo is found on an existing four-wheel drive road and may be difficult to preserve in place. Landscaping with maiapilo is recommended in order to encourage a greater population of this botanically interesting and culturally important plant.

The other native plants found generally on the property are common in many locations in Kona, and it would appear that no adverse impacts to botanical resources will occur from continued clearing and occupation and farming of the subdivision.

Hawaiian hoary bats and Hawaiian Hawks are common in the South Kona landscape of mixed farms and residences, and construction, occupation and farming of the subdivision is not likely to impact the health of their populations.



The following additional mitigating actions are recommended for the developer, farmers and homeowners clearing their lands for homes, farms, or farm buildings.

- In the unlikely event that an active Hawaiian Hawk nest is encountered during clearing and grubbing, halt any construction activity within 100 meters of the nest tree and consult with the U.S. Fish and Wildlife Service.
- In order to reduce effects to Hawaiian hoary bats, landowners should attempt to avoid clearing and other land altering activities during the period from the beginning of June to the end of August, when bats are caring for their young and most vulnerable to disturbance.
- In order to reduce the threat for downing endangered Hawaiian Petrels and threatened Newell's Shearwaters after they become disoriented by external lighting, shield any such lighting, in conformance with the Hawai'i County Outdoor Lighting Ordinance (Hawai'i County Code Chapter 9, Article 14), which requires shielding of exterior lights so as to lower the ambient glare.
- Homeowners may improve the botanical landscape of the project area by planting native Hawaiian plants, including rare and endangered species, in consultation with reputable nurseries. The Amy Greenwell Ethnobotanical Garden, located nearby in Captain Cook, provides an excellent resource for education and advice on planting natives.

## REFERENCES

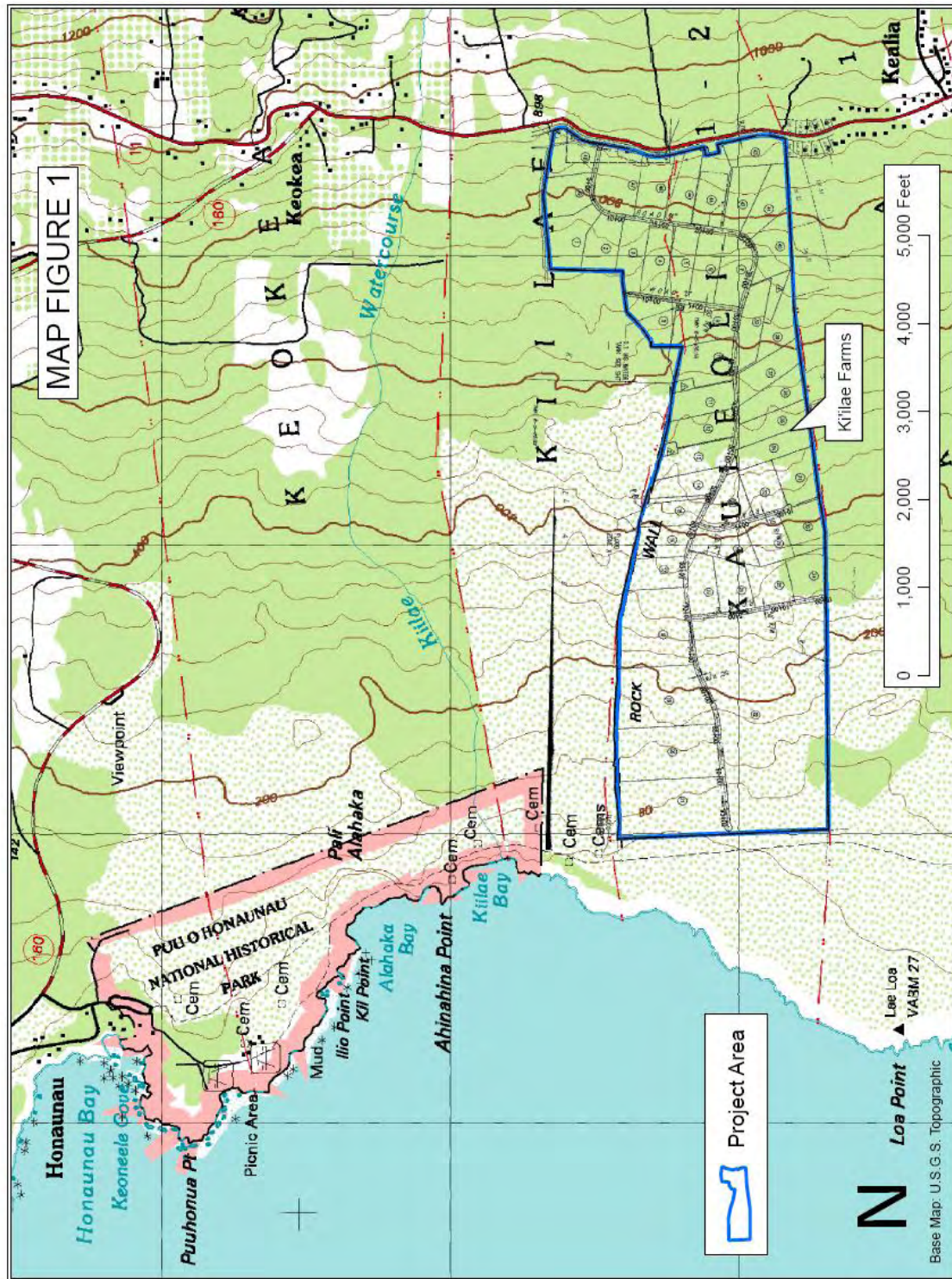
Gagne, W., and L. Cuddihy. 1990. "Vegetation," pp. 45-114 in W.L. Wagner, D.R. Herbst, and S.H. Sohmer, eds., *Manual of the Flowering Plants of Hawai'i*. 2 vols. Honolulu: University of Hawai'i Press.

U.S. Soil Conservation Service. 1973. *Soil Survey of Island of Hawai'i, State of Hawai'i*. Washington: U.S.D.A. Soil Conservation Service.

U.S. Fish and Wildlife Service (USFWS). 2007. *USFWS Threatened and Endangered Species System (TESS)*. Washington: GPO. [http://ecos.fws.gov/tess\\_public/StartTESS.do](http://ecos.fws.gov/tess_public/StartTESS.do)

University of Hawai'i at Hilo, Dept. of Geography. 1998. *Atlas of Hawai'i*. 3rd ed. Honolulu: University of Hawai'i Press.

Wolfe, E.W., and J. Morris. 1996. *Geologic Map of the Island of Hawai'i*. USGS Misc. Investigations Series Map i-2524-A. Washington, D.C.: U.S. Geological Survey.



**Table 1**  
**Plants Detected in Botanical Survey**

Scientific Name	Family	Common Name	Life Form	Status*
<i>Abutilon grandifolium</i>	Malvaceae	Hairy abutilon	Shrub	A
<i>Achyranthes aspera</i>	Amaranthaceae	Achyranthes	Herb	A
<i>Aleurites moluccana</i>	Euphorbiaceae	Kukui	Tree	A
<i>Allamanda sp.</i>	Apocynaceae	Allamanda	Shrub	A
<i>Amaranthus spinosus</i>	Amaranthaceae	Spiny amaranth	Herb	A
<i>Artocarpus altilis</i>	Moraceae	Ulu	Tree	A
<i>Asparagus plumosus</i>	Liliaceae	Asparagus fern	Herb	A
<i>Axonopus compressus</i>	Poaceae	Carpetgrass	Herb	A
<i>Begonia sp.</i>	Begoniaceae	Begonia	Herb	A
<i>Bidens cynapiifolia</i>	Asteraceae	Bidens	Herb	A
<i>Bidens pilosa</i>	Asteraceae	Bidens	Herb	A
<i>Boerhavia coccinea</i>	Nyctaginaceae	Boerhavia	Herb	A
<i>Buddleia asiatica</i>	Buddleiaceae	Dogtail	Shrub	A
<i>Caesalpinia bonduc</i>	Fabaceae	Kākalaioa	Vine	I
<i>Canavalia cathartica</i>	Fabaceae	Canavalia	Vine	A
<i>Capparis sandwichiana</i>	Capparaceae	Maiapilo	Vine	I
<i>Carica papaya</i>	Caricaceae	Papaya	Shrub	A
<i>Cassytha filiformis</i>	Lauraceae	Kaunaoa	Vine	I
<i>Catharanthus roseus</i>	Apocynaceae	Madagascar periwinkle	Herb	A
<i>Chamaecrista nictitans</i>	Fabaceae	Partridge pea	Herb	A
<i>Chamaesyce hypericifolia</i>	Euphorbiaceae	Graceful spurge	Herb	A
<i>Chamaesyce hirta</i>	Euphorbiaceae	Hairy spurge	Herb	A
<i>Citrus sp.</i>	Rutaceae	Lime	Tree	A
<i>Citrus sp.</i>	Rutaceae	Orange/ Lime	Tree	A
<i>Cleome gynandra</i>	Capparaceae	Spider Wwsp	Herb	A
<i>Cocculus trilobus</i>	Minespermaceae	Cocculus	Vine	I
<i>Cocos nucifera</i>	Arecaceae	Niu	Tree	A
<i>Codiaeum variegatum.</i>	Euphorbiaceae	Croton	Shrub	A
<i>Coffea arabica</i>	Rubiaceae	Coffee	Shrub	A
<i>Commelina diffusa</i>	Commelinaceae	Honohono	Herb	A
<i>Cordyline fruticosa</i>	Agavaceae	Ki	Shrub	A
<i>Crotalaria pallida.</i>	Fabaceae	Crotalaria	Herb	A
<i>Crotalaria sp.</i>	Fabaceae	Crotalaria	Herb	A
<i>Cucumis dipsaceus</i>	Cucurbitaceae	Teasle gourd	Vine	A
<i>Cynodon dactylon</i>	Poaceae	Bermuda grass	Herb	A
<i>Cyperus sp.</i>	Cyperaceae	Cyperus	Herb	A
<i>Desmanthus virgatus</i>	Fabaceae	Slender mimosa	Herb	A
<i>Desmodium cajanifolium</i>	Fabaceae	Desmodium	Herb	A
<i>Desmodium sandwicense</i>	Fabaceae	Desmodium	Herb	A
<i>Desmodium tortuosum</i>	Fabaceae	Desmodium	Herb	A
<i>Dimocarpus longan</i>	Sapindaceae	Longan	Tree	A
<i>Dioscorea bulbifera</i>	Dioscoreaceae	Bitter yam	Vine	A
<i>Doryopteris decora</i>	Pteridaceae	Doryopteris	Fern	I
<i>Drymaria cordata</i>	Caryophyllaceae	Drymaria	Herb	A
<i>Eleusine indica</i>	Poaceae	Goosegrass	Herb	A
<i>Epipremnum sp.</i>	Araceae	Pathos	Vine	A

Table 1, continued

Scientific Name	Family	Common Name	Life Form	Status*
<i>Eragrostis sp.</i>	Poaceae	Love grass	Herb	A
<i>Erechtites sp.</i>	Asteraceae	Fireweed	Herb	A
<i>Heliconia sp.</i>	Heliconiaceae	Heliconia	Herb	A
<i>Hibiscus tiliaceus</i>	Malvaceae	Hau	Tree	I
<i>Hyptis pectinata</i>	Lamiaceae	Hyptis	Shrub	A
<i>Indigofera suffruticosa</i>	Fabaceae	Indigofera	Shrub	A
<i>Ipomoea alba</i>	Convolvulaceae	Ipomoea	Vine	A
<i>Ipomoea indica</i>	Convolvulaceae	Morning glory	Vine	I
<i>Kalanchoe pinnata</i>	Crassulaceae	Airplant	Herb	A
<i>Kyllinga brevifolia</i>	Cyperaceae	Kyllinga	Herb	A
<i>Lantana camara</i>	Verbenaceae	Lantana	Shrub	A
<i>Leucaena leucocephala</i>	Fabaceae	Haole koa	Shrub	A
<i>Lycopersicon sp.</i>	Solanaceae	Tomato	Herb	A
<i>Malvastrum coromandelianum</i>	Malvaceae	False mallow	Herb	A
<i>Mangifera indica</i>	Anacardiaceae	Mango	Tree	A
<i>Manihot glaziovii</i>	Euphorbiaceae	Ceara rubber tree	Tree	A
<i>Microsorium scolopendria</i>	Polypodiaceae	Maile scented fern	Fern	A
<i>Momordica charantia</i>	Cucurbitaceae	Bitter Melon	Vine	A
<i>Morinda citrifolia</i>	Rubiaceae	Noni	Shrub	A
<i>Murraya paniculata</i>	Rutaceae	Mock orange	Shrub	A
<i>Nephrolepis exaltata</i>	Nephrolepidaceae	Sword fern	Fern	I
<i>Odontonema spp.</i>	Acanthaceae	Odontonema	Shrub	A
<i>Panicum maximum</i>	Poaceae	Guinea grass	Herb	A
<i>Paraserianthes sp.</i>	Fabaceae	Albizia	Tree	A
<i>Paspalum conjugatum</i>	Poaceae	Hilo grass	Herb	A
<i>Passiflora edulis</i>	Passifloraceae	Lilikoi	Vine	A
<i>Passiflora foetida</i>	Passifloraceae	Love-in-a-mist	Vine	A
<i>Passiflora suberosa</i>	Passifloraceae	Passiflora	Vine	A
<i>Pennisetum setaceum</i>	Poaceae	Fountain grass	Herb	A
<i>Peperomia leptostachya</i>	Piperaceae	Ala ala wai nui	Herb	I
<i>Persea americana</i>	Lauraceae	Avacado	Tree	A
<i>Phlebodium aureum</i>	Polypodiaceae	Phlebodium	Fern	A
<i>Pithecellobium dulce</i>	Fabaceae	Dulce	Tree	A
<i>Pluchea symphytifolia</i>	Asteraceae	Sourbush	Shrub	A
<i>Plumbago zeylanica</i>	Plumbaginaceae	Ilie'e	Herb	A
<i>Plumeria sp.</i>	Apocynaceae	Plumeria	Tree	A
<i>Portulaca oleracea</i>	Portulacaceae	Pigweed	Herb	A
<i>Portulaca pilosa</i>	Portulacaceae	Portulaca	Herb	A
<i>Pritchardia affinis.</i>	Arecaceae	Pritchardia	Tree	End
<i>Prosopis pallida</i>	Fabaceae	Kiawe	Tree	A
<i>Psidium cattleianum</i>	Myrtaceae	Waiawi	Shrub	A
<i>Psidium guajava</i>	Myrtaceae	Guava	Shrub	A
<i>Rhynchelytrum repens</i>	Poaceae	Natal Rrdtop	Herb	A
<i>Ricinus communis</i>	Euphorbiaceae	Castor bean	Shrub	A
<i>Rivinia humilis</i>	Phytolaccaceae	Coral berry	Herb	A
<i>Samanea saman</i>	Fabaceae	Monkey pod	Tree	A

Table 1, continued				
Scientific Name	Family	Common Name	Life Form	Status*
<i>Schefflera actinophylla</i>	Araliaceae	Octopus tree	Tree	A
<i>Schinus terebinthifolius</i>	Anacardiaceae	Christmas berry	Shrub	A
<i>Senna occidentalis</i>	Fabaceae	Coffee senna	Herb	A
<i>Senna sp.</i>	Fabaceae	Senna	Shrub	A
<i>Sida fallax</i>	Malvaceae	Ilima	Shrub	I
<i>Sida rhombifolia</i>	Malvaceae	Sida	Shrub	I
<i>Sida spinosa</i>	Malvaceae	Prickly sida	Herb	A
<i>Solanum americanum</i>	Solanaceae	Popolo	Herb	I
<i>Spathodea campanulata</i>	Bignoniaceae	African tulip	Tree	A
<i>Sporobolus sp.</i>	Poaceae	Smutgrass	Herb	A
<i>Stachytarpheta jamaicensis</i>	Verbenaceae	Jamaica vervain	Herb	A
<i>Talinum sp.</i>	Portulacaceae	Talinum	Herb	A
<i>Thunbergia fragrans</i>	Acanthaceae	White Thunbergia	Vine	A
<i>Triumfetta sp.</i>	Tiliaceae	Triumfetta	Shrub	A
<i>Verbena litoralis</i>	Verbenaceae	Verbena	Herb	A
<i>Waltheria indica</i>	Sterculiaceae	Uhaloa	Herb	I
<i>Wedelia trilobata</i>	Asteraceae	Wedelia	Herb	A

A = alien, E = endemic, I = indigenous, End = Federal and State listed Endangered Species

Note: Pineapple (*Ananas comosa*), 'inika (*Basella alba*) and tobacco (*Nicotiana tabacum*) were also reported to be present on or near the property as part of testimony in subdivision appeals.

**Table 2**  
**Birds Detected During Botanical Survey**

Scientific Name	Common Name	Status
<i>Acridotheres tristis</i>	Common Myna	Alien Resident
<i>Buteo solitarius</i>	Hawaiian Hawk	Endemic resident*
<i>Cardinalis cardinalis</i>	Northern Cardinal	Alien Resident
<i>Carpodacus mexicanus</i>	House Finch	Alien Resident
<i>Geopelia striata</i>	Zebra Dove	Alien Resident
<i>Leiothrix lutea</i>	Red-billed Leiothrix	Alien Resident
<i>Lonchura punctulata</i>	Nutmeg Mannikin	Alien Resident
<i>Paroaria capitata</i>	Yellow-Billed Cardinal	Alien Resident
<i>Passer domesticus</i>	House Sparrow	Alien Resident
<i>Serinus mozambicus</i>	Yellow-Fronted Canary	Alien Resident
<i>Sicalis flaveola</i>	Saffron Finch	Alien Resident
<i>Streptopelia chinensis</i>	Spotted Dove	Alien Resident
<i>Zosterops japonicus</i>	Japanese White-Eye	Alien Resident

\* indicates federally listed endangered species.

## **Appendix 3**

### **Cultural Impact Assessment and Summary of Archaeological Studies**

**Note: Oversize Maps Not Include in This Version**

# Cultural Impact Assessment and Summary of Archaeological Studies for the Ki'ila'e Farms Subdivision

(TMKs: 3-8-5-005:019, 022 por.)

Ki'ila'e and Kauleolī 1<sup>st</sup> and 2<sup>nd</sup> *ahupua'a*  
South Kona District  
Island of Hawai'i



PREPARED BY:

Robert B. Rechtman, Ph.D.

PREPARED FOR:

Steven A. Jiran  
Ki'ila'e Estates LLC  
1885 Main Street, Suite 104  
Wailuku, HI 96793

May 2008

---

## RECHTMAN CONSULTING, LLC

HC 1 Box 4149 Kea'au, Hawai'i 96749-9710

phone: (808) 966-7636 fax: (808) 443-0065

e-mail: bob@rechtmanconsulting.com

ARCHAEOLOGICAL, CULTURAL, AND HISTORICAL STUDIES

# Cultural Impact Assessment and Summary of Archaeological Studies for the Ki'ila Farms Subdivision

(TMKs: 3-8-5-005:019 and 022 por.)

Ki'ila and Kauleolī 1<sup>st</sup> and 2<sup>nd</sup> *ahupua'a*  
South Kona District  
Island of Hawai'i



## CONTENTS

INTRODUCTION .....	1
PROJECT AREA DESCRIPTION AND PROPOSED DEVELOPMENT ACTIVITIES .....	3
Prior Archaeological and Cultural Studies .....	3
CULTURAL AND HISTORICAL BACKGROUND .....	21
Natural and Cultural Resources in a Hawaiian Context .....	21
Native Traditions and Historical Accounts of Ki‘ilae and Kauleolī the Lands of South Kona.....	26
Historical Journals and Letters—Foreign Visitors and Residents Describe South Kona.....	34
<i>Māhele ‘Āina</i> —Land Tenure and Historic Period Transitions in Ki‘ilae and Kauleolī (and Neighboring Lands).....	48
A Chronology of the Land and People in Government Communications.....	60
<i>NĀ MO‘OLELO ‘OHANA: ORAL HISTORICAL STUDY</i> .....	94
Study Methods and Approach .....	95
Overview of Historical Recollections and Family Connections.....	97
Family Relations of the Ki‘ilae-Kauleolī Vicinity ( <i>Ka Pilina ‘Ohana o Kahi Kokoke me Ki‘ilae a me Kauleolī</i> ).....	98
Summary of Points Raised in Oral-History Interviews .....	99
TEMPORAL SUMMARY OF PROJECT AREA SETTLEMENT PATTERNS .....	101
Precontact Period (prior to 1779) .....	101
Postcontact to the <i>Māhele</i> (1779-1847).....	102
The <i>Māhele</i> Period (1848-1852) .....	103
After the <i>Māhele</i> (1853-1950s) .....	104
IDENTIFICATION AND MITIGATION OF POTENTIAL CULTURAL IMPACTS .....	104
REFERENCES CITED .....	111
APPENDIX A – <i>Māhele</i> Records .....	118

## FIGURES

1. Portion of USGS 7.5 minute series showing project area location.....	2
2. Development area boundary showing NPS acquisition and potential donation area. ....	5
3. <i>Makai</i> portion of Ki‘ilae Village (from Bryan et al. 1957). ....	8
4. <i>Makai</i> portion of Ki‘ilae-Keōkea Village (from Jackson 1966).....	9
5. Distribution of agricultural sites within the project area. ....	12
6. Distribution of homesteads within the project area. ....	17
7. Distribution of Precontact temporary habitation sites within the project area. ....	18
8. Distribution of burial sites within the project area. ....	19
9. Portion of Register Map No. 1445 (Kahauloa to Ki‘ilae). ....	22

10. Portion of Tax Map Key Third Division Zone 8 showing major land divisions of South Kona. ....	23
11. Map of Ki‘ilae (from Jackson 1966) annotated by Rechtman Consulting, LLC.....	57
12. Portion of Register Map No. 1745 (Ki‘ilae to Kalahiki). ....	60
13. <i>Alahaka</i> on the <i>alanui aupuni</i> ( <i>Makai</i> Government Road). ....	62
14. Survey of School Lot at Ki‘ilae Ahupua‘a, South Kona, Hawaii (November 14, 1854). ....	70
15. Survey of Royal Patent Grant 1575; to James Atkins at Kauleolī (not to scale), August 31, 1853 (State Land Division). ....	76
16. Survey of Royal Patent Grant 3051 to Palaualelo (Kauleolī), May 19, 1863 .....	77
17. Map of Kauleolī –Patent Grant 3708, to Wm. Wright (not to scale); July 2, 1894 (State Bureau of Conveyances). ....	79
18. Portion of Register map 1281 depicting lands of the Ki‘ilae-Kauleolī vicinity (J.S. Emerson Surveyor, 1891; not to scale; State Survey Division). ....	90
19. J.S. Emerson Field Book Sketch; Book 256:49 (State Survey Division). ....	91
20. J.S. Emerson Field Book Sketch; Book 256:71 (State Survey Division). ....	92
21. J.S. Emerson Field Book Sketch; Book 256:129 (State Survey Division). ....	93
22. Oral History Interview Questionnaire (designed to provide general guidance during the interview process). ....	96
23. Portion of Register Map No. 1745—Annotated interview map showing approximate site locations identified in oral history interviews. ....	In pocket
24. Distribution of preservation sites within the development area. ....	108
25. SIHP Site 23193 plan view. ....	109

## TABLES

1. Sites recorded during the Rechtman et al. (2001) inventory survey.....	13
2. Summary of land use in Ki‘ilae and Kauleolī during the Māhele. ....	52
3. Individuals documented as having residency or land tenure rights in Ki‘ilae and Kauleolī at the time of the Māhele ‘Āina. ....	52
4. Place names of Ki‘ilae and Kauleolī recorded in Māhele testimonies. ....	53

# INTRODUCTION

On behalf of Ki'īlae Estates, LLC, Rechtman Consulting, LLC has prepared this Cultural Impact Assessment associated with the creation of the Ki'īlae Farms subdivision on approximately 380 acres in Ki'īlae and Kauleolī 1<sup>st</sup> and 2<sup>nd</sup> *ahupua'a* (TMKs:3-8-5-005:019 and 22 por.), South Kona District, Island of Hawai'i (Figure 1). This report is intended to accompany an Environmental Assessment (EA) compliant with Chapter 343 HRS, as well as fulfilling the requirements of the County of Hawai'i Planning Department and the Department of Land and Natural Resources (DLNR) with respect to permit approvals for land-altering and development activities. This study has been prepared pursuant to Act 50, approved by the Governor on April 26, 2000; and in accordance with the Office of Environmental Quality Control (OEQC) *Guidelines for Assessing Cultural Impact*, adopted by the Environmental Council, State of Hawai'i, on November 19, 1997.

The archival-historical research and oral-historical interviews that are included in this study were performed in a manner consistent with Federal and state laws and guidelines for such studies. Among the pertinent laws and guidelines are the National Historic Preservation Act (NHPA) of 1966, as amended in 1992 (36 CFR Part 800); the Advisory Council on Historic Preservation's "Guidelines for Consideration of Traditional Cultural Values in Historic Preservation Review" (ACHP 1985); National Register Bulletin 38, "Guidelines for Evaluating and Documenting Traditional Cultural Properties" (Parker and King 1990); the Hawai'i State Historic Preservation Statue (Chapter 6E), which affords protection to historic sites, including traditional cultural properties of on-going cultural significance; the criteria, standards, and guidelines currently utilized by the Department of Land and Natural Resources-State Historic Preservation Division (DLNR-SHPD) for the evaluation and documentation of cultural sites (cf. 13§13-275-8; 276-5); and the November 1997 guidelines for cultural impact assessment studies, adopted by the Office of Environmental Quality Control.

While the physical study area is limited to portions of Ki'īlae and Kauleolī *ahupua'a* that lie *makai* of Māmalahoa Highway and *mauka* of the coastal Government Road (*Alanui Aupuni*), in an effort to provide a comprehensive and holistic understanding of the current study area, this report examines the entire *ahupua'a* and its relationship to neighboring lands within the larger South Kona region. As there have been some previously reported cultural studies in the general vicinity of Ki'īlae and Kauleolī (primarily as a part of research conducted for the National Park Service—Pu'uhonua o Hōnaunau), the current study does not repeat all that has been written about the area. The current study does bring forth new documentary materials that have not been previously, or widely reported, as every source of archival-historical information for Ki'īlae and Kauleolī that could be located was investigated. Archival-historical literature from both Hawaiian and English language sources was reviewed, including an extensive examination of Hawaiian Land Commission Award (LCAw.) records from the *Māhele 'Āina* (Land Division) of 1848; Boundary Commission Testimonies and Survey records of the Kingdom and Territory of Hawai'i; and historical texts authored or compiled by—Beaglehole (1967); Bingham (1969); Bowser (1880); Bryan and Emory (1986); Bryan et al. (1957); Ellis (1963); Fornander (1916-1919 and 1996); Greene (1993); Handy et al. (1972); I'i (1959); Jackson (1966); Kamakau (1961, 1964, 1976, and 1991); Malo (1951); Reinecke (n.d.); Stokes and Dye (1991); and Thrum (1908). This study also includes several native accounts from Hawaiian language newspapers (compiled and translated by Kepā Maly), historical records authored by eighteenth and nineteenth century visitors to the region, and records of the South Kona Mission Station.

The archival-historical sources investigated were located in the collections of the Hawai'i State Archives, Land Management Division, Survey Division, and Bureau of Conveyances; the Bishop Museum Archives; Hawaiian Historical Society; University of Hawai'i-Hilo Mo'okini Library; the collection of Pu'uhonua o Hōnaunau National Historical Park; private family collections; and in the collection of Kepā Maly.

Much of the research for this current study was conducted as part of a comprehensive archaeological inventory survey (Rechtman et al. 2001) that was prepared for the current study area. That extensive archival and oral-historical work has been augmented by follow-up interviews with a few of the participants from the earlier studies. All of the interview participants (both past and present) have shared their personal knowledge of the land and practices of the families who lived in this portion of South Kona.

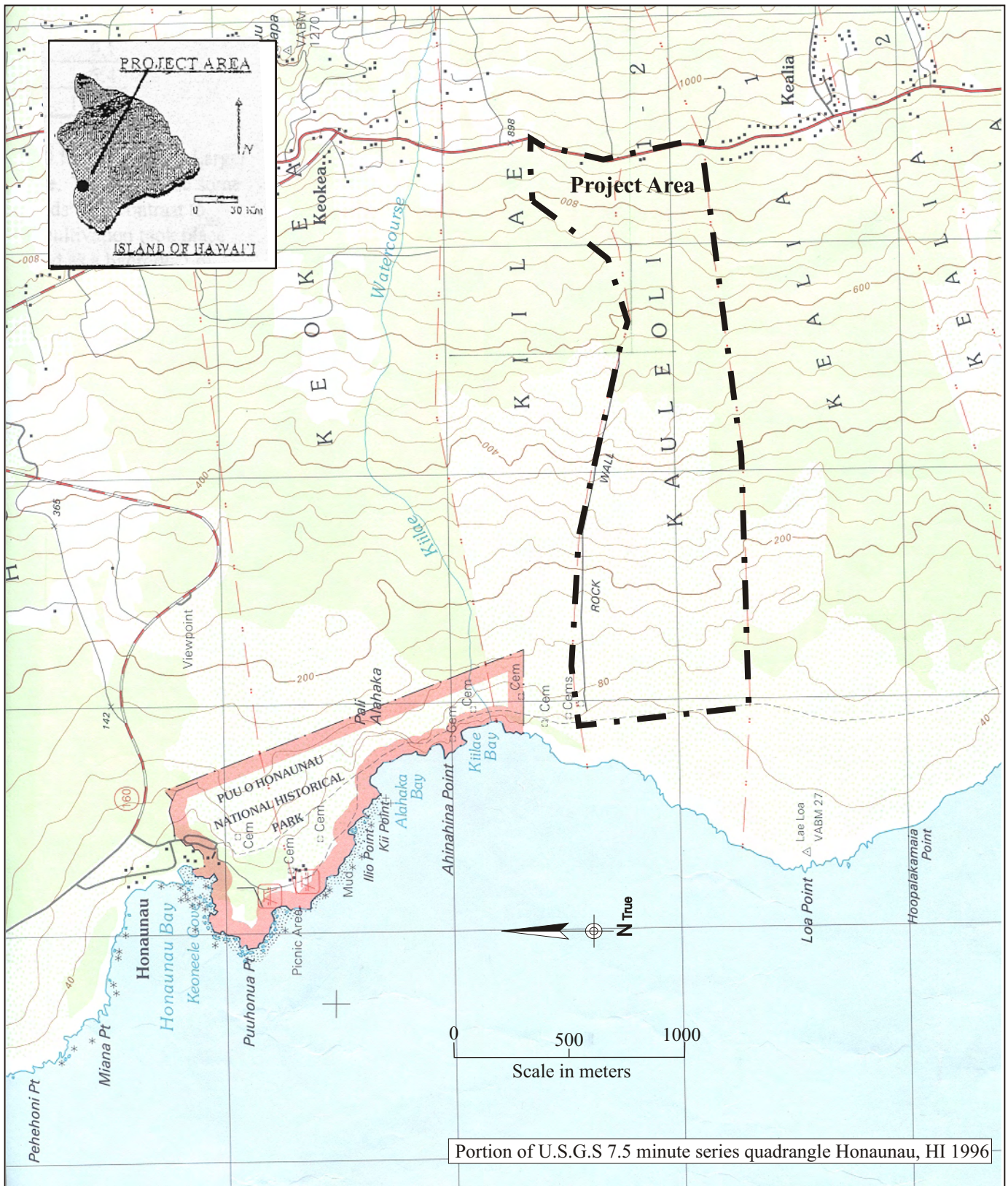


Figure 1. Portion of USGS 7.5 minute series showing project area location.

This report begins with a description of the general project area and the proposed development activities. This is followed by a presentation of prior archaeological and cultural studies. A discussion of the cultural and historical background for Ki'īlae and Kauleolī *ahupua'a* and the neighboring lands was generated based on detailed archival research. It is a comprehension of this background information that facilitates a more complete understanding of the potential significance any resources that might exist within the study area. Information from both prior and newly conducted oral-historical interviews is presented and summarized. Traditional and on-going cultural practices, and traditional cultural properties have been identified; and the prior archaeological study (Rechtman et al. 2001) has documented several significant archaeological resources within the study area, several of which merit preservation. All of these resources and practices are described, potential impacts are discussed, and appropriate mitigation measures are outlined.

## PROJECT AREA DESCRIPTION AND DEVELOPMENT ACTIVITIES

The current study area consists of approximately 50 acres in Ki'īlae Ahupua'a and 330 acres in Kauleolī Ahupua'a. The Ki'īlae portion is bounded on the west (*makai*) and north by the expanded National Park and a roughly 100 acre parcel that was created for preservation, on the east (*mauka*) by Māmalahoa Highway, and on the south by Kauleolī Ahupua'a (see Figure 1). The Kauleolī portion is bounded on the west (*makai*) by the *Alanui Aupuni*, on the east (*mauka*) by Māmalahoa Highway, on the south by Keālia Ahupua'a, and on the north by Ki'īlae Ahupua'a (see Figure 1). Elevation within the study area ranges from 30 feet (9 meters) along the *Alanui Aupuni* to 900 feet (274 meters) at Māmalahoa Highway. Geologically, the project area is characterized by Kau Series lava flows (both *pāhoehoe* and '*a'ā*') originating from Mauna Loa, which consist predominately of tholeiitic basalt dating to 1,500–3,000 years before present (Wolfe and Morris 1996). The soil in the Ki'īlae portion of the study area is predominantly Punaluu Extremely Rocky Peat [rPYD] with a limited occurrence of Kainalui Extremely Stony Peat [rKED] in the northeastern corner (Sato et al. 1973). In Kauleolī, Sato et al. (1973) define two distinct soil areas, the upper section (above about 600 feet elevation) is characterized by Punaluu Extremely Stony Peat [rKED] and lower portion is described as either Rough Broken Land [RB] or Lava Flows [rLW]. The gentle, westward sloping terrain of the project area is punctuated at two places, at about the 650-foot elevation and at about the 250-foot elevation, where the slope increases to almost bluff-like status. These geomorphic conditions combined with the geology and soils are considered to be limiting factors that ultimately influenced cultural use of the area as reflected in the nature and distribution of archaeological resources across the landscape.

The current vegetation pattern follows the soil types. The upper portions (above 600 feet elevation) of both *ahupua'a* support a tree canopy of *kukui* (*Aleurites moluccana*), mango (*Mangifera indica*), monkeypod (*Samanea saman*), guava (*Psidium guajava*) and avocado (*Persea americana*) with a vine growth of *liliko'i* (*Passiflora spp.*), *kākalaioa* (*Caesalpinia major*), and *hoi* or bitter yam (*Dioscorea bulbifera*) and an understory of Christmas-berry (*Shinus terebinthifolius*), coffee (*Coffea arabica*), air plants (*Bryophyllum pinnatum*), and *waiawī* (*Psidium cattleianum*), along with a variety of introduced weeds and grasses. In Kauleolī, below 600 feet elevation, the *pāhoehoe* and '*a'ā*' flows support a tangle of *koa hoale* (*Leucaena leucocephala*), '*opiuma* (*Pithecellobium dulce*), and lantana (*Lantana camara*), with an occasional *kiawe* (*Prosopis pallida*). Within the Historic Period residential areas in upper Ki'īlae and Kauleolī, *ti* (*Cordyline fruticosa*), *loulou* (*Pritchardia spp.*), *plumeria* (*Plumeria acuminata*), and a few scattered citrus trees are also present. The Precontact vegetation pattern (both native and cultivated) was also no doubt a function of the soils. Temperature in the area fluctuates annually with a mean high of about 80 degree and a mean low of about 60 degrees Fahrenheit; current rainfall averages about 50 inches a year with the heaviest rain falling in the summer months (Armstrong 1983). The current rainfall amount appears to be less than was the case during earlier times. Even as recently as the 1940s (Rechtman et al. 2001:Appendix B) residents of the area report greater rainfall amounts. It is very likely that during Precontact times the rainfall was yet even greater; deforestation of the lower slopes of Hualālai and Mauna Loa may have resulted in decreased rainfall (and higher temperatures), perhaps affecting areas as far down as the 600 feet elevation.



The development for the project area, which is zoned Ag-5 is well underway, and included subdivision into forty-eight agricultural lots varying in size from 5 to 75 acres as well as the construction of the supporting infrastructure (roads and utilities). Additionally, some of the lots are subject to mass excavation to facilitate future agricultural use. All of the development work to date has been subject to both archaeological and cultural monitoring.

Early in the planning for the development of Ki'ilae Farms, the landowner recognized the archaeological and cultural significance of Ki'ilae Ahupua'a and negotiated a transaction with the National Park Service to transfer through fee 238 acres of land, more than doubling the size of Pu'uhoonua o Hōnaunau National Historical Park. And, an additional roughly 100 acres of Ki'ilae Ahupua'a extending from the upper boundary of the new Park Service land to Māmalahoa Highway was pulled out of the Ki'ilae Farms development area and set aside as a "donation parcel" for preservation purposes (Figure 2).

## Prior Archaeological and Cultural Studies

In the early 1900s, Thrum (1908) and Stokes (Stokes and Dye 1991), conducted literature and field research to identify and record *heiau* (ceremonial sites) and associated features on Hawai'i Island. Neither Thrum nor Stokes mentioned Ki'ilae or Kauleoli. Because of the great cultural and historical significance of the *Pu'uhoonua o Hōnaunau* and associated resources (north and *makai* of the current study area), numerous archaeological and ethnographic studies have been conducted within the current boundary of the National Historical Park (Apple 1966; Bryan et al. 1957; Bryan and Emory 1986; Emory 1970; Greene 1993, Jackson 1966; Kekahuna and Kelsey 1956; Ladd 1969, 1986; Pearson 1969; Soehren and Tuohy 1987; Somers 1986). As the scope of the National Historical Park was being developed, it was determined to also acquire the *makai* lands of Keōkea and a portion of the coastal village at Ki'ilae. As a result, some detailed field studies and ethnographic research has been compiled for the *makai* lands (with Jackson's 1966 study also covering upland residency and land use practices). The comprehensive report prepared by Greene (1993) provides a detailed presentation of the studies conducted between 1919–1990 in the greater *Pu'uhoonua o Hōnaunau* area.

For the purposes of the present study, excerpts from Reinecke (n.d.), notes from annotated maps prepared by Kekahuna and Kelsey (1956); and reports by Bryan et al. (1957), and Bryan and Emory (1986), and Jackson (1966) are discussed. This discussion is augmented with data from a 2000 reconnaissance survey (Wolforth 2000), as well as the comprehensive inventory survey (Rechtman et al. 2001) that was conducted for the study area.

In 1929-1930, the Bishop Museum contracted John Reinecke to conduct a study of sites in the district of Kona (Reinecke n.d.). One of Reinecke's survey areas included the coastal zone extending south from Hōnaunau to Kapua. While Reinecke relied on the work of Thrum (1908) and Stokes (Stokes and Dye 1991), he also met with elderly native informants and other individuals who were knowledgeable about various sites in the district. Though Reinecke's work has not been formally published, it has been referenced over the years, and today, it gives us insight into certain sites and features for which no other early information is available.

In some respects, Reinecke's work went further than Stokes in that he documented the occurrence of a greater variety of cultural features he came across, rather than limiting himself to "ceremonial" sites. Features and sites described by Reinecke include *heiau*, house sites, caves, burials, trails (*mauka-makai* and coastal), canoe landings, walls (e.g., *ahupua'a* boundaries and enclosures etc.), platforms, agricultural features (i.e. mounds, pits, terraces), and many other sites of undetermined function.

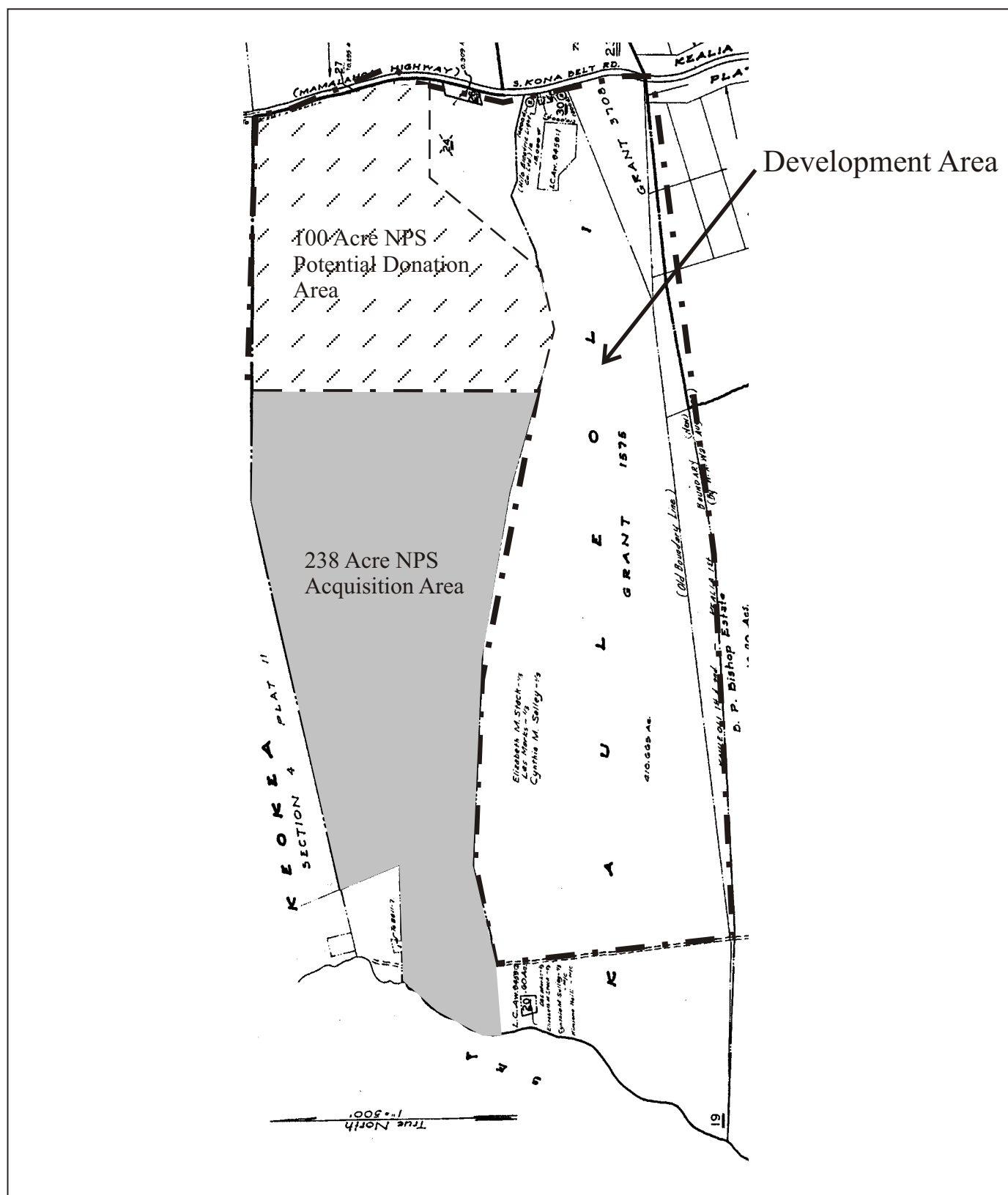


Figure 2. Development area boundary showing NPS acquisition and potential donation area.

Describing the area around Hōnaunau, and south beyond Ki'ilae-Kauleoli, Reinecke reported:

It is to be taken for granted that at the villages of Honaunau, Kealia, and Hookena, the older sites will have been for the most part erased by later erections, making these places interesting chiefly as examples of the decay within recent years of the Kona coast villages. The post office at Hookena (for example) was closed in April 1930, the wharf receives shipments of freight only twice a month, a deserted building bears the name of the last store, even the churches plainly show their deserted condition. Over one-half of the dwellings marked on the maps (1924-25) are entirely deserted or only temporarily occupied.

The trail from Honaunau to Kealia, forming a continuation of the "Puuhonua Road," is about ten feet wide and paved in several places with large flat stones. The effect at the ascent of the *pali* is especially striking and pleasing (Reinecke n.d.:160).

Selected descriptions of sites between Keōkea, Ki'ilae, and Kauleoli provide insight into residency and land use practices of the area:

### **Keōkea Section:**

Site 5. Most of the passageway at the foot of the *pali* is untouched. At the north end however, one part is walled in. When Ellis visited in 1823 some of the tunnels and caves of Keanae were inhabited (p. 132). It is still an imposing sight. Several of the caves have been used for burials, even up to the time of the great influenza epidemic, and hence are generally known as "the *make* caves..."

Site 6. *Heiau* Walahaka. A large platform now crumbled badly about the edges, but built with walls of carefully fitted *pahoehoe* blocks, with the vitreous side out. The intact parts of the N.E. side are 8' high . . . The surface of the platform is remarkable for its fine example of hollow-work construction . . . North of the *heiau* is a rudimentary platform, south a few rough platforms and a space marked off by a quadrangle of stones on the *pahoehoe*.

Site 7. At the very foot of the *pali* where the path makes its fine paved ascent, there is a rather large, very old platform. All the area between this plot and [Site] # 3, and the *pali*, contains a scattered lot of small platforms like *puoa* and spaces marked off by stones. The most prominent, in the shade of the *pali*, is a platform c. 19x15x3 ½.

Site 10. Excellent walled yard about the house on the point in south Keokea.

There are no ruins at the top of the *pali*.

### **Ki'ilae Section:**

Site 11. High modern house platform and old house platform on *makai* side of trail; remains of house platform on *mauka* side; apparently another house site, broken up, on *makai* side.

Site 12. Two house sites on *makai* and one on *mauka* side of trail; remains of site by palms; remains of platform just *makai* of northern windmill.

[Waiku'iakekela].

Site 13. The usual row of boulders between the bare *pahoehoe* of the beach and the algaroba; I thought I could make out three platforms in the tangle. The remains of a small platform on a slight knoll, its use unknown. The area ends with a *puoa* . . .

### **Kauleoli Section:**

Site 14. Behind the *puoa* and running toward the lone palm at Aalii Rock are more scattered stones indicating, perhaps, former platforms. One smaller platform of *pahoehoe* fragments is plain. There are traces of an attempt to build an elaborate beach path for a few yards.



Site 15. Back of Aaalii rock (I heard it pronounced, however, with only two a's), are a small yard with a modern house platform; part of a wall about an area containing a few coco palms, a modern house platform in two levels; a pen; and a dry well; part of another wall, with house site. Following this are scattered stones, indications of another platform and some small square pens.

Site 16. A grave, consisting of a heavily walled pen 9x8x4 inside and a platform of slightly larger dimensions. It joins a set of recent salt pans, in front of which is an irregular platform 6' high on the steepest side, probably another *puoa*. A small, high-walled pen stands a little apart.

### ***Keālia Section:***

Site 17. Several disconnected ruins; a low line of all running parallel to the shore; a sort of pen against a lava slope; a small platform or large *ahu* on a knoll; remains of a very large, old, platform. In additions, the usual traces of platforms, with many rows and heaps of lava fragments. These extend over a quarter of a mile past Lae Loa.

Site 18. By the Lae Loa monument [survey station] is a small square platform, a fishing *heiau*, the only name given was Lae Loa . . . (Reinecke n.d.:160-162)

In the 1950s, Henry Kekahuna and Theodore Kelsey undertook a study of traditions and sites in the lands of Hōnauanu, Keōkea and Ki'ilae. Their work resulted in the drafting of an annotated (interpretive) map of Ki'ilae Village. As noted earlier in this study, Kelsey, in 1933, had recorded traditions of the Ki'ilae vicinity. Kekahuna identified many sites in Ki'ilae as *heiau* or chiefly residences, and also reported on various practices associated with the sites. Sources of some of the information are uncertain, and have been discussed at length in various studies conducted for the Park Service (see Greene 1993).

The locations of several sites referenced during recent interviews (Rechtman et al. 2001), are identified on the Kekahuna map (Kekahuna and Kelsey 1956). Among them are:

1. The *mauka-makai* trail in Ki'ilae;
2. Keawe Maunu's house, *mauka* of the *Alanui Aupuni*, and north of the *mauka-makai* trail. Keawe Maunu, who died in 1911, was the grandfather of two participants in the oral history interviews cited in this study;
3. Pawai's house, *makai* of the *Alanui Aupuni*, and a short distance north of Waikuiakekela. It may be recalled that Kalapawai/Kapawai/Pawai was also the name of the first recorded named of the teacher at Ki'ilae (in the 1847-1848 period); a descendant was also an 1890 lessee. Kekahuna does not record the Ki'ilae School Lot, but reports that land between Pawai's residence and a *heiau*, Ka'akapua, was the residence of chiefs and priests in ancient times;
4. Chiefess Kekela's house site;
5. Wai-ku'i-a-Kekela well; and
6. The various entrances to the lava tube/cave system (Ke ana o ka Ilio or Cave of the Dog), through which the dog spoken of in the tradition of Wai-ku'i-a-Kekela entered to reach the water source.

In 1957, Kenneth Emory conducted archaeological survey work as a part of the program to develop the National Historical Park (Bryan et al. 1957; Bryan and Emory 1986). Emory used Kekahuna's 1956 map as a base and refined site boundary alignments. Figure 3 is a reduction of Map 7 of the map series produced as a result of the 1957 fieldwork, and includes the sites and features described above. Also, the 1965 interviews reported by Jackson (1966), referenced the Kekahuna map and annotated it further, linking some of the sites to families in residence during the Historic Period (Figure 4). The residences of Polani, Ahu, Kahikina, Kau'inui, Manunu—all discussed by interviewees of the Jackson study (1966), and in interviews of the present study—are identified on Figure 4.

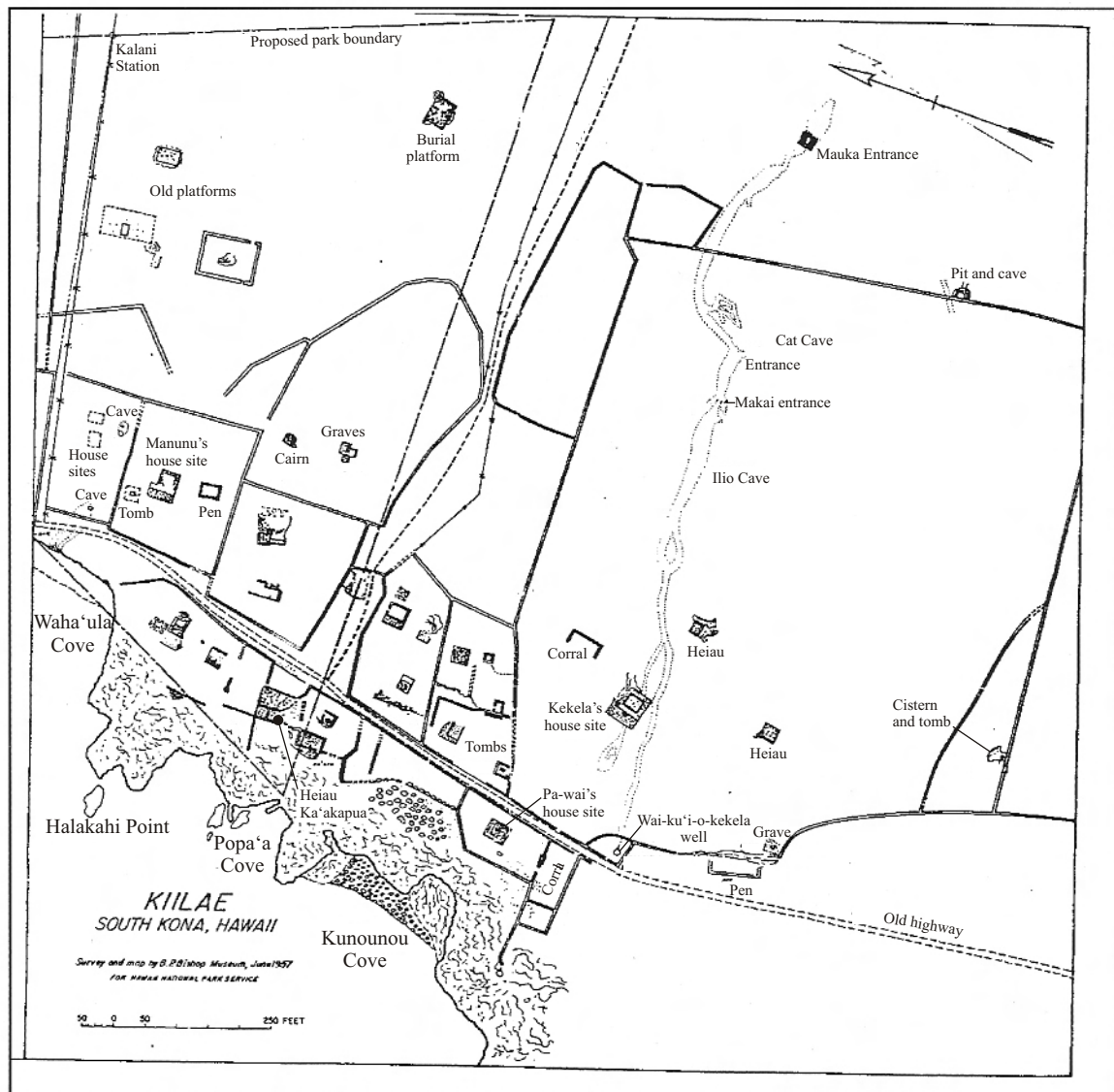


Figure 3. Makai Portion of Ki'ila'e Village (from Bryan et al. 1957).

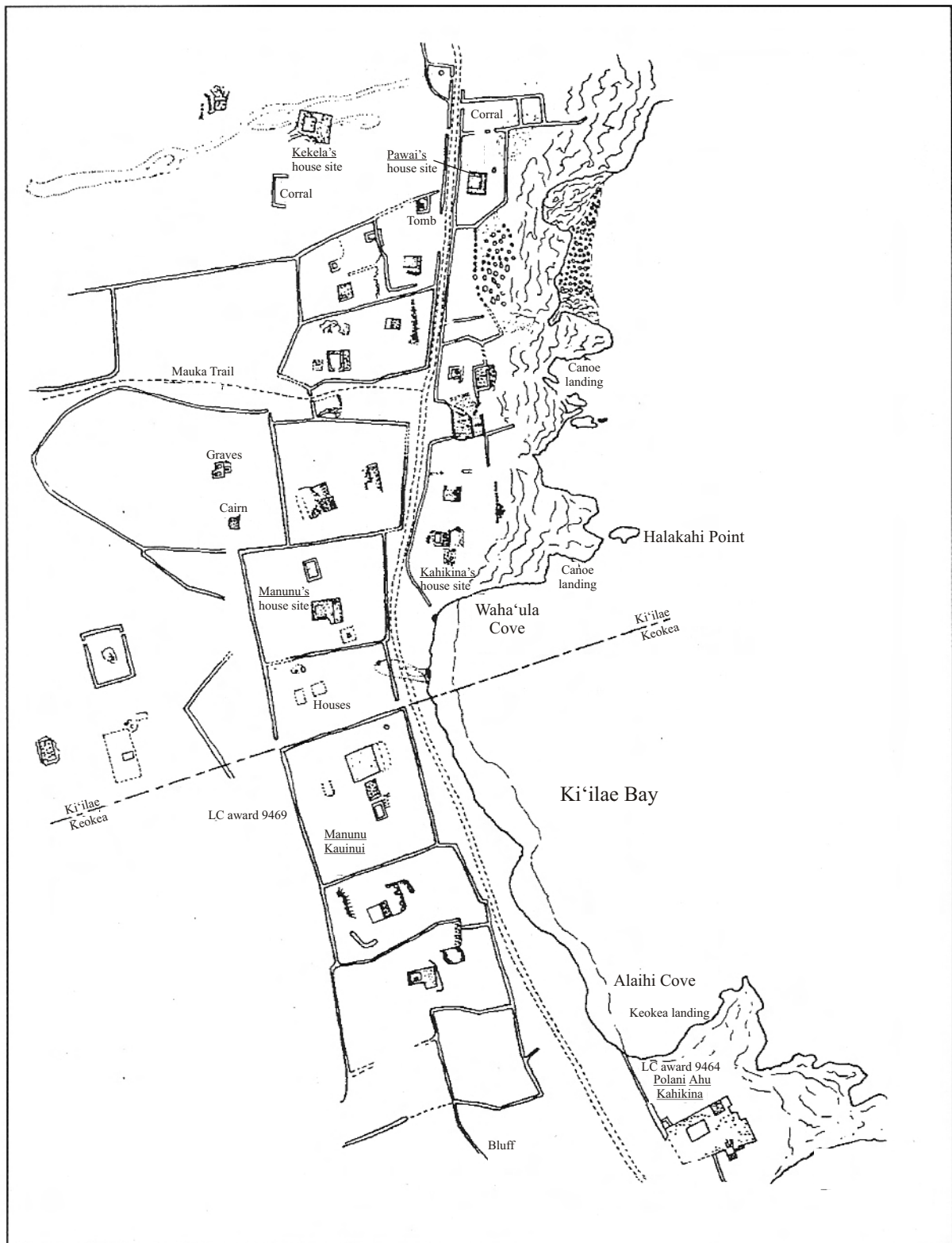


Figure 4. Makai portion of Ki'ilae-Keokea Village (from Jackson 1966).

In August 2000 Scientific Consultant Services, Inc. (SCS) conducted an archaeological reconnaissance survey of approximately 720 acres in Ki'īlae and Kauleolī *ahupua'a* (Wolforth 2000). The SCS project area was coterminous with the current study area with the addition of the 238-acre portion of Ki'īlae that was transferred to the National Park Service, the roughly 100 acre "donation" area, and the coastal area makai of the the *Alanui Aupuni* (see Figure 2). The field survey strategy include:

Surface reconnaissance . . . conducted at 20 meter intervals over most of the project area. Approximately 60 acres in the central portion of Kiilaie were walked at 30 meter intervals. Cave entrances were inspected, but lava tubes were not investigated . . . The reconnaissance . . . resulted in the location of many prehistoric and historical archaeological remains. Temporary site numbers were assigned to all non-agricultural features and groups of features, and some types of agricultural features, such as some pits in pahoehoe and some mounds. Many modified outcrops, mounds, and terraces that appear to be related to agricultural activity were not assigned numbers or counted. (Wolforth 2000:1)

A total of 606 site numbers were assigned, 324 in Ki'īlae and 249 in Kauleolī. Wolforth (2000:1-6) discusses the sites in eight categories: Agricultural Sites, Platforms, Burials, Possible *Heiau*, Caves, Trails, Historic Homesteads Ranches Corrals and Mills, and Walls and Enclosures. The majority of the features observed during the SCS reconnaissance were related to agricultural activities. Wolforth (2000:1,4) observed that the agricultural mounds below 600 feet elevation are smaller and less formal than those above 600 feet elevation, and postulates that the lower elevation features are prehistoric planting mound while the upper are Historic Period clearing mounds. This proposition is based on the current distribution of vegetation types, the upper features being "coterminous with plants associated with historical activity: coffee, mango, Christmas berry, and guava." (Wolforth 2000:4).

Of the 324 temporary site numbers assigned in Ki'īlae Ahupua'a by SCS, 221 were located outside the current project area in the 238-acres transferred to the Nation Park. The 238 acres, which was surveyed during the reconnaissance (Wolforth 2000) but not during the subsequent inventory survey (Rechtman et al. 2001), contained 19 of the 24 cave entrances (the tube interiors were not investigated), 34 of the 50 platforms, and all 7 of the possible *heiau* recorded in Ki'īlae Ahupua'a, along with numerous other site types, including (but not limited to) walls and enclosures, agricultural features, and one historic homestead. This area also contained 33 of the 48 possible burial sites recorded for the entire project area.

Wolforth (2000) recorded 103 sites within the upper portion of Ki'īlae, which was included in the subsequent inventory survey (Rechtman et al. 2001). One trail, "that spans the project area in the middle of Ki'īlae Ahupua'a [and is] probably an ancient pathway that was subsequently used by ranchers to move cattle downslope (2000:6)," was located. One historic homestead or ranch was identified near the eastern project boundary. Sixteen platforms were identified, five of which were suggested as possible burials. Wolforth did, however, note, "large platforms situated above 600 foot elevation may be large historical agricultural mounds" (2000:5). Five lava tube openings were identified, four of which went unexplored but were suggested as possible burials. The fifth, "a cave near the mauka-makai trail of Ki'īlae Ahupua'a at 690 foot elevation" (2000:5), contained human skeletal remains. By far the most numerous features recorded in the upper portions of Ki'īlae were agricultural mounds followed by walls, most of which "in the upper elevations were probably made during the last 150 years for agricultural purposes" (2000:6); and then enclosures, which according to Wolforth, "were created during prehistory around habitation agricultural, and ceremonial areas" (2000:6).

Within Kauleolī Ahupua'a Wolforth (2000) recorded 249 sites. Two stepping stone trail segments, located near the southern border of Kauleolī at approximately the 120 foot and 280 foot elevation, were identified crossing an 'a'ā flow. Four historic homesteads, including a mill area "located near the eastern project boundary in Kauleolī" (Wolforth 2000:6), and a concrete crypt "associated with the major ranch in the center of the project area near the Kings Trail [Sic, *makai* Government Road]" (Wolforth 2000:5), were recorded. Twenty-two cave entrances were located (the tube interiors were not investigated), all of which were suggested as possible burial sites. However, "some of these are connected to one another making the number of cave systems less" (Wolforth 2000:5). The caves generally cluster in bands near the 600-foot elevation and the 200-480 foot elevation. Twenty-nine platforms were identified, seven of which were suggested as possible burials. Two possible *heiau* were also discovered within Kauleolī. Wolforth notes, "Possible *heiau* occur more frequently in

Ki'īlae Ahupua'a. This is probably a direct reflection of the concentration of population at the Ki'īlae Village near the shoreline, and the numerous agricultural features throughout the *ahupua'a*. All of the possible *heiau* are below 600 foot elevation. Many of the possible *heiau* are situated on the crest of sloping terrain that provide broad vistas. The function of the *heiau* in the project area is unclear, but some may have served in agricultural ceremonies" (Wolforth 2000:5). Like Ki'īlae, the most common features recorded in Kauleolī were agricultural mounds followed by walls and then enclosures.

Wolforth concluded the SCS reconnaissance survey by stating, "the distribution of sites across the property may be explained by specific land use practices that took place during prehistory and historical times. These interpretations are preliminary, and are based solely on site distribution. Information from test excavations, absolute dating, documentary research, and oral interviews are needed to test and elaborate on the propositions put forth below" (Wolforth 2000:7). He goes on to suggest that "population was concentrated in Ki'īlae during prehistory" (Wolforth 2000:7), and that, "in contrast, in Kauleolī there are fewer prehistoric agricultural sites . . . and no habitation along the shoreline," thus, "this *ahupua'a* was probably not a major habitation, agricultural, or resource procurement area" (2000:7). Further that, "Ki'īlae Village was occupied during the historic period," but, "it is unclear whether cattle were brought through the village while it was occupied. Cattle movement, pasturing, and corral use in and around the village may not have occurred until after the village was abandoned" (Wolforth 2000:7). Finally that, "agricultural use during the historic times of the area above 600 foot elevation is reflected in the numerous stone mounds and coffee plants," and that, "walls in the upper elevations probably delineated boundaries of small lease plots" (Wolforth 2000:7). These, and other propositions, were tested and elaborated on during the subsequent inventory survey (Rechtman et al. 2001).

For a five month period, between November 2000 and March 2001, Rechtman Consulting, LLC conducted an intensive archaeological field survey of the current project area along with the roughly 100 acre "donation" area. During that inventory survey, 140 sites (Table 1) containing 4,773 features were recorded in the overall study area. Subsurface testing was conducted at eleven of these sites, and provided information sufficient for making functional interpretations of features whose functions were equivocal based solely on surface manifestations. Testing demonstrated the absence of human burials in the "formal" agricultural "platforms" and mounds, confirmed the presence of temporary habitation features within the agricultural complex areas, and yielded charcoal adequate for radiocarbon analysis.

Six samples were sent to Beta Analytic, Inc. for radiocarbon age determination. Collectively the resultant dates indicate that the study area may have been utilized continuously from at least the fifteenth century. Historic Period use of the area appears to have been focused along the *makai* Government Road and the Māmalahoa Highway area. Residential, agricultural, and ranching activities have all been identified in the archaeological record and documented in the traditional history (archival and oral). This later land use has obscured the earlier Precontact sites, however, as excavation within a historic citrus orchard in the *mauka* portion of Kauleolī demonstrated, older material from a Precontact agricultural context was still present in isolated areas.

Agricultural features dominated the archaeological landscape of the study area. Of the 4,773 features recorded, 4,540, or 95% were agriculture related. These features were segregated into twelve sites (Figure 5). One of these sites is a known early twentieth century citrus orchard located in the *mauka* portion of the Kauleolī study area, but some of the recorded features may date to earlier agricultural activities. Six of the sites, comprised of 4,312 features (95% of the agricultural features) are situated above 600 feet elevation. Many of these features may be associated with nineteenth century indigenous agricultural pursuits that were a continuation of earlier practices. We know from archival and oral sources that indigenous farming was practiced in Ki'īlae and Kauleolī from the early 1800s to the 1900s and beyond. Five of the agricultural sites, accounting for only 228 features, exist below the 600 feet elevation. These lower elevation features appear to be opportunistic sites taking advantage of localized soil areas in an otherwise soil poor lava landscape. All of these sites have centrally located temporary habitation features. One might predict that these sites represent expansion of agricultural practices into marginal areas; however, it is equally possible that these sites closest to the coast represent early attempts to farm at locations proximate to coastal residential habitation.

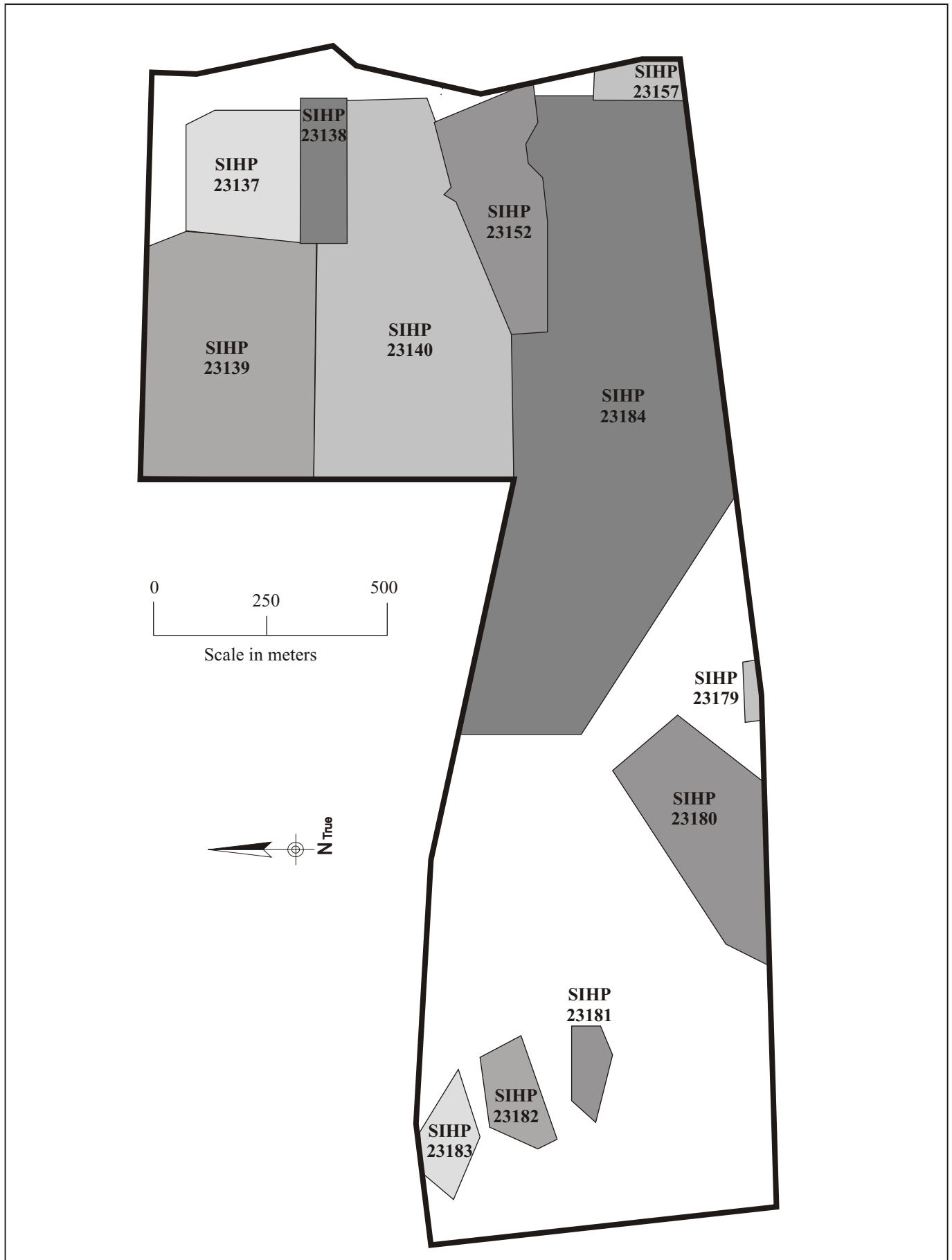


Figure 5. Distribution of agricultural sites within the project area.

**Table 1. Sites recorded during the Rechtman et al. (2001) inventory survey.**

<i>SIHP Site Number</i>	<i>Temporal Affiliation</i>	<i>Functional Interpretation</i>	<i>Recommended Treatment</i>
<b>Proposed Donation Area</b>			
23064	Historic Period	Landscape Marker	Preservation
23068	Historic Period	Landscape Marker	Preservation
23069	Historic Period	Ranching	Preservation
23070	Historic Period	Homestead	Preservation
23071	Historic Period	Ranching	Preservation
23072	Historic Period	Ranching	Preservation
23073	Historic Period	Ranching	Preservation
23087	Historic Period	Ranching	Preservation
23088	Historic Period	Ranching	Preservation
23089	Historic Period	Homestead	Preservation
23090	Historic Period	Animal Pen	Preservation
23091	Historic Period	Ranching	Preservation
23092	Historic Period	Landscape Marker	Preservation
23093	Historic Period	Landscape Marker	Preservation
23094	Historic Period	Ranching	Preservation
23095	Historic Period	Landscape Marker	Preservation
23096	Historic Period	Ranching	Preservation
23097	Historic Period	Ranching	Preservation
23098	Historic Period	Homestead	Preservation
23099	Historic Period	Landscape Marker	Preservation
23100	Historic Period	Animal Pen	Preservation
23101	Historic Period	Animal Pen	Preservation
23102	Historic Period	Landscape Marker	Preservation
23103	Historic Period	Ranching	Preservation
23104	Historic Period	Homestead	Preservation
23105	Historic Period	Ranching	Preservation
23106	Historic Period	Landscape Marker	No further work
23107	Historic Period	Ranching	Preservation
23108	Historic Period	Homestead	Preservation
23109	Historic Period	Ranching	Preservation
23110	Historic Period	Ranching	Preservation
23111	Historic Period	Ranching	Preservation
23112	Historic Period	Animal Pen	Preservation
23113	Historic Period	Cattle Trap	Preservation
23114	Historic Period	Ranching	Preservation
23115	Historic Period	Ranching	Preservation
23116	Historic Period	Ranching	Preservation
23117	Historic Period	Ranching	Preservation
23118	Historic Period	Ranching	Preservation
23119	Historic Period	Animal Pen	Preservation
23120	Historic Period	Ranching	Preservation
23121	Historic Period	Ranching	Preservation
23122	Historic Period	Ranching	Preservation
23123	Historic Period	Ranching	Preservation
23124	Historic Period	Ranching	Preservation
23125	Historic Period	Ranching	Preservation
23126	Historic Period	Ranching	Preservation
23127	Historic Period	Ranching	Preservation
23128	Historic Period	Ranching	Preservation
23129	Historic Period	Ranching	Preservation

*continued on next page*

**Table 1. Continued.**

<i>SIHP Site Number</i>	<i>Temporal Affiliation</i>	<i>Functional Interpretation</i>	<i>Recommended Treatment</i>
23130	Historic Period	Ranching	Preservation
23131	Historic Period	Ranching	Preservation
23132	Historic Period	Ranching	Preservation
23133	Historic Period	Animal Pen	Preservation
23134	Historic Period	Ranching	Preservation
23135	Historic Period	Ranching	Preservation
23136	Historic Period	Agricultural	No further work
23137	Historic/Precontact	Agricultural	Preservation
23138	Historic/Precontact	Agricultural	Preservation
23139	Historic/Precontact	Agricultural	Preservation
23140	Historic/Precontact	Agricultural	Data recovery/Preservation
23141	Precontact	Temporary Habitation	Preservation
23142	Precontact	Temporary Habitation	Preservation
23143	Precontact	Temporary Habitation	Preservation
23144	Precontact	Temporary Habitation	Preservation
23145	Precontact	Temporary Habitation	Data recovery
23146	Historic/Precontact	Trail	Preservation
23147	Historic/Precontact	Trail	Preservation
23148	Precontact	Burial	Preservation
23149	Precontact	Burial	Preservation
23150	Historic Period	Ranching	No further work
<b>Development Area</b>			
23065	Historic Period	Homestead	No further work
23066	Historic Period	Ranching	No further work
23067	Historic Period	Homestead	No further work
23074	Historic Period	Ranching	No further work
23075	Historic Period	Homestead	No further work
23076	Historic Period	Ranching	No further work
23077	Historic Period	Landscape Marker	No further work
23078	Historic Period	Ranching	No further work
23079	Historic Period	Ranching	No further work
23080	Historic Period	Ranching	No further work
23081	Historic Period	Ranching	No further work
23082	Historic Period	Ranching	No further work
23083	Historic Period	Animal Pen	No further work
23084	Historic Period	Ranching	No further work
23085	Historic Period	Ranching	No further work
23086	Historic Period	Ranching	No further work
23151	Historic Period	Landscape Marker	Preservation
23152	Historic/Precontact	Agricultural	Data recovery
23153	Historic Period	Burial	Preservation
23154	Historic Period	Ranching	No further work
23155	Historic Period	Ranching	No further work
23156	Historic Period	Ranching	No further work
23157	Historic Period	Agricultural	Data recovery
23158	Historic Period	Cattle Trap	No further work
23159	Historic Period	Homestead	No further work
23160	Historic Period	Homestead	No further work
23161	Historic Period	Ranching	No further work
23162	Historic Period	Animal Pen	No further work
23163	Historic Period	Ranching	No further work

*continued on next page*



**Table 1. Continued.**

<i>SIHP Site Number</i>	<i>Temporal Affiliation</i>	<i>Functional Interpretation</i>	<i>Recommended Treatment</i>
23164	Historic Period	Ranching	No further work
23165	Historic Period	Cattle Trap	Preservation
23166	Historic Period	Ranching	No further work
23167	Historic Period	Landscape Marker	No further work
23168	Historic Period	Homestead	Preservation
23169	Historic Period	Ranching	No further work
23170	Historic Period	Ranching	No further work
23171	Historic Period	Cattle Trap	No further work
23172	Historic Period	Ranching	No further work
23173	Historic Period	Homestead	No further work
23174	Historic Period	Ranching	No further work
23175	Historic Period	Animal Pen	No further work
23176	Historic Period	Landscape Marker	No further work
23177	Historic Period	Ranching	No further work
23178	Historic Period	Ranching	No further work
23179	Precontact	Agricultural	Data recovery
23180	Precontact	Agricultural	Data recovery
23181	Precontact	Agricultural	Data recovery
23182	Precontact	Agricultural	Data recovery
23183	Precontact	Agricultural	Data recovery
23184	Historic/Precontact	Agricultural	Data recovery
23185	Precontact	Temporary Habitation	Data recovery
23186	Precontact	Temporary Habitation	Preservation
23187	Precontact	Temporary Habitation	Data recovery
23188	Precontact	Temporary Habitation	Preservation
23189	Precontact	Temporary Habitation	Preservation
23190	Precontact	Temporary Habitation	No further work
23191	Precontact	Temporary Habitation	Data recovery
23192	Precontact	Temporary Habitation	Preservation
23193	Precontact	Refuge Cave	Preservation
23194	Precontact	Temporary Habitation	Preservation
23195	Precontact	Temporary Habitation	Preservation
23196	Precontact	Ceremonial/Religious	Preservation
23197	Precontact	Ceremonial/Religious	Preservation
23198	Precontact	Trail	No further work
23199	Precontact	Trail	No further work
23200	Precontact	Burial	Preservation
23201	Precontact	Burial/Ceremonial	Preservation
23202	Precontact	Burial	Preservation
23203	Precontact	Burial	Preservation

Within the overall study area, the only permanent habitation sites, with one exception, are those along Māmalahoa Highway dating to the late nineteenth and early to middle twentieth centuries (Figure 6). The exception being a walled residential complex (SIHP Site 23168) dating to the middle nineteenth century located in Kauleolī at about 280 feet elevation along the Ki'īlae/Kauleolī boundary. Precontact Period permanent habitation sites may be located along the coast, *makai* of the current study property. Temporary habitation features dating to the Precontact Period were identified in association with agricultural field areas, in small habitation clusters, and in lava tubes (Figure 7). In this latter category, two types of sites were recorded, simple blister formations that appear to have seen short-term non-recurrent use, and larger blisters and tubes that were fortified or concealed with stone work and used as long-term or recurrent refuge habitations. Further, there were no burials found in any of the habitation blisters or tubes, which may indicate a temporally sensitive cultural pattern, with respect to the segregation of habitation and mortuary activities.

During the inventory survey, burials dating to Precontact times were found exclusively in lava tubes, two such sites were identified in Ki'īlae and four burial tubes were recorded in Kauleolī (Figure 8). The skeletal material identified in the lava tubes amounts to an estimated twenty minimum number of individuals (MNI). A single Historic Period (early twentieth century) mausoleum was also recorded straddling the Ki'īlae/Kauleolī boundary. The tube burials, all likely to date from Precontact times, appear to be attempts at concealing the remains, while the Historic Period burial was placed in a prominent location along what may have been the major *mauka/makai* trail for Kauleolī. This temporally dichotomous treatment of the dead may reflect a shift in the socioreligious ideology of the area's native inhabitants, or may be an indication that the individual interred in the mausoleum is not of Hawaiian ancestry. Based on archival information either situation is possible; however, the latter seems more likely.

The network of extant trails reflects a late nineteenth/early twentieth century pattern, which is likely an overlay of the earlier Precontact pattern. A primary Ki'īlae Trail and associated Keōkea Trail provided access from *makai* residential areas to the *mauka* agricultural fields, from the *mauka* residences to the resources of the sea, and between the two residential areas. During historic times (post 1900) walls were placed on both sides of the Ki'īlae Trail to control cattle that were herded down the trails to the coast, on to market. It appears that the Keōkea Trail was abandoned by that time. Within the overall study area, the primary Kauleolī Trail was thoroughly impacted during relatively recent times, with only possible traces visible along the northern edge of Kauleolī. Additionally, there were two minor *mauka/makai* trail segments consisting of cobble steppingstones across 'a'ā identified in the *makai* southern portion of Kauleolī, *mauka* of the old Government Road.

As a result of the inventory survey for the study area (Rechtman et al. 2001) eighty-eight of the 140 sites were slated for preservation (including the identified burial sites), twelve were recommended for data recovery, one was recommended for both data recovery and preservation, and forty sites were assigned a no further work designation (see Table 1). Following the DLNR-SHPD approval of the inventory survey, a burial treatment plan (Rechtman and Dougherty 2002) was prepared, submitted and approved; and an archaeological sites preservation plan (Rechtman 2004) was likewise approved. A mitigation plan including both data recovery and monitoring plans (Rechtman 2002) was prepared and approved, and the data recovery fieldwork completed. The final data recovery report is currently underway with an anticipated completion date of August 2008. During data recovery investigation one additional burial site was identified in a pavement feature, and preserved in a manner consistent with the approved in the burial treatment plan. Also during data recovery, thirty previously recorded (Rechtman et al. 2001) rock mounds were investigated through controlled (hand and mechanically) excavations, and an additional roughly forty-five mounds were destroyed while monitoring; no new sites or inadvertent discoveries were made during that process. Archaeological monitoring is on going as development activities are underway; an interim monitoring report (Rechtman and Hauani'o 2008) has been prepared and submitted to DLNR-SHPD. To date approximately 350 mounds have been impacted by bulldozing with an archaeological monitor present. There were no new archaeological sites or inadvertent discoveries made during this phase of monitoring.

Further claims have been made that additional as of yet undiscovered burial exist within the development area, however, these claims have not been substantiated. One mound was pointed out by Clarence Medeiros Jr. to contain a burial. This feature was hand excavated with both DLNR-SHPD and a potential descendant present. No human skeletal remains were found and the original interpretation of this mound as an agricultural clearing feature was supported.

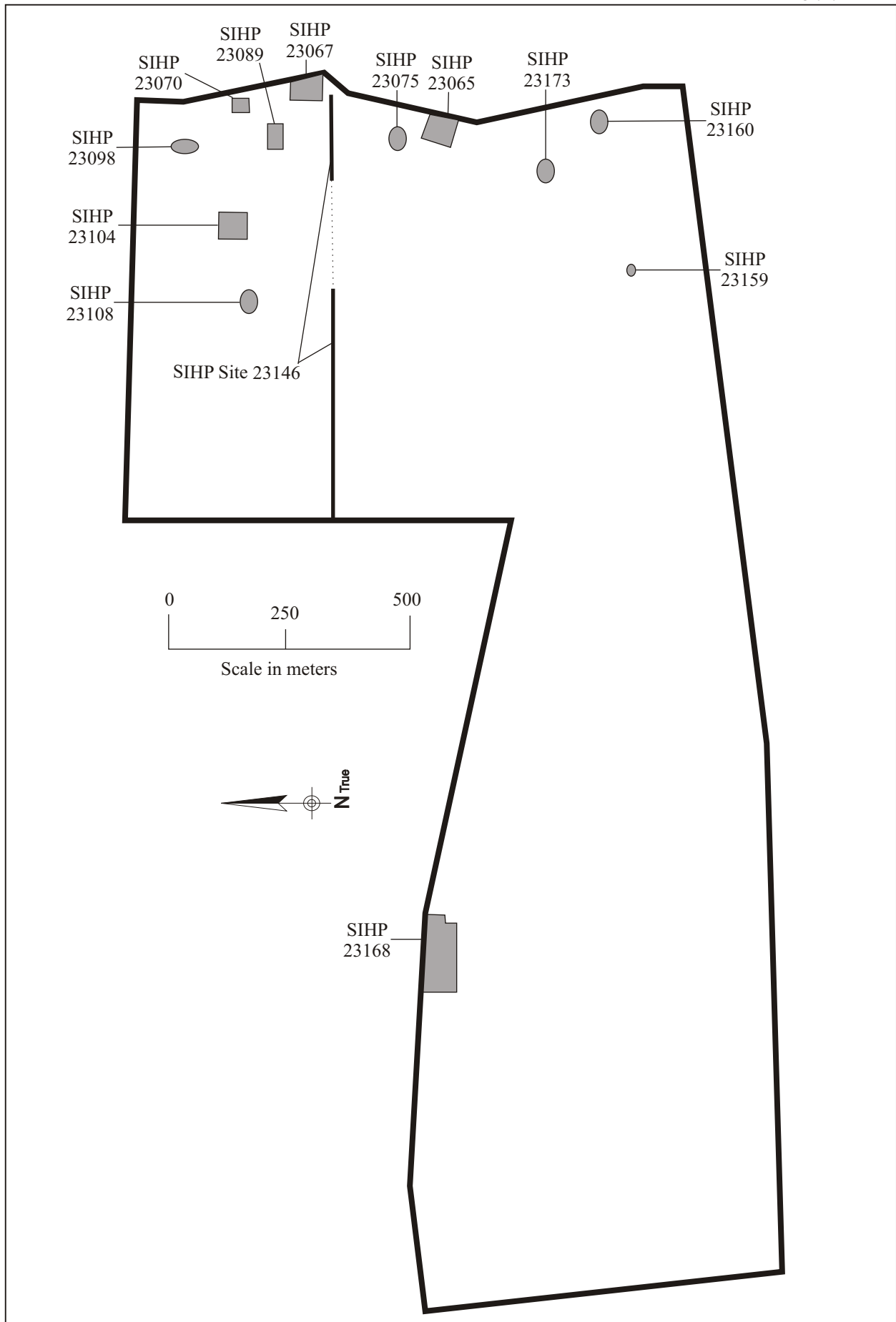


Figure 6. Distribution of homesteads within the project area.

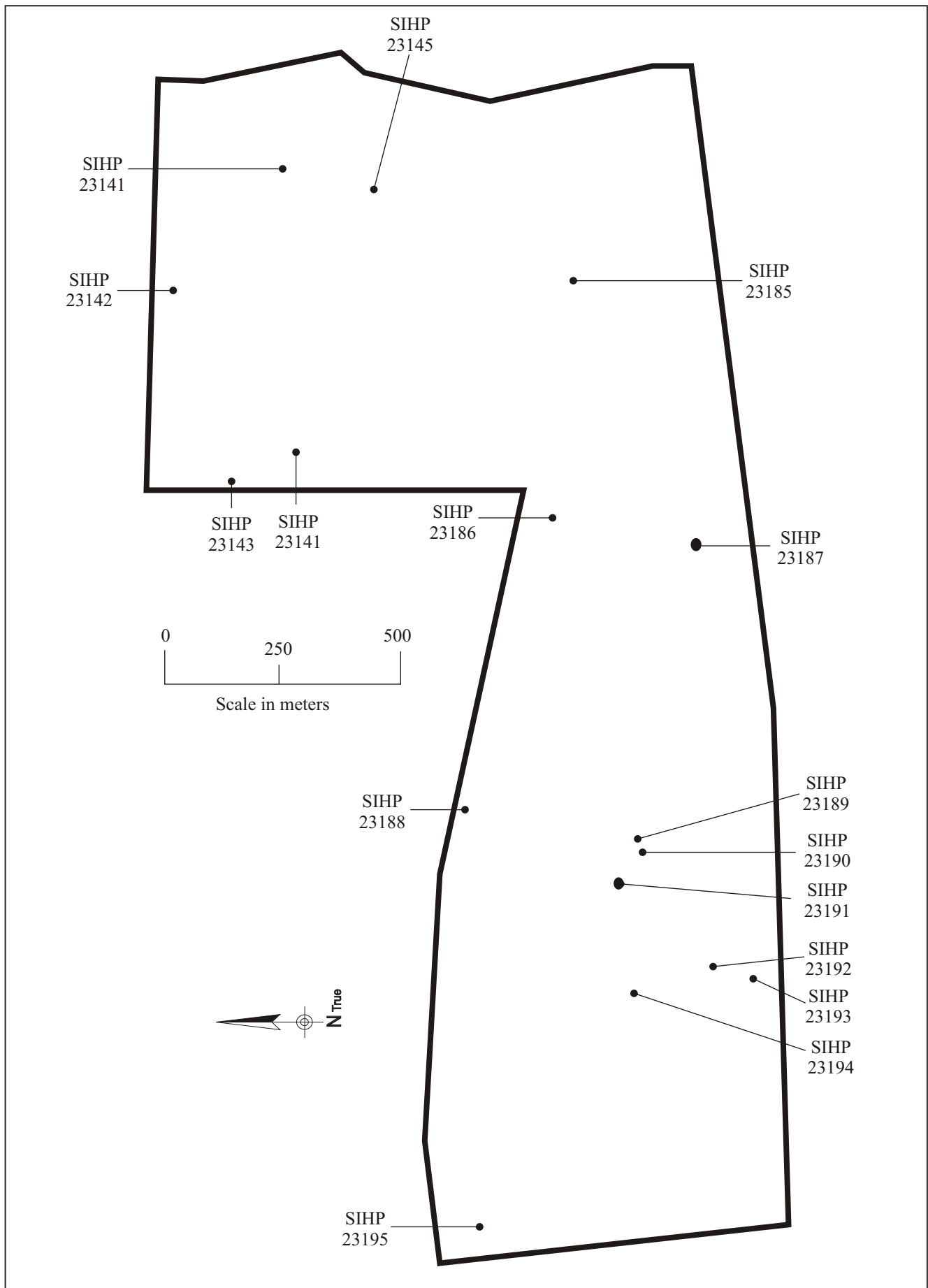


Figure 7. Distribution of Precontact temporary habitation sites within the project area.

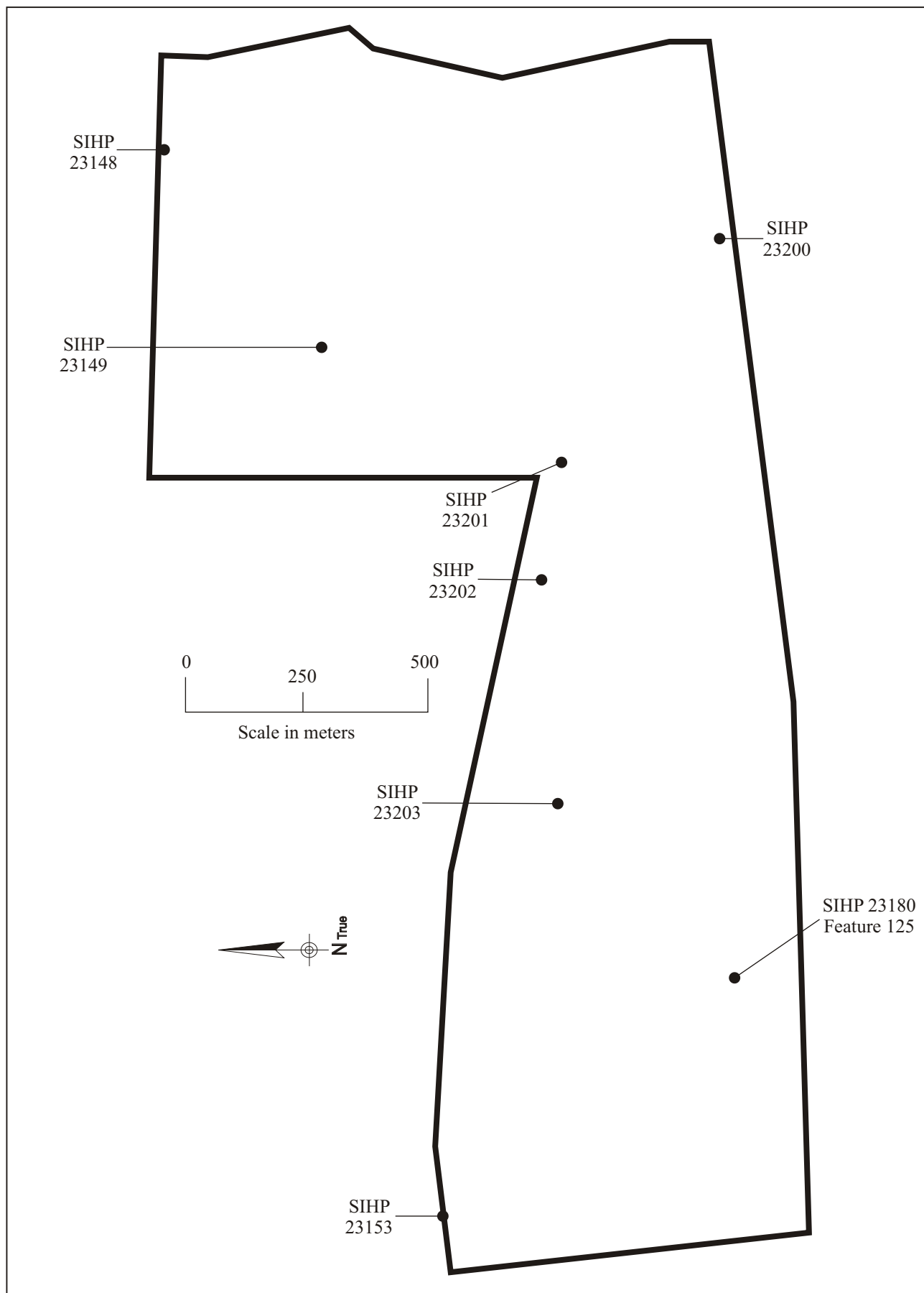


Figure 8. Distribution of burial sites within the project area.

### Comparative Summary of Previous Oral and Documentary Studies

Comparing the locations marked on the Kekahuna-Emory-Jackson maps with records and maps of the *Māhele* awarded *kuleana*, and the Ki‘ilae School Lot reveals some important information pertaining to residency and land use in relation to the sites (ref. Survey Division–C.S.F. 13,297 map, June 2, 1960). Two parcels are identified overlooking Ki‘ilae Bay, one on the north bluff of ‘Ala‘ihi Cove (LCAw. 9464–Maka‘ike); and the other (LCAw. 9463–Holoua) on the *mauka* side of the *Alanui Aupuni*, bounded on the south by the Keōkea-Ki‘ilae boundary wall (inland of Waha‘ula Cove). A third lot, on Halakāhi Point, including the early Kahikina home, and a portion of the Ki‘ilae School Lot, are cited in some form on the Kekahuna-Emory-Jackson maps (see Figure 4).

The house site overlooking ‘Ala‘ihi Cove, is identified as the historic residence of Polani<sup>1</sup>, Ahu, and Kahikina. In the *Māhele*, this lot was awarded to Maka‘ike (LCAw. 9464); who reported receiving it from Polani. The location of the house lot was given as being in the ‘ili of Pā‘ilima, Keōkea. Maka‘ike served the South Kona community in several capacities. He was a schoolteacher, school inspector, road supervisor, and minister. Records in the Interior Department-Lands, Public Instruction, and Road Department files, report that by 1851 (around the time that the survey for the Royal Patent to Maka‘ike was conducted), he had relocated, or was in the process of relocating. Maka‘ike’s residence for a short while was listed as Nāpo‘opo‘o, and then at Honua‘ino 3, where in 1852, he received a Land Grant of 137 acres (a few years later, he received a second grant as well). Maka‘ike was the school teacher at Kāināliu at that time.

Emerson’s fieldbook (1884), cited in this study, identifies the point of ‘Ala‘ihi as the residence of Polani, with a canoe landing below it to the south. Thus, it might be assumed, that when Polani did not receive his house lot in Ki‘ilae (a portion of his *kuleana* application–LCAw. 9461), and when Maka‘ike relocated, Polani took up residency on the ‘Ala‘ihi Bluff.

The lot historically identified as Kau‘inui and/or Manunu’s house, was the *Māhele* Award of Holoua or Holowaa (LCAw. 9463), who claimed *kula* land in Ki‘ilae for agriculture, and a house lot in the ‘ili of Pāpua‘a Iki, in Keōkea. Holoua’s right to the house lot descended to him from his parents in 1819 (and the Ki‘ilae parcel, from Polani). Kau‘inui was a *Māhele* applicant for a *kuleana* in Ki‘ilae (LCAw. 9878). Registration of his claim only identified garden plots, with no residence given. Though the claim was not awarded, Kau‘inui and his descendents remained in Ki‘ilae until the 1940s. Kau‘inui had tenants rights on several parcels in Ki‘ilae (a part of the 1890 lease agreement between native families and the Hū‘eu-Davis heirs). One of Kau‘inui’s (Pipi) Ki‘ilae house and agricultural field lots was near the Ki‘ilae-Keōkea boundary wall, immediately *makai* of the Māmalahoa Highway; and adjoining Manunu’s upland parcel in Ki‘ilae-Keōkea. The other parcels extended down the *kula*, and included a house lot near the shore (see interviews with Joseph Keli‘ipa‘akaua and Taro Fujimori in Rechtman et al. 2001:Appendix B).

Manunu’s name does not appear in the *Māhele*, but Joseph Manunu (grandfather of interview participant Joseph Keli‘ipa‘akaua) had a home, and agricultural fields in the area of Ki‘ilae-Keōkea, bounding Māmalahoa Highway. Thus, physically there is a linear relationship between the *mauka* home-agricultural lot and the *makai* home (formerly Holoua’s *pā hale*). Mr. Keli‘ipa‘akaua’s maternal line descends from Manunu, while his paternal line descends from Kupa a pre-*Māhele* resident and applicant for *kuleana* at Ki‘ilae (LCAw. 8675, not awarded) Kupa Keli‘ipa‘akua remained at Ki‘ilae with taro fields approximately one-half mile *mauka* of Māmalahoa Highway (south of the *mauka-makai* trail), and in residence on the shore until the 1920s.

The Kahikina’s (and Maunu family–who’s *kūpuna* include Ki‘ilae *Māhele* claimants Kahinawe and Paila, and Kauleolī resident Hamu<sup>2</sup>) had property interests at several locations in Ki‘ilae. Their main residence and primary taro lands were situated approximately one-half mile *mauka* of Māmalahoa Highway, along the *mauka*-

<sup>1</sup> Polani was a *Māhele* applicant at Ki‘ilae (LCAw. 9461, not awarded), and possibly an area *Konohiki*, by reference to his having granted others the right to certain properties prior to the *Māhele*.

<sup>2</sup> Hamu moved to Kauleolī during Atkin’s tenure, his daughter, Kamaka‘ena‘ena married Keawe Maunu, grandfather of interviewees, Margaret Keākealani (1996), and Mary AhNee (2001).

*makai* trail. Other parcels (held by the lease of 1890) extend *makai* across the *kula*, to a home overlooking Waha‘ula Cove and Halakāhi Point (in 1996 and 2001 interviews with Margaret Maunu-Keākealani, Mary Maunu-AhNee, and family members). The *makai* house includes a portion of, or is immediately adjacent to, the former Ki‘ilae School Lot (School Grant 7:6). Kekahuna’s map (and subsequently the maps of Emory and Jackson) identified the school lot as a *heiau*, the name given Ka‘akapua (none of them identify the school site). The Kahikina home at the shore, was immediately *makai* of the intersection of the *Alanui Aupuni* and the Ki‘ilae *mauka-makai* trail (in linear alignment with the *mauka* house), overlooking Po‘opa‘a Cove. Emerson’s Register Map No. 1445 (Figure 9) identifies the same location as Kahikina’s house in 1888. Mrs. Keākealani and her daughters visited Ki‘ilae in the 1980s, and Mrs. Keākealani was surprised to learn that her family home was a “*heiau*.” (personal communication 2001). In the last years of their residency (ca. 1927-1935) at Ki‘ilae, the Maunu-Kahikina descendants resided at the ‘Ala‘ihi Point house site described above. The latter, noted for its large cistern and a mortar lined *pū‘o‘a* (crypt). Around 1969, the *pū‘o‘a* was pointed out by Herbert Maunu (son of Samuel Maunu and Becky Kahikina), to his son and grandson (Samuel Maunu and Robert Kamaka III) as the grave of Herbert Maunu’s grandfather—this would be Keawe Maunu, who died in 1911 (personal communication 2001).

Interview participants Mrs. Kaneyo Higashi and her daughter, Gloria Higashi-Okamura, and Mr. Taro Fujimori, provided further information regarding the nearshore Kahikina residence. The Higashi’s ran a *poi* factory at Keōkea, and they recalled that until the 1950s, Mr. Higashi (who has passed away), regularly delivered *poi* to Beni Kahikina. Mr. Kahikina would walk up the old Ki‘ilae trail to get his *poi*, and then go back to the shore. Mr. Taro Fujimori (raised by his grandfather at Kauleolī), shared fond recollections of walking down the Kauleolī trail to the *Alanui Aupuni*, and out to Beni Kahikina’s house. It was from Kahikina (around 1932 to 1939), that Fujimori learned Hawaiian *lūhe‘e* (octopus lure) fishing from canoe, off of the Keōkea-Ki‘ilae fisheries (see Rechtman et al. 2001:Appendix B). It may also be recalled that in the *mo‘olelo* of Ka-Miki, *he‘e* were among the prized fish of the area.

## CULTURAL AND HISTORICAL BACKGROUND

The *ahupua‘a* of Ki‘ilae and Kauleolī are two native land divisions (*ahupua‘a*) among some fifty-five traditional *ahupua‘a* that make up the district of Kona Hema (South Kona) (Figure 10). Ki‘ilae extends from the offshore fisheries to the 6,000-foot elevation on the slopes of Mauna Loa, and contains approximately 4,000 acres. Kauleolī also rises from the shore and extends to the uplands, but it only reaches the 1,600-foot elevation, where it is cut off by Ki‘ilae and Keālia. Kauleolī contains approximately 460.5 acres.

### Natural and Cultural Resources in a Hawaiian Context

In Hawaiian society, natural and cultural resources are one and the same. Native traditions describe the formation (the literal birth) of the Hawaiian Islands and the presence of life on and around them in the context of genealogical accounts. All forms in the natural environment, from the skies and mountain peaks, to the watered valleys and lava plains, and to the shoreline and ocean depths were believed to be embodiments of Hawaiian deities. One Hawaiian genealogical account, records that Wākea (the expanse of the sky—father) and Papa-hānau-moku (Papa—Earth-mother who gave birth to the islands)—also called Haumea-nui-hānau-wā-wā (Great Haumea—Woman-earth born time and time again)—and various gods and creative forces of nature, gave birth to the islands. Hawai‘i, the largest of the islands, was the first-born of these island children. As the Hawaiian genealogical account continues, we find that these same god-beings, or creative forces of nature who gave birth to the islands, were also the parents of the first man (Hāloa), and from this ancestor, all Hawaiian people are descended (cf. Beckwith 1970; Malo 1951:3; Pukui and Korn 1973). It was in this context of kinship, that the ancient Hawaiians addressed their environment and it is the basis of the Hawaiian system of land use.

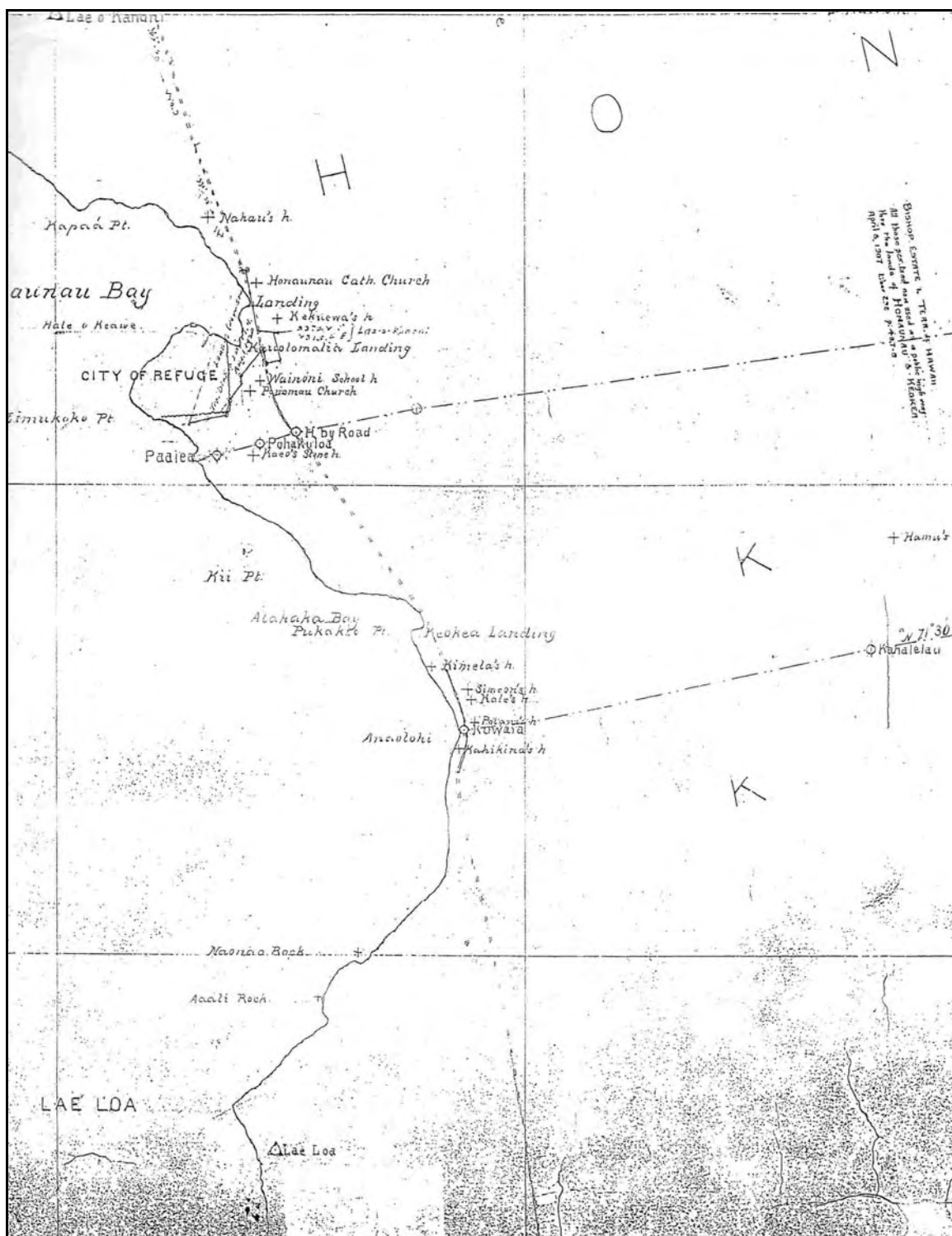


Figure 9. Portion of Register Map No. 1445 (Kahauloa to Ki'ilaie).



23

## An Overview of Hawaiian Settlement

Archaeologists and historians describe the inhabiting of these islands in the context of settlement that resulted from voyages taken across the open ocean. For many years, researchers have proposed that early Polynesian settlement voyages between Kahiki (the ancestral homelands of the Hawaiian gods and people) and Hawai‘i were underway by A.D. 300, with long distance voyages occurring fairly regularly through at least the thirteenth century. It has been generally reported that the sources of the early Hawaiian population—the Hawaiian Kahiki—were the Marquesas and Society Islands (Cordy 2000; Emory in Tatar 1982:16-18).

For generations following initial settlement, communities were clustered along the watered, windward (*ko‘olau*) shores of the Hawaiian Islands. Along the *ko‘olau* shores, streams flowed and rainfall was abundant, and agricultural production became established. The *ko‘olau* region also offered sheltered bays from which deep sea fisheries could be easily accessed, and near shore fisheries, enriched by nutrients carried in the fresh water, could be maintained in fishponds and coastal waters. It was around these bays that clusters of houses where families lived could be found (McEldowney 1979:15). In these early times, Hawai‘i’s inhabitants were primarily engaged in subsistence level agriculture and fishing (Handy et al. 1972:287).

Over a period of several centuries, areas with the richest natural resources became populated and perhaps crowded, and by about A.D. 900 to 1100, the population began expanding to the *kona* (leeward side) and more remote regions of the island (Cordy 2000:130). In Kona, communities were initially established along sheltered bays with access to fresh water and rich marine resources. The primary “chiefly” centers were established at several locations—the Kailua (Kaiakeakua) vicinity, Kahalu‘u-Keauhou, Ka‘awaloa-Kealakekua, and Hōnaunau. The communities shared extended familial relations, and there was an occupational focus on the collection of marine resources. By the fourteenth century, inland elevations to around the 3,000-foot level were being turned into a complex and rich system of dryland agricultural fields (today referred to as the Kona Field System). By the fifteenth century, residency in the uplands was becoming permanent, and there was an increasing separation of the chiefly class from the common people. In the sixteenth century the population stabilized and the *ahupua‘a* land management system was established as a socioeconomic unit (see Ellis 1963; Handy et al. 1972; Kamakau 1961; Kelly 1983; and Tomonari-Tuggle 1985).

In Kona, where there were no regularly flowing streams to the coast, access to potable water (*wai*), was of great importance and played a role in determining the areas of settlement. The waters of Kona were found in springs and caves (found from shore to the mountain lands), or procured from rain catchments and dewfall. Traditional and historic narratives abound with descriptions and names of water sources, and also record that the forests were more extensive and extended much further seaward than they do today. These forests not only attracted rains from the clouds and provided shelter for cultivated crops, but also in dry times drew the *kēhau* and *kēwai* (mists and dew) from the upper mountain slopes to the low lands (see also traditional-historical narratives and oral history interviews in this study and Rechtman et al. 2001).

In the 1920s-1930s, Handy et al. (1972) conducted extensive research and field interviews with elder native Hawaiians. In lands of North and South Kona, they recorded native traditions describing agricultural practices and rituals associated with rains and water collection. Primary in these rituals and practices was the lore of Lono—a god of agriculture, fertility, and the rituals for inducing rainfall. Handy et al., observed:

The sweet potato and gourd were suitable for cultivation in the drier areas of the islands. The cult of Lono was important in those areas, particularly in Kona on Hawai‘i . . . there were temples dedicated to Lono. The sweet potato was particularly the food of the common people. The festival in honor of Lono, preceding and during the rainy season, was essentially a festival for the whole people, in contrast to the war rite in honor of Ku which was a ritual identified with Ku as god of battle. (Handy et al. 1972:14)

Handy et al. (1972) noted that the worship of Lono was centered in Kona. Indeed, it was while Lono was dwelling at Keauhou, that he is said to have introduced taro, sweet potatoes, yams, sugarcane, bananas, and ‘awa to Hawaiian farmers (Handy et al. 1972:14). The rituals of Lono “The father of waters” and the annual

*Makahiki* festival, which honored Lono and which began before the coming of the *kona* (southerly) storms and lasted through the rainy season (the summer months), were of great importance to the native residents of this region (Handy et al. 1972: 523). The significance of rituals and ceremonial observances in cultivation and indeed in all aspects of life was of great importance to the well being of the ancient Hawaiians, and cannot be overemphasized, or overlooked when viewing traditional sites of the cultural landscape.

### **Hawaiian Land Use and Resource Management Practices**

Over the generations, the ancient Hawaiians developed a sophisticated system of land and resources management. By the time ‘Umi-a-Līloa rose to rule the island of Hawai‘i in ca. 1525, the island (*moku-puni*) was divided into six districts or *moku-o-loko* (cf. Fornander 1973–Vol. II:100-102). On Hawai‘i, the district of Kona is one of six major *moku-o-loko* within the island. The district of Kona itself, extends from the shore across the entire volcanic mountain of Hualālai, and continues to the summit of Mauna Loa, where Kona is joined by the districts of Ka‘ū, Hilo, and Hāmākua. One traditional reference to the northern and southern-most coastal boundaries of Kona tells us of the district’s extent:

*Mai Ke-ahu-a-Lono i ke ‘ā o Kani-kū, a hō‘ea i ka ‘ūlei kolo o Manukā i Kaulanamauna e pili aku i Ka‘ū!—From Keahualono [the Kona-Kohala boundary] on the rocky flats of Kanikū, to Kaulanamauna next to the crawling (tangled growth of) ‘ūlei bushes at Manukā, where Kona clings to Ka‘ū! (Ka‘ao Ho‘oniua Pu‘uwai no Ka-Miki in Ka Hōkū o Hawai‘i, September 13, 1917; Translated by K. Maly)*

Kona, like other large districts on Hawai‘i, was subdivided into ‘*okana* or *kalana* (regions of land smaller than the *moku-o-loko*, yet comprising a number of smaller units of land). The lands of Ki‘ilae and Kauleolī, situated in an area now known as Kona Hema (South Kona), are part of an ancient subregion generally known as “*Ka-pali-lua*” (The-two-cliffs; describing the topographic features of the *kula* or lands of the mountain slope). The *moku-o-loko* and ‘*okana* or *kalana* were further divided into manageable units of land, and were tended to by the *maka‘āinana* (people of the land) (cf. Malo 1951:63-67). Of all the land divisions, perhaps the most significant management unit was the *ahupua‘a*. *Ahupua‘a* are subdivisions of land that were usually marked by an altar with an image or representation of a pig placed upon it (thus the name *ahu-pua‘a* or pig altar). In their configuration, the *ahupua‘a* may be compared to wedge-shaped pieces of land that radiate out from the center of the island, extending to the ocean fisheries fronting the land unit. Their boundaries are generally defined by topography and geological features such as *pu‘u* (hills), ridges, gullies, valleys, craters, or areas of a particular vegetation growth (see Boundary Commission testimonies in this study; and Lyons, 1875).

The *ahupua‘a* were also divided into smaller individual parcels of land (such as the ‘*ili*, *kō‘ele*, *māla*, and *kīhāpai*, etc.), generally oriented in a *mauka-makai* direction, and often marked by stone alignments (*kuaīwi*). In these smaller land parcels the native tenants tended fields and cultivated crops necessary to sustain their families, and the chiefly communities with which they were associated. As long as sufficient tribute was offered and *kapu* (restrictions) were observed, the common people, who lived in a given *ahupua‘a* had access to most of the resources from mountain slopes to the ocean. These access rights were almost uniformly tied to residency on a particular land, and earned as a result of taking responsibility for stewardship of the natural environment, and supplying the needs of the *ali‘i* (see Kamakau 1961:372-377 and Malo 1951:63-67).

Entire *ahupua‘a*, or portions of the land were generally under the jurisdiction of appointed *konohiki* or lesser chief-landlords, who answered to an *ali‘i-‘ai-ahupua‘a* (chief who controlled the *ahupua‘a* resources). The *ali‘i-‘ai-ahupua‘a* in turn answered to an *ali‘i ‘ai moku* (chief who claimed the abundance of the entire district). Thus, *ahupua‘a* resources supported not only the *maka‘āinana* and ‘*ohana* who lived on the land, but also contributed to the support of the royal community of regional and/or island kingdoms. This form of district subdividing was integral to Hawaiian life and was the product of strictly adhered to resources management planning. In this system, the land provided fruits and vegetables and some meat in the diet, and the ocean provided a wealth of protein resources. Also, in communities with long-term royal residents (like Hōnaunau just north of Ki‘ilae and Kauleolī), divisions of labor (with specialists in various occupations on land and in procurement of marine resources) came to be strictly adhered to. It is in the general cultural setting outlined above, that we find the *ahupua‘a* of Ki‘ilae and Kauleolī.



## Native Traditions and Historical Accounts of Ki‘ilae and Kauleolī, and the Lands of South Kona

Over the past 30 years, Kepā Maly has compiled an extensive index of native articles published in Hawaiian language newspapers (covering the period from 1841 to 1948); the articles are a valuable source of traditional and historical accounts pertaining to lands, customs, and *mo‘olelo* (traditions). Unfortunately, to date, no traditions specifically pertaining to Ki‘ilae and Kauleolī have been found that predate the early 1900s. The earliest records for the Ki‘ilae and Kauleolī vicinity are those cited in the section below that addresses land and roads communications of the Hawaiian government, and date back to A.D.1847.

While there is only a limited amount of documentation in historical narratives for Ki‘ilae and Kauleolī, the larger body of texts which speak of neighboring lands such as Hōnaunau (an important royal and ceremonial community), and the larger *Kapalilua* region help us understand something of the history of the area. In the larger collection of *mo‘olelo* that have been found, are descriptions of the land and through those descriptions we begin to understand the relationship between the land and the native population in ancient times. It is appropriate to note here, that the apparent dearth of early native accounts for Ki‘ilae and Kauleolī is not surprising when one takes into account the dramatic changes that began in the region by about 1820. Early in the nineteenth century, the native population began to decline (some times at alarming rates), and the decline continued throughout the 1800s. The decline was primarily the result of foreign diseases, periods of drought followed by famine, and changes in land tenure (see below). Thus, many of the native residents who could have told the *mo‘olelo* were gone before detailed written accounts could be recorded.

Of the *mo‘olelo* that have been found for Ki‘ilae, Kauleolī, and neighboring lands in the *Kapalilua* region, we find specific references to cultural sites (such as villages, *heiau*, family sites, trails, and other features) and events spanning several centuries (into the Historic Period). This part of the study presents readers with a collection of *mo‘olelo*—native traditions and historical accounts—(some translated here for the first time from the original Hawaiian) that span many centuries.

The narratives below are presented in several categories, generally chronological in sequence by date of first publication and by the period being described by the historians and authors. The primary sources being native Hawaiian historians, and visitors or foreign residents to the area in between 1800–1930.

### Nā Mo‘olelo Hawai‘i (Native Traditions and Historical Accounts)

In “*Na Hunahuna no ka Moolelo Hawaii*” (Fragments of Hawaiian History), native historian and member of the Kamehameha household, John Papa I‘i wrote about the death of King Kalani‘ōpu‘u in ca. 1782. The king died at Ka‘ū, and his remains were taken to *Kapalilua*. Kiwala‘ō (Kalani‘ōpu‘u’s heir) and his cousin Kamehameha met at Hōnaunau, and disagreements over the division of lands arose. The events that unfolded led to a battle that brought Kamehameha to gain control over part of the island of Hawai‘i. It is very likely that the families of the lands of Ki‘ilae and Keōkea were participants in the events, I‘i described:

When the company from Kau reached Kapalilua in Kona with the corpse of Kalaniopuu, they heard that Kamehameha had arrived at Keei. That was probably the reason why the corpse was not taken to Kailua but to Honaunau, as they had originally agreed . . .

After the Kau chiefs had been at Honaunau a while, Kamehameha and his canoe paddlers arrived in his single canoe, named *Noiku*. They landed back of Akahipapa, a lava flat extending into the sea. No sooner had his foot touched land than those on shore were ready to hurl spears of *hau* wood at him, a custom observed upon the landing of a high chief. This they did, and those on land watched with admiration as Kamehameha thrust them aside. A person remained near the chief with a container of water for his bath; and after the spear throwers had finished and had seated themselves, Kamehameha bathed and donned a dry *malo*. He went up to see his cousin Kiwalao, and when they met food was made ready. Thus they met graciously. As Kamehameha went there to see Kiwalao, so did his cousin visit him at Keei, spending the night time and again. It was said that Kamehameha served his cousin as steward

during these visits. As Kiwalao was in no hurry to return to Honaunau, his uncle, Keawemauhili, came for him. He left at Keawemauhili's insistence, which caused Kiwalao to remark to Kamehameha that his uncle seemed to be disturbed over their friendly association. "Because of this, trouble may brew between us," he said. It happened so . . .

...That night, overseers sent a proclamation to all the men of the chiefs to go to the upland of Honaunau for some taro. That same night the great warrior taught Keoua all the things that he was to do on the morrow on the sands of Hauiki in Mokuohai. When day came, all the men had gone to the upland, having started while it was still dark because of the long distance they had to travel to and-fro. This gave Keoua and his companions a chance to do their work. After eating, they went to the beach to bathe or dive (*lele kawa*). They went along the shore diving until they reached Hauiki in Mokuohai. There coconut trees were hewn down, houses burned, and men killed. After this act of war, they turned about and went home. The work was then taken up by others, for the news had reached the chiefs of both sides. They prepared for war and the war canoes were made ready . . .

Kiwalao was the first to arrive on the battlefield, with the men who were to fight with him. Kamehameha was getting ready, and was preceded to the battlefield by Keeaumoku Papaiahiahi, his uncle. Kalaimamahu, Kamehameha's younger brother, was in charge on Kamehameha's side. They went to the place where they were to encamp, for the purpose of asking the will of the gods. While they were encamped there, a report came that Keeaumoku had been taken captive by his opponents and was to be stabbed. Kiwalao, who was standing close by, said, "Be careful of the *niho palaoa* on Keeaumoku's neck," and at these words Keeaumoku thought, "The chief has no regard for the life of a *hulu makua* (an older relative)." This news of Keeaumoku's peril caused Kamehameha to hasten to the battlefield. Kaahumanu, later the wife of Kamehameha, and daughter of Keeaumoku, was borne thither on the back of Pahia, a man who was an expert in stone throwing. When they drew near to Kiwalao, Pahia let Kaahumanu down and took some stones into his hand which he flung with such force that Kiwalao fell when they struck his temple. Kiwalao landed on Keeaumoku, who took him by the throat and slashed it with a *lei o mano*, or shark-tooth knife, killing him... [thus] Kamehameha gained the victory in this battle at Mokuohai. (I'i 1959:13)

In the late 1860s, writing under the title "*Ka Moolelo o Kamehameha I*" (The History of Kamehameha I), and later under the title "*Ka Mo'olelo o na Kamehameha*" (The History of the Kamehamehas), Samuel Mānaiakalani Kamakau, provided readers with some background information pertaining to the *ali'i* of the *Kapalilua* region in the late 1700s. From his writings come the following narratives:

During the war between Ka-lani-'opu'u and Ka-hekili, the parents of Ka-'ahu-manu went to Hawaii with their whole household and company of attendants and followed in the rear of Ka-lani-'opu'u's army, together with the twin half brothers of Ke'e-au-moku. [These were] Kame'e-ia-moku and Ka-manawa, who had the same father (Keawe-poepoe) but different mothers... Keawe-a-heulu also belonged to their company. His estates were the lands of Kapalilua, Ka'awaloa, and Kealakekua; those of Kame'e-ia-moku and his brother under Ka-lani-'opu'u were Kekaha and the lands of that section. Kamakau 1961:310

Kamakau (1961) also spoke of Keālia, the *ahupua'a* that joins Kauleolī on the south, telling readers that it was the place where sacred chiefess Kapi'olani (chiefess who in 1824, helped form the Ka'awaloa-Kealakekua Mission Station of which Ki'ilae-Kauleolī were a part) was reared from ca. 1790. The circumstances that brought her to Keālia were a continuation of events that unfolded as Kamehameha I rose to power. It will be seen that several of the key figures are those already mentioned above by I'i.

When Keawe-ma'u-hili died in battle with Keoua Kuahu-'ula, the chiefs of Hilo joined forces with Kamehameha. Ka-pi'o-lani and her brothers, sons of Keawe-ma'u-hili, went to live with Kamehameha. Ke-kiki-pa'a was a cousin of Kamehameha, and Kame'e-ia-moku and Kamanawa were her fathers (*makua kane* [implying uncles]). Therefore when Keawe-ma'u-hili

was killed by Keoua Kuahu-‘ula at ‘Alae in Hilo-pali-ku...Ke-kiki-pa‘a and her daughter Ka-pi‘o-lani followed Kamehameha. Ka-pi‘o-lani was reared at Kealia in South Kona. When she grew up several heiaus were erected for the gods of Ka-pi‘o-lani, and she went to impose the *tabu* for them according to her royal rank. The very sacred part of the *heiau* was *tabu* to chiefesses, and no woman, royal or otherwise, escaped death when she drew near to it. Only the sacred chiefesses, whose *tabu* equaled that of a god, went into the Hale-o-Papa and ate the dedicated foods of the heiaus. So was Ka-pi‘o-lani’s *tabu* in ancient times. Chiefesses had various husbands, but when she was wedded to Haiha Na-ihe she remained with him up to the time when the chiefs departed [ca. 1795] for Oahu with the *peleleu* fleet. . .

When Kamehameha and the chiefs of Hawaii returned home on the royal journey called Ni‘au-kani [ca. 1811], she was among those returning to Hawaii, after which she made her home at Ka‘awaloa. (Kamakau 1961:380)

### **Ka‘ao Ho‘oniua Pu‘uwai no Ka-Miki –The Heart Stirring Story of Ka-Miki (recorded in 1914-1917)**

It is not until the early twentieth century, that we find a detailed native account pertaining to the lands of Ki‘ilae, Kauleolī, and vicinity. “*Ka‘ao Ho‘oniua Pu‘uwai no Ka-Miki*” (The Heart Stirring Story of Ka-Miki) is a long and complex account that was published over a period of four years (1914-1917) in the weekly Hawaiian language newspaper *Ka Hōkū o Hawai‘i*. The narratives were primarily recorded for the paper by Hawaiian historians John Wise (born ca. 1865) and J.W.H.I. Kihe (born 1953) (translators of the work of A. Fornander) with contributions from others of their peers.

Through the tradition of Ka-Miki, readers learn about the origins of place names, areas of ceremonial significance, how resources were managed and accessed, and the practices of those native families who made the area their home. While “Ka-Miki” is not an ancient account, the authors used a mixture of local traditions, tales, and family histories in association with place names to tie together fragments of site-specific history that had been handed down over the generations. Also, while the personification of individuals and their associated place names may not be entirely “ancient,” such place name-person accounts are common throughout Hawaiian traditions. The narratives include documentation on approximately 800 named locations, and document site and community histories, local and regional practices, ceremonial sites and practices, and *mele* (chant) texts.

The English translations below (translated by K. Maly) are a synopsis of the Hawaiian texts, with emphasis upon the main events and areas being discussed. The author has added diacritical marks, hyphenation, and underlining to selected names to help readers with pronunciation and identify locational references.

This *mo‘olelo* is set in the 1300s (by association with the chief Pili-a-Ka‘aiaea), and is an account of two supernatural brothers, Ka-Miki (The quick, or adept, one) and Maka-‘iole (Rat [squinting] eyes). The narratives describe the birth of the brothers, their upbringing, and their journey around the island of Hawai‘i along the ancient *alaloa* and *alahahele* (trails and paths) that encircled the island. During their journey, the brothers competed alongside the trails they traveled, and in famed *kahua* (contest fields) and royal courts, against ‘*ōlohe* (experts skilled in fighting or in other competitions, such as running, fishing, debating, or solving riddles, that were practiced by the ancient Hawaiians). They also challenged priests whose dishonorable conduct offended the gods of ancient Hawai‘i. Ka-Miki and Maka-‘iole were empowered by their ancestress Ka-uluhe-nui-hihi-kolo-i-uka (The great entangled growth of *uluhe* fern which spreads across the uplands), who was one of the myriad of body forms of the goddess Haumea, the earth-mother, creative force of nature who was also called Papa or Hina. Among her many nature-form attributes were manifestations that caused her to be called upon as a goddess of priests and competitors.

. . . Ka-Miki and Maka-‘iole departed from Nā‘ulu-o-Weli and ‘Ālanapō at Ke‘ei, and arrived at an area with a large *hālau*, which had no equal; it was the *hālau* of the chief Hōnaunau-ihi-kapu-maka-o-ka-lani. The high priest of Hōnaunau was Nō-hale-o-Keawe, and at the time that Ka-Miki and Maka-‘iole arrived, the *kapu* period of *Akua* (the full moon) had been called for

the ‘Aha‘ula (chief’s council). At that time, the temple drums were also heard ringing throughout the area. Seeing Ka-Miki and Maka-‘iole approaching, the guardians of the *heiau* commanded that they prostrate themselves. Ka-Miki told the guardians that if they prostrated themselves, that he and Maka-‘iole would do the same.

One of the *kia‘i* (guardians) leapt to attack Ka-Miki with a *lā‘au pālau* (war club), and was beaten, and the others who tried to attack were beaten as well. Word of the events were carried to the chief Hōnaunau, his priest and companion chiefs. Hōnaunau commanded that Ka-Miki *mā* be brought before him. Uia, an *ilāmuku* (chief officer and war leader) and others attempted to capture Ka-Miki and Maka-‘iole, but they leapt into the *heiau*, at the place where the priest was offering his prayers. The brothers lay before the priest claiming the *pu‘uhonua* (sanctuary) status.

The warrior-guardians of Hōnaunau demanded that Ka-Miki and Maka-‘iole be turned over to them, but Nōhaleokeawe told them, “*He pu‘uhonua kēia, a ua kapu ho‘i no nā po‘e wale no e ‘imi ‘ana i pakele ko lākou ola*” (This is a sanctuary sacred for those who seek to save their lives. Any who attempted to kill them would suffer reprisal from the gods). Nāhaleokeawe offered the ceremonies of releasing, calling upon the male and female deities of the *pu‘uhonua* in a *mele pule* (prayer chant)—

Kāne-hekili, Kāne-wāwāhi-lani,	<i>Kāne the thunderer, Kāne who breaks the heavens,</i>
Kāne-i-ka-pualena,	<i>Kāne in the glowing dawn light,</i>
Kāne-i-ka-mālamalama,	<i>Kāne in the light,</i>
Kāne-i-kolihana-a-ka-lā,	<i>Kāne who works in the heat of the sun,</i>
Kāne-i-ka-mōlehulehu,	<i>Kāne in the dusk,</i>
Kāne-i-ka-wana‘ao,	<i>Kāne in the dawn,</i>
Kāne-i-ka-pule,	<i>Kāne in the prayers,</i>
Kāne-i-ka-mākaukau...	<i>Kāne in readiness...</i>
O Kanaloa, o Kū,	<i>O Kanaloa, O Kū,</i>
O Lono-honua-mea,	<i>O Lono of the sacred earth,</i>
O Pele ka wahine ‘ai lā‘au,	<i>O Pele the woman who devours the forest,</i>
O Hi‘iaka-i-ka-poli-o-Pele,	<i>O Hi‘iaka in the bosom of Pele,</i>
O Meheanu, o Wahine-lua-nu‘u,	<i>O goddess Meheanu, O goddess Wahine-lua-nu‘u,</i>
Ka-wahine-i-ka‘e-o-kapuahi,	<i>The woman at the edge of the fire pit,</i>
O Wa-‘ula-ke-ahi,	<i>O Wa-‘ula-ke-ahi- goddess of flames,</i>
O Luahinekaikapū,	<i>O goddess Luahinekaikapū,</i>
O Kahina-a-ola . . .	<i>O goddess Ka-hina-a-ola . . .</i>
Ua kapu i ka lani,	<i>Sacred are the heavens,</i>
Ua kapu i ka papa ka honua,	<i>Sacred are the strata of the earth,</i>
Ua wela ua moe ka pāpāi-a-oa,	<i>Fire sacredness, prostrate sacredness,</i>
Kapu o! Ua moe!	<i>Everlasting sacredness! Prostrate!</i>
Moe i ke kapu!	<i>Prostrate before the sacredness!</i>
A lele wale ke kapu	<i>The sacredness flies away,</i>
‘Āmama - noa!	<i>It is finished, it is freed!</i>

Uia, went to his chief and asked if he could be permitted to kill Ka-Miki and Maka-‘iole when they came before him, but Hōnaunau-ihi-kapu-maka-o-ka-lani urged Uia to be patient.

That evening, Hōnaunau-ihi-kapu-maka-o-ka-lani, his retainers, and priests gathered at the royal compound. After discussing the events with his counselors, the chief agreed that it would not be wise to tempt the wrath of the gods, by allowing Uia to fight with the brothers once they departed from the *pu‘uhonua*. Uia was upset at this and determined to go to his grandaunt, Ala-haka-lewa-i-ke-kai (Alahaka) who was a skilled ‘*ōlohe*. Together they devised a plan by which he might kill Ka-Miki and Maka-‘iole.

In the early morning when the *kapu* period of the *pu'uhonua* was completed, Ka-Miki and Maka-'iole arose and gave their thanks to the gods and Nā-hale-o-Keawe and then departed from Hōnaunau. The brothers then walked the trail towards Alahaka, at Keōkea.

Now Alahaka was a mysterious, skilled *'ōlohe*, and the grandaunt of Uia. The lands of Alahaka, Ki'ilae, Kauleolī, and various locations on those lands, such as Wai-ku'i-a-Kekela and Lū'ia-i-kāmoe have all been named for members of this family. Alahaka was greatly feared by those who lived in the surrounding communities and those who traveled along the ocean path near her dwelling.

Seeing the brothers, Alahaka called to them—

*E pi'i, e pi'i mai e nā keiki a kau iluna, i 'ai 'olua i ka limu līpahe'e a me ka 'a'ama pai'ea, i ke 'ālinalina, i ka pūhelo, ka 'ōpihi makaiauli, ka pipipi a me ka he'e pūlōloa o ku'u 'āina... (Say! You two ascend, climb to the top of the cliff and join me. Eat the līpahe'e sea weed, the 'a'ama pai'ea crab, the 'ālinalina seaweed, the shrimp and coconut sauce, the dark eyed (bluish fleshed) limpets, the pipipi (sea snails) and long headed octopus of my land...)*

Knowing her true nature, Ka-Miki replied, “We can not pass by the (rope) trail you have let down for us. It is an old rope, tattered beyond its usefulness. Maybe if you come down and carry us up, then we might stay to enjoy your food and be adorned with the garlands made by your cherished ward, Waiku'iakekela—garlands made from *ka pua hala onaona ho'i o Lū'ia-i-Kāmoe* (The exceedingly fragrant pandanus blossoms *Lū'ia-i-Kāmoe*).

Alahaka told the brothers, “The upland trails are all *kapu*, thus you must pass by the coastal path.” Along this path of Pali Alahaka, Alahaka kept an *olonā* rope on the sea cliff. This rope was used by those who climbed the cliff and it was Alahaka's practice to attack people as they ascended the rope. The travelers were dashed upon the stones and eaten by her shark gods 'Ūkanipō<sup>3</sup> and 'Ūkaniau.

When Ka-Miki and Maka-'iole ascended half of the *ala nui kaula* (rope trail), Alahaka dislodged the rope, causing them to fall towards the rocks, thinking they would become the food of her shark gods 'Ūkanipō and 'Ūkaniau. Alahaka thought she had defeated the strangers, but Ka-Miki and Maka-'iole had prepared themselves and called upon the aid of their ancestress 'Ōhi'a-nui-moe-awakea, who in the form of an 'ōhi'a tree, carried them to Alahaka's house. Returning to her house, Alahaka saw the brothers and attacked them. A fierce battle ensued, but in a short while, Alahaka was defeated, and securely bound in the cordage of *Kanikawī* and *Kanikawā*, and placed in the supernatural net, *Makali'i*.

Alahaka was greatly impressed with the strength and skills of Ka-Miki, for this was the first time that she had ever been defeated. Alahaka thought that in order to gain her freedom, she might offer her ward Wai-ku'i-a-Kekela to be Ka-Miki's wife. But Ka-Miki told Alahaka that her freedom could only be gained by giving up her treacherous practices and honoring the gods. Angered, Alahaka thought that perhaps her ward, and other family members who had joined together in support of Uia would kill Ka-Miki and Maka-'iole instead. With these thoughts in mind, Alahaka refused to surrender, and Ka-Miki left her bound in the net *Makali'i*, tucked away like the 'ōpae (shrimp) in the high cliffs at Kōkī o Wailau.

The priest-seer Ki'ilae-nui-a-'eho (Ki'ilae) was Alahaka's older brother, and he guarded the lands over looking the agricultural fields of Ka-ulu'ulu. The land of Ki'ilae was named for

<sup>3</sup> 'Ūkanipō is also a *heiau* dedicated to a shark god of Kona; the *heiau* is situated on a bluff above the old coastal trail (now the *Alanui Aupuni*), in Lehu'ula.



Ki'ilae-nui-a-'eho, a powerful 'ōlohe priest and reader of omens. Ki'ilae's wife was Kauleolī-a-Hina-iki, and the land of Kauleolī now bears her name. Ki'ilae and Kauleolī were the parents of Ka-hau-o-'ōhala-ke'e (The dew of 'ōhala-ke'e) and Wai-ku'i-a-Kekela (The spring opened by Kekela); and Ka-hau-o-'ōhala-ke'e was the mother of Uia.

Ki'ilae and Kauleolī lived above a cliff overlooking the *kula* (flatlands) from which they could look upon their planted fields. At the base the cliff called Ka-ulu'ulu was an extremely large breadfruit tree. Their grandson, Uia, had hidden himself in this tree in the manner of a *kūmopō* (robber and thief), thinking that he could drop upon Ka-Miki and Maka-'iole as they passed by on the trail. Ka-Miki knew of this tactic, and as he departed from Alahaka's residence and approached the cliff, he grabbed a *pōhaku pāhoa nui* (large stone dagger) and hurled it at Uia. This dagger struck Uia, and killed him. Uia<sup>4</sup> was left here and buried at this site. Seeing that Uia had been killed, Wai-ku'i-a-Kekela and her mother, Kauleolī, leapt to attack the brothers, and they were quickly defeated.

As Ka-Miki and Maka-'iole drew near to Ki'ilae, he discerned their true nature and made peace with the brothers, vowing that the family would give up its' evil practices. In this way, the trails which passed through the lands of Hōnaunau, Keokea, Ki'ilae, and Kauleolī became safe to travel. Having been freed, Waiku'iakekela, Alahaka and Kauleolī prepared a feast and 'awa ceremony for the brothers.

Now, the chiefess Waiku'iakekela (Kekela) lived at Ki'ilae below the *hala* (pandanus) grove called Lū'iaikāmoe, and above the residence of her guardian, Alahaka. Kekela's beauty was compared to the beautiful, fragrant *hala* blossoms of Lū'iaikāmoe — *ka pua hala onaona ho'i o Lū'iaikāmoe*. And the symbolism of stringing a pandanus garland (*lei hala*) was used to invite Ka-Miki to stay with her as her husband — *E lei 'ana i ka pua o ka hala o Lū'iaikāmoe, ke 'oki i nā pua onaona o Lū'ia, ki'i 'ana o ka mānai, e kui ai i nā pua hala onaona . . .* To wear a garland made of the pandanus flowers of Lū'ia-i-Kāmoe, cut the fragrant flower of Lū'ia, then fetch a needle with which to string the fragrant pandanus blossoms...

Ka-Miki explained that he could not stay at Ki'ilae, and after spending a few days with Ki'ilae *mā*, the brothers departed. On the way, the brothers offered their *aloha* to the people who dwelt in the lands of Keālia, and then traveled on until reaching the lands of Ho'okena and Kauhakō.

Ka-Miki and Maka-'iole arrived at the *hale auolo ali'i* (royal compound) of the chief Kauhakō, and his daughter Ho'okena-hai-lipo-i-ka-wao. Houses were built on both the *mauka* and *makai* sides of the trail. In these houses, the children were kept and taught all manner of skills which boys and girls needed to know. Even travelers were kept and not permitted to leave until they mastered certain skills. Any one unable to complete a task, was bound and led to the chief, and required to carry him upon his litter. Kauhakō commanded that he be borne from uplands to shore, border to border, for no purpose but to belittle the people.

The people became embittered with the chief for his careless nature and one day, they killed him by releasing his litter (*mānele*) along a cliff, thus his intestines were dragged along the cliff. This is how the place came to be called Kauhakō . . . (*Ka Hōkū o Hawai'i* October 1 – November 15, 1914)

### **Ka-Wai-Ku'i-o-Kekela (1923)**

In 1986, E.H. Bryan Jr., and Kenneth Emory prepared a study of "The Natural and Cultural History of Hōnaunau, Kona, Hawaii" (Bryan and Emory 1986). Among the contributors to the study was Dorothy Barrère, who had translated a hand written account prepared for the museum in 1923 by noted Kona historian, Kalokuokamaile. The account describes how the freshwater well "Ka-wai-ku'i-o-Kekela" (The-pounded-water-

<sup>4</sup> Uia is a native variety of taro, known to the district of South Kona.

of-Kekela) came to be found and opened at Ki'ilae. While the narrative has been reported in its entirety by both Jackson (1966) and Bryan et al. (1957), portions of it are cited below. The excerpts include descriptions of the *kula* (flat lands) as an area of sweet potato cultivation; the occurrence of a cave "Ke ana o ka Ilio", extending approximately one mile from the uplands to the shore; and how the stone flats *mauka* of the *Alanui Aupuni* at Ki'ilae were prepared and "*ku'i*" (pounded) open to make the famous water hole of Ki'ilae:

We cross now into Kiilae, a village which owed its importance to Kiilae Bay and to the well, Wai-ku'i-o-Kekela, Pounded-well-of-Kekela, over which a windmill was erected in recent times.

Chiefess Kekela-o-ka-lani was the mother of Queen Emma, the wife of Kamehameha IV. She resided at Kiilae on the beautiful house platform overlooking the well in the early and middle 1800's. Kalokuokamaile of Nāpo'opo'o wrote out for the Bishop Museum in 1923 this story concerning the well.

#### ***Story of the Pounded Water of Kekela***

An elderly man and his wife were living in the middle of the cultivable (*kula*) lands of Kiilae, South Kona, Hawaii. The work of these two was the cultivation of sweet potatoes. Also with these two old people was a dog. While they cultivated this land, and the days were very long, they could not understand the doings of their dog. While they cultivated near the mouth of a certain cave their dog appeared from inside of it, and came out wet with water.

The old man said to the old woman, "Do you see anything unusual?" Answered the old woman, "No, I don't." Said the old man "Let's wait until tomorrow, then you will see and we will both see it." The old woman did not understand the words of her husband. They lay down that night with their dog. The old man observed their dog more closely and he noticed when the dog went out. He did not neglect to notice the time of his going. He watched closely until the time the dog left. At the time the dog went, he followed quickly. The dog entered the cave. He noticed when he went in and when he came out again.

The two cultivated their sweet potato garden; and near to the time the dog was to return to them, the husband said to the wife, "Let's go to the opening of the cave and there do our work." They went to the opening of the cave to cultivate. Said the man to his wife, "I have an unusual thing to show you." "What unusual thing?" "Do you see our dog?" "Not in the least." Said the man, "Let's stay here until he returns. We are going to receive riches and benefits from our dog..." While they were talking the dog came, and his fur was wet with water . . . " . . . Yes indeed, there is water perhaps inside this cave. Tomorrow we will go with the dog into the cave. Maybe the water inside will be lucky for us, who live in this land without water . . ."

The narrative describes how the old couple followed their dog into the cave, and came to a place where the opening was too narrow for them to enter. They returned from the cave and reported their findings to the "overseer of the land." Confirming the story of the old couple, they, "made this known to the alii who was living at Kiilae." The chiefess Kekela then inquired of her kahuna, what might be done, and a plan was laid out:

This water was near the seashore. It was a mile from the entrance of the cave to the seashore where the spring was. That cave has been called the Cave of the Dog [Ke ana o ka Ilio] to this day and forevermore. The kahunas pointed out the place to hammer a certain rock with another rock. The work of the men was to go upland to fetch fire wood to be lighted on top of the rock of the spring.

It was lighted to burn red hot, then a rock hammered onto the rock set on fire, then the rock that was lighted burst open. The strange thing was that the traveling company coming from Ka-u to go to Kohala could not go, they were stopped there and sent upland for shoulder loads of firewood. Truly this spring was made here beside the road that goes to Ka-u, Hilo,

and around the island of Hawaii. Therefore, no one who passed by could escape. The alii's work was continued right on top of this hard rock mound, without knowing there was water underneath this mound. But she listened to the words of her kahunas. The men fetched firewood and it was a long time that they hammered with patience at the rock until the water was obtained... Eight feet were pounded through that rock mound before the water was found. And here is this spring that lies here by the road. It was called after the name of the alii whose work it was. That was Kekela. The name of this spring to this day and forever, and a famous deed it is indeed, "The Pounded Water of Kekela." (Barrère translation in Bryan and Emory 1986:246-247)

The reference to Kekela, is Fanny Kekela, daughter of Ka'oana'eha and John Young. Kekela was born in 1806, and died in 1880. John Young (Olohana) and Isaac Davis (Aikake) were the *haole* (foreign) advisors and favorites of Kamehameha I. Following Aikake's death in 1810, Olohana took the Davis children, including George Davis Hū'eu (born ca. 1800) as his own. He was also trustee of the Davis children lands until his death in December 1835. Thus, it is possible that Kekela's residence at Ki'ilae may have coincided with her father's stewardship of the lands, and the event described in Kalokuokamaile's *mo'olelo* would have occurred in the late 1820s. This chronology is plausible based on the facts that: (1) by 1835, Kekela was on O'ahu, with her husband, George Na'ea, where she tended to her father's death bed; and (2) that in 1836, Kekela was residing on O'ahu where she gave birth to her daughter, Emma<sup>5</sup>. Emma went on to become Queen Emma Kaleleonalani, wife of Alexander Liholiho, Kamehameha IV.

Also included with the *mo'olelo* above, in the 1986 report, is a *mele* (chant) from Malia Ka'onana'eha Davis, the ninth child of George Davis Hū'eu and his wife Kaha'anapilo. The *mele* is a poem of affection for a loved one (presumably a companion of Malia K. Davis'), and in it are several references to Ki'ilae, the cliffs of Alahaka, and the sweet waters of Waiku'iakelā. George Davis Hū'eu died in January 1874, his daughter, Malia Ka'onana'eha Davis, had died prior to that date, thus the *mele* would predate 1874 (ref. Probate 41, 1874). An additional *mele* was written for Queen Emma that also references Ki'ilae, Haleolono (an 'ili in Kauleoli), and the water of Kekela (Nogelmeier 2001).

### Traditions of Ki'ilae and Kauleoli (1933)

In 1933, Theodore Kelsey, an ethnographer who sometimes worked with the Bishop Museum, conducted interviews with elder Hawaiians in South Kona. One of his informants was the famed Kalokuokamaile of Nāpo'opo'o. The following excerpts come from hand written notes of Kelsey, viewed in the collection of the late June Gutmanis (Kelsey Collection Curator). The narratives collected in Hawaiian, were translated by K. Maly:

Names of the Lands of South Kona. Written by Theodore Kelsey, Feb. 15, 1933, from Kalokuokamaile, Nāpo'opo'o, South Kona.

32. Keokea (There is a *kupua* – supernatural – dog in the sea here, it is of white stone), a large land. There is a spring at the shore, named Keokea.
33. Alahaka (It is a *pali*, there was a ramp made there on which travelers climbed up). Alahaka is the name of the *pali*. There is no spring.
34. Kiilae (There were many wooden images made there which were set up on that point. The fish of that land is the *uhu*. Alahaka is the name of the sea and the upland area there. The images were set up there so that the people who were passing by on canoes would see them and mistake them for real people, guarding the fish. The images were only set up in the dark. They were removed in the day. During the day, the place was restricted to only those who had the right to be there.

Wai-ku'i-a-Kekela is the spring. (Kekela was a chiefess. The stone flats were struck there [to open up the well]).

<sup>5</sup> For chronology, see "Funeral Obsequies of the Late Queen Dowager, Emma Kaleleonalani..." (J.M. Oats Jr. & Co., 1885).

35. Ka-ule-o-Li. There was an elder brother and a younger brother, Li was the elder. The younger brother had power, and living was his only task. The younger sibling gave the genitals of a dog to his elder brother, the genitals of a dog were the genitals of Li. That spring of Kekela is there, between Ka-ule-o-Li and Kiilae . . .

In the late 1940s and early 1950s, Kelsey and his partner, Henry Kekahuna, continued their research in Kona, and recorded traditions with the Kahalu'u historian, Nāluahine Ka'ōpua. On June 2<sup>nd</sup> 1950, the three took a boat trip from Keauhou to Ka'apuna, and an additional note pertaining to Kauleolī was recorded:

. . . Piapia, is a *heiau* near the shore at Ka-ule-o-Li. A white man made salt at this place... [Kelsey and Kekahuna notes in the Collection of June Gutmanis]

## Historical Journals and Letters—Foreign Visitors and Residents Describe South Kona

The narratives cited in this section of the study, include some of the earliest written accounts for the South Kona region of Hawai'i (including lands around Ki'ilae and Kauleolī), and span the period from 1779 to 1913. It will be seen that the lands of Ki'ilae and Kauleolī are specifically named in only a few citations, and that the larger body of narratives are of a regional nature. The historical narratives are important though, as their descriptions fit with some of what is still to be seen in the lands of Ki'ilae and Kauleolī. Some of the writers also recorded traditions and their observations of traditional practices in their journals and letters. The authors were explorers, missionaries, and travelers, and their observations often include important descriptions of features that make up the cultural landscape (e.g., villages, *heiau*, trails, and agricultural fields), the nature of land use, and transitions in the Hawaiian community.

The excerpts from the historic journals and letters are generally presented chronological in sequence by date of first publication, and source of the communications. Underlining used in the quoted material draws the reader's attention to specific place names, site references, and individuals mentioned.

### The Journals of Captain James Cook on his Voyages of Discovery: The Voyage of The Resolution and Discovery (1776-1780)

Captain James Cook first saw the Hawaiian Islands of O'ahu and Kaua'i on January 18, 1778. On January 17, 1779, Cook and his ships arrived at Kealahou Bay, where he was entertained as the returning god Lono. As described in the native accounts and foreign journals cited in this study, suspicions concerning Cook's divinity arose, and following an attempted "kidnapping" of King Kalani'ōpu'u, Cook was killed on the flats of Ka'awaloa on February 14, 1779.

The following narratives were recorded by Commander Charles Clerke and Lieutenant James King (Beaglehole 1967) who accompanied and survived Cook. King and Clerke provide readers with the earliest recorded descriptions of life in the South Kona region. Among the features they described, was the occurrence of extensive plantations (some of which were more than 6 or 7 miles inland), and among the crops seen were the taro, sweet potatoes, breadfruit, plantains (cooking bananas), and *wauke* (the "cloth" plant). The narratives are of direct importance to the Ki'ilae-Kauleolī study area, as features of the plantation are evident on the ground in these lands. The plantation system was formally laid out, and in many instances bounded by walls (similar to the garden system that was mapped as part of the current study).

Also, as a result of excursions to the mountain lands, Cook's crew reported that most residences were situated near the shores, and that only few good houses were observed inland. While in the forests, various activities and features were observed as well—among them were canoe making, bird catching, and the occurrence of trails. They also noted that the Hawaiians demonstrated knowledge of upland resources and travel to the mountain lands.

January 26, 1779—King identifies members of the party who set out on a journey to Mauna Loa from Kealahou (the goal was not achieved):

[At Kealakekua] . . . a free leave was given to trade at our desire, & the bay in a short time became crouded with Canoes, leave was ask'd & granted for a party to go into the country & to attempt reaching the Snowy Mountain;

This Party consisted of the Resolutions Gunner, Mr. Vancouver, a young gentleman of the Discovery, Mr. Nelson sent out by Mr. Banks to botanize; the Corporal we had on Shore, & three other men, they carried no arms of any kind, & set out at ½ . . . past 3 this Afternoon with 4 of the Natives . . . (Beaglehole 1967:513–514)

February 1779—Having departed from Kealakekua, King took the opportunity to write up an account of excursions to the lands behind Kealakekua-Nāpo'opo'o, and of the trip begun on January 26, 1779 to the mountain lands from Kealakekua.

. . . As we have now left Karakooa [Kealakekua] bay, I shall before we go any farther, give a description of what was seen in the Country about it; (in the doing of which I am oblig'd to those who took the excursion up towards the Mountain) & leave any occurrences or Observations that may give an insight into their Arts & Manners, till we have bid a final Adieu to the Group of Islands; that also will be the best time to give in one View the dimensions of the different Island, &c.

I was never myself above 3 miles into the body of the Country; for the first 2 ½ miles it is compos'd of burnt loose stones, & yet almost the whole surface beginning a little at the back of the town, is made to yield Sweet potatoes & the Cloth plant. One then comes to breadfruit trees which flourish amazingly. The ground was very uneven & although there was a tolerable Soil about the trees, yet there was constant breaks in the land & large bare, burnt rocks; in the bottoms that these made were planted the Sweet Potato roots with earth collected about them; my occupation at the Observatory hindered me always proceeding farther. If I had I should have come to the extensive cultivated spots that are visible at the Ships beyond the grove of bread fruit trees: I shall therefore relate the Journey of the party of seven & 4 guides who set out on the afternoon of the 26<sup>th</sup>.

They travelled 3 or 4 miles & found the Country as above represented, after which were the regular & very extensive plantations. The Plantain trees are mixed amongst the breadfruit trees & did not compose any part of the plantation except some in the Walls: these walls separate their property & are made of the Stones got on clearing the Ground; but they are hid by the sugar cane being planted on each side, whose leaves or stalk make a beautiful looking edge. The Tarrow or Eddy root & the sweet Potato with a few cloth plants are what grow in these cultivated spots. The party stopt for the Night at the 2d hut they met on this ground, they then judged themselves 5 miles from our Village, or at the top of the first hill as seen at the Ship. The Prospect was delightful: they saw the Ships in the bay: to the NW a continuation of Villages by the Sea shore & to the left a thick wood, to the right cultivated ground as far as they could see, & a thick wood on their back. The Potatoes & Tarrow are planted 4 feet from each other, the former is cover'd except the tops with about a bushel of light Mould, the latter is left bare to the roots, & the mould surrounding made in the form of a basin, in order to preserve the rain as this root is fond of & requires much humidity, it should be noted that the Tarro of these Islands is the best we have ever tasted. They foresaw, from the few Cottages scattered about & the poverty of the one they took their residence in, that their trade would not be able to ensure them provisions . . .

On the 27<sup>th</sup> in the Morning they set out & filld their Calabashes at an excellent well about ½ a mile from their hut & enter'd the wood by a foot path, made, as they understood, by those who fetch wild or horse Plantains, & who go to Catch birds; it was either Swampy or else Stoney, also narrow, & made still worse by large trunks of trees laying across it, there was no proceeding on either side of the path for underwood; as far as the Wild plantains grew, intermixt amongst the trees, were at Certain distances white flags secur'd to poles, which they

took for divisions of Property . . .

The 28<sup>th</sup> they march'd along the Skirt of the Wood for 6 or 7 miles, & then entered again, by a path that went away to the Eastward. For the first 3 miles they passd thro a wood compos'd of high trees, interspers'd with Plantations of Plantains, for the next three miles were dwarfish trees, much underwood, & growing amongst broken burnt Stones. They then came again to a pleasant wood... In this wood they pass'd many Canoes, half finishd, & a hut also, but since their first entering of the different Woods could find no water, of which they began to feel the want, they proceeded on about 3 miles in this last Wood, when coming to two huts that was convenient for holding their whole party, they stopped; heartily fatigued with their day's Journey, having walkd as they thought 20 miles this day, but they were obligd to separate into parties in search of water, & at last found some rain water in the bottom of a Canoe, which although the Colour of red wine, was to them a very agreeable sight . . (Beaglehole 1967:520–523]

*March 1779.* Clerke's notes of the Kealakekua region—describing agricultural development and native “towns,” and practices observed from near shore to the upper mountain slopes—concur with those of King and add some additional site and resource descriptions:

. . . this being the Lee side of the Isle the Natives have been at infinite pains to clear away the Cindars to make their plantations; the fertility of the Soil however when they do come at it very well repays them for their trouble; for nothing in nature can be more abundantly prolific, being a fine rich Loom, tho' in many places they have been obliged to remove 4, 5, or 6 feet depth of Cindars, and the soil when they come to it probably does not exceed two or at most three feet, but what there is of it is excellent beyond comparison; two or three miles up the Country the soil becomes deeper and is luxurious to the last degree. All the Shores on the Southern and Western sides are formed by burnt Rocks, and in many places where they break off in Cliffs there are numberless Caverns blown in the sides.

The Towns of the Natives are built along the Sea side. At Cari'ca'coo'ah [Kealakekua] Bay there were three, one [Kealakekua-Napoopool] on the SE-tern side of the Bay which was very large extending near two miles along the shore, another [Kaawaloa] upon the NWtern side which was not so large, and a small Village [Palemano] in the cod or bottom of the Bay. At the back of the villages upon the Brow of the Hill are their plantations of Plantains, Potatoes, Tarrow, Sugar Canes &c, each mans particular property is fenced in with a stone wall; they have a method of making the Sugar Cane grow about the walls so that the stones are not conspicuous at any distance, but the whole has the appearance of fine green fences. These Plantations in many places they carry six or seven miles up the side of the hill, when the woods begin to take place which diffuse themselves from hence to the heights of the eminences and extend over a prodigious track of ground; in these woods are some paths of the Natives and here and there a temporary house or hut, the use of which is this; when a man wants a Canoe he repairs to the wood and looks about him till he has found a tree fit for his purpose and a convenient spot for his work; having succeeded thus far, he runs up a house for his present accommodation and goes to work upon his Canoe, which they in general compleatly finish before it's moved from the spot where its materials had birth. Our people who made excursions about the Country saw many of these Canoes in different states of forwardness, but what is somewhat singular, if one of their vessels want repairing she is immediately removed into the woods though at the distance of 5 or 6 miles. These woods abound with wild Plantains which though not equal to the cultivated, are far from being a bad fruit. The poorer sort of People here make a very general use of them. Upon the highest hills our people could ascend, the burnt rocks were in many places bare or only covered with a little moss with numberless Chasms blown in them by the violence of the volcano, though just by, there would be soil enough to hold large trees very firm . . . (Beaglehole 1967:591–593)

All their Towns are built along the Sea shore, up the Country there is not a house to be seen except such temporary Huts as has been before described and here and there one by a large

plantation where the peasants sometimes lodge who look after it . . . (Beaglehole 1967:599)

*March 1779.* To King's previous descriptions of the Kealakekua region he added additional notes, and described the area as "highly cultivated & populous" (Beaglehole 1967:607):

. . . We now come to the West side, where are the districts of A-kona & Ko-harra. The part of A-kona joining to Koa partakes of its nature. Its N part is highly cultivated & very populous... [page 607]

...Before they enter'd the first Wood, they also observ'd Arms or branches, stretch towards the Sea side, in a direction at right Angles to the Main wood, & that these reach within a Mile or two of the beach, these Arms seperated the great Plantations which has been observ'd to be 4 or 5 miles broad, & which are again divided into Small fields by stone hedges. The Soil was good, the Space that seperated these Plantations from the entire Lava, or burnt Cindery surface, which extends two or three miles inland from the beach, is Planted with Breadfruit trees & Plantains; Wild or horse Plantains grow some distance into the first Wood. The prevailing productions of the above Plantations is Tarro (Eddy) & which in all other Islands is only plant'd in very wet ground, & where a great part is always coverd with water. These can only be water'd from the heavens, the Earth about them is so contriv'd as to retain about their roots whatever moisture falls; they are the best tasted tarrow we have seen. The Sweet Potatoe grows any where, a great part of the ground about the Villages yield them... Four Leagues to the N of Karakacooa bay, is [Keauhou] another which they represent as equally good, & thereabouts the Country is less hurt by the Lava. The King has here another Residence . . . (Beaglehole 1967:607–608)

#### **Journal of Hiram Bingham (1820-1841)**

Hiram Bingham was a member of the first party of missionaries sent to the "Sandwich Islands" (Hawai'i), by the American Board of Commissioners for Foreign Missions (ABCFM), arriving in April 1820. Bingham worked earnestly in his capacity as a missionary, but also took the time to speak with surviving *ali'i*, and people of the land who had been eye-witnesses to many of the events that followed the arrival of foreigners in the islands. His historical accounts were first published in 1847, and subsequently edited and republished in 1855 (the source of the 1969 reprint cited herein). Bingham's texts were regularly referenced by authors and historians throughout the nineteenth century, and his descriptions of Hawaiian history provide readers with important details. While Bingham does not specifically reference Ki'ilae or Kauleoli, he does speak of Hōnaunau, and in his narratives he addresses native beliefs pertaining to *ilina* (burials). Bingham (1969) reported:

#### ***Burials of Ali'i Revered—Relocation of Remains from Hōnaunau to the Pali of Ka'awaloa and Kealakekua (1829)***

A species of superstition once existed at the islands analogous to the *grave-worship* of the Chinese, and the worship of relics in other countries. This was supposed to have nearly ceased before the attempt to introduce Romanism. It was, however obvious that the tendency still existed in the nation to revive that superstition. The zeal of Kaahumanu led her as early as 1829 to visit the Hale o Keawe at Honaunau, a cemetery associated with dark superstitions, and surrounded with horrid wooden images of former generations. The regent visited the place not to mingle her adorations with her early contemporaries and predecessors to the relics of departed mortals, but for the purpose of removing the bones of twenty-four deified kings and princes of the Hawaiian race, and consigning them to oblivion. But at that time she thought Naihe was wavering in respect to their removal, and Kekauluohi, whose father's bones were there, she thought still cherished an undue veneration for them; and Boki she feared would treat her with abuse and violence if she should disturb the house or remove its mass of relics. But when she saw it *ought* to be done, she determined it *should* be done: and in company with Mr. Ruggles and Kapiolani, she went to the sacred deposit, and caused the bones to be placed in large coffins and entombed in a cave in the precipice at the head of Kealakekua Bay. In doing this she found an expensive article of foreign manufacture,

comparatively new, placed near the bones of the father of Kekauluohi, and which appeared to have been presented as an offering since the date of the prohibition of the worship of idols . . . (Bingham 1969:426)

While Bingham implies that such reverence for *ilina* “once existed,” we find through the oral interviews that in modern practice respect for *ilina* remains important among the families of the region.

### **The Journal of William Ellis (Descriptions of Hōnaunau and Vicinity)**

Following the death of Kamehameha I in 1819, the Hawaiian religious and political systems began undergoing radical changes. Just moments after his death, Ka‘ahumanu proclaimed herself “*Kuhina nui*” (Prime Minister), and approximately six months later, the ancient *kapu* system was overthrown in chiefly centers. Less than a year after Kamehameha’s death, Protestant missionaries arrived from America (see I‘i 1959, Kamakau 1961, and Fornander 1973). In 1823, British missionary William Ellis and members of the American Board of Commissioners for Foreign Missions (ABCFM) toured the island of Hawai‘i seeking out communities in which to further work of the growing Calvinist mission. Ellis’ writings (1963), generally the earliest detailed accounts (written in 1825) of settlements around the island of Hawai‘i, offer readers important glimpses into the nature of native residency and history at the time.

During the visit, Ellis and his traveling companions visited Hōnaunau and lands south. While Ki‘ilae or Kauleolī are not specifically referenced in the journal, members of the tour did walk the *alaloa* (coastal trail—later modified into the *Alanui Aupuni*) through Keōkea, Ki‘ilae, and on to lands in the south. On the journey, it was reported that they “passed through two villages, containing between three and four hundred inhabitants” (Ellis 1963:118). The following excerpts from Ellis’ journal—with descriptions of land use and customs in *ahupua‘a* neighboring Ki‘ilae-Kauleolī—describe the landscape extending from sea to the upland field systems and areas of residence. Selected narratives are cited here as they relate to our general understanding of the cultural-historical landscape of the period.

Ellis reported that the “town” of Hōnaunau contained “147 houses” (Ellis 1963:109). During the visit, Asa Thurston and Joseph Goodrich made an excursion to the uplands, where they found that:

after proceeding about two miles from the sea, that the ground was generally cultivated.

They passed through considerable groves of breadfruit trees, saw many cocoa-nuts, and number of the prickly pear (*cactus ficus inidicus*), growing very large, and loaded with fruit. They also found many people residing at the distance of from two to four miles from the beach, in the midst of the plantations, who seemed to enjoy an abundance of provisions, seldom possessed by those of the sea shore . . . (Ellis 1963:109)

Ellis’ journal includes detailed descriptions of Hale o Keawe and the larger area of the Pu‘uhonua o Hōnaunau. Those texts, cited in several historical publications (e.g., Stokes and Dye 1991, and Bryan and Emory et al., 1986), are not repeated here as they exceed the scope of the present study. Departing from Hōnaunau, the party traveled “nearly half a mile, to a place called Keokea” (Ellis 1963:115), and the next day, Ellis and party explored the cliff of Keanae‘e and the area near the Keōkea-Ki‘ilae boundary. Ellis reported:

After travelling half a mile, a singular appearance of the lava, at a small distance from the shore, attracted our attention, and, on examination, presented a curious phenomenon. it consisted of a covered avenue of considerable extent, from fifty to sixty feet in height, formed by the flowing of the lava, in some recent eruption, over the edge of a perpendicular pile of ancient volcanic rocks, from sixty to seventy feet high . . . As we passed along this vaulted avenue, called by the native Keanae, we beheld a number of caverns and tunnels, from some of which streams of lava flowed. The mouths of others being walled up with stones, we supposed were used as sepulchers.

Mats, spread upon the slabs of lava, calabashes, &c. indicated some of them to be the



habitations of men; others, near the openings, were used as workshops, where women were weaving mats, or beating cloth.

In many places the water filtered through the lava, and, around the spots where it had dropped on the ground, we observed a quantity of fine white spear-shaped crystals of a sharp nitrous taste.

Having walked a considerable distance along the covered way, and collected as many specimens of the lava as we could conveniently carry, we returned to the sea-shore. Mr. Harwood being indisposed, and unable to travel, and being myself but weak, we proceeded in the canoe to Kalahiti, where we landed about 2 p.m. and waited the arrival of our companions. The rest of the party travelled along the shore, by a path often tedious and difficult... They passed through two villages, containing between three and four hundred inhabitants, and reached Kalahiti about four in the afternoon . . . (Ellis 1963:116–118)

### **Records of the Hawaiian Mission Station—South Kona, Hawai‘i**

In April 1824, the year following Ellis’ visit, the first South Kona Mission Station was established on the flats of Ka‘awaloa by Reverend James Ely. The station was situated on land provided for that purpose by chiefess Kapi‘olani and her husband, Haihā Nāihe (see references to these important *ali‘i* of Kona earlier in this study). It was from the Ka‘awaloa Station, and later the Kealahakua Station (to which the Ka‘awaloa branch was relocated), that activities of the South Kona churches were directed.

Four years after his arrival, James Ely departed from Ka‘awaloa (October 15, 1828), and was replaced by Samuel Ruggles (who transferred from the Kailua Station). On May 17, 1832, Cochran Forbes arrived in Hawai‘i to take up residence at the Ka‘awaloa (South Kona) Mission. Mark Ives also settled in the South Kona Station with Forbes, and in 1835, they established the Keālia-Kapalilua out-station of South Kona. Under Forbes’ tenure, the Ka‘awaloa Station relocated to the Kepulu vicinity of Nāpo‘opo‘o (location of the present-day Kāhikolu Church), in 1839, and became known as the Kealahakua Station. Forbes remained in Kona until 1845, and Ives remained until 1847.

In 1848, J.F. Pogue took up residency in the Kealahakua station and remained there till 1851, when he was transferred to Lahaina Luna. In 1852, John D. Paris relocated from Wai‘ōhinu, Ka‘ū, to the Kealahakua Station. During Paris’ tenure, the station evolved and assumed the basic configuration (i.e., location of churches and meeting areas) recalled by Hawaiian families in interviews conducted as a part of the present study. Reverend J.D. Paris remained in his Kona parish until he passed away in 1892. The elder Paris, and his descendants were very active in Kona matters, and one of his great grandchildren are among the interviewees cited in the present study.

It is from the writings of the missionaries mentioned above, that we find several important descriptions of the native communities and population in the Ki‘īlae-Kauleolī vicinity and the larger region of *Kapalilua*. Selected excerpts from letters and station reports are cited here, which document some of the history of the region, and transitions in residency. The communications were viewed in the collection of the *Hawaiian Mission Children’s Library*. Underlining of place names and emphasis given in selected narratives are used to draw attention to specific narratives.

#### 1833 - C. Forbes, at Ka‘awaloa:

Probably no Station on the islands is worse situated for access to the people than is Kaawaloa. There is no way of getting from village to village south of the bay, but in canoes, unless we climb over vast shaggy beds of lava, and the people mostly coming under our charge are strewn along a shore probably 40 miles in length, besides some 5,000 who live on the south point of the Island . . . [only] a small portion of the people allotted to Kaawaloa station has hitherto come directly under the Missionary influence. Probably 1000 may be said to come directly under Missionary influence which leaves 9 or 10,000 destitute as the whole district includes 10 or 12,000 souls . . . (Forbes 1833:3)

November 8, 1835—C. Forbes, writing from Kuapehu, reported that Keālia has been chosen as an out station (Vol. 8:2310).

November 8, 1835—C. Forbes, writing from Kuapehu, reported:

. . . Our station embraces the coast delineated on the map from Kainaliu on the north west, to Puna on the southwest; a coast of nearly 90 miles. Two weeks is the very least in which the whole field can be hastily visited by simply preaching at the more important villages . . . [Vol. 8:2317]

July 23, 1836—C. Forbes, writing from Kaʻawaloa, reported:

Last fall I had every house numbered and its inhabitants from the borders of the Kailua Station [being at Kainaliu], southward & round to the borders of this station on the southeast, and found the whole population of my field to be as follows. This part of Kona 3,536 adults; 1473 children...total 5,009 . . . Kau adults 3,365 . . . children 1,401 . . . total in Kau 4,766 . . . [Vol. 8:2330; MHM-266.858 M69; Missionary Letters 1830-1836; Vols. 4 and 8]

October-November 1836 – Among the letters of Cochran Forbes, is a “Journal of occurrences showing my manner of spending my time” (October 10-26, 1836); the original handwritten letters are in the collection of the ABFCM-Hawaii Papers, Houghton Library, Harvard (a photocopy was viewed in the collection of Hawaiian Mission Children’s Library).

On October 10, 1836, Forbes sailed from Kaʻawaloa, beginning his tour of the southern portion of his mission station. His journal offers readers a description of the villages he visited, the conditions of the schools, churches, and circumstances of the people, and he specifically discussed Kiʻilae Village, Hōnaunau, and conditions in the region. While Forbes at times wrote with a prejudice, his first hand accounts are of value in understanding the historic landscape of the period.

Forbes wrote that he first “arrived at Honaunau,” where he “preached to a congregation in the school room.” (Forbes 1836:2). He then reported:

Then we left for Kealia where we have just arrived. Alas for there [sic] poor souls. There are perhaps 50 children growing up in ignorance. No one to teach them; and their Chief [chiefess] (Akahi) does not encourage schools. She has placed two canoes in the school house, thus making it a store house! Instead of having her people collected for instruction as she ought, she collects her canoes in the school house & has no school. Her coming to reside among them has manifestly altered things for the worse. Formerly they had a school and showed some signs of improvement. Now they are more the heathens than they were 7 years ago!! Still she does not openly oppose.

9 o’clock at night. Have just closed a little meeting with all who assembled at the blowing of the shell. The headman has just now presented us baked hog weighing perhaps 80 lbs . . . (Forbes 1836:2-3)

Forbes’ journal entry of October 13<sup>th</sup>, provides readers with a general overview of the villages between Hōnaunau and “Opihale” (or ‘Ōpihihale):

I ought to say that all these villages are destitute of regular schools, tho I found in all of them a number who can read & in some cases almost the whole village could read. The teachers who had taught them that much, have deserted their posts and gone, many of them, after chiefs. They being the most capable men of their villages, in many cases, have been greedily courted by the chiefs, for headmen or for men to wait about their persons, and a prospect of earthly gain is as attractive to these poor heathens as any... nor indeed can I blame them. But we must now have better teachers to supply their place. I found the people in all of the

villages remarkably kind & docil & believe they would generally be glad to have schools if they had competent teachers. The above remarks apply to most every village from Honaunau, 10 miles south of us to Kau . . . (Forbes 1836:9-10)

On the journey from Ka'ū, returning to Ka'awaloa, Forbes visited Kilai (Ki'ilae) Village, and recorded the following observations:

October 14, 1836 ...we came to Kealia about 11 o'clock and collected the people. Preached and distributed some tracts. After taking some refreshments we left for Honaunau, and on our way stopped at Kilai, which as many other villages is perched upon high rocks, almost inaccessible from the sea unless when smooth. In attempting to spring on the rocks, I unhappily stepped just as a surge raised the canoe some four or five feet from its position and of course, missed my calculations, when having to descend instead of stepping up. I fell prostrate on the rocks and should have rolled into the sea had not one of the natives caught me & supported me till I recovered enough to sit erect. The shock was so great as to quite deprive me of all power for a time, tho no bones were broken. The kind sympathy of one or two who rowed the canoe . . . will I think never be forgotten.

Recovered a little, we ascended to the village and the people soon collected in the headman's house, to whom I preached, distributed some tracts and left them amid many a sympathy (*aloha*) for my bruised bones. Most of those present could read. The man's Daughter formerly taught a school in this village. Her husband accompanied Mr. Ruggles to America and has not yet returned. She too has forsaken her school and wandered off to Kauai. O how my heart aches for these poor villages!

Leaving Kilai we arrived at Honaunau about 3 o'clock. Here found the children collected in school. After school the people were assembled, to whom I preached. This closed the labors of the day . . . (Forbes 1836:14-17)

May 6, 1841 – Mark Ives described general activities and events of the last year, noting:

My spare time during the week has been employed in schools. I have spent my Sabbaths at Kealia, about five miles from this place; where we have had our house of worship filled both forenoon & afternoon; & it holds from five to six hundred people... My only means of getting to this place, is either to go in a canoe, or walk by land without a foot path; over uneven rocks & huge points of lava . . . (Ives 1841:2)

Ives also observed that in the district, “the condition of the schools has fluctuated . . . the chiefs have had the teachers and students out working the *koele* (planting fields) . . .” (1841:4); and that there was a total of “34 schools with 1,837 students” found in the district (including South Kona and Kau) (1841:5a).

April 1, 1842—C. Forbes reported on activities and events during 1841-1842, describing the fields of Ka'ū and South Kona (which had been divided into three sections); and also noted the passing of Chiefess Kapi'olani:

II) I come now to the part of this field in which Bro. Ives has spent most of his labors the past year, which by itself forms a field of labor large enough for any one man. It commences at Kealia and extends to the borders of Kau & is 15 or 20 miles in extent. The population is near 2000.

In this district which is called Kapalilua there are 10 schools containing 400 scholars all which are now in an interesting condition. There are 450 church members in Kapalilua including Kealia. They have lately been set off from this chh. to form a separated church by themselves... Kealia is about 8 miles by water and ten or 12 by land over a bad road from this place....

III) It remains to report the district of which Kealakekua is the station and which has been the principal field of my labors the past year. The limits of this district are from Kiilai to the borders of Bro. Thurston's field, about six miles away from Kealakekua [on the coast at Kāināliu]. The whole population is about 2600. There are 11 schools in a prosperous condition. Whole number of scholars in school 553 . . . This district has seriously felt the loss of Kapiolani who was indeed a mother to us & to the people & a nursing mother to the chh. here. Never did we know how much the cause was indebted to here example & her prayers till the lord deprived us of her. There is at present no probability that her place will ever be filled . . . (Report of the Mission Station at Kealakekua—MHM Kealakekua 1839-1857; Mss 2a H31 Kealakekua. Forbes 1842:6-7)

April 4, 1842—M. Ives added a section to the Report of the Mission Station at Kealakekua; commenting on activities and events in the *Kapalilua* field, which had a population of some 2000 individuals:

The field at Kapalilua extends 20 miles along the sea coast, and extends 4 to 8 miles inland. The villages can only be reached by canoe . . . Kealia, at the northern extremity of the field is the best location for the meeting house and landing . . . There are no roads in Kealia for a horse to go . . . (Ives 1842:2-3; MHM Kealakekua 1839-1857; Mss 2a H31 Kealakekua)

May 9, 1846 – M. Ives' report from the Mission Station at Kealakekua for 1845-1846 includes descriptions of events at Kealakekua, Keālia, and *Kapalilua*. He also described the devastating impacts of a drought, fires, and then heavy rains upon the native population and landscape of South Kona. In the period between February 15<sup>th</sup> to December 18<sup>th</sup>, 1845, there was no rainfall, then on December 18<sup>th</sup> there was “a terrific conflagration.”

The drought aforementioned was followed by the epidemic common to all the island & by a scarcity of provisions scarcely before known even at Kealakekua. The consequence was that numbers flocked to Kau & other places where they found sustenance.

It is now impossible for many of the natives to get taro & potatoe tops to start their plantations; such has been the devastation. A spark of fire dropped into the leaves would immediately kindle & the consequence was that the country from Onouli to Kapua & onwards a distance of 30 miles including all our arable land except here and there a small patch where the owner with uncommon vigor defended it, was burnt over & the food thoroughly baked. Often the man after watching his plantation a whole night would leave it supposing it past danger when some sudden turn of the wind would change the direction of the fire, & before he could again reach it, his whole plantation be consumed.

There has been a decrease of children in our field the last 5 years, upwards of 250... The population in our field is diminishing. There is no place probably among us where it is on the increase. Kaawaloa which in 1835 numbered 460 inhabitants has now only 160 either on the land or considered as belonging to it . . . The famines too are thinning off our inhabitants.

There are two or three vessels constantly plying between our place & Oahu & every vessel that left for several weeks was loaded down with passengers so as scarcely to afford a foot room for the captain. But a part of these will ever get back.

They are trusted for their fare to Oahu & when they return they are required to pay the fare for both ways. Their lands in the mean time, lying uncultivated, they will have nothing to eat should the return . . . (Ives 1846:2-5; MHM Kealakekua 1839-1857; Mss 2a H31 Kealakekua)

1848-1849—J.F. Pogue and family arrived at the Kealakekua Station in 1848, landing at Nāpo'opo'o. At the time of Pogue's arrival at the South Kona Station, the King embarked upon a program of public

improvements—causing the *Alanui Aupuni* (Government Road) system, like that at Alahaka and through Ki‘īlae-Kauleolī to be improved—and caused the Hawaiian system of land tenure to be radically altered. The latter was instituted through the *Māhele ‘Āina* of 1848.

Describing the improvements to the roads and highways of the Kingdom, Pogue situated at Kepulu–Nāpo‘opo‘o reported:

The road which commences at Kailua & which is thought may some day girdle the island has been extended south of us some 13 miles—So that we have easier access to certain parts of our field & may thus have more frequent intercourse with the people. Another road has been commenced, extending from the Bay to the interior, this is a cart road [Nāpo‘opo‘o cart road completed in 1853]. This road may soon be completed & when finished will be a great improvement, as well as a convenience to persons doing business in the Bay [Kealakekua]. As there has not been heretofore a cart road from the interior to the Bay . . . (Pogue 1851:1-2)

1852—Upon the departure of J.F. Pogue, Reverend John D. Paris and family settled at “the old Station, chosen & occupied by the first Missionaries” (Paris 1852:2). In the Station Report for 1852, Paris reported that he had conducted regular tours of the Kealakekua Station, where he preached “every other Sab. at Kealakekua, & divided the remainder between Nawawa, Honaunau & Kealia” (Paris 1852:3).

In the 1852 report, under the heading “Advance in Civilization &c” Paris penned narratives are likely also a reflection of the condition of land tenure which resulted among some of the native tenants as a result of the *Māhele* of 1848:

South Kona embraces a large extent of the richest, most fertile land, with the best climate on Hawaii. A little back from the sea shore, vegetables of all kinds, & fruit in great variety, can be produced with as little labor & in as great perfection as in any portion of the Hawaiian Islands . . . there are signs of improvement & progress among our people. A number are purchasing farms & fencing them, & seem to be inspired with new life in putting in order & cultivating them. Orange & other fruit trees are being planted extensively & are beginning to adorn the hills & vallies. A little better class of houses, with enclosed yards ornamented with flowers, \* a variety of fruit & shade trees begin to appear . . . (Paris 1852:7-8)

1855—J.D. Paris (Station Report). Paris described the reorganization of the South Kona Mission Station, giving the boundaries of each out-station, and the population, beginning at Hōkūkano and extending to Miloli‘i-Kapu‘a. Paris reported:

Since our last Annual Report our Church in S. Kona has reorganized and divided into six branches . . . The 3d [branch] is the Hoonaunau Church. This church embraces 169 members . . . This Chh. & people have a rude Stone Meeting House which they have improved a good deal. It has a thatched roof—is not plastered or floored. But it is well covered with *Lauhala* mats & partly seated...

. . . The health of the native population & foreign residents in South Kona has been during the past year unusually good. . . . Our hills & valleys have been watered abundantly with the showers of heaven. The Earth has yielded its increase & the ocean abounded with fish. . . . More patches have been cultivated—more fields fenced—more trees planted—more houses built & repaired, & more roads & paths made than in years past. In some of our villages there is a very marked improvement about the houses & yards everything wearing a more cheerful aspect.

We have no field waving with golden harvests (as on some other islands) but our people are multiplying their Coffee patches & the number of Orange trees loaded with golden fruit, are rapidly increasing.

Some of the “thousand hills” are dotted over with cattle & horses; and vast fields of barren lava, fertilized with streams of living goats . . . I would remark that the materials collected & gratuitous labour on three houses of worship at Kealia, Naapoopoo & Nawa [Nāwāwā], would amount to more than a Thousand dollars over & above the sum paid in cash . . . (Paris 1855:7-8)

1858—In the Station Report of 1858, J.D. Paris observed that his labors had been much the same as those previously described. The coast line of South Kona covered some 50 or 60 miles, and that “the people live for the most part along the shores & inland from two to four or five miles” (Paris 1858:1). Paris also reported that he regularly preached at two places on each Sabbath, generally three to five miles to either side of the station [being Hōnaunau and Nāwāwā] (Paris 1858:3).

### **Commander Charles Wilkes: The United States Exploring Expedition of 1840-1841**

In 1840 and 1841, Commander Charles Wilkes of the United States Exploring Expedition, toured the Hawaiian Islands (Wilkes 1845, Vol. IV). In November 1840, Wilkes and party toured South Kona, and Wilkes’ narratives provide readers with important documentation concerning the landscape and practices of the natives living in the region. Again, no specific references were made to the lands of Ki’īlae and Kauleoli, but his descriptions of dryland agricultural practices and the larger Hawaiian community at the time are of value to an understanding the area.

On the 14<sup>th</sup> (Saturday), they landed at Napolo [Nāpo‘opo‘o], and were kindly received by Mr. Forbes, the resident missionary for the district of Kealakekua. They were greatly disappointed when they found it would be impossible to proceed on their tour that day, and that their departure would have to be deferred until Monday, as it would be impossible to prepare the food necessary for the journey in a day, and the next being Sunday, no natives could be persuaded to travel until Monday. On the nights of their stay with Mr. Forbes, they distinctly saw the heavens lighted up by the fires of the volcano of Kilauea Pele, although at the distance of forty miles. This mission station is on the west side of Hawaii, and on the south side of the bay of Kealakekua.

Almost the whole coast of this district, extending forty miles, is one line of lava. This frequently lies in large masses for miles in extent, and is in other places partially broken, exhibiting perpendicular cliffs, against which the sea dashes with fury. This formation extends half a mile into the interior, and as the distance from the sea increases, the soil becomes richer and more productive. The face of the country, even within this rocky barrier, is rough and covered with blocks and beds of lava, more or less decomposed. The land in places reaches the altitude of two thousand feet, and at a distance of two miles from the coast begins to be well covered with woods of various kinds of trees, which are rendered almost impassable by an undergrowth of vines and ferns. In these woods there are many cleared spots, which have the appearance of having been formerly cultivated, or having been burnt by the descending streams of lava. In some places, these strips of wood descend to within a mile of the shore, having escaped destruction. These are in no place parallel to the shore, but lie always in the direction which the streams of lava would take in descending from the mountains.

Cultivation is carried on in many places where it would be deemed almost impracticable in any other country. There are, indeed, few places where a plough could be used in this district, although there is a strip of good land from three to five miles wide, having the barren lava-coast on one side and the forest on the other. This strip produces, luxuriantly, whatever is planted on it, the soil being formed of decomposed lava, mixed with vegetable matter. The natives, during the rainy season, also plant, in excavations among the lava rocks, sweet-potatoes, melons, and pine-apples, all of which produce a crop...

The only staple commodities are sweet-potatoes, upland taro, and yams. The latter are almost entirely raised for ships. Sugar-cane, bananas, pine-apples, bread-fruit, cocoa-nuts, and

melons, are also cultivated. The Irish potato, Indian corn, beans, coffee, cotton, figs, oranges, guavas, and grapes, have been introduced, and might be successfully cultivated, if there was any demand for them.

The climate is mild throughout the district. The thermometer ranges between 62° and 76° in the winter, and from 70° to 86° in the summer, and seldom above 86° or below 62°; this, it will be remembered, is on the lee side of the island. They seldom have strong winds; and in the day they enjoy a cool sea-breeze, which changes to the land-breeze at night.

From May to September is the wet or rainy season, when they experience a good deal of rain; and this is also the growing season.

In December, January, and February, they have usually very dry weather, and the winds prevail from the north, from which quarter it sometimes blows fresh . . .

Good paths for horses have been made throughout the district, with much labour. An evident improvement has taken place in the habits of the females, who have been taught the use of the needle, and other feminine employments. Kapiolani has been very assiduous in introducing improvements

. . . The inhabitants of this district are nine thousand. The marriages are about one hundred yearly. The population is thought to be decreasing, but this is assuming as correct the former census, which I have before said is not to be relied on. The grounds on which this decrease has been supposed to exist were, that it was found that of fifty-six mothers, taking old and young promiscuously, were born two hundred and sixty-seven children, of whom one hundred and twenty-nine are living, one hundred and twenty-five died very young, mostly under the age of two years, and thirteen at ages beyond ten years. It is thought by Mr. Forbes, that this proportion of deaths would hold good through the district. One thing seems certain however, that they do not all die from hereditary diseases; many are carried off by diarrhea, occasioned by improper diet, and a few are stillborn. There has also been much emigration from this district to others, and many have embarked as sailors on board whale-ships . . .

There are twenty-three schools, one of which is kept by the missionaries, and the others by natives, some of whom have been educated at the high-school at Lahaina. The number of scholars is between seven and eight hundred... (Wilkes 1845[IV]:89–94)

. . . On their way from the coast, they in a short time came to a very fertile district, with luxuriant sugar-cane, taro, &c., and good houses. The taro here is cultivated without water; but in order to retain the moisture and protect the plant from the sun, it was observed that they used fern-leaves to secure and shield the roots. The taro, thus cultivated, attains a much larger size and is superior to that which is grown in water, being more dry and mealy. The houses of this district are much better also, although the natives, for the most part, reside at the sea-shore, to enjoy fishing and bathing.

In their day's jaunt they passed some wooded land, the trees of which consisted of *koa* (*Acacia*), *Edwardsia chrysophylla* (which is used for fuel), *Dodonaea*, &c. Plants of wild raspberry and strawberry were seen—the fruits of both now out of season; the former, however, yet showed some of its blossoms, like small roses. The most remarkable plant was a species of dock, with large clusters of crimson flowers, which runs up the branches of dead trees to the height of twenty or thirty feet. These woods abounded with birds, several of which Mr. Peale shot; among them a crow, called by the natives *Alala*, and a *muscipapa* called *Elepaio*—formerly worshipped as the god of canoe-makers . . . (Wilkes 1845:98–99)

### The Journal of Chester S. Lyman (1846-1847)

In 1846, Chester S. Lyman, “a sometime professor” at Yale University visited the island of Hawai‘i. His narratives provide readers with important documentation pertaining to — the native villages in Kona; decline of the native population in the region; and offers specific descriptions of roads and trails (both along the coast and in the uplands) between Kealahou and Keauhou. The original typewritten manuscript (919.69 L 98) was viewed in the collection of the Hawaiian Mission Children’s Society Library.

Traveling from Wai‘ōhinu, Ka‘ū to South Kona, Lyman stopped at Kapu-a, where he hired a canoe to take him on to Kealahou. While sailing in the canoe, Lyman recorded the following observations of the area from Kalahiki to Kealahou (though not named, Ki‘ilae-Kauleoli are considered in the narratives):

(September 4, 1846) At 3 h. 45 m., we passed Kalahiki, a long straggling village with a beautiful sand beach and extensive coconut groves.

Hookena, Kealia, Keokea and other villages of some size, we passed before reaching Honaunau, which is an extensive and populous place about 6 miles from Kealahou, and celebrated for containing in idolatrous times the chief temple for human sacrifices and affording a city of refuge to fleeing criminals or warriors . . . (Lyman n.d.:21)

Describing the church, Kāhikolu, at Kepulu, Lyman noted that it had been built to hold “a congregation of 2000, tho’ the ordinary congregation at present I am told has dwindled down to 100” (Lyman n.d.:23). Lyman explains this in the context of a drought and famine that affected the entire *Kapalilua* region:

One reason for the smallness of the congregation appears to have been the dispersion of the people in consequence of the great famine which prevailed on this side of the island for a year past. There has been a continual drought during that time, reducing every vegetable substance to tinder, in consequence of which the whole country was overrun by fire, presenting a most sublime spectacle by night and destroying many habitations.

The natives have suffered exceedingly for want of food and have been obliged to subsist on a species or two of roots, scarcely fit for food, and the few fish they could get from the sea . . . (Lyman n.d.:23)

On December 2<sup>nd</sup> 1846, Lyman and Ives traveled to Hōnaunau, where they visited the *pu‘uhonua* (place of sanctuary) (Lyman, Book V; October 10-December 21, 1846), and Lyman recorded a detailed account of the visit and features seen (including a sketch). Apparently, he did not again venture further south into the Ki‘ilae-Kauleoli vicinity.

### George Bowser’s “Directory and Tourists Guide” (1880)

George Bowser, editor of “*The Hawaiian Kingdom Statistical and Commercial Directory and Tourists Guide*” (1880) wrote about various statistics and places of interest around the Hawaiian Islands. In the following excerpts from “An Itinerary of the Hawaiian Islands...” (Chapter IV Hawai‘i), Bowser described the communities and various attractions of the Kealahou-Ho‘okena section of Kona. Bowser’s narratives are written from the perspective of traveling the *makai* alignment of the *Alanui Aupuni* (while he passed Alahaka and the Ki‘ilae-Kauleoli area, he did not specifically mention them):

. . . Kona coffee is reckoned equal to that grown in Java, as a marketable article. It was first planted in the district in 1854, during the reign of Kamehameha III.

. . . From Kealahou I went to Hōnaunau, a village situated on a small inlet of the sea. The road to it is very rough, over nothing but lava – very slow traveling. there are here about fifteen native houses and a Roman Catholic Church. Here the traveler can get water for his horse, and important matter during the journey... Here are the remains of an old *heiau*, or native temple, and also of the other of those cities of refuge, one of which, at the other



extremity of the island... In olden days the native who had committed a crime would run for one of these cities of refuge, and, if he succeeded in reaching it, was free from all attempts at capture...

The next village on my route was Kealia, a small place four miles from Hoonaunau. Here there are about twenty native houses, a church and a school. It is close to the sea, and the tourist may spend a day or two at the place to great advantage. There is a good bathing found, also plenty of water for one's horses. Messrs. A.S. Cleghorn & Co. have a store here under the management of Mr. W.C. King. Mr. Neal, who resides here also, is always happy to accommodate strangers, having at all times a good bed at disposal. A short distance from Kealia is the landing place called Hookena, where there is another small village. The Post Office is here, and travelers can get accommodation for the night at D.H. Nahinu's, with plenty of water for horses. Up to this place the road is chiefly near the sea, and enlivened by many groves of cocoa palms, which love the neighborhood of salt water. The track is, all along, rough and stony. The whole district is unsurpassed in the matter of the pineapples and oranges it produces.

As you leave Hookena the road turns away from the sea beach. Soon afterwards—say about 500 yards from Hookena—you come to a junction of roads. I took that to the right, which brought me, in a mile and a half, to the village of Waiea. This village is not exactly on the road, but on the sea beach about a quarter of a mile from it. This is a village of about twenty-five houses, with groves of cocoanut trees and plenty of pineapple plantations. It is prettily situated, and I was favorably impressed with the appearance of the people, who look cleaner and are neater in all their ways than those of many native villages I have passed through. Here we are still bordering on the forest land, which runs for eight or ten miles up the slopes of Hualalai northward. Higher up, the potato (the Irish potato, as they call it to distinguish it from the sweet potato) can be grown, the average temperature falling materially with every two or three miles as you ascend from the sea coast... [Bowser 1880:550–554]

### H.W. Kinney's "Visitor's Guide" (1913)

In 1913, H.W. Kinney published a visitor's guide to the island of Hawai'i. In it, he included descriptions of the land at the time, historical accounts of events, and descriptions of sites and practices that might be observed by the visitor. Describing lands of the Ke'ei-Ho'okena section of Kona, Kinney paid particular attention to *heiau* and certain traditions associated with places of importance. Kinney walked the coastal alignment of the *Alanui Aupuni* on his journey, and speaks of the land from that perspective.

#### The Island of Hawaii

. . . KEEI village is a pretty spot on the beach, about a mile south of Napoopoo. Here are several *papa konane* (chess boards), but most of them are poorly preserved. Directly south thereof, on the lava, between this village and Kepu [Kipu], where there is a cocoanut grove, was the great battle of MOKUOHAI, in about 1782, where a chief, named Kiwalao, was killed after a great fight. His remains were taken to Napoopoo and baked (a last indignity) at Paokalani, where the oven is still shown.

HONAUNAU, the next village south, lies by a great bay, but the village has become non-important. It is entirely Hawaiian. Here stands the famous HALE O KEAWE, the best known of Hawaiian places of refuge and temples. It is a solid mass of stones ten feet high and 128 x 64 feet in area. The stone enclosure measures 715 x 404, its walls being 15 feet thick and 12 feet high. The first cocoanut tree *mauka* of the *heiau* is named Kaahumanu. The stone terrace *mauka* thereof was the site of the house of the priests, named Hale o Lono. *Makai* of the tree was the Hale o Keawe proper, where the high chiefs lived. Traces can still be seen of a vault under the stone floor, where were deposited the bones of high chiefs. *Makai* thereof was a sacred place for prayers, which was very *tabu*. The place of refuge proper, Alealea, is the

great structure south. On the north side of its wall is Keoua's Stone, a gigantic, long rock, which is said to have been the measure of the stature of that famous chief. On the south side is Kaahumanu's Stone, a large rock, set on some smaller ones. It is related that this queen was at Kailua, when she heard that her husband, Kamehameha, was visiting a woman who lived in the village by the great cliff south of Honaunau. She swam from Kailua to Kaawaloa, where she rested, then swimming on to Honaunau, where she arrived at dark with a single retainer. She hid under this rock, and the following morning, when her absence was noted, a search was made for her, in the course of which 500 houses were burned. Finally a dog located the two women under the stone, and there was great rejoicing. Behind this rock is a stairway leading to the top of the *puuhonua*. South of the stone is a good *papa konane*.

A fair trail leads through KEALIA, a pretty village which is practically a suburb to HOOKENA, a steamer landing place, which was once a village of much importance, but which is now being abandoned by the population, which is Hawaiian. Near the wharf was a place famous in ancient days for the playing of a game with *pupu* shells. In the great cliff south of the village are several caves, some of them still floored with sand, where *tapa* makers piled their trade. A very poor trail leads *makai* of this cliff to the KALAHIKI village, a small settlement on the south side of the bay, which may also be reached by a better trail on top of the bluff. Here are traces of a four terrace *heiau*. Beyond this there is no practicable trail leading south. There are a few very small fishing villages, Alae, Alike and Papa, which are reached by poor trails from the *mauka* road. It is necessary to travel from Hookena *mauka* to the main road, to Papa, and thence by either road or trail to HOOPULOA, the last steamship landing in Kona . . . (Kinney 1913:65)

## ***Māhele* ‘*Āina*—Land Tenure and Historic Period Transitions in Ki‘ilae and Kauleolī (and Neighboring Lands)**

The best source of documentation pertaining to native Hawaiian residency and land use practices—identifying specific residents, types of land use, crops cultivated, and features on the landscape—is found in the records of the *Māhele* ‘*Āina* (Land Division) which the King entered into with the chiefs and people in 1848. The “Land Division” gave native tenants an opportunity to acquire land (in fee-simple) that they lived on and actively cultivated.

In precontact Hawai‘i, all land and natural resources were held in trust by the high chiefs (*ali‘i* ‘*ai ahupua‘a* or *ali‘i* ‘*ai moku*). The use of lands and resources were given to the *hoa‘āina* (native tenants), at the prerogative of the *ali‘i* and their representatives or land agents (*konohiki*), who were generally lesser chiefs as well. In 1848, the Hawaiian system of land tenure was radically altered by the *Māhele* ‘*Āina*. This change in land tenure was promoted by the missionaries and the growing Western population and business interests in the island kingdom. Generally these individuals were hesitant to enter business deals on leasehold land.

The *Māhele* (division) defined the land interests of Kamehameha III (the King), the high-ranking chiefs, and the *konohiki*. As a result of the *Māhele*, all land in the Kingdom of Hawai‘i came to be placed in one of three categories: (1) Crown Lands (for the occupant of the throne); (2) Government Lands; and (3) *Konohiki* Lands (Chinen 1958:vii and Chinen 1961:13).

The “Enabling” or “Kuleana Act” (December 21, 1849) laid out the frame work by which native tenants could apply for, and be granted fee-simple interest in “*kuleana*” lands, and their rights to access and collection of resources necessary to their life upon the land in their given *ahupua‘a*. The Act reads:

August 6, 1850

An Act confirming certain resolutions of the King and Privy Council passed on the 21<sup>st</sup> day of December 1849, granting to the common people allodial titles for their own lands and house lots, and certain other privileges.

Be it enacted by the Nobles and Representatives of the People of the Hawaiian Islands in

Legislative Council assembled;

That the following sections which were passed by the King in Privy Council on the 21<sup>st</sup> day of December A.D. 1849 when the Legislature was not in session, be, and are hereby confirmed, and that certain other provisions be inserted, as follows:

**Section 1.** Resolved. That fee simple titles, free of commutation, be and are hereby granted to all native tenants, who occupy and improve any portion of any Government land, for the land they so occupy and improve, and whose claims to said lands shall be recognized as genuine by the Land Commission; Provided, however, that the Resolution shall not extend to Konohikis or other persons having the care of Government lands or to the house lots and other lands, in which the Government have an interest, in the Districts of Honolulu, Lahaina and Hilo.

**Section 2.** By and with the consent of the King and Chiefs in Privy Council assembled, it is hereby resolved, that fee simple titles free of commutation, be and are hereby granted to all native tenants who occupy and improve any lands other than those mentioned in the preceding Resolution, held by the King or any chief or Konohiki for the land they so occupy and improve. Provided however, this Resolution shall not extend to house lots or other lands situated in the Districts of Honolulu, Lahaina and Hilo.

**Section 3.** Resolved that the Board of Commissioners to quiet Land titles be, and is hereby empowered to award fee simple titles in accordance with the foregoing Resolutions; to define and separate the portions belonging to different individuals; and to provide for an equitable exchange of such different portions where it can be done, so that each man's land may be by itself.

**Section 4.** Resolved that a certain portion of the Government lands in each Island shall be set apart, and placed in the hands of special agents to be disposed of in lots of from one to fifty acres in fee simple to such natives as may not be otherwise furnished with sufficient lands at a minimum price of fifty cents per acre.

**Section 5.** In granting to the People, their House lots in fee simple, such as are separate and distinct from their cultivated lands, the amount of land in each of said House lots shall not exceed one quarter of an acre.

**Section 6.** In granting to the people their cultivated grounds, or Kalo lands, they shall only be entitled to what they have really cultivated, and which lie in the form of cultivated lands; and not such as the people may have cultivated in different spots, with the seeming intention of enlarging their lots; nor shall they be entitled to the waste lands.

**Section 7.** When the Landlords have taken allodial titles to their lands the people on each of their lands shall not be deprived of the right to take firewood, aho cord, thatch, or ti leaf from the land on which they live, for their own private use, should they need them, but they shall not have a right to take such articles to sell for profit. They shall also inform the Landlord or his agent, and proceed with his consent. The people shall also have a right to drinking water, and running water, and the right of way. The springs of water, and running water, and roads shall be free to all should they need them, on all lands granted in fee simple. Provided, that this shall not be applicable to wells and water courses which individuals have made for their own use.

Done and passed at the Council House, Honolulu this 6<sup>th</sup> day of August 1850. [copied

from original handwritten “Enabling Act”<sup>6</sup> – State Archives DLNR 2-4]

The lands awarded to the *hoa‘āina* (native tenants) became known as “*Kuleana* Lands.” All of the claims and awards (the Land Commission Awards or LCA) were numbered, and the LCA numbers remain in use today to identify the original owners of lands in Hawai‘i.

The work of the Land Commission was brought to a close on March 31, 1855. The program, directed by principles adopted on August 20, 1846, met with mixed results. In its’ statement to the King, the Commissioners to Quiet Land Titles (George M. Robertson, March 31, 1855) summarized events that had transpired during the life of the Commission:

...The first award made by the Commission was that of John Voss on the 31<sup>st</sup> March 1847.

The time originally granted to the Board for the hearing and settlement of all the land claims in the kingdom was two years, ending the fourteenth day of February, 1848.

Before the expiration of that term it became evident that a longer time would be required to perform a work... Accordingly, the Legislature on the 26<sup>th</sup> day of August 1847, passed an Act to extend the duration of the Board to the 14<sup>th</sup> of February, 1849, adding one year to the term first prescribed, not however, for the purpose of admitting fresh claims, but for the purposes of hearing, adjudicating and surveying those claims that should be presented by the 14<sup>th</sup> February, 1848. It became apparent to the Legislature of 1848 that the labors of the Land Commission had never been fully understood, nor the magnitude of the work assigned to them properly appreciated, and that it was necessary again to extend the duration of the Board. An act was accordingly passed, wisely extending the powers of the Commissioners “for such a period of time from the 14<sup>th</sup> day of February 1849, as shall be necessary for the full and faithful examination, settlement and award upon all such claims as may have been presented to said Board.” . . . [T]he Board appointed a number of Sub-Commissioners in various parts of the kingdom, chiefly gentlemen connected with the American Mission, who from their intelligence, knowledge of the Hawaiian language, and well-known desire to forward any work which they believed to be for the good of the people, were better calculated than any other class of men on the islands to be useful auxiliaries to the Board at Honolulu . . .

During the ten months that elapsed between the constitution of the Board and the end of the year 1846, only 371 claims were received at the office; during the year 1847 only 2,460, while 8,478 came in after the first day of January 1848. To these are to be added 2,100 claims, bearing supplementary numbers, chiefly consisting of claims which had been forwarded to the Board, but lost or destroyed on the way. In the year 1851, 105 new claims were admitted, for Kuleanas in the Fort Lands of Honolulu, by order of the Legislature. The total number of claims therefore, amounts to 13,514, of which 209 belonged to foreigners and their descendants. The original papers, as they were received at the office, were numbered and copied into the Registers of the Commission, which highly necessary part of the work entailed no small amount of labor...

The whole number of Awards perfected by the Board up to its dissolution is 9,337, leaving an apparent balance of claims not awarded of say 4,200. Of these, at least 1,500 may be ranked as duplicates, and of the remaining 2,700 perhaps 1,500 have been rejected as bad, while of the balance some have not been prosecuted by the parties interested; many have been relinquished and given up to the Konohikis, even after surveys were procured by the Board, and hundreds of claimants have died, leaving no legal representatives. It is probable also that on account of the dilatoriness of some claimants in prosecuting their rights before the

---

<sup>6</sup> See also *Kanawai Hoopai Karaima no ko Hawaii Pae Aina* (Penal Code) 1850.

Commission, there are even now, after the great length of time which has been afforded, some perfectly good claims on the Registers of the Board, the owners of which have never taken the trouble to prove them. If there are any such, they deserve no commiseration, for every pains has been taken by the Commissioners and their agents, by means of oft repeated public notices and renewed visits to the different districts of the Islands, to afford all and every of the claimants an opportunity of securing their rights . . . (Minister of Interior Report 1856:10-17)

It is reported that the total amount of land awarded to *hoa'āina* equaled approximately 28,658 acres (cf. Kame'eleihiwa 1992:295).

A review of the Hawaiian language records of the *Māhele* reveals important information regarding residency and land use practices in the lands of Ki'īlae and Kauleolī, and lands immediately to their north and south. The Indices of Awards (1929), which is the standard reference used to search out awardees of *kuleana* in the *Māhele*, report that only one claim each was recorded for the *ahupua'a* of Ki'īlae and Kauleolī. This apparent dearth of claims is particularly puzzling when considering the extensive cultural remains—including a wide range of agricultural features—that are seen when walking upon the land of Ki'īlae (and to a lesser extent Kauleolī) between the shore and the present-day Māmalahoa Highway.

A review of the original Hawaiian Language records of the *Māhele* revealed that a number of claims were actually made for *kuleana* in both Ki'īlae and Kauleolī. Rather than only the two claims, one awarded to George Davis Hū'eu (the *Ali'i-Konohiki* awardee of Ki'īlae), and the other, to Nika, the sole native tenant awardee in Kauleolī (the entire *ahupua'a* of Kauleolī was retained as Government Land), a total of eighteen (18) additional claims were located (making a total of 20 known claims). It should be noted that while a detailed review of the *Māhele* records was conducted as a part of the current study, it is possible that additional records of claims may be located in future searches of the *Māhele* books.

Upon realizing that many more claims for *kuleana* were made than were awarded, one naturally might wonder “why?” Aside from the fact that the concept of private land ownership was completely foreign to the native Hawaiian mind, some other factors were at play. Regardless, the records show that many native tenants did step forward in the process of application for private land rights. Two problems in perfecting claims stand out, one was the occurrence of epidemics, and the other was fear. The records show that in some cases an applicant registered a claim, and within a year, was reported as having died. In the matter of fear, several communications written by John Fuller, who surveyed most of the *Māhele* claims in Kona, provides us with some insights into what else was occurring. Fuller observed that some *konohiki* were preventing “quite a number” of residents from presenting claims (see communications in this study).

One communication from Fuller to Keoni Ana (John Young), the Minister of the Interior, specifically tells of circumstances at Ki'īlae:

Kealakekua, August 17, 1853

J. Fuller (Kona Land Agent, Surveyor),

To J. H. Smith (Secretary, Board of Land Commissioners):

. . . I send you enclosed the surveys of Kapaakea's Claims and wish you would show them to His Highness Mr. Young, that he may know how they are located. I sent you by Mr. Kitterege a package of 242 surveys with letter. Please inform me whether they came safe to hand...

Have I any thing to do with Kuleanas where the claimants refuse to show their claims?  
On some lands the Konohiki have Kapu'd the kuleanas and the natives are afraid to show them. Kiilae is one land so situated . . . (Interior Department Land Files)

As a part of this study, to help fill out the records of nineteenth century residency and land use practices in the Ki'īlae-Kauleolī vicinity, selected records from neighboring lands (Keōkea and Hōnaunau on the north, and Keālia, Ho'okena, and Kauhakō on the south) were also reviewed. The additional information recorded in those

claims describes residency and land use in a regional context for this portion of South Kona. Also, because a number of claims for neighboring lands were awarded, survey records were compiled, which provide an indication of the elevational ranges of residency and land use.

Claimants for several of the *kuleana* in Ki‘ilae and Kauleolī indicated that their rights of residency and land use dated back to at least 1819, and were handed down from their parents and grandparents. Other claimants stated that their rights were granted by pre-*Māhele* *konohiki*, generally dating from the 1830s to the early 1840s. Table 2 is a further summary of land use records reported in the claims for Ki‘ilae and Kauleolī.

In the *Māhele* records for Ki‘ilae, Kauleolī, and neighboring lands, we find documentation of residency both near shore, and in the uplands; development of formal planting fields (including those defined by *kuaiwi*); cultivation of *kalo* (taro), *‘uala* (sweet potatoes), *‘ulu* (breadfruit), *mai‘a* (bananas), *kō* (sugarcane), *pia* (arrowroot), *niu* (coconuts), *kou* (*Cordia* trees), *loulou* (*Pritchardia* palms), *‘alani* (orange trees), and *kope* (coffee trees). We learn about the construction of *umu* (stone mounds) built near shore to catch *‘ōhua* (fish fry) and the use of *Pā kao* (pens built as goat corrals).

**Table 2. Summary of land use in Ki‘ilae and Kauleolī during the *Māhele*.**

<i>Ahupua‘a</i>	<i>Number of Kīhāpai Kalo (Formal Taro Gardens)</i>	<i>Number of Kīhāpai ‘Uala (Formal Sweet Potato Gardens)</i>	<i>Number of “Kīhāpai i Mahi‘ia” (cultivated fields)</i>	<i>Number of Houses</i>
Ki‘ilae	97	87	26*	13**
Kauleolī	4	9	unidentified	3***

\*2 *kope* and 24 others including *loulou*, *mai‘a*, *kou*, and *niu*.

\*\*historical records also document that Hū‘eu and his heirs maintained at least two houses at Ki‘ilae, one near the shore and another, *mauka* of the present-day highway.

\*\*\*others likely based on claimant records, but not specifically identified.

Appendix A contains a compilation of all the *Māhele* records located for the lands of Ki‘ilae and Kauleolī, and selected records from the neighboring lands of Hōnaunau, Keōkea, Keālia, and Kauhakō. Kepā Maly translated the original Hawaiian records, and native terms are used in the translated texts. The glossary at the beginning of Appendix A provides readers with translations of the various words and terms used in the *Māhele* records.

In addition to the native terms cited in the *Māhele* records, names of more than 50 individuals are given, including 34 individuals listed as being residents of, or associated with the lands of Ki‘ilae and Kauleolī (Table 3). There are also more than 30 place names for *‘ili*, other than the primary *ahupua‘a* names cited in the selected narratives. Table 4 is a list of place names recorded for the lands of Ki‘ilae and Kauleolī. When possible (based on current use of the Hawaiian language) diacritical marks, and literal (lit.) or interpretive (int.) translations for the names are also suggested.

**Table 3. Individuals documented as having residency or land tenure rights in Ki‘ilae and Kauleolī at the time of the *Māhele* ‘Āina.**

<i>Ahupua‘a</i>	<i>Individual Claimants (family names)</i>
Ki‘ilae	Ahu (Oahu), Davida, Haupenu, Holoua, Hueu (Davis), Imakua, Kahaolekeokeo, Kahaupuu, Kahinawe, Kalapawai, Kalei, Kaolulo, Kapahunui, Kauinui, Kaula, Kaulukou, Kaupai, Kiko, Kuaana, Kukapu, Kupa, Meaalii, Mee, Namakelua, Nika, Paila, Palila, Polani, Puhipau.
Kauleolī	Ahu (Oahu), Kekualoa, Naihe, Namilimili, Nika, Kalapawai.

**Table 4. Place names of Ki'īlae and Kauleolī recorded in Māhele testimonies.**

<i>Place Name</i>	<i>Translation</i>
Ki'ī-lae	<i>lit. Image point; Ahupua'a. (int. Image on the Point)</i>
Ka-lehua	<i>lit. The metrosideros blossom; 'ili.</i>
Ka-lua-iki	<i>lit. The little pit (or crater); 'ili.</i>
Ka-'ohe	<i>lit. The 'ohe taro (or bamboo); 'ili.</i>
Ka-'ōhi'a	<i>lit. The metrosideros tree; 'ili.</i>
Pā-pua'a	<i>lit. Pig enclosure; 'ili.</i>
Pia-hulihuli	<i>lit. Overturned arrowroot; 'ili.</i>
Pahu-kauila*	<i>lit. Kauila (Alphitonia wood) drum; 'ili</i>
Ka-ule-o-Lī	<i>lit. The penis of Lī; Ahupua'a.</i>
Hale-o-Lono	<i>lit. House of Lono (an agricultural shrine); 'ili.</i>
Ka-pia	<i>lit. The pia (arrowroot); 'ili.</i>

\*also written in text as *Kapahukauila* and *Paukauila*.

### **Ki'īlae Residency and Land Use Through the 1900s**

All but one of the claims submitted to the Board of Commissioners by native tenants for their *kuleana* parcels went unawarded. Archival and oral historical research reported in the following sections of this study, provide us with documentation that many of the claimants and their descendants remained on their “*kuleana*” lands at Ki'īlae and Kauleolī as tenants under the *Konohiki* (living much as their ancestors had prior to the *Māhele*). In the case of Ki'īlae, where G.D. Hū'eu, and his heirs were part-time resident *Konohiki* (from at least the 1820s to the 1920s), their sustenance and support, required the presence of a resident population. Thus, the native tenants continued their varied land use practices (e.g., cultivation of various crops, field development, *mauka-makai* residency and travel, access to shore and fisheries, and various practices associated with daily life). As noted in the historical record, G.D. Hū'eu's *Māhele* Award specified, “the rights of the people therein, are retained” (Mahele Award Book 10:394 June 17, 1852). This acknowledgement of the “rights” of the native tenants under Hū'eu (and his heirs), was also reaffirmed in a lease executed between the Hū'eu heirs and the native tenants, covering the period between 1890 to 1910 (Liber 150:162-165), translated by Kepā Maly. The agreement (cited below with underlining for emphasis) granted leasehold rights of the entire *ahupua'a* to the families residing upon the land, with the exception of the lot called “Kapulani,” the historic (late 1800s—early 1900s) residence of the Hū'eu-Davis heirs.

#### **Lease**

Bureau of Conveyances Liber 150:162-165

L. Peabody et al. To J. Ahu et al.

This agreement made on this \_\_\_\_ day of January, Yr. 1890, between Lucy Peabody, Laanui (k) and Kahoiwai (w) of Honolulu, Island of Oahu, The Hawaiian Islands, Elizabeth Davis and H. Kailihiwa Davis of Holualoa, North Kona, Island of Hawaii, of the aforementioned Hawaiian Islands, and William K. Davis of Kawaihae, Kohala, Island of Hawaii, afore mentioned, party of the first part, and John Ahu Hoopii (k), Lilia Kamaka, Kauinui (k), Keohokii (k), Luaehu (k), Olopana (k), Pawai (k), Moonohu (w) wife f Paila (k), Kahikina (k), Makainai (k), Kaanaana (k), Malie Kimeona wife Kimiona (k), H. Dreyzhner, Keamio and Kaainoa of Kiilae, South Kona, Island of Hawaii, aforementioned, party of the second part, bear witness. By this instrument, the party of the first part does lease to the party of the second part, that tract of land at South Kona, called and named the *Ahupuaa* of Kiilae, and given to G.D. Hueu in Kuleana Claim Number 8521 B, Royal Patent Number 5671, retaining the rights of the natives, and retaining the house lot at the shore called Kapulani for the party of the first part.

This place, aforementioned, is granted to and to be held by the party of the second part, and their executors and administrators for the period of twenty (20) years, beginning on the first day of March Yr. 1890. By the payment of the lease in the amount of two hundred fifty dollars (\$250) per year, to be paid each half of a year, One hundred twenty five dollars (\$125) at the aforementioned Honolulu, on the first day of March and September of each year.

The party of the second part, on their own, and their executors, do swear with the party of the first part and their heirs, executors and administrators that they will pay the lease rental aforementioned, and also, all the taxes upon said land for the period aforesaid; they shall also weed out and clean the lantana, mimosa and other noxious plants growing upon the land. They shall not agree to the doing of anything damaging to the place or anything contrary to the laws, anything improper on the aforementioned place. They shall not assign this lease to any other party without approval from the party of the first part or their heirs and assigns, in writing. And at the time of the close of the lease, said place shall be returned in good condition and peaceably to the aforementioned party of the first part, their heirs and executors, along with the houses, walls, and such benefits there on.

[continues with conditions of how lease between the parties may be terminated for good cause, and states that in witness of the truth of this lease agreement the parties sign below].

L.K. Peabody	William Davis	
Kahoiwai	J.D. Laanui	
Elizabeth Kahaanapilo	H. Kailihiwa Davis	
Lilia Kamaka	H. Dreyzhner	
J. Ahu	A.W. Kahikina	
Malie Kimiona	Moonohu Paila	
Kauinui	Pawai	
Kaainoa	Hoopii	
Makainai	H.P. Kaanaana	
Olopana	Keohokii	Luaehu

Four of the lessees named above—Ahu, Kauinui, Paila, and Pawai (also identified as Kalapawai)—were also *Māhele* applicants for *kuleana* at Ki‘īlae and Kauleoli. Most all of the remaining lessees were related to one another, or descendants of other *Māhele* claimants.

Five months after the group entered into their leasehold agreement with the Hū‘eu-Davis heirs, they entered into a sublease agreement for the upper mountain lands of Ki‘īlae, with brothers and ranchers, W.H. and J.D. Johnson (who worked out of a ranching base extending from Mā‘ihi to Hōnaunau). Interestingly, the Johnson brothers themselves were also descendants of a branch of the Davis line. The lease agreement below (translated by Kepā Maly), recorded in Bureau of Conveyances Liber 150:488, reads:

Lease  
Bureau of Conveyances Liber 150:488

J. Ahu et al. To W.H. & J.D. Johnson  
This is an agreement made between John Ahu (k), Hoopii, Lilia Kamaka, Kauinui (k), Keohokii, Luaehu (k), Olopana (k), Pawai, Moonohu wife of Paila, Kahikina, Makainai, Kaanaana (k), Malie Kimeona wife of Kimeona, H. Dreyzhner, Keamio and Kaainoa of Kiilae, South Kona, party of the first part, and W.H. Johnson and J.D. Johnson of Kainaliu, North Kona, Hawaii, party of the second part. By this instrument, the aforementioned party of the first part, grants lease to the party of the second part, all of that portion of land situated 3 miles above the government road, being the upland of Kiilae Ahupuaa at South Kona, Hawaii, aforementioned; being that land obtained by the party of the first part by lease, in an instrument executed on the \_\_\_\_ day of January Yr. 1890.

That place aforementioned, with all the rights and benefits pertaining to it are granted to the party of the second part, aforementioned, their heirs and assigns for the period of one year from the first day of June Yr. 1890, at twenty dollars for one year, to be paid on June 1, of the year mentioned. At the time when the aforementioned one year is ended, both parties may again enter into a lease of the aforementioned place for twenty dollars a year, and thus, until



the lease belonging to the party of the first part, aforementioned is ended. They shall not lease it to any other person, it is only between the aforementioned parties until they vacate said place,

The party of the first part swears and agrees with the party of the second part to fulfill the words set forth in this instrument. In witness of the truth, the parties of the two parts do sign their names and affix their seal on this \_\_\_\_ day of May Yr. 1890.

Keoni Ahu	Kaainoa
Kauinui	H.K. Kaanaana
H.M. Simeona	S.W. Kahikina
D. Makainai	S.K.P. Pawai
Olopana	Kamakahoohie (w)
H. Keamio	Keohokii
Luaehu	Paila
W.H. Johnson	J.D. Johnson

At the time of their lease, the Johnson brothers were hunting wild goats, and subsequently wild cattle. A review of Bureau of Conveyances records from 1890 to the 1920s revealed that by the late 1890s various members of the original group of lessees began to relinquish or sell their interests in the Ki'īlae lease. Among those relinquishing interest was S.W.C.H. Kalapawai, who in December 1897, conveyed his interest in the “*Hui Hoolimalima Aina*” (Lessee's Organization) to William Hooper of Kauleoli (Liber 206:371).

In 1902 H. John Ahu, John Kaainoa, Sam Kahikina, Charles Pawai, Kaai, Moonohu Paila, Keohokii, D. Makainai, J.D. Paris (of the Paris-Johnson family), Rose Kaimi (sole heir of Malie Simeona), H.P. Kaanaana, and Luaehu (sole heir of Luaehu Sr.) surrendered their leasehold agreement with the Hū'eu-Davis heirs (Liber 240:328). In 1903, a lease for 1,000 acres at Ki'īlae was renewed between the Hū'eu-Davis heirs (Lucy Peabody et al.) and J.D. Paris for ranching privileges in the *mauka* lands, through 1923 (Liber 246:355).

Lucy K. Peabody (granddaughter of G.D. Hū'eu), died in 1928, and the estate of the Hū'eu-Davis heirs leased a 3,000 acre parcel of Ki'īlae to L.L. McCandless, who had begun his own ranching operation in South Kona in ca. 1919. In 1932, John Young Olohana Davis Jr. and George Hū'eu Davis III sold their interest in Ki'īlae to L. McCandless (Liber 1183:482). That same year Lucy Davis-Henriques died, and under her estate McCandless continued his lease of the larger portion of Ki'īlae. Finally, in 1936, the estate of the Hū'eu-Davis heirs sold their entire interest in Ki'īlae to McCandless (Liber 1331:290).

At least from 1890 to the 1930s, portions of Ki'īlae, extending from about one-half mile above the *mauka* government road (Māmalahoa Highway) to the shore was used by the Hawaiian families (lessees; and several descendants of the original *Māhele* Award applicants) for residence and agriculture, much as had been reported in the claims for *kuleana* cited in Appendix A. The families maintained homes near Māmalahoa Highway and near the shore, and cultivated fields near the *mauka* residences and on the *kula* to about the 500-foot elevation. Oral history interviews (Jackson 1966, and in this study) record that there was regular travel between the *mauka* lands and the near-shore residences. Subsistence agriculture and fishing were the means of life upon the land.

In 1955, McCandless Ranch entered into a process of subdividing a portion of the land in Ki'īlae (sections both *mauka* and *makai* of Māmalahoa Highway) into the Ki'īlae Land Company's, Ki'īlae Coffee Lots. The *makai* lots were surveyed (with dozer lines cut for surveyor access), and the process of assigning separate Tax Map Key numbers (TMK 8-5-05:24, 25, 28, 29) was initiated. These lots took in the area of several historic homestead residences (including parcels of *Māhele* applicants and 1890 lessees). While the process of surveying and initial subdividing was initiated, the plan was never completed and the TMK numbers were dropped (ref. Real Property Tax Office History Sheets—1933-1957; and oral history interview with Emil Spencer, in this study).

Jackson (1966) conducted a historical study for the National Park Service (*Pu'uhonua o Hōnaunau*) and based on recollections of interviewees, she compiled an annotated map (Figure 11) for the Ki'īlae area. Jackson's map includes important locational references for various features on the landscape, and identifies a number of the native families who resided on the land. It should be noted that not all that is depicted on the map is contemporaneous. The residences and fields on the map appear to range from prior to 1890 to around 1960. During the course of conducting interviews for the present study, a copy of the map was referenced, and it facilitated bringing forth recollections of the interviewees. It was also found through interviews and further research, that there are several locational errors made in placing features such as the old Ki'īlae School site, and various homes of historic residents on the map.

It is interesting to note that except for the original lease issued by the Hū'eū-Davis heirs in 1890 to the native Hawaiian families of Ki'īlae, no formal written agreements have been located which granted residency to the families. But the records cited in Jackson (1966) and recorded in oral history interviews study tell us that the families maintained an ongoing relationship of residency under the "*Konohiki*" owners of Ki'īlae.

It was not until the 1930s that the last of the native families relocated to other areas in South Kona and other parts of the islands. The final abandonment of Ki'īlae by the native families probably resulted from several factors. One being the passing away, or failing health of older family members (for example Mrs. Becky Kahikina-Maunu and a daughter were forced to relocate to Kalaupapa, Moloka'i). Other factors being that economic conditions made continued residency difficult in this portion of South Kona; and finally, the McCandless' lease (after ca. 1928) and subsequent purchase of Ki'īlae, led to restrictions in access to the *mauka-makai* resources of the land. As noted above, the Johnson lease at Ki'īlae was limited to *mauka* lands, the area extending from three miles above the government road to the top of Ki'īlae. In 1903, Paris' lease took in the entire *ahupua'a*, but the Hawaiian families (agriculturalists and fishermen, as well as those who worked in ranching operations), continued to live on the lands much as they had in the preceding century.

Some modifications in the historic landscape and land use practices have been attributed to the Paris leasehold period (ca. 1903-1928). One change is that ranching operations spanned the entire length of the *ahupua'a*. During this period, the cattle were herded from the mountain lands to the lowlands and driven onto the Ki'īlae trail (below Māmalahoa Highway). On the *kula* lands where such crops as sweet potatoes, coffee, and watermelons were cultivated in formal fields, the Ki'īlae trail (continuing *makai*) was walled on both sides to keep cattle out of the fields. Another of the historic modifications of the Paris era was that the "Paris Pen" (corral) was made on the *makai* side of the *Alanui Aupuni*, below Waiku'iakēkela. A windmill facilitated getting water from Waiku'iakēkela to the cattle pen, and in the following day or two, the cattle were shipped from Ki'īlae. This process was described to Taro Fujimori by Willie Thompson as—the cowboys dragging the cattle down the stony, Ki'īlae canoe landing (the area still used to ca. 1935 by the native fishermen in residence at Ki'īlae), into the water, where they were then taken with rowboats out to a ship for transportation (see interviews with Taro Fujimori and Margaret Maunu-Keākealani).

Interviews conducted by Frances Jackson (1966), report that Ben Kahikina, the last Hawaiian resident of the Ki'īlae shoreline, moved away in the 1930s (this has been clarified in the present study). Also by the 1930s, the McCandless Ranch maintained several houses near the Māmalahoa Highway where ranch hands and families—apparently under "unrecorded" leases—lived. Among the residents of that period was Pipi Kau'inui, son of a *Māhele* applicant at Ki'īlae. His home was situated near the Ki'īlae-Keōkea boundary, just *makai* of the Māmalahoa Highway.

The interviews and site visits conducted with descendants of the Kahikina-Maunu line, Madeline Leslie, and Taro Fujimori add further documentation to transitions in residency at Ki'īlae. It was recorded that after the 1930s, Ben Kahikina (a descendant of the Kahikina-Paila-Kahinawe lines of Ki'īlae-Kauleoli), lived in the Ke'ei vicinity (where his paternal grandfather was a *Māhele* awardee), and still maintained an old house on the shore of Ki'īlae until the early 1950s, where he and other members of families with generational ties to Ki'īlae visited periodically while on fishing trips. One of the Ki'īlae reference points cited by surveyor, J.S. Emerson in ca. 1888, on Register Map No. 1445 (see Figure 9 in pocket), is Kahikina's House. The 1888 location coincides with the area of the early *makai* home known to elder members of the Kahikina-Maunu family.

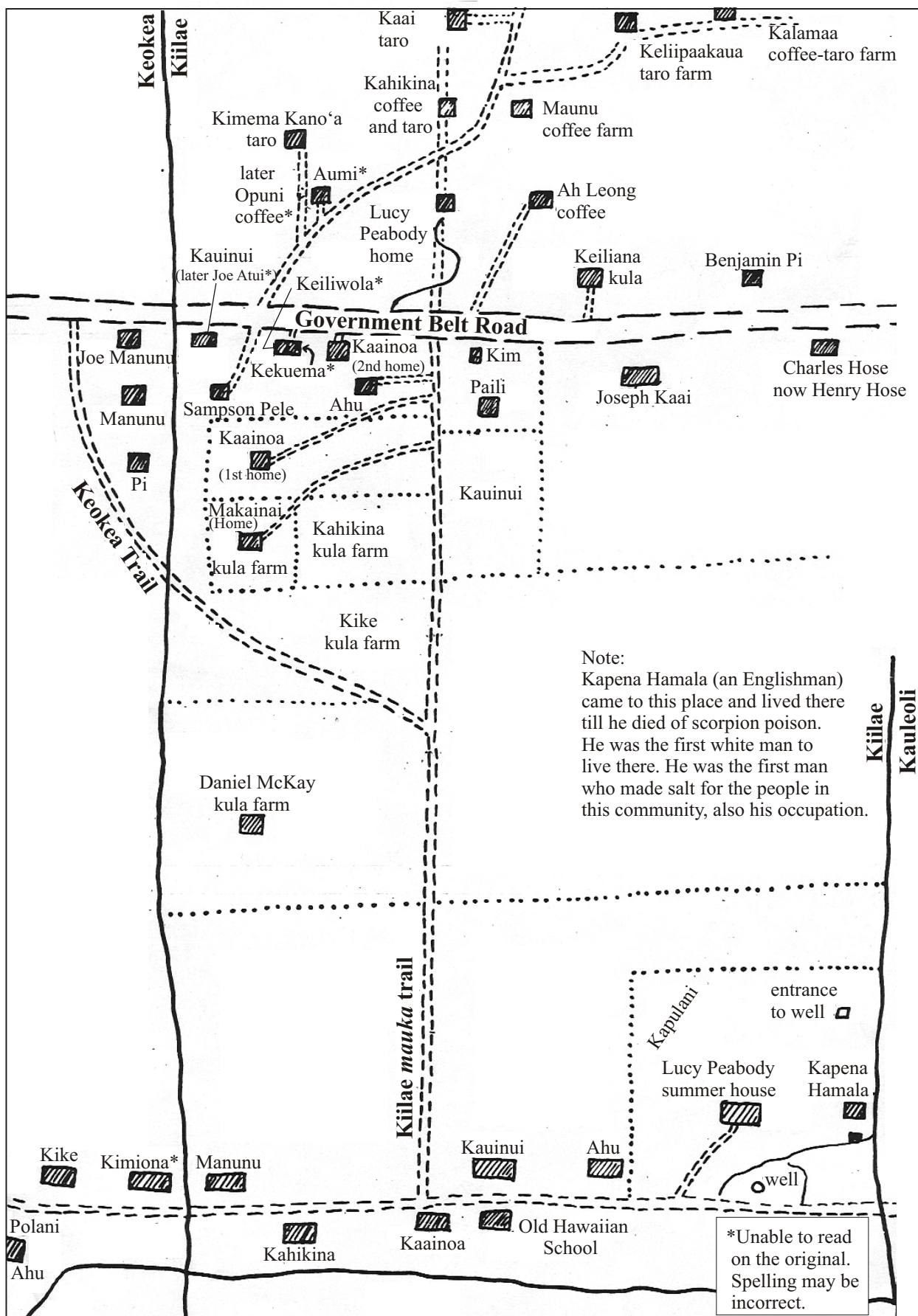


Figure 11. Map of Ki'īlae (from Jackson 1966) annotated by Rechtman Consulting, LLC.

## Kauleolī Residency and Land Use Through the 1900s

The *ahupuaʻa* of Kauleolī was retained as Government Land during the *Māhele*. A total of four claims were identified that specifically mentioned Kauleolī. By the close of the *Māhele*, two *kuleana* parcels: one of 4 and 17/100<sup>ths</sup> acres of agricultural land just *makai* of the upland Government Road (Māmalahoa Highway); and the second, a house lot of 6/10<sup>ths</sup> of an acre, situated near the shore, *makai* of the coastal *Alanui Aupuni* (see Figure 2). Historic records indicate that one *kuleana* (LCAw. 9459), awarded to Nika in two parcels—was awarded at Kauleolī. A careful review of the *Māhele* records and subsequent land transactions reveals that this is not the case. Nika and his younger brother Naihe (LCAw. 10405) each claimed and received one parcel (*apana*) at Kauleolī. Apparently an error in transcribing the claims in the *Māhele* Award Book (Volume 7:526-527) occurred, and was subsequently caught by the Land Commission; as a note “*no Naihe ka pololei*” (it is correctly for Naihe) is written on the page 526 of Volume 7 (Figure 12). As described in the actual claims submitted by Nika and Naihe (see Appendix A), Nika’s claim in Kauleolī was for a taro and sweet potato parcel (of 4 and 17/100<sup>ths</sup> acres), and his house was at Keōkea. Naihe’s sole claim was a house lot (of 6/10<sup>ths</sup> an acre) at Kauleolī, where he had resided for 13 years at the time of confirmation of his claim.

Both Nika (LCAw. 9459) and Naihe (LCAw. 10405) held private property rights at Kauleolī. Ahu, and Kalapawai (sometimes written Pawai), also filed *Māhele* claims at Kauleolī and Kiʻilae, and their claims were not awarded. The historic record does list them and their descendants as residents at Kiʻilae. Namilimili and Kekualoa were cited as ones who had granted property rights to the claimants, but they did not file claims themselves (in the case of Namilimili, the testimony stated he died on Kauaʻi some years prior to the *Māhele*).

Nika died intestate and his younger brother, Naihe, inherited his land at Kauleolī (Liber 533:303-304). Naihe’s children, Moses Manunu and Malie Kimeona, in turn inherited the parcels (recorded as totaling approximately 4.76 acres) described in LCAw. 9456 and LCAw. 10405, both situated at Kauleolī (written Kauloli). In 1908, Moses Manunu, (the younger of the siblings<sup>7</sup>), sold to John Gaspar, his own 2.38 acre interest in the two lots which he and his late sister had inherited (Liber 305:399-400) (members of the Gaspar-Kiwaha family lived on the lot until ca. 1930). The remaining 2.38 acres were retained by the children of Malie Kimeona—Kawahinepoaimoku (w), Halemaumau (w), and Willie Kimeona (k) (Liber 533:303-304), and subsequently their descendants. At this writing, final disposition of the *makai* house lot (apparently incorrectly identified as LCAw. 9459:2) is unclear. Title research reports that some Naihe descendants sold their undivided interests in the land to members of the McCandless family. Other Naihe descendants still hold their interests in the property and share in the ownership. This *kuleana* parcel is *makai* of the current study area near the shore.

All of the remaining land in the small *ahupuaʻa* of Kauleolī was sold in three Royal Patent Grants (Nos. 1575, 3051, and 3708). Grant 1575, containing 364 acres, and taking in almost all of the land extending from the *mauka* Government Road (Māmalahoa Highway) to the sea, was sold to James Atkins. Atkins was an English resident of Hawaiʻi, who arrived in Kona in 1827 (ref. *Māhele* testimony in LCAw. 925). He and his wife, a Hawaiian woman by the name of Kaloa (also written Kahalaa) had land interests at several locations in Kona. Atkins business interests included logging and ranching, and it is assumed that his residency at Kauleolī centered on ranching endeavors.

A Historic Period stone wall enclosed residential complex recorded as Site 23168 (Rechtman et al. 2001) about mid-way between the upper Government Road and the shore, and near the Kauleolī-Kiʻilae boundary wall, includes a house platform, planting areas, and two mortar-lined cisterns may have been Atkins residence, and subsequently used by other Historic Period landowners.

In July 1857, Atkins and Kaloa sold all their interest in Grant 1575 to Henry Clark (also written Clarke) of Kauhakō (Liber 9:641-642). Clark has an interesting and unfortunate place in the history of South Kona. He was pure English, but the Hawaiians called him by the name Elemakule or Kaelemakule, thus records pertaining to him identify him as Clark, Clarke, and Elemakule. Clark owned a store at Kauhakō, and had interest in ranching as well. In November 1866, Clark was killed at Kauhakō, murdered and burned in his store by two

<sup>7</sup> By 1902 Malie Kimeona had passed away, Rose Kaimi signed as her “sole heir” (see notes from Liber 240:328, above).

natives who were angry with him; various reasons are given by descendants as to the cause of the anger (see *Ku Okoa*, December 1, 1866:3). The Reverend J.D. Paris, who officiated over the memorial services observed:

It is a shameful and sad thing to remember that *haole* monk (H.C.) at Kauhako! And he died at the hand of a Church member. He was excommunicated . . . (J.D. Paris Kona Mission Station Report for 1867; *Hawaiian Mission Children's Library*)

On March 26<sup>th</sup> 1867, Pa‘akaula and Kahauliko were convicted of the murder and sentenced to be hung (*Ku Okoa*, March 30, 1867:2; and State Archives F.O. & Ex. Doc. 81). On April 5<sup>th</sup> 1867, the sentence was carried out (*Ku Okoa*, April 6, 1867:2). The reference to Pa‘akaula is one that has some additional relevance to Ki‘ilae. Between 1863 and 1866, D.H. Pa‘akaula was the resident teacher at Ki‘ilae School. In April 1866, parents of the Ho‘okena section school (Kauhakō vicinity) suggested that Pa‘akaula be assigned as teacher at Ho‘okena. It is uncertain as to whether or not the move actually occurred, as no further reports on the matter were seen while conducting this study. What we do know is that Ki‘ilae School was closed by late 1866, and the teacher at Ho‘okena was not Pa‘akaula (see section below entitled “Overview of the Hawaiian Schools in South Kona”).

J. Waterhouse, executor of Clark’s estate, including Grant 1575 of his Kauleolī holdings, disposed of Clarks assets. In March 1869, the land of Kauleolī was transferred to William Clarke and Ann Hessing (or Herring) et al., the “lawful” brothers and sisters of Henry Clark (Liber 27:270). They conveyed interest in Grant 1575 to J.H. Hamlin, who also held a lease on the Government portions of Kauleolī (Liber 27:266 & 270). J.D. Paris and W. King also shared leasehold interests in Kauleolī (Liber 84:301), and in 1884, during the regional survey work conducted by J.S. Emerson, a reference point of “Kings grass house . . . Kauloli” (Field Book 256:137 in this study), was given. W.C. King and A.S. Cleghorn were proprietors of a store at Keālia in the 1880s (see Bowser 1880 in this study).

Henry Clark’s brothers and sister retained their interest in Kauleolī until 1888, when it was sold to George Snider (Liber 109:410). By 1918, L.L. McCandless and A.C. Dowsett began acquiring the various land parcels of Kauleolī, and the land was primarily dedicated to McCandless Ranch activities.

An issue regarding disposition of Clark’s estate has existed between members of the Moku‘ōhai-Mederios family and those of the McCandless family for a number of years. Land records cited in this study, for March 10, 1873 and June 14, 1876, identify Hamlin as owner or lessee of a portion of Kauleolī, as well. The issue raised between the Moku‘ōhai-Mederios (Clark heirs) and L.L. McCandless heirs is that in 1867, the executors of Clark’s estate seemingly failed to address the rights of inheritance belonging to the widow and children in this matter (see oral history interviews with Clarence Medeiros Sr., 1996; and Clarence Medeiros Jr., 2001 in Rechtman et al. 2001:Appendix B).

Grant 3501, containing 79.2 acres, situated *mauka* of Māmalahoa Highway, was granted to Palaualelo in 1863. To date, no record of how Palaualelo used the land has been seen. Palaualelo’s Grant was sold to Charles Hooper, and subsequently inherited by his grandson John Hooper Lani; land use in 1919 was described as the “Hooper Homestead,” with the family having interests in coffee cultivation and ranching. John Hooper Lani was a minor in 1919, and the estate executor, George Barker, was authorized to dispose of various Hooper lands in South Kona. As a result, L.L. McCandless and A.C. Dowsett, partners in a ranching venture in South Kona, acquired Grant 3051 (see Liber 521:426 & 525:85). In ca. 1960, the parcel was sold to Francis Foo et al. of Kona.

Grant 3708, containing 15 and 3/10<sup>ths</sup> acres, situated along the *makai* boundary of Māmalahoa Highway, was purchased by William J. Wright in July 1894. As with Grant 3051, L.L. McCandless purchased the parcel and added it to his McCandless Ranch holdings. By ca. 1925, a couple of acres of this parcel (from the highway to a wall at the *makai* boundary of the lot) were planted with citrus trees and other vegetable crops. Except for the orchard and the Hooper Homestead, all the land of Kauleolī was used for development of cattle pens and traps from this time.

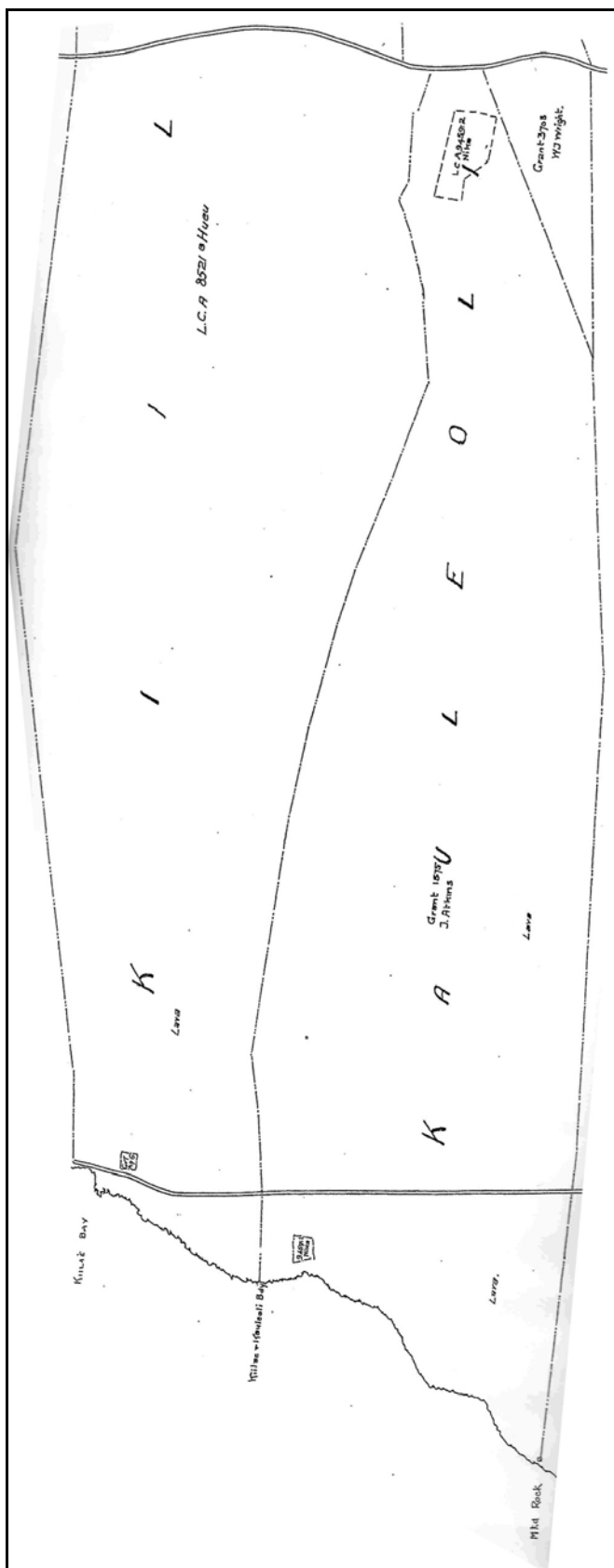


Figure 12. Portion of Register Map No. 1745 (Ki'īlāe to Kalahiki).

Taro Fujimori lived with his grandfather, Sataro Fujimori, at the Kauleolī “citrus orchard” from ca. 1932-1946. Among his recollections from that period, are his descriptions of the citrus orchard lot and house, the Kauleolī cattle pen (on the *makai* side of Māmalahoa Highway (noted for its good white mountain apple tree), and the old Kauleolī trail which ran along the northern wall of the cattle pen, passing the former Kiwaha (*kuleana* of Nika and Naihe) lot, and continued down to the *makai Alanui Aupuni*. Fujimori often traveled the *mauka-makai* trail (which after the 1950s was dozed and widened), to go out to Kahikina’s house and on to Hōnaunau (Rechtman et al. 2001:Appendix B).

## A Chronology of the Land and People in Government Communications

In addition to the collection of *Māhele* records—pertaining to land tenure—cited in the preceding section, several other important governmental agency collections provide documentation pertaining to the South Kona community of which Ki‘īlae and Kauleolī are a part. By the middle 1840s several divisions of government in the Hawaiian Kingdom had been established, and charged with the responsibility of ensuring that the people could contribute to and benefit from public resources. This section of the study provides readers with several important sources of communications from two primary Government Offices—the Interior Department (which bore responsibility for such functions as the land grant and survey programs, road improvements, and public works); and the Department of Public Instruction (Schools). The records cited herein were viewed in the collections of the Hawai‘i State Archives, State Survey Division, and State Land Division. The information is presented by subcategories in chronological order, spanning the period ca. 1847 to 1900.

### Trails and Roads of the Kona Hema Region

*Alahele* (trails) and *alaloa* (regional thoroughfares) are an integral part of the cultural landscape of South Kona and all Hawai‘i. The *alahele* provided access for local and regional travel, subsistence activities, cultural and religious purposes, and for communication between extended families and communities. Trails were, and still remain important features of the cultural landscape.

Historical accounts (cited in this study) describe at least two primary trails of regional importance in the South Kona region. One trail crossed the *makai* (near shore) lands, linking coastal communities and resources together. The other major trail of this region is “*Keala‘ehu*” (The path of Ehu), which passes through the uplands (in the vicinity of the Māmalahoa Highway). This trail comes out of Ka‘ū, passes into North Kona, and continues on to Ka‘ūpūlehu, where it then cuts *makai* to Kīholo (meeting with the *makai* alignment of the *alaloa*). The *alaloa* then continues into Kohala, passing through Kawaihae and beyond. This route provided travelers with a zone for cooler travel, and access to inland communities and resources. The trail also allowed for more direct travel between North and South Kona (see Malo 1951; I‘i 1959; Kamakau 1961; Ellis 1963; and *Māhele* and Boundary Commission Testimonies in this study).

In addition to the *alahele* and *alaloa*, running laterally with the shore, there is another set of trails that run from the shore to the uplands (*makai* to *mauka*). By nature of traditional land use and residency practices, every *ahupua‘a* also includes one or more *mauka-makai* trail. In native terminology, these trails were generally known as—*ala pi‘i uka* or *ala pi‘i mauna* (trails which ascend to the uplands or mountain).

Along these trails which pass through Ki‘īlae-Kauleolī and the larger South Kona region are found a wide variety of cultural resources, including, but are not limited to residences (both permanent and temporary), enclosures and exclosures, wall alignments, agricultural complexes, resting places, resource collection sites, ceremonial features, *ilina* (burial sites), petroglyphs, subsidiary trails, and other sites of significance to the families who once lived in the vicinity of the trails. The trails themselves also exhibit a variety of construction methods, generally determined by the environmental zone and natural topography of the land. “Ancient” trail construction methods included the making of worn paths on *pāhoehoe* or ‘*a‘ā* lava surfaces, curbstone and coral-cobble lined trails, or cobble stepping stone pavements, and trails across sandy shores and dry rocky soils.

Following the early nineteenth century, western contact brought about changes in the methods of travel (horses and other hoofed animals were introduced). By the mid-nineteenth century, wheeled carts were also being used on some of the trails. In the Ki‘īlae-Kauleolī vicinity of South Kona, portions of both the near shore

and upland *alahele-alaloa* were realigned (straightened out), widened, and smoothed over, while other sections were simply abandoned for newer more direct routes. In establishing modified trail—and early road—systems, portions of the routes were moved far enough inland so as to make a straight route, thus, taking travel away from the shoreline.

By the 1840s, the modified alignments became a part of a system of “roads” called the “*Alanui Aupuni*” or Government Roads. Work on the roads was funded in part by government appropriations, and through the labor or financial contributions of area residents and prisoners working off penalties (see below). In the Ki‘ilae-Kauleolī section of South Kona, portions of the *Alanui Aupuni* are lined with curbstones; elevated; and/or made with stone filled “bridges” in areas that level out the contour of the roadway. This section of the roadway was surveyed and laid out in ca. 1847 (see Governor Kapeau to Keoni Ana, Aug. 13, 1847 in this study). The *Pali Alahaka* road (Figure 13) that ascends the *pali* from Keōkea into Ki‘ilae is one of the significant road construction events of this period. While the *alahaka* (ramp or bridge) has been restored as a part of the National Park Service’s preservation program, interviews with “old-timers” (Rechtman et al. 2001) indicates that the *Alahaka* looks much as it did in the 1930s-1940s.



Figure 13. *Alahaka* on the *alanui aupuni* (*Makai* Government Road).



In September 1856, the Pacific Commercial Advertiser published an article that provides readers with a historic overview of road development in the Hawaiian Islands:

... The history of road making in this kingdom does not date far back. The first law that we find recorded was enacted in 1840, which as well as the laws of 1846 and 1850 gave to the Governors a general control of the roads, with power to make new roads and employ prisoners in their construction. But no system of road making has ever been introduced, and the whole subject has been left to be executed as chance dictated. In 1852 road supervisors were made elective by the people, at the annual election in January. This change worked no improvement in the roads, as the road supervisors, in order to remain popular, required the least possible amount of labor, and in many districts an hour or two of work in the morning was considered as a compliance with the road law. Under this law the road supervisors were pretty much to themselves, and though accountable to the Minister of the Interior, they considered favor of their constituents of more importance. This law was found productive of more evil than good, and during the last session of the legislature a new road law was passed, which goes in to force on the 1st of January 1857. This new law gives to the Minister of the Interior the appointment of road supervisors throughout the Kingdom, who are subject to such general instructions (we suppose in regard to the construction of roads) as he may issue ... (The Pacific Commercial Advertiser, September 25, 1856)

#### **Travel in the Ki‘īlae-Kauleoli Vicinity:**

June 26, 1847

George L. Kapeau to Keoni Ana

I have received your instructions, that I should explain to you about the *alaloa* (roadways), *alahaka* (bridges), light houses, markets, and animal pounds. I have not yet done all of these things. I have thought about where the *alanui heleloa* (highways) should be made, from Kailua to Kaawaloa and from Kailua to Ooma, where our King was cared for. And then afterwards around the island. It will be a thing of great value, for the roads to be completed. Please instruct me which is the proper thing for me to do about the *alaloa*, *alahaka*, and the laying out of the *alaloa*. (State Archive–Interior Department Misc., Box 142; translated by Kepā Maly)

August 13, 1847

George L. Kapeau to Keoni Ana

... I have a few questions which I wish to ask you. Will the police officers be required to pay, when they do not attend the Tuesday (*Poalua*) labor days? How about parents who have several children? What about school teachers and school agents? Are they not required to work like all other people when there is Government work on the roads and highways?

I believe that school agents, school teachers and parents who have several children, should only go and work on the weeks of the public, and not on the *konohiki* days ...

... The roads from Kailua and down the *pali* of Kealakekua, and from Kailua to Honokohau, Kaloko, Ooma, the place where our King was cared for, and from thence to Kaeleluluhulu [at Kaulana], are now being surveyed. When I find a suitable day, I will go to Napoopoo immediately, to confer with the old timers of that place, in order to decide upon the proper place to build the highway from Napoopoo to Honaunau, and Kauhako, and thence continue on to meet the road from Kau. The road is close to the shore of Kapalilua ...

... The width of the highways round Hawaii, is only one fathom, but, where it is suitable to widen where there is plenty of dirt, two fathoms and over would be all right ... If the roads are put into proper condition, there are a lot of places for the strangers to visit when they come here. The Kilauea volcano, and the mountains of Maunaloa, Maunakea, Hualalai ... (Interior Departments Roads Hawaii; translation revised by Kepā Maly)

March 29, 1848

George L. Kapeau to Keoni Ana:

. . . I received your letter, at the instruction of the Minister of the Interior inquiring as to the amount of work done on the Government Roads, on the island of Hawaii. I do not know fully, though know of some work, and tell you here, what I do know . . .

The *alaloa* (highway) from Kealakekua to Honaunau has been worked on, but it is not completed, it is a rocky place. The work done is from Kealakekua to upper Keei, and from Honaunau to Keomo, place of the great battle of Kamehameha and Keeaumoku with Kiwalao, the battle called Mokuohai. The place covered with dirt is from Kealakekua to Keei. The alaloa at Kau has been made as well, not in it's entirety, but in sections . . . (Interior Department—Misc. Box 142; translation revised by Kepā Maly)

South Kona, Hawaii,

December 22, 1854.

Geo. B. Kalaau (South Kona Road Supervisor),

to Keoni Ana (Minister of the Interior):

I report to you the matters pertaining to the Road Tax of this District during this year, as follows:

1. The number of persons subject to Road Tax in this District. When I counted the persons from 16 years up to forty years and over, there were six hundred and forty-one persons, including foreigners and native Hawaiians.
2. The number of days worked by these persons, under the law of 1853, six days work by each, that being the full payment for the one year ending on the last day of December, 1854; and if these six days are multiplied with the six hundred and forty-one persons, the result will be three thousand eight hundred and forty-six, the number of days. But, I divided the work up in the nine divisions, as follows:  
 Division 1, from Puuohau to Onouli 1; Division 2, from Onouli 2 to Kealakekua; Div. 3, from Kiloa to Keei 1; Div. 4, Keei 2 to Honaunau; Div. 5, Keokea to Kealia 2; Div. 6, Hookena to Waiea; Div 7, Honokua to Kaohe; Div. 8, Kukuipae to Hoopulua; Div. 9, Milolii to Kapua.  
 If the count of the days is by districts, it will be fifty-four days, because, I have given six days to each division, the same to all the sections.
3. The amount of money received from Road Tax in this year. I received the sum of eight dollars, as follows: From David Barrett, \$2.00; Mr. Schulze, \$2.00, Kanakaole, \$2.00, H. Clark, 2.00, these are the names of those who paid properly, according to law...
5. Balance of money from the former year. No balance was given me by the Road Supervisor in 1853.
6. Money disbursed and the balance. I paid out the sum of eight dollars, of the road tax, for a part between Hoopulua and Milolii. A very bad place, plenty of rocks, therefore, I gave that money in order to fix up that place. There is no money balance.
7. The tools and implements with me now. I received from Charles Hall, the former Government Official, two hammers, two crowbars, and four shovels. These tools and implements were not in a damaged condition, and these things are now in my hands.
8. The number of days worked by me, in this position during this year. Here it is, sixty, as follows: Nine districts, six days of each district, being fifty-four days, which together with the six days worked by me, makes in all sixty days . . .

The total number of people who required to contribute to the Road Tax in the District of South Kona:

From Puuohau to Onouli 1, the people in this division, 99.  
 From Onouli 2 to Kealakekua, the people in this division, 106.  
 From Kiloa 1 to Keei 1, the people in this division, 109.  
 From Keei 2 to Honaunau, the people in this division, 111.  
From Keokea to Kealia 2, the people in this division, 50.  
 From Hookena to Waiea, the people in this division, 62.  
 From Honokua to Kaohe, the people in this division, 94.  
 From Kukuioape to Hoopuloa, the people in this division, 65.  
 From Milolii to Kapua, the people in this division, 44.  
 The total is 641 . . . (Interior Department Misc. Box 146)

March 6, 1856

R.A. Wood (Superintendent, Bureau of Public Improvements),  
 to R.C. Wyllie (Minister of Foreign Relations, Minister at War);  
 Reporting on Road Supervisors, Island of Hawaii (District of Kona):

North Kona	G.W. Waiau
South Kona	D. Nahinu [Interior Department – Roads]

February 4, 1868

Geo. Hardy (Road Supervisor), to F.W. Hutchinson (Minister of Interior):

. . . According to your instructions I hereby inform you what work I have done in the different districts under my charge. In South Kona I have repaired a very bad place known by the name of Alahaka in the village of Kiilae, a place of great danger, where several horses had been killed, and where people went in danger of falling down on the way up. I have made it wide and a substantial road.

I have also put the road going down to Kaawaloa in first rate order. In north Kona, I have opened a very convenient road, going down to Keauhou, and also given my attention to repairing the worst places through the districts, and made roads as good as possible . . . (Interior Department Roads—Hawaii Folder 4; translation modified by Kepā Maly)

1869 [see also letter of October 4, 1869]

Petition of J.W. Maele and 97 native residents of South Kona,  
 to F.W. Hutchinson (Minister of Interior):

. . . We, the people whose names are below, petition to you about the Road Supervisor of Kona. We desire that S.W. Papaula be made the Road Supervisor of South Kona. That a straight road be opened from Kaulanamauna to Kealakekua, and that the places which are bad and in disrepair be made good, like the work (by Thomas Martin) on the road of Kau.

Please kindly consider our request to you. In truth of this request, we sign our names below . . . (Interior Department, Roads Hawaii Folder 6; translated by Kepā Maly)

Keopuka

August 1, 1871

Henry Cooper (Kona Road Supervisor),  
 to F.W. Hutchinson (Minister of the Interior):

. . . I beg to inform you in regards to the roads in South Kona.

I have worked the roads for about 18 miles from North to South, say from your Highness' place to Kukuioape, the roads thus far are in fairly good order.

I have remade two miles of road on the beach across the lands of Keei & Honaunau, this improvement was much required as the road had become almost impassable. From Kukuiopae to Kapua there is some 12 miles of bad road... I would also say that on the newly made piece of road before mentioned, then natives allow their goats to run at large thereby doing more damage in one month than would be done by ordinary travel in a year. I have posted notices without effect, and would ask your Excellency's instructions upon the subject . . . (Interior Department, Roads Hawaii Folder 8)

December 11, 1871

List of Road Supervisors to whom Circulars and Blanks were sent December 11<sup>th</sup> 1871.

<u>Name</u>	<u>District</u>	<u>Island</u>
Henry Cooper	South Kona	Hawaii
Jas. Smith	North Kona	Hawaii

[Interior Department Book 10:589]

December 25, 1871

Petition of D.H. Nahinu et al. (signed by 66 individuals),  
to F.W. Hutchinson (Minister of the Interior):

. . . The names of the people below, are natives dwelling in the district of South Kona, from Kealia, Hookena, Kauhako, Kalahiki, Waiea, Honokua, and Pahoehe, and to Kaohe, And also up to Honaunau.

We humbly ask you that a new road be built from Hookena to Pahoehe, because it has been a very long time since any work was done on the road, therefore it is in very bad shape, difficult for our animals to travel upon, and also for the visitors who travel there.

We have asked the Road Supervisor to make this road, but he has refused, saying there is no money left in his account. The road from Kealakekua to Hookena is finished and everything is good, only this area remains in bad shape . . . (State Archives—Interior Department Roads, Hawaii Folder 8; translated by Kepā Maly)

March 31, 1886

Minister of the Interior Reports  
Appendix L.

. . . North Kona District. The roads of North Kona are now in fair repair. We have recently cut the lantana which, to a certain extent, had encroached upon and obstructed them. No large work has been attempted, as the requirements of the District are light. Cost of repairs to the roads in this District for the period has been \$898.

*Requirements*— [described work to be done in Northern section of the district]

South Kona District. The roads through this District are in good repair at the present time. They have been worked upon from time to time, as they required it. A new road was constructed, six miles long, from Pahoehe to Hookena. Cost of new road and general repairs in this District has been \$2,882.

*Requirements*—The wants of this District for the coming period will be light. No new work is required, and an appropriation of \$1,000, in additions to the receipts from road taxes, will be sufficient to maintain the roads in good order . . . (Report of 1886:cvi)

Kailua

November 16, 1889

W.E. Rowell, to L.A. Thurston (Minister of the Interior);

Reporting on road work to be done by Kalanipoo in South Kona, and observed:

...They have had a tremendous crop of coffee this season, and every man, woman & child in South Kona is busy picking and cleaning coffee. It is out of the question getting a gang of natives now for the road, the coffee run will last through December... (Interior Department Roads Box 40)

December 3, 1890

G.W.R. King (Department of Public Works), to

H.W. McIntosh (Superintendent of Public Works):

... I herewith present my report of the work intrusted to my care while acting under your letter of instructions dated Nov. 12/90, relating to the new roads in North and South Kona...

As regards the Hookena Road, I will say that I consider it a fine piece of work and Mr. Kalanipoo deserves the credit of being a very competent man for the work he has in charge . . . The makai road from Hookena to Napoopoo is in bad shape and needs some attention from the local road board. Mr. Nahinu, will however, attend to the matter . . . (Interior Department Roads Box 40)

December 31, 1897

T.H. Wright (South Kona Road Supervisor), to J.A. King (Minister of Interior):

... Napoopoo Road badly washed out by heavy rain . . . it will cost about \$400—to put it in proper repair if not more.

Napoopoo to Hookena beach road in a fearful condition, it needs repair of the worst kind. The Walahaka [Alahaka] pali very dangerous. This road is used every day for the convenience of the public, going and back to these places. It will cost a big lot of money to put it in shape . . . (Interior Department Roads Box 42)

December 31, 1898

T.H. Wright (South Kona Road Supervisor), to J.A. King (Minister of Interior):

... The condition of our roads is fair from Kuaimoku [the Pahoehe vicinity] to the North boundary [at Kainaliu], with the exception in want of new top dressing... Beach Trail from Napoopoo to Hookena in a very bad condition. The last legislature has appropriated the sum of \$400.00 for repair of the said trail, but the board has not been able to draw the same. How can the board draw this amount from the treasury? (Interior Department Roads Box 42)

### **Overview of the Hawaiian Schools in the Hōnaunau-Ho‘okena Section (with Ki‘ilae) South Kona: Records of the Department of Public Instruction**

As reported earlier, the instruction of students in schools (most of whom were adults in the early years), in reading, writing and other skills initially fell to the missionaries. In a short time native teachers were trained, and by 1831, eleven hundred schools were in operation throughout the islands, with more than thirty thousand students enrolled (Kuykendall and Day 1970:79). The schools generally served as both native churches and meeting houses, and were established in most populated *ahupua‘a* around the island of Hawai‘i; native teachers and lay-ministers were appointed to oversee their daily activities.

By ca. 1840, most of the native residents of the Hawaiian Islands could read and write, and interest in the schools began to diminish. On October 15, 1840, Kamehameha III enacted a law that required the maintenance and local support of the native schools (the Constitution of 1840). The Constitution provided a “Statute for the Regulation of Schools,” which required that in a village with 15 or more students, the parents were to organize and secure a teacher. They could then apply to the local school agent for funds to pay the teacher and for land on which a school could be built and classes held. The statute also allowed for the use of proceeds and work of

the “*Poalua*” (King’s Labor Days) to be used in support of the schools (cf. Constitution of 1840 and Kuykendall and Day 1970). The early records were kept by the mission stations, but by 1847, more detailed records were kept by government representatives and appointed officials, including — teachers, school inspectors, superintendents, and surveyors. In these records are also found important lists identifying the native tenants of various lands in South Kona (including the Ki‘ilae vicinity).

In 1847, the records list a school at Ki‘ilae, with neighboring schools at Hōnaunau and Keālia. Following a review of all available documentation, it was found that the school of Ki‘ilae remained open until 1866, after which, the students either went to Hōnaunau or Ho‘okena for school. D.H. Pa‘akaula (Pa‘akaula may have been the “Kaula” referenced as heir of Meaalii, a *Māhele* applicant for a *kuleana* at Ki‘ilae; LCAw. 10121) the last teacher at Ki‘ilae participated in an event that led to his removal and left the school with no teacher.

1847 School Report, District 3, Hawaii

(by Superintendent, G.W. Lilikalani)

<u>Ahupuaa (Land)</u>	<u>Kumu (Teacher)</u>
Honaunau	Kainapau, Kapiioho, Holoaa
Kiilae	Kapawai
Kealia	Makuaaloha...

Teachers who have been released:

<u>Ahupuaa</u>	<u>Kumu</u>
Honaunau	Nawaaloo
Kiilae	Kanakaokai...

(Public Instruction, Series 261 Box 1)

Kealakekua

January 22, 1848

G.W. Lilikalani (South Kona School Inspector), to Keoni Ana (Assistant Minister of Public Instruction); Reporting on numbers of families, children, and construction of schools:

Families of Hawaiian Ancestry	1033
Number of children, from 4 to 14 years of age	778

New school houses that have been constructed in this District: 5

These were merely grass-houses, with stone walls along the bottom

(Public Instruction Series 261 Box 1)

November 1848

Journal of a tour around the windward islands, Hawaii, Maui & Molokai in the months of September, October & November 1848:

Oct. 2. As we passed along the coast of Kona, I visited the schools in several villages, & as in Kau, found the teachers doing but little.

Met the teachers & trustees of this district in a convention; also examined several schools. There are 29 Protestant schools in this district, embracing about 964 children; and 4 Catholic schools embracing about 80 children. Many of the children & youth appeared well on examination & reflected much credit upon their teachers, while others appeared to have made little or no improvement.

The qualifications of teachers need to be raised every where. I am more & more impelled with this necessity. The superintendent of this district is very inefficient. (Public Instruction Series 261 –Box 1:12-13)

October-December 1852

South Kona School Report (S.W. Papaula):

<u>Teacher</u>	<u>School</u>	<u>Students</u>
Napahi	Honaunau	47
Kaipo	Kiilae	36
Mokualoha	Kealia	38
Kealoha	Hookena	31

(Public Instruction Series 262)

November 14, 1854

Survey of School Lot at Kiilae Ahupuaa (Grant 7:6), South Kona, Hawaii (Figure 14):

Beginning at the southern corner towards the sea, adjoining the Western corner of the Stone wall (Goat pen) stone marked X, running –

North 5°00' West 200 links to the Coconut Tree

North 81°30' East 226 links to the Government Road

South 6°00' East 200 links to the Konohiki's land

South 83°00' West 185 links to the point of commencement

There being 34/100ths Acre.

J.W. Makalena, Surveyor. (DAGS 6 Volume 36; translated by Kepā Maly)

October-December 1855

South Kona School Report (D.H. Nahinu):

<u>Teacher</u>	<u>School</u>	<u>Students</u>
Napahi	Honaunau	43
Kumukahi	Kiilae	20

Orange Hill

August 11, 1856

J.D. Paris, to R. Armstrong (Minister of Public Education):

Nahinu informs me that the people of Hokena wish to erect a new School House *mauka*, but he is informed by the Konohiki that he, Halelea who has the management of the land objects to their having a spot to build on. The land on which the house now stands near the sea shore would of course return to him.

Perhaps you can say a word to him or Ruta & write to me or Nahinu. It is very desirable to be able to get locations for school houses back from the sea when the people are willing to go back. This is a trouble at Honaunau & here at Kaawaloa. We can't get an inch of land to set a house on... I hope you will write us & let us know whether we must keep our school houses on the barren shore or not.

Nahinu says he wrote or spoke to you about his pay for superintending roads. Please inform him whether anything is to be obtained from the treasury & forward it to him. This is his request . . . Again (*hoomanawanui*) Please ask the Governess of Hawaii if she will set a few acres of land to Nahinu at Hookena, say 10, 15, or 20, he wishes to purchase a spot to build on. His influence is better than gold... [Public Instruction – Series 261, Box 81]

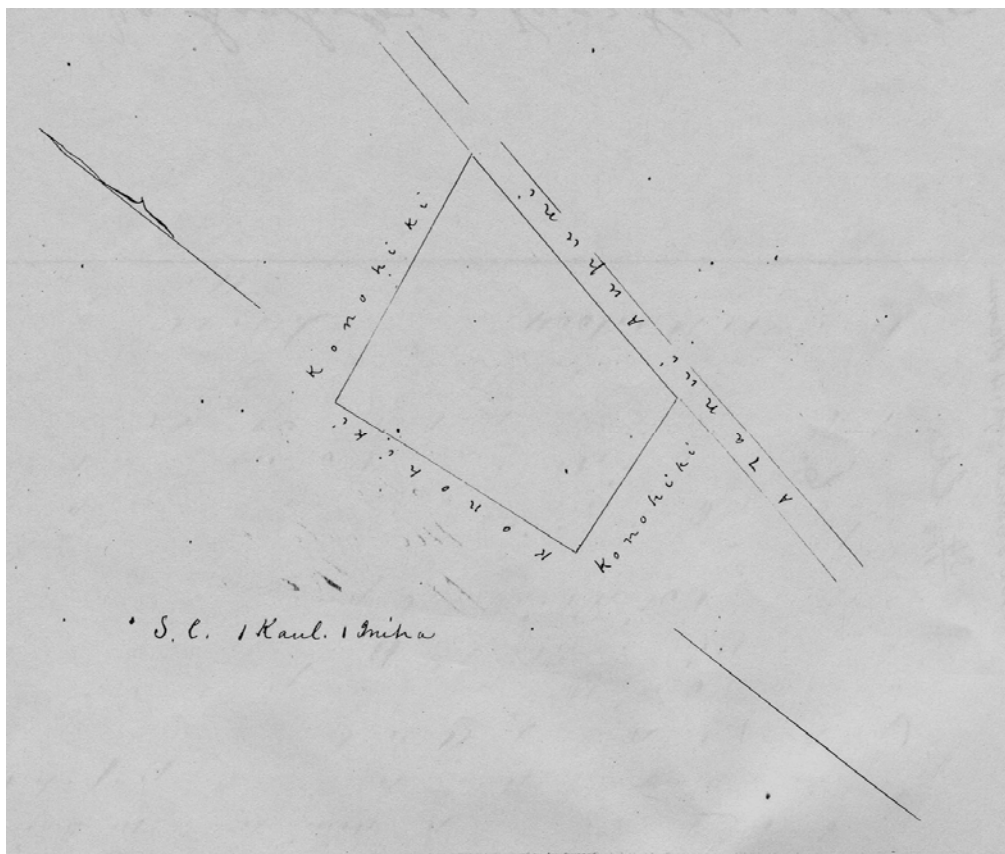


Figure 14. Survey of School Lot at Ki'īlae Ahupua'a, South Kona, Hawaii (November 14, 1854).

January-May 1858

South Kona School Report (D.H. Nahinu):

Teacher	School	Students
D.H. Nahinu	Hookena	40
Mokualoha	Kealia	54
Kumukahi	Kiilae	30
Napahi	Honaunau	37

(Public Instruction Series 262)

October 1858-January 1859

South Kona School Report (D.H. Nahinu):

Teacher	School	Students	Comments
Mokualoha	Kealia	53	A good school, and the teacher is prepared.
Waiau	Kiilae	32	The school is in poor condition; the teacher is good.
Kaauhaukini	Honaunau	35	The school is a lean-to ( <i>lanai</i> ), The teacher is good.

(Public Instruction Series 262)

1862 [prior to June 11, 1862; see letter of that date below]

Pila et al. (Parents of school age children),  
to Mathew Kekuanaoa President of the Board of Education):

We are the parents of children residing in the *ahupuaa* of Honaunau and Keokea, in the district of South Kona, Hawaii.



We humbly request that you agree to the building of a school house for these *ahupuaa*, and that a school teacher be supplied to instruct our children, who now have to travel to Kiilae. It is a place far away, not good for the small children to travel to. There is a cliff and very dangerous trail there.

It would be right for you to instruct the School Inspector and the treasurer to begin construction of the school house soon . . .

(Signed)

Pila (k); Makaimoku (w); Manua (k); Halena (k); Hupoole (w); Halena (w); Keo (k); Kaumakaole (w); Anae (k); Ikepoo (w); Kema (k); Nawaliwali (w); Kaneaiole (k); Kaliiae (k); Leonui (w); Hilo (k); J.W. Namakeha (k); Kunewa (w); [& one name illegible]

Napoopoo, South Kona

June 11, 1862

S.W. Papaula (South Kona School Inspector),  
to J. Fuller (Clerk of the Department of Public Instruction):

I received the decree of the Board of Education concerning the petition of the parents of Honaunau and Keokea for a school for their children. Your servant humbly submits this report before the Board.

Rev. J.D. Paris and I discussed with great consideration whether this district should have a school or not, and this is the reason substantiating our thoughts why there isn't a school there. The main cause being that the people are living in an unsettled state at Honaunau. The people's properties were auctioned away because of improper action of the land overseer, L. Haalelea. Some people needed a place to live so they picked up and left for other places with their children. A small part of them are still living here, but there aren't enough children, totaling 18 as required by law. The parents of Keokea entered their children in the school at Kiilae, where they now attend. The journey to Kiilae for the children of Keokea is pleasant. That is how it is for the children of Honaunau as well, it is alright for them to go to the school at Kiilae. There aren't any problems. Therefore, it is better for the children of Honaunau and Keokea to continue going to Kiilae. The teacher is qualified and there's a school house at Kiilae. At Honaunau there is not school house or teacher. The building became worthless and the teacher went somewhere else. The parents of Honaunau and Keokea did not come to speak with me about a school for their children, or say that the journey to Kiilae was not good for their children. Therefore, we did not refuse their request for a school at Honaunau, but because of the confusion about the land, and because of the cruelty of L. Haalelea to the people, we did not agree . . . (Public Instruction—Series 261 Box 7; translation revised by Kepā Maly)

October 1862-January 1863

South Kona School Report (S.W. Papaula):

Teacher	School	Students	Comments
Iosepa O	Kealia	26	A good School House
Paakaula	Kiilae	37	The School House is broken down

(Public Instruction—Series 262)

October 1864-January 1865

South Kona School Report (S.W. Papaula):

Teacher	School	Students
Waiau	Kealia	28
Paakaula	Kiilae	47

(Public Instruction—Series 262)

April-July 1865

South Kona School Report (S.W. Papaula):

Teacher	School	Students	Comments
Paakaula	Kiilae	46	[this is the last teacher's report from Kiilae]
Waiau	Kealia	28	

(Public Instruction—Series 262)

July-September 1865

Chas. Gulick (School Inspector's Report, Island of Hawaii: Inspector's tour conducted between July 19<sup>th</sup> to September 1<sup>st</sup>, 1865; reporting that 85 out of 94 common schools were visited), to Board of Education:

Kiilae. Another stone coffin without a lid, standing on strange land, the original school lot lying elsewhere. The proficiency of the scholars, some thirty in number, was rather better than the foregoing [Kalahiki], in fact reading and writing were good, but arithmetic and geography were not so good.

Honaunau. 35 scholars. School kept in the Catholic Chapel standing on the original school lot. The reading of the school was good, but its proficiency in the other branches of study was on a par with the majority of the Kona Schools, i.e. defective. There is a large unoccupied school lot, south of the village, makai of the road, where I intend to build a new school house and also one at the other end of the plain near Keokea, and, when done, I will divide the Kiilae and Honaunau schools by the sexes, if a competent mistress can be obtained . . . (Public Instruction—Series 262 Reports, Hawaii 1865)

Hookena

April 24, 1866

Petition of Nuhi et al. (parents of students at Hookena),  
to Abraham Fornander (Superintendent of Schools):

We, the people whose names appear below, are parents of some of the students in the School at Hookena which is under the teacher, G. Waiau. We are complaining to you about him because his work is in violation of the School laws and regulations concerning that important job... He should be suspended from this job... Here is our thought, that you would be favorable with us, and set D.H. Paakaula, the teacher at Kiilae, as the teacher of this place, as it would be much better . . . (Public Instruction—Series 261 Box 9)

Hookena, South Kona

July 7, 1868

D.H. Nahinu (Assistant School Agent), to A. Fornander (Board of Education):

I went to examine the schools of South Kona . . .

. . . School at Hookena. D.H. Nahinu is the teacher. There are 38 students, 30 boys and 8 girls. There are 11 in reading, 27 in mental arithmetic, 11 in general arithmetic, 27 in penmanship, and 38 in geography . . .

. . . School House of Hookena. This is a good stone, well built, its roof is native *pili* thatch, but at present most of it is rotten. It is good in the times when there is no rain. It would be good for the government to help with the thatching and rafters, lest it fall and the rains come in...I have urged the parents to contribute some monies, but there is a famine on the land at this time. The building is 24 feet long by 22 feet wide, the ridge posts are 7 feet and the rafters are 13 feet. That is what I have to report . . .

School at Honaunau. Kahalewai is the teacher. There are 29 students, 21 boys and 8 girls

...

... School House of Honaunau. The sides are stone walls and there is a shade roof over it. It is good for the sunny times, but not good for rainy times. The school house is in very poor condition ... (Public Instruction—Series 261 Box 10; translation revised by Kepā Maly)

October 1873—January 1874

South Kona School Report (H.N. Greenwell):

Teacher	School	Students	Comments
D.H. Nahinu	Hookena	54	( <i>Kokua kumu</i> , John Keawe)
J.W.P. Kahalewai	Honaunau	52	( <i>Kokua kumu</i> , Kilo)

(Public Instruction—Series 262 Box 3)

October 1875—January 1876

South Kona School Report (H.N. Greenwell):

Teacher	School	Students
Keawe	Hookena	49
Manase	Honaunau	50
Kawaaihoole	Nawawa	22

(Public Instruction—Series 262 Box 4)

October 1876—January 1877 (H.N. Greenwell):

South Kona School Report:

Teacher	School	Students
Kawaaihoole	Nawawa	23
H. Manase	Honaunau	50
John Keawe	Hookena	55

(Public Instruction—Series 262 Box 4)

South Kona

April 28, 1877

H.R. Hitchcock (Inspector of Schools),

to C. R. Bishop (Pres. Board of Education):

The five schools strung along the upper road in the southern extremity of South Kona, are, as formerly, rather poorly taught. The school houses are in good conditions, but need some furniture. The neglect of the parents to supply their children with books is a great source of inefficiency of the schools. The pupils have cultivated the school lots, and made a little money; but as a general thing, they find no sale for their produce, and therefore consume it themselves. The Schools of Kalahiki, Hookena, Holualoa and Napoopoo are well taught. The schools at Hookena and Holualoa numbering over fifty pupils each, with prospect of increase ... (Public Instruction—Series 262)

October 1877 – January 1878

South Kona School Report (H.N. Greenwell):

Teacher	School	Students	Comments
S.W. Makaike	Nawawa	20	Wooden School House
H. Manase	Honaunau	50	Wooden School House
D.H. Nahinu	Hookena	51	Stone School House

(Public Instruction—Series 262 Box 4)

October 1878—January 1879

South Kona School Report (H.N. Greenwell):

Teacher	School	Students	Comments
S.W. Makaike	Nawawa	14	Good School House

H. Manase	Honaunau	50	Good School House
D.H. Nahinu	Hookena	55	Good School House

(Public Instruction—Series 262)

October 1879—January 1880

South Kona School Report (H.N. Greenwell):

Teacher	School	Students	Comments
S.W. Makaike	Nawawa	22	Wooden School House
H. Manase	Honaunau	53	Wooden School House
			J. Kanae (Kokua)
D.H. Nahinu	Hookena	55	Wooden & Stone School
			House. J.E. Keawe (Kokua)

(Public Instruction—Series 262 Box 4)

October 1880—January 1881

South Kona School Report (H.N. Greenwell):

Teacher	School	Students	Comments
S.W. Makaike	Nawawa	19	
H. Manase	Honaunau	31	
J.E. Keawe	Hookena	11	
Mr. & Mrs. Roberts	Hookena	76	English School

(Public Instruction—Series 262 Box 4)

October 1882—January 1883

South Kona School Report (H.N. Greenwell):

Teacher	School	Students	Comments
Makaike	Nawawa	14	[last ref. to school at Nawawa]
Kailianu	Honaunau	27	
Makaehu	Hookena	33	

(Public Instruction—Series 262 Box 4)

October 1883 – January 1884

South Kona School Report (H.N. Greenwell):

Teacher	School	Students
Kailianu	Honaunau	36
Apela	Hookena	31

(Public Instruction – Series 262 Box 4)

### Hawaiian Government Survey Records

Among the records of the government collections are documents pertaining to the surveying of lands and applications for leases and fee-simple interests in land. Records found in the collections of the Hawaii State Archives, Survey Division and Land Division, add important documentation to the history of land tenure, and nature of the lands and access to resources in the Ki'īlae-Kauleolī vicinity. The documentation cited below generally post-dates the *Māhele*, and focuses on: (1) records of surveyors (those working on individual parcels and the larger South Kona regions); (2) the disposition of lands; and (3) testimonies of native tenants pertaining to land boundaries and practices relating to land use and access to resources, presented before the Boundary Commission.

#### *Kona Land Agent Communications*

Kona Hawaii

August 5, 1853

J. Fuller (Kona Land Agent, Surveyor),

to J. H. Smith (Secretary, Board of Land Commissioners):

I am happy to inform you that I have completed the surveys of Kuleanas in this District

so far as I have been able to find them. There are however, quite a number scattered through the District which have not been pointed out to me, and a few in the neighborhood of Kailua which the Konohiki, Kaheana, prevented the people showing me. I am now making a tour through the whole district as Land Agent, and shall survey all the scattering claims which are pointed out to me...

In Kealia five persons voluntarily paid the costs on their claims, the Konohiki having persuaded them not to have the claims surveyed...

Quit Claims in Kealia

No. 7548	Kakaukapule
No. 7546	M. Kakau
No. 7020 B	Kailikakio
No. 1603	Kuhaulua
No. 7020 C	Kaumaka I

(Interior Department Land Files)

August 31, 1853

Royal Patent Grant 1575 (to James Atkins) (Figure 15):

A part of Kauleoli sold to James Atkins situated in the District of South Kona, Island of Hawaii and bounded as follows: Beginning at the sea at the N.W. corner of this land adjoining Kiilae and running

1. N 73° E 8.50 chains along the boundary of Kiilae (to the road)... [all coordinates follow then follow the boundary between Ki'ilae and Kauleoli to:]

24. S 82°30' E 2.80 chains to *ohia* m'd. X on old road *mauka*.

25. S 16°30' E 6.15 chains along old road to corner.

26. S 56°45' W 33.70 chains along the boundary of Kealia.

27. S 74°45' W 34.00 chains along the boundary of Kealia.

28. S 80°30' W 51.70 chains along the boundary of Kealia to road *makai*.

29. S 85°15' W 28.80 chains along the boundary of Kealia to the sea shore.

30. N 18° 30' E 35.25 chains along the sea shores to point of beginning and containing 364 acres. Surveyed by J. Fuller.

May 19, 1863

Royal Patent Grant 3051 (to Palaualelo) (Figure 16):

Notes of a Survey of the *mauka* end of the Government Land "Kauleoli" in South Kona Hawaii.

Beginning at a pile of rocks on the *mauka* side of the Govt. Road, on the boundary between this land, and the Konohiki land "Kilae".

Thence up along this boundary N 74 ½ ° e 17.00 Chains, N 67° E 51.00 chas. to a *koa* mk. X. the *mauka* corner of this land at its intersection with the Konohiki land "Kalia".

Thence down along said land S 32° W 5.00 chas. S 56° W 25.60 chas. S 55 ¾ ° W 44.00 ch. to a pile of Rocks on the *mauka* side of the Govt. Road.

Thence along the Road N 1° W 4.50 chas. N 21° W 6.40 chas. N 16.30° W 16.50 chas. N 1 ½ ° W 3.10 chas. to the place of beginning. Containing 79.2/10 Acres.

Surveyed May 19<sup>th</sup> 1863 for Palaualelo  
by S.C. Wiltse.

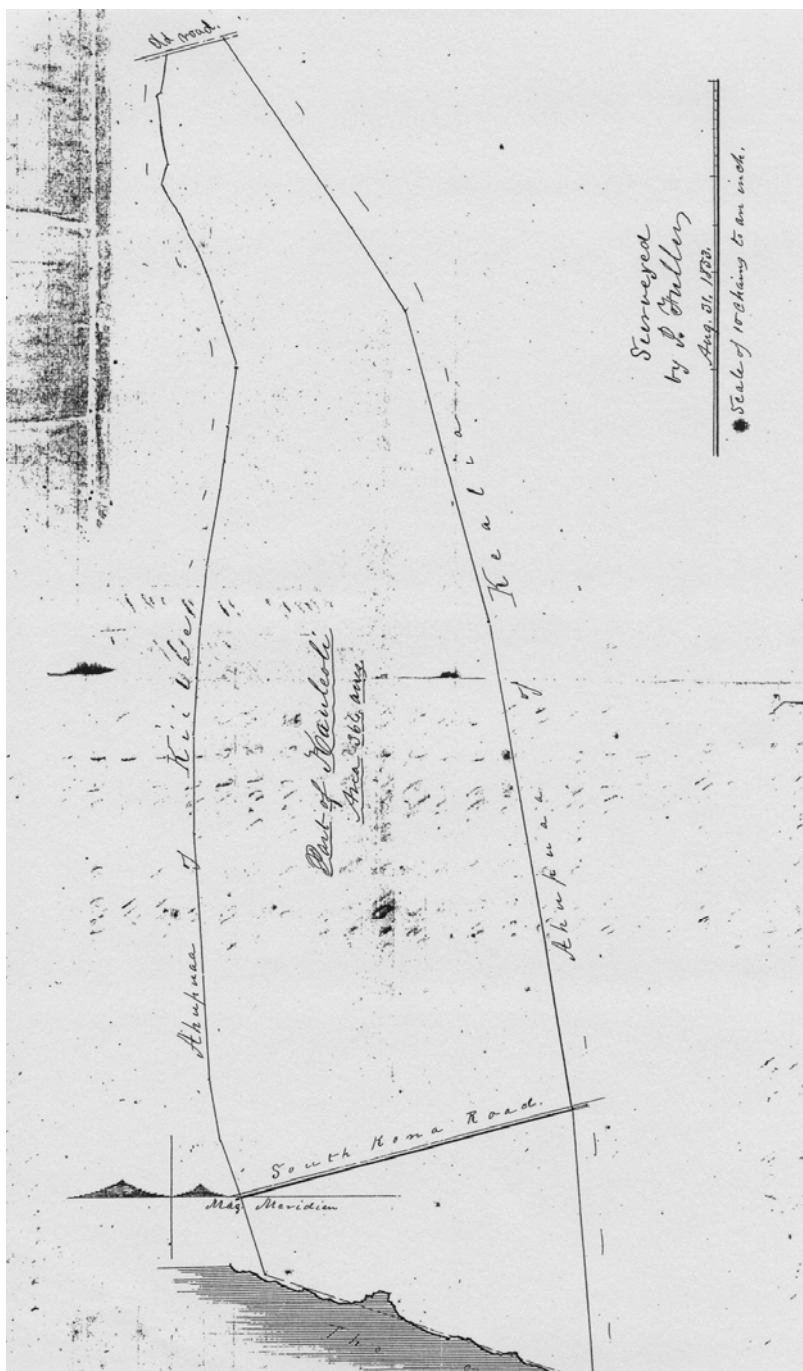


Figure 15. Survey of Royal Patent Grant 1575; to James Atkins at Kauleoli (not to scale), August 31, 1853 (State Land Division).

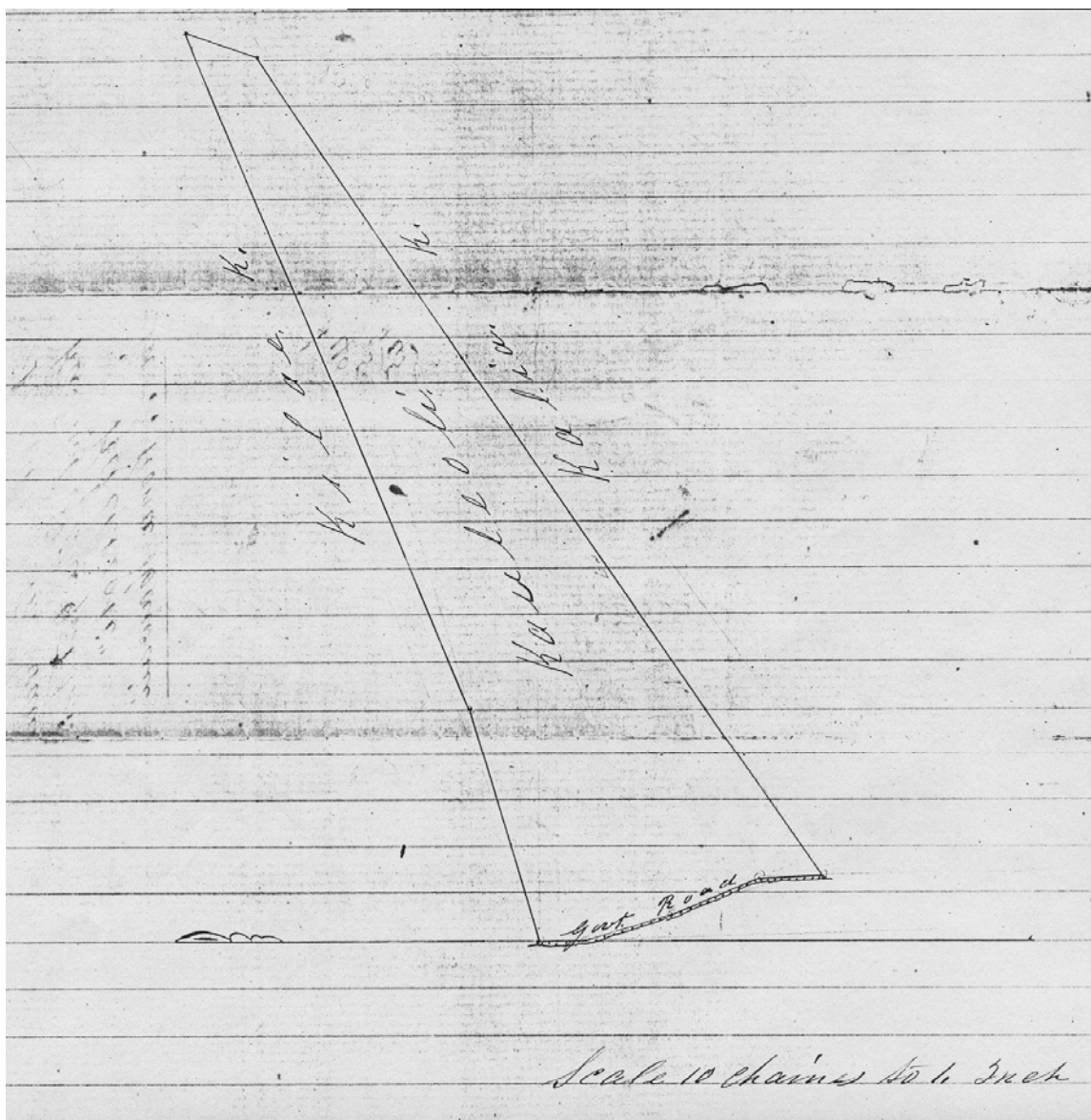


Figure 16. Survey of Royal Patent Grant 3051 to Palaualelo (Kauleoli), May 19, 1863.

September 5, 1865

S.C. Wiltse (Surveyor—Government Land Agent), to Minister of the Interior;  
Kona Hawaii. Government Lands in this District not sold, Also those Sold and not  
Patented:

...“Kauleoli” *mauka* part of this land containing about 70 Ac. Sold by Sheldon to  
“Palaualelo,” who says he has paid for it in full, but got no receipt. He wishes to buy it again.  
It is a poor rocky piece worth about 50 cts. pr. Acre . . . (Interior Department Land Files—  
Hawaii)

April 25, 1866

J.H. Kalaiheana (Land Inventory Agent), to Minister of Interior:

Lands of the King and the Government

Name of Land      *Ahupuaa* of South Kona

Honaunau      An *Ahupuaa* of Haalelea;

Keokea	An <i>Ahupuaa</i> of Keelikolani;
Kiilae	An <i>Ahupuaa</i> of Hueu;
Kauleoli 1	An <i>Ahupuaa</i> of the government, <i>makai</i> disposed of;
Kauleoli 2	An <i>Ahupuaa</i> of the government, disposed of;
Kealia 1	An <i>Ahupuaa</i> of Akahi...

These lands set forth above, are the *Ahupuaa* and the *Ili* of South Kona, Island of Hawaii. These are the lands which were pointed out to me by the old residents when I made the count . . . (Interior Department—Land Files; translation modified by Kepā Maly)

March 10, 1873

C.T. Gulick (Interior Department),  
to H.N. Greenwell (Government Land Agent, Kona):

By direction of His Excellency the Minister of the Interior I have to inform you with regard to J.H. Hamlin's application for the lease of "Kauleoli" that a land sale of 79.20 acres in Kauleoli, Kona for \$40—to Palauolelo under that date of May 10<sup>th</sup> 1867 is on record in this office, also a land sale of 35.20 acres of Kapalaalaea 2, to the same person for \$18—same date as above; the patents for both these sales are still on file in this office showing that nothing has been received here for them. The total amount due is \$68—\$5—for each patent.

As the subject of irregular land sales in Kona was investigated and settled some years since by the Circuit and Supreme Courts as well as by a personal visit of the then Minister of the Interior to Kona, it is not deemed advisable to open up the matter again.

Be good enough to inform Palauolelo that if he desires to secure the sales above alluded to he can do so by remitting the amounts state above...

Should Palauolelo not see fit to avail himself of this opportunity you are hereby authorized to lease the whole of the Govt. interest in "Kauleoli" to Mr. Hamlin for the term of 10 to 15 years, according to agreement between you, at a rental of about 10 cents an acre pr. year, but should Palauolelo take out his patent you can then rent the balance of the land to Mr. Hamlin at the above rent . . . (Interior Department Letter Book 12:165)

July 2, 1894

Patent Grant 3708 (to William J. Wright) (Figure 17):

All that piece of land situate at Kauleoli—South Kona—in the Island of Hawaii—described as follows:

Begin at a point on the west side of the upper Government Road, 20 feet west of a pile of stone at the south west corner of Grant 3051 to Palaualelo, and run by magnetic Meridian, as follows, viz.

N. 1°00' W. 297 feet along *makai* side of Gov't. Road and parallel to the line of Grant 3051.

N. 21°00' W 420 feet along the same to the south line of Grant 1575 to J. Atkins.

S. 56° 45' W 2204 feet along Grant 1575 to the North line of Kealia I.

N. 76° 00' E 2066 feet along Kealia I as per Bdry. Cert. No. 96 to the Initial point—Area 15 3/10 Acres.



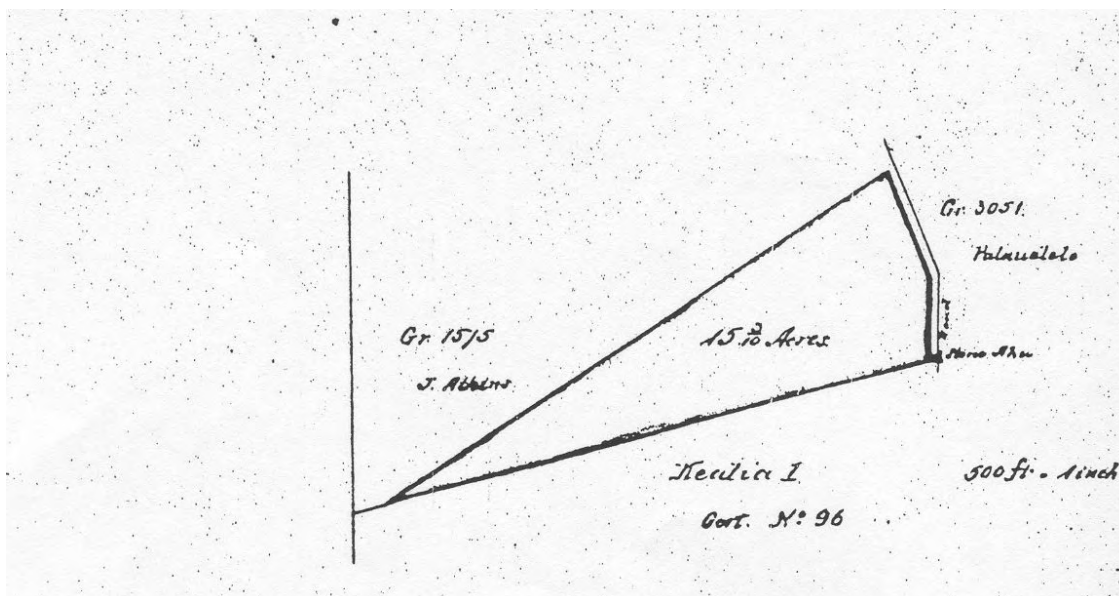


Figure 17. Map of Kauleolī—Patent Grant 3708, to Wm. Wright (not to scale); July 2, 1894 (State Bureau of Conveyances)

#### Proceedings of the Boundary Commission in South Kona (ca. 1873-1876)

The *Māhele* and Land Grant programs of the Kingdom were accompanied by rapid growth in land-based business interests. In an address before the Annual Meeting of the Royal Hawaiian Agricultural Society (1857), J.F.B. Marshall spoke of the growing business ventures in the islands which included—the cultivation of sugar and coffee; harvesting *pulu* for mattresses and pillows, and *kukui* for oil; ranching and export of hides, tallow and wool; farming for trade and export, and salt manufacture (*Pacific Commercial Advertiser*; November 5, 1857). Large landowners (including *Konohiki* and foreign residents) also pursued the establishment of formal boundaries on their land holdings, in order to protect their private property “rights.”

In 1862, a Commission of Boundaries (the Boundary Commission) was established in the Kingdom of Hawai‘i to legally set the boundaries of all the *ahupua‘a* that had been awarded as a part of the *Māhele*. Subsequently, in 1874, the Commissioners of Boundaries were authorized to certify the boundaries for lands brought before them (Alexander 1891:117-118). Rufus A. Lyman served as the Commissioner of Boundaries for the Third Judicial Circuit—the Island of Hawai‘i.

The primary informants for the boundary descriptions were old native residents of the area being discussed. For lands in the region of which Ki‘ilae and Kauleolī are a part, many of the informants stated that they were either born on one of the lands being described, or that they had lived there most of their lives. All of the witnesses had learned of the boundaries from elder residents, and they described the landscape by the nature of the terrain, the presence of resources, land use, and features of significance to the residents of the land.

The oldest informants were born around 1795, by association with events described at the time of their birth, and the youngest, born around 1820. The native witnesses usually spoke in Hawaiian, and their testimony was translated into English and transcribed as the proceedings occurred. Readers here will note that there are often inconsistencies in spelling of particular words such as place names, people names and natural or man-made features.

The narratives below were excerpted from the testimonies for Hōnaunau, Keōkea, Ki‘ilae, and Keālia (underlining is used to emphasize selected references). As a government held land, Kauleolī’s boundaries were not defined by this process, but they are described in association with the lands that bound it north and south. Not all of the documentation provided by each witness is repeated here, though primary documentation

regarding the *ahupua'a* boundaries, and narratives regarding native customs, practices, and cultural features are cited<sup>8</sup>.

Register Map No.'s 1445 (J.S. Emerson, ca. 1888) and 1796 (W.A. Wall, 1896) identify the boundaries of the lands, including some of the locations (natural and manmade) described in the testimonies (see Figures 9 and 12 in pocket). Unfortunately, the maps of surveys made as a part of the proceedings of the Boundary Commission, could not be located in public collections.

*Testimonies for Lands of the Hōnaunau (Ki'īlae-Kauleoli) Keālia Vicinity Boundary Commission — Volume 1-A*

(page 273)

The Ahupuaa of Kealia District of South Kona, Island of Hawaii . . . On this fifth day of August A.D. 1873 . . . met at Keopuka South Kona for hearing the application of C.R. Bishop for the settlement of the boundaries of Kealia . . . Present J.G. Hoapili for Hawaiian Government, applicant and Her Excellency R. Keelikolani.

Patent for part of Kauleoli filed No. 1575.

Kekuhaulua<sup>K</sup>. Sworn

I was born at Keei in South Kona, Hawaii, at the time of Kamehameha I, at Ulukaa Oahu [ca. 1809], at the time of Umikaua. I now live at Kealia 1<sup>st</sup> and know the boundaries. Kahaukapule and Kaumaka bird catchers, pointed them out to me. I have been up after sandal wood.

Kuiuala is the boundary at shore between Kealia and Kauleoli, a place at the *mauka* Government road called Ahupuaa is on the boundary between these two lands, at the end of Hamilins land. Thence *mauka* to Puuawawa then into the edge of the woods to Puukii a *puu ahua* [stone hillock], thence to Kawahine, a *pali* where the land of Kiilae joins Kealia, and cuts Kauleoli off, thence along Kiilae to Kamuahiku a large *koa* tree; there is a *Kualapa* [ridge] and *awaawa* [valley or grotto] along the boundary, all through the woods. thence to Kalaemamani Kuakai, above the woods where Keauhou cuts Kealia off, at the *poha* [soft hollow *pāhoehoe* flow] and *aa*, I do not know whether Kiilae extends clear to Keauhou or not. Thence along Keauhou to Kaulupa, a water hole on the boundary of Keauhou and Kealia 1<sup>st</sup> and Kealia 2<sup>nd</sup>. I went there with Kaelemakule and two kamaainas named Kailikakio and Kaaipuaa... (page 274) . . . I also went with Wiltse, we surveyed into the edge of the fern, and then sighted the woods. Thence the boundary turns *makai* along Kealia 2<sup>nd</sup> until you come to *Kualapa* or ridge called Nakii in the *koa* woods, thence down along the end of the ridge to Kala a water hole, thence *makai* to Kumukaua, another water hole, thence to Puuhinahina, an old *kauhale* [dwelling place] below the woods, thence along the *iwi aina* [boundary wall] to Kapohokinikini, thence to Kahope Kaluakii, a water hole. Thence to Niho, at the *mauka* Government road. Thence the boundary runs to Haliipalala, and along the *iwi aina* to Naulu, an *oioina* [trail side resting place], thence *makai* to Kananaka, a cave; thence to Minoi, there the boundary turns towards Kau and runs to Kapiipaa, a cave and from thence to Paapuiula [?], thence to Kahikilaniakea, where Akahi's houses are, then the boundary turns toward Kona, to Keawa o Kini the *makai* boundary at Sea shore.

Ancient fishing rights extending out to sea. CX'd  
August 6, 1873

Kaai<sup>K</sup>. Sworn

I was born at Kauhako, South Kona, Hawaii after the first Missionaries arrived [ca. 1820] now live at Kauhako, my wife is from Kealia and I am *kamaaina* of that land.

<sup>8</sup> Measurements of degrees and chains etc., recorded as a part of the metes and bounds in surveys for the various lands are not reproduced in the Boundary Commission records cited in this study; Volumes from which documentation was excerpted is indicated at beginning of each land record; and page numbers as recorded in the original "Folio" of recordation are cited in parenthesis at top of each cited page.

The boundary at shore is a *Puu pahoe* [pahoe mound or hill], between Kealia 1<sup>st</sup> and Kealia 2<sup>nd</sup>. Puu o Kealia is the name of the *Puu pahoe* at shore and is rather on the North side of the landing in front of the Pa hale o Akahi [Akahi's residence], the boundary then runs South to the end of the cocoanut trees, and there turns *mauka* and follows up a wall, that the *kamaaina* told me was on the boundary of Kealia, to below where the breadfruit trees are growing. I do not know the boundaries above there. CX'd .

Note: Map and Notes of Survey filed by D.H. Hitchcock June 14, 1876 . . .

(page 279)

The Ahupuaa of Honaunau South Kona . . . Fifth day of August 1873 . . . for the hearing of the application of C.R. Bishop, for the settlement of the boundaries of Honaunau . . . Present J.G. Hoapili for applicant, for Mrs. C.R. Bishop, Her Excellency R. Keelikolani, and Madam Akahi.

Kawaha<sup>K</sup>. Sworn

I was born at Honaunau South Kona Hawaii at the time of Peleleu [ca. 1795 - the making sailing of the great canoe fleet to Oahu]. I lived on said land until after it was sold, then moved to Keei. The land of Keokea bounds Honaunau on the South side, my *kupuna* told me the boundary between these two lands, at shore, is at a place called Keakuaaniwale a *papa konane* (sort of checker board) on the *pahoe*, where the natives used to play a game with pebbles called *konane*. Thence the boundary runs *mauka* to Pohakuloa, a place near the *makai* Government road; a large rock. I do not know the points between these places. Do not know the boundaries on this side above this point. Keei is on the North side of Honaunau the boundary between these two lands at the sea shore is at a cave called Kapukalua, said cave has two entrances and is on the North side of a point called Kanoni. Thence *mauka* along Keei to Kaahu o Keawe, a very large pile of stones, now overturned near the Government road at shore. Thence the boundary runs *mauka* passing on the Southern side of Lepo-ula (which is on Keei) to Ahupuaa, a large pile . . . (page 280) . . . of rocks at the *mauka* Government road.

Thence *mauka* to Kalonowai a water hole in *awaawa*, thence *mauka* to where *koa* trees are growing and to the *pahoe* where *ohia* trees are growing, this my *kupuna* told me was the *mauka* boundary. Keaweohiki, Lunaiholani and Kumukoa (all now dead) told me boundaries. Keauhou cuts Honaunau off. Have not heard whether Keei reaches up to Keauhou or not. CX'd

Kalalahua<sup>K [9]</sup>. Sworn

I was born at Keei South Kona Hawaii, at time of Liholiho's leaving the Islands [ca. 1823]. I have always lived on Keei and know the boundaries between said land and Honaunau, but not between Keokea and Honaunau.

The *ana* [cave] Pukalua is the boundary at seashore between Honaunau and Keei, thence the boundary runs *mauka* to Ahu a Keawe a pile of stones, now overturned; by the *makai* Government road, thence to Ahupuaa a pile of stones, at the *mauka* Government road thence to Kalonowai, on the edge of the woods, in the ferns. This is as far as I know the boundaries of the lands, and Kawaha<sup>K</sup> (the last witness) is the one who told them to me.

Umi<sup>K</sup>. Sworn

I was born at Keei 1<sup>st</sup> at the time of Kamehameha I [ca. 1811-1819]. Lived at Keei till I married my second wife, and then moved to Honaunau, am a *kamaaina* and know the boundaries. My wife now dead pointed them out to me, and her *kupuna* Moana<sup>K</sup> an old fisherman and *kamaaina* told them to her. Keei nui bounds Honaunau on . . . (page 281) . . . the north side. The *awa* [landing] Uanakua is the boundary at shore, between Honaunau and

<sup>9</sup> Kalalahua was the grandfather of Mr. Charles Hua, and great grandfather of Clarence A. Mederios Jr. (and siblings); participants in the oral history/consultation program conducted as a part of this study.

Keei, thence the boundary between these lands runs *mauka* to Ahu a Keawe, a pile of stones at the *makai* Government road. Thence to *Ahupuaa* at *Mauka* Government road, thence *mauka* to Punawai Kalonowai, in the woods, there is an *awaawa* near a spring called Keahiolo; said spring being on the south side of the *awaawa*. I have heard that Pupuewai is the *mauka* boundary of Honaunau, that Keauhou and Kahuku cuts it off at Pupuewai. Kuikanai Keakaokawai's brother, told me this when we went up in Kealaehu after cattle (Kuikanai is now dead). Keokea bounds Honaunau on the South side, I do not know the points of the boundary do not know where Keei ends. Used to live with Kamehameha I and Liholiho and so do not know the boundaries of Keei. CX'd

Kapuwahelani <sup>K</sup>. Sworn

I was born at Keokea South Kona Hawaii at the time of *Peleleu* [ca. 1795 - the making & sailing of the great canoe fleet to Oahu], am a *kamaaina* of Honaunau; Uanakua a canoe landing is the boundary at the seashore between Keei nui and Honaunau thence *mauka* to Ahu Keawe thence to *Ahupuaa*, *mauka* Government road, thence to Kalonowai *punawai* [spring], there is Keahiolo on the top of the Southern bank of Honaunau, where stone rolls down Keei. This is as far as I know the boundaries.

The old *kamaaina* told me that the *awaawa* Ahiolo runs clear through the woods on the boundary of Keei, and *mauka* of *Lae mamani* to the foot of the mountain, where it is cut off by Keauhou. I have never been there, have only heard this; Pupuewai is on Honaunau and that Keauhou is *mauka*.

The boundary at shore between Honaunau and Keokea is a Kaheka, a pool of water called Haliipalala. Thence the boundary runs *mauka* to Pohakuloa, along rock, above the houses thence to Kahuahakamoa a *kukui* grove; a place called Keakuaaniwale is the boundary on the sea beach, a sort of *iwi aina* [boundary wall] along here from the shore, from Kahuahakamoa the boundary . . . (page 282) . . . runs along Keokea to Ke Ahupuaa, a pile of stones, on the *mauka* Government road. Thence to the edge of the woods. I do not know the points on the boundary, on where Keokea ends. I do not know of any one living who knows the boundaries in the woods. CX'd

Kila <sup>K</sup>. Sworn (Same witness as on Kiilae)

I have lived on Honaunau a long time and am a *kamaaina* of said land, used to go onto the mountain with kamaainas catching birds. I do not know the boundaries between Keei and Honaunau, but between Keokea and Honaunau. The boundary at sea shore is the point on the South side of Puaike *awa* [landing] thence *mauka* to Pohakuloa, a place *mauka* of the *makai* Government road thence to Ahuakanakou a large pile of rocks thence; to Kahuahakamoa, thence to Puuokakai a hill in *kukui* trees, thence to Ke Ahupuaa, *mauka* of the Government road, thence to Waiopokii, a water hole, thence to Ahuakukailimoku a place where canoe makers used to kill their pigs. (The old road for the canoe makers used to run up the boundary) Thence to Kalaewale, small water holes in the *koa* woods, thence to Waihaka, a large pond of water several fathoms long, thence to Paliohikihi, where we used to let the canoes down with ropes. (these boundaries are all in the old road) Thence follow up the road to Keaha which is out of the woods, in scant *ohia* and *mamani*, a place where bird catchers used to catch a bird called Kapiopio thence to Kamanu at which place the lands are all narrow. Alohi is on Keauhou 2. I do not know the boundaries between Keei and Honaunau, have heard that Puuloa is on Honaunau, it is a Palinui in the middle of the woods; know Pupuewai, it is *mauka* of a large cave called Ana o Umi, and is where Honaunau ends and Keokea and other lands end near there. CX'd

Ancient fishing rights extending out to sea . . .

(page 292)

The Ahupuaa of Kiilae District of South Kona Hawaii . . . On this sixth day of August A.D. 1873 the Commission of Boundaries for the 3<sup>rd</sup> J.C. met at Keopuka South Kona Hawaii, for

the hearing of the application of G.H. Davis for the settlement of the boundaries of the *ahupuaa* of Kiilae South Kona.

Notice of the hearing of applications for the settlement of the boundaries of lands in North and South Kona...Present G.H. Davis, for self, J.G. Hoapili for the Hawaiian Government, her Excellency R. Keelikolani and Akahi

Note: For boundaries of Kauleoli see Royal Patent of J. Atkins and Palauolelo

Testimony

Kila<sup>K</sup> Sworn

I was born at Kailua North Kona Hawaii, at the time of Peleleu [ca. 1795—the sailing of the great canoe fleet to Oahu], lived at Honaunau over twenty years, and used to go into the woods with my kupuna, bird catching, and it was then that the boundaries were pointed out to me. I know the land of Kiilae and its boundaries, Kuwaia a water spring, under the pali, at the sea shore, is the boundary between Kiilae and Keokea; The land has ancient fishing rights extending out, as far as you can see bottom. Commencing at the spring at the sea shore, the boundary runs *mauka* along Keokea to a *kahawai* (gulch) called Keokea thence follow up an *ivi aina* [boundary wall] to *kahawai* Kiilae [Kiilae gulch] the boundary being on the South side of the *kahawai*, thence follow up to opposite Ke Ahupuaa on Keokea, where the *kahawai* turns onto Keokea and the boundary runs *mauka* to Kaapali hookaa, a *pali* in the woods where *koa* is growing and where you can see the shore . . . (page 293) . . . and the *pali* Manuahi at Kaawaloa; thence *mauka* to Kanuukolea, a grove of Kolea trees where bird catchers used to live. Thence out of the woods, to Kanuku, a pile of stones which was built on the *pahoehoe* in olden times, thence through Kaanunu to Alohi. The Alohi, is on Keauhou thence along a *Lae mamani* [a *māmane* forest grove] called Mamani nui to a place called Kuakai, said place being in the middle of Kealia. Kiilae runs to the edge of Mamani nui, which is on Kealia. Thence the boundary between Kealia and Kiilae runs *makai*. I do not know the boundaries *makai* from Mamani [nui]. CX'd

No more witnesses on hand . . .

[George Davis Hū'eu died on January 1, 1874; and the continuance of the Boundary Commission hearings on Ki'ilae were left incomplete.]

(page 294)

The Ahupuaa of Keokea District of South Kona Hawaii . . .

August 6, 1873 . . . for the hearing of the application of J.O. Dominis, Administrator of the Estate of the late M. Kekuanaoa for settlement of the boundaries of Keokea 1<sup>st</sup> . . .

Testimony

Kila<sup>K</sup> Sworn (Same witness as on Kiilae)

Keokea ends at Kanunu at the lower edge of Kealohi; the *a poha* [thin crusted lava flow]. Kuluahi father of Keakaokawai, told me, that Keauhou and Kahuku were the two lands owning the *kuahiwi* [the mountain zone]; that Kahuku was on the top of the mountain, on the steep point and that Keauhou was at the foot, and flat part of the mountain, on this side. Kuluahi was a *makuakane* [uncle] of mine, and told me this at Kainaliu, I never went into the mountain with him. CX'd

Case continued till the 8<sup>th</sup> instant . . .

Keopuka August 8<sup>th</sup> 1873

Manuia<sup>K</sup>. Sworn (rather an old man)

I was born at Olelomoana Kona Hawaii but do not know when. My *kupuna* moved to Keokea when I was quite young.

At the time I desired lands a few years [back] . . . (page 295) . . . I went to Kekuanaoa and asked him the boundaries. He said he was born at Keokea and knew the boundaries. He said Kiilae is on the south side of Keokea and that Kuaaia is the boundary between them at the sea shore; said place is at the foot of a *pali* on Keokea but the *pali* and land beyond is on Kiilae. Thence *mauka* along Kiilae to Ke Ahupuaa, a high pile of stones the boundary following an old *iwi aina* [boundary wall] from the shore to the *mauka* Government road. This is as far as I have seen boundary between Keokea and Kiilae have not heard where Keokea ends on what lands cut it off.

Haliipalala and Keakuaaniwale are on Keokea and the boundary between Honaunau and Keokea at the sea shore is at an open place among the cocoanut trees, mostly sand and *pahoehoe* called Papa Konane, on the south side of Keakuaaniwale; there are two large stones there from this place the boundary to Keahuakamakau, a very high pile of stones; thence to Kahuamoa a cave, thence to Puu Kahakai a hill surrounded by *kukui* trees; thence to Ke Ahupuaa, a large pile of stones at the *makai* side of the *mauka* Government road. This is as far as I know the boundaries of the land.

The *kamaaina* are all dead and gone. CX'd

The Kaheka is on Keokea. Pohakuloa is on Keokea. Kahuahakamoa is another name for Kahuamoa . . .

Keauhou, Kona Aug. 9, 1873

Hamu<sup>K</sup>. Sworn

I know Makoi's *kuleana* [property] on Keokea, it is on the South side of Papa Konane, a place called Keakuaaniwale is on the side of the *kuleana*. Makoi, my father (now dead told me that the boundary between Honaunau and Keokea ran on the North side of this *kuleana*, said *kuleana* is a short distance below the *makai* Government road and same distance from shore. I do not know the boundaries *mauka*. CX'd

(page 220) Boundary Commission—Volume 1 No. 3, Certificate No. 96

Certificate of the Boundaries of Kealia 1<sup>st</sup> District of South Kona, Island of Hawaii, Third Judiciary Circuit. [Includes southern boundary of Kauleoli.]

Upon the application of Chas R. Bishop for Madam Akahi, and by virtue of the Authority vested in me by law as Sole Commissioner of Land Boundaries for the Island of Hawaii 3<sup>rd</sup> J.C.

I hereby decide and certify the boundaries of the *Ahupuaa* of Kealia 1<sup>st</sup>, Situated in the District of South Kona, Island of Hawaii, to be as hereinafter set forth . . . This fourteenth day of June, A.D. 1876 . . .

Boundaries of Kealia 1<sup>st</sup>

Commence at rock marked "X" on the Sea coast at boundary of Kauleoli and running along the coast to Kealia 2<sup>nd</sup> as follows:

South...West... South...East... (page 221) ...to large rock on Sand Beach. North...East... to center of old *Kahua Hale* [house site]... North...East... to top of *Pali* line of Kealia 2<sup>nd</sup>...North...West along *pali* line of Kealia 2<sup>nd</sup>...North...West...to corner of goat pen... North...East... to Stone wall. North...East... along Stone wall. North...East... along Stone

wall to upper Corner. North...East... to upper Govt. Road. North...East...to woods. North...East... to “Komakawai” Waterhole. North...East...to South East corner of this land bearing North from “Keanahaluhi” [?]. North... thence along Kahuku to Kiilae Thence along boundary of Kiilae as follows.

South...West... along Kiilae to point opposite Komakawai. South...West... to Kauleoli & *Koa* marked “X”. South...West... along Palauolelo’s land. South...West... along Palauolelo’s land... South...West... along Palauolelo’s land to *ahu mauka* of road. Thence along Hamblin’s [Hamlin] land and land of Kauleoli Royal Patent 1575. South...West... to Commencement of Hamblin’s land. South...West... to *ahu* on lower Road. South...West... to Sea coast & points of Commencement and Containing an area of 7300 acres more or less...

(page 251) Boundary Commission—Volume 1 No. 3, Certificate No. 109 (for correct description of this Ahp. See R.P. 7874)

Certificate of the Boundaries of Honaunau, District of South Kona, Island of Hawaii . . .

Upon the application of C.R. Bishop and by virtue of the Authority vested in me by law as Sole Commissioner of Land Boundaries for the Island of Hawaii 3<sup>rd</sup> J.C.

I hereby decide and certify the boundaries of the *Ahupuaa* of Honaunau Situated in the District of South Kona, Island of Hawaii, to be as hereinafter set forth. Given under my hand at Hilo, Hawaii. This twenty seventh day of June A.D. 1876.

R.A. Lyman

#### Boundaries of Honaunau

Commencing at the sea coast on the boundary of Keokea rock marked “H” and running along the coast as follows... North...West... (page 252) ...North...East... North...West... to spouting Hole & well. North...West... to place called Keanapukalua on boundary of Keei 2<sup>nd</sup>; Thence along said boundary, as follows.

North...East... to *ahu* on lower Govt Road. North...East... to *ahu* on upper Govt Road. North...East... to water hole on *Pali* called Pokii. North...East... through woods to boundary of Keauhou 2<sup>nd</sup> and large *ahu* on said corner; Thence along said boundary outside boundary of Heavy Forest. South...East... to *ahu*. South...East... to *ahu* on large rock. South...East... to boundary of Keokea. Two *ahu*’s one on each side of *Awaawa* [valley or gulch] line runs half way between. South...West... down boundary of Keokea to water hole called Pokii on *pali*. South...West... to *ahu* in Govt. Road. South...West... to *ahu*. South...West... to *ahu* near lower Govt. road and Rock marked “H”. South...West... to rock called Pohakuloa. South...West... to sea coast & point of commencement, and containing an area of 6123 acres, More or less.

(page 253) Boundary Commission—Volume 1 No. 3, Certificate No. 110

Certificate of the Boundaries of Keokea, District of South Kona, Island of Hawaii . . . [Includes the north boundary of Ki‘ilae.]

Upon the application of J.P. Dominis administrator of the Estate of H.R.H. M. Kekuanaoa, and H.R.H. V. Kamamalu per T.H. Harris atty at Law, and by virtue of the authority vested in me by law, as sole commissioner of Land Boundaries for the Island of Hawaii, 3<sup>rd</sup> J.C. I hereby decide and certify the Boundaries of the *Ahupuaa* of Keokea Situated in the District of South Kona, Island of Hawaii to be as herein after set forth . . . This twenty seventh day of June, A.D. 1876.

R.A. Lyman

#### Boundaries of Keokea

Commencing at rock on coast marked “K + K” on boundary of Kiilae, and running along boundary of Kiilae... (page 254) N...E... to *ahu*. North...East... to *ahu* near breadfruit tree. North...East... to upper Govt road and *ahu*. North...East... to top of *Pali*. North...East... to upper edge of forest, on boundary of Keauhou 2<sup>nd</sup>. North...West... to *awaawa* [gulch or valley] (large *ahu* each side *awaawa*). South...West...chains along boundary of Honaunau to water hole on *pali* called Pokii. South...West...chains to *ahu* on upper Govt road. South...West... to *ahu*. South...West... to *ahu* & rock marked H on lower Government road. South...West... to rock called Pohakuloa. South...West... to sea coast rock marked H. South...East... along coast... to commencement and containing an acre of 2,375 Acres, More or less.

(page 221) Boundary Commission—Volume B

The Ahupuaa of Honaunau, District of South Kona, Island of Hawaii... *Continued* from August 6<sup>th</sup>, 1873...

Notes from Commissioners Journal taken June 5<sup>th</sup> 1874:

Went with Kila, Umi and others, and looked at Haliipalala and *awa pai waa* [canoe landing] near the boundary of Keokea. Kila pointed out a point South side of the canoe landing as the boundary of Keokea, and thence to old *Halau* [canoe house] and to west *makai* corner of *Kuleana*, and along the North boundary of said *kuleana* and passing to North of Pohakuloa, a rock at the Government road. Thence to an *ahu* Kamakau, thence to the wall, running straight *makai* from *Kukui* grove making it nearly straight. Umi, and the woman witness pointed out boundary as from Halipalala, a few rods towards Kau of Kila's boundary thence to Keakuaaniwale on sand, and to near South corner of *Kuleana*; thence to Pohakuloa large rock at the Government road, thence as given in their testimony and to wall *mauka* that Kila points out.

The place in dispute has a few cocoanut trees on it, otherwise it is almost worthless. The line Kila points out goes just to the South of the place pointed out by all as the *papa konane* [checker board]. The *kuleana* award says this [is] on Keokea.

Testimony taken at Honaunau, South Kona Island of Hawaii. June 5<sup>th</sup>, 1874

(page 222)

Kuiline<sup>K</sup>. Sworn (A blind man)

I was born in Kohala at the time of Peleleu [ca. 1795] I now live here, moved here during the life time of Kamehameha I and have lived here ever since, and know a part of the boundaries of Honaunau. Makaluhi the *konohiki* of Keokea told me the boundaries. The boundary at shore between Honaunau and Keokea is at a place called Haliipalala a *Kaheka* [tidal pool], thence to a large rock on the sand. I do not know whether the rock is there now or not, as I have been blind since 1838. The *Kaheka* called Keakuaaniwale is on the North side of Haliipalala, from thence the place on that boundary that I remember is called Kipikipi, a kihapai [dryland garden]. Hikili is in the *koa* woods. Heard that Keauhou takes most of the mountain. Kahawai is a water spring on Keokea. The bird right of Honaunau in olden times extended to Alohi and Puepuewai. Have heard that Keauhou cuts this land off. Kahuku and Kau bird catchers used to fight on the mountain, but I do not know the boundary between those two lands. If Kona people went too far over Kau people used to fight them and drive them back and visa versa. I know the boundaries between Honaunau and Keei. Anakua, I think is on the boundary at shore, thence to a pile of stones at Mahana, thence to a pile of stones on the Kau side of Kalepowila. Thence to Ke Ahupuaa at the *mauka* Government road.

Note. On being asked how he knew where the *mauka* Government road was, when he had been blind so many years he replied. That he was told that it was at the same place where the ancient trail [Kealaehu] to Kau used to be.



Thence to Pohakupakahi a pile of stones, thence passing on the Kona on North side of Kalonowai to Keahiolo. I do not know the points on the boundaries beyond here and I do not know how far Keei extends but have heard that Honaunau extends to Puepuewai. CX'd

(page 223)

Know a place called Anapuka, it is way on Honaunau. The boundary as it was told to me runs from Anapuka to Puulehu and then to Mahana. Bounded *makai* by the sea. Ancient fishing sights extending out to sea.

Note:

Then went to look at the point in dispute with Kalalahua and Umi.

The place in dispute is quite a wide strip of *pahoehoe*, nearly worthless.

The witnesses all agree as to points when the boundary reaches good land *mauka*...

R.A. Lyman.

Hilo June 27, 1876

The Commission of Boundaries for the 3<sup>rd</sup> J.C. met at the office of Com. D.H. Hitchcock filed notes of survey of Honaunau and map, and being sworn says.

I found a dispute about the boundary between Honaunau and Keokea, whether a *kaheka* belonged to Keokea or Honaunau. I put the *Kaheka* into Honaunau, as both parties agreed as to boundary at *makai* Govt. road. I think that there are only a few cocoanut trees on this strip, and it is about 2 acres in area, rocks and sand. On the North side I found that the *kamaaina* carried the boundary at shore 4 or 5 chains into Keei, but there were no old *ahu* on their boundary, and so I put the boundary where they claimed. Mr. Bishop left it to me to straighten the boundary. I surveyed each side of the land as far as the *mauka* edge of woods and then made a straight line through the woods to the place that Keakaikawai pointed out as the boundary between Keauhou and this land. I am Mr. Bishop's Agent to look after his interests. I requested the *kamaaina* from this land to point out the *mauka* boundary and they said that they could not point it out and refused to go any further. They said that the land went further *mauka* but could not point it out. They said there were two *ahu* on the boundary. Keakaikawai pointed out two *ahu*, and said those were the ones.

CX'd The *kamaaina* from this land seemed to be lost above the woods. Testimony closed.

The boundaries of Honaunau are decided to be as given in the notes of survey filed by Mr. Hitchcock . . . see Folio 251, Liber I . . . [see Certificate No. 109]

### Surveyor Field Notebooks and Correspondence (South Kona Region)

Among the historic government records for lands in the vicinity of the study area are the communications and field notebooks of Kingdom Surveyor, Joseph S. Emerson. Born on O'ahu, J.S. Emerson (like his brother, Nathaniel Emerson, a compiler of Hawaiian history) had the ability to converse in Hawaiian, and he was greatly interested in Hawaiian beliefs, traditions, and customs. As a result of this interest, his letters and fieldbooks record more than coordinates for developing maps. While in the field, Emerson also sought out knowledgeable native residents of the lands he surveyed, as guides. Thus, while he was in the field he often recorded traditions of place names, residences, trails, and various features of the cultural and natural landscape. Among the lands that Emerson worked in was the greater South Kona region, including the lands of Ki'ilae and Kauleoli.

One of the unique facets of the Emerson field notebooks is that one of his assistants, J. Perryman, was a talented artist. While in the field, Perryman prepared detailed sketches that bring the landscape of the period to life. In a letter to W.D. Alexander, Surveyor General, Emerson described his methods and wrote that he took readings of:

... every visible hill, cape, bay, or point of interest in the district, recording its local name, and the name of the *Ahupuaa* in which it is situated. Every item of local historical, mythological or geological interest has been carefully sought & noted. Perryman has embellished the pages of the field book with twenty four neatly executed views & sketches from the various trig stations we have occupied ... (May 21, 1882; Hawai'i State Archives—DAGS 6, Box 1)

Discussing the fieldbooks, Emerson also wrote to Alexander, reporting “I must compliment my comrade, Perryman, for his very artistic sketches in the field book of the grand mountain scenery” (State Archives, HGS DAGS 6, Box 1; Apr. 5, 1882). Later he noted, “Perryman is just laying himself out in the matter of topography. His sketches deserve the highest praise...” (ibid. May 5, 1882). Fieldbook sketches and the Register Maps which resulted from the fieldwork provide us with a glimpse of the country side of more than 110 years ago.

The following notes are excerpted from the Fieldbook No. 256, “KONA HAWAII Primary Triangulation, 1883-4. VOL. VI” (viewed in the collection of the State Survey Division). The numbered sites and place names cited from the fieldbook coincide with the locational references in sketches prepared by Perryman. Because the original books are in poor condition—highly acidic paper that has darkened, making the pencil written and drawn records difficult to read—some of the notations have been carefully traced to enhance readability. Figure 18 is a portion of Register Map No. 1281 (Registered in 1891), depicting the Ki‘ilae-Kauleoli vicinity. Produced by Emerson as a result of the surveys which he conducted between 1884 and 1888; this map provides viewers with the larger regional context of the fieldbook sketches (Figures 19, 20, and 21).

*Field Book No. 256 KONA HAWAII (1883-1884), Feb. 25, 1884 (p. 57, 59)*

*Palanihi Station (Overlooking Kauhakō-Ho‘okena Bay)*

Ref.	Location	Feature	Ahupuaa
b6	Laina Maui	Top of Pole	Kauhako
c6	Alaihi	Top of pole	Kalahiki
d6	Kepaka	Top of pole	Kealia 1
e6	sharp rock in sea	Top of pole rock by Lae Mamo	Kealia 1
f6	Pukaana Ch.	Top of steeple	Hookena
g6	Kukaheka Pt.	surface of sea	Kukuiope 1
h6	Lae o Kapilo	Surface of sea Waiea	
v6	Limu Koko reef	Covered by surf	Kalahiki
j6	Kanekaukii	Covered by surf	Kalahiki
k6	Laina Maui Pt	Division line between	Kauhako & Kalahiki
l6	Tang Hd Kealia Bay	Jagged Bay	Kealia 2
m6	Poomaka Pt		Kealia 2
n6	Lae Mamo No. 3		Kealia 1
o6	Lae o Kauhi Nohonakauhi		Kealia 1
n3	Lae Kanoni	Extremity	Honaunau
o2	Keawekaheka Pt.		Kaawaloa

*Field Book 256 Feb 29, 1884 (p. 79) Lae o Kanoni Station*

Ref.	Location	Feature	Ahupuaa
q4	Lae Loa Cape extremity		Kealia 1
v6	Limukoko No. 2		Honaunau
i4	Palemano		Keei
o2	Keawekaheka Cape		
w6	Tang hd. Alahaka Bay		Keokea

v6	Limu Koko Cape Extremity		Honaunau
m4	Tang hd. Honaunau Bay		Honaunau
x6	Hale o Keawe	South side of Honaunau Bay	Honaunau
y6	Tang hd. Mokuohai B.	South Side of Palemano Cape	Keei 2...
w4	Honaunau Cath. Ch.	Top of Spire	Honaunau
x4	Honaunau Prot. Ch.	Top of spire (Ponomau)	Honaunau
f6	Pukaana Prot. Ch.	Top of Spire	Hookena...
z6	Kekuewa's large house		Honaunau
a7	Wainoni frame school house		Honaunau
b7	Polani's frame house	Just above Laai Landing	Keokea
q6	Robert's frame house		Kauhako

*Field Book 256 Mar. 14, 1884 (p. 137) Lae o Kanoni Station*

Ref.	Location	Feature	Ahupuaa
...17	Pukakio Cape south of Alahaka B.	Just north of Polani's frame house	Keokea
m7	Kiilae Bay tang at hd.		Kiilae
n7	Papakolea Pt. No. 1	part of the large cape Lae loa	Kealia
o7	Small bay tang hd. of	just north of Lae Loa	Kealia
g4	Lae Loa Cape		Kealia
p7	King's thatched house		Kauloli
q7	C. Hooper's frame house		Kauloli

Hookena, February 1, 1891, J.S. Emerson (Government Surveyor), to W.D. Alexander (Surveyor General); Describes great difficulty in getting fresh water in the South Kona Region, and also reported:

. . . Every where in Kona the natives show me marked consideration and kindness. I never met a more generous and kind hearted people any where . . . (State Archives—DAGS 6 HGS)

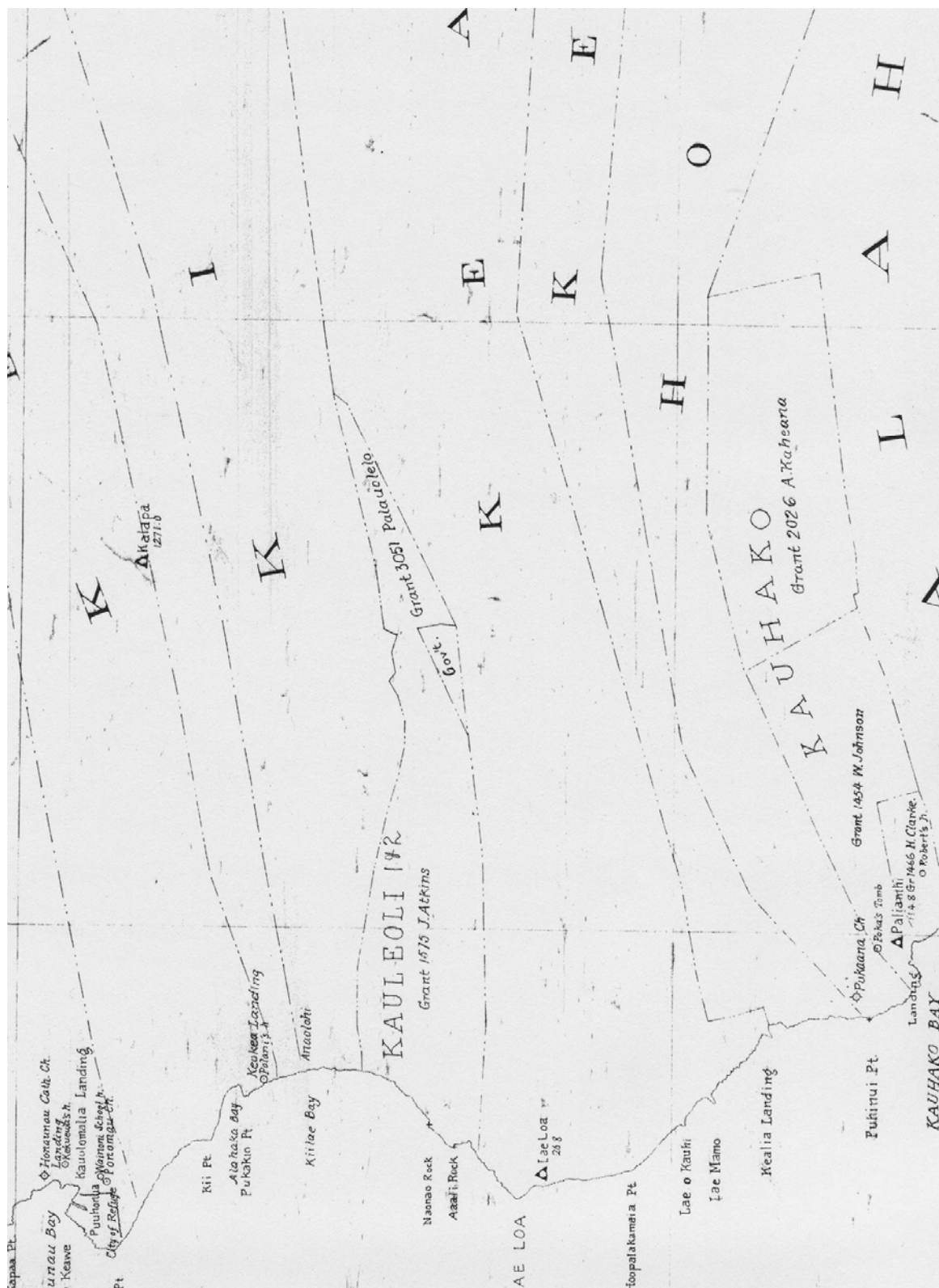


Figure 18. Portion of Register map 1281 depicting lands of the Ki'īlāe-Kauleolī vicinity (J.S. Emerson Surveyor, 1891; not to scale; State Survey Division).

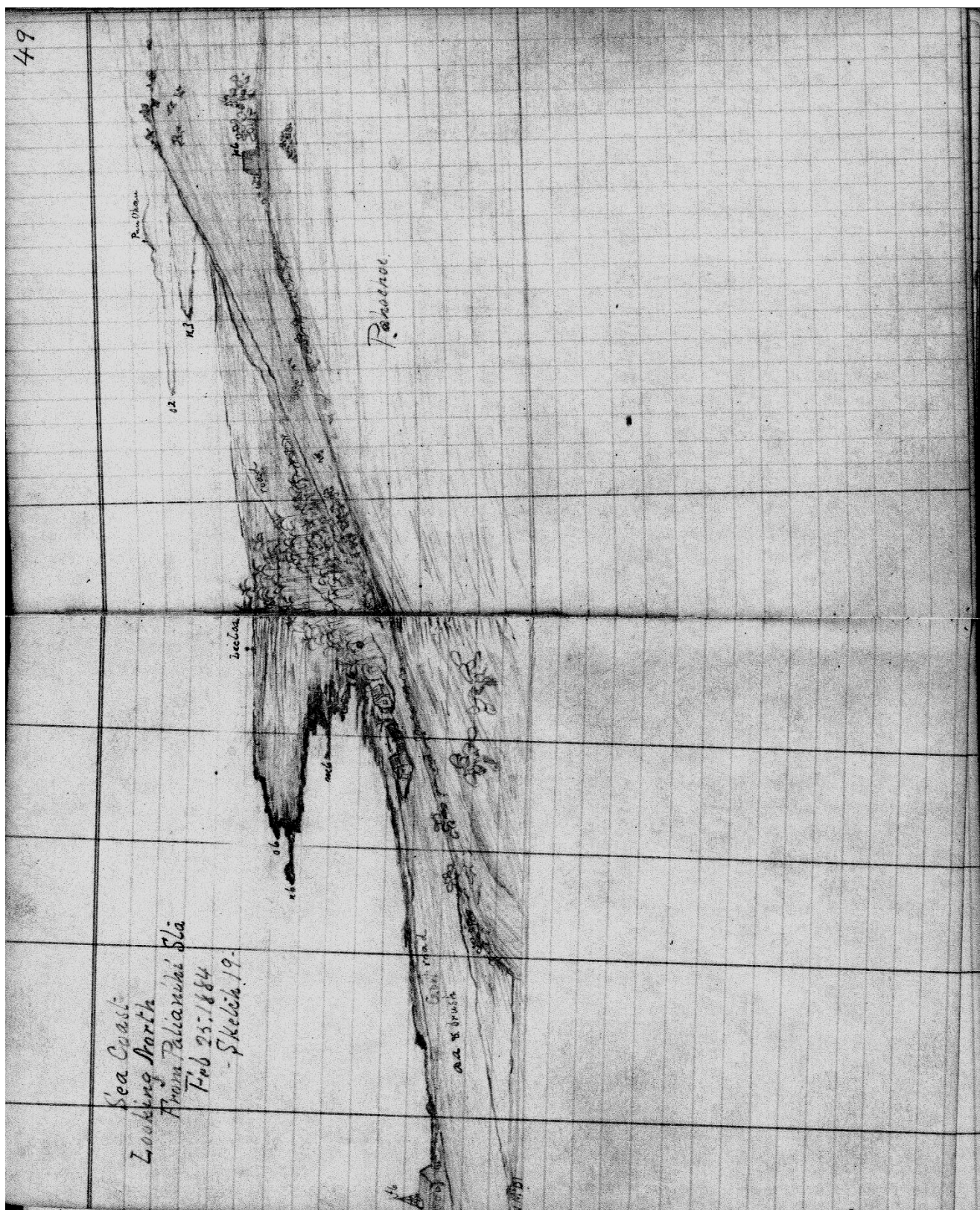


Figure 19. J.S. Emerson Field Book Sketch; Book 256:49 (State Survey Division).



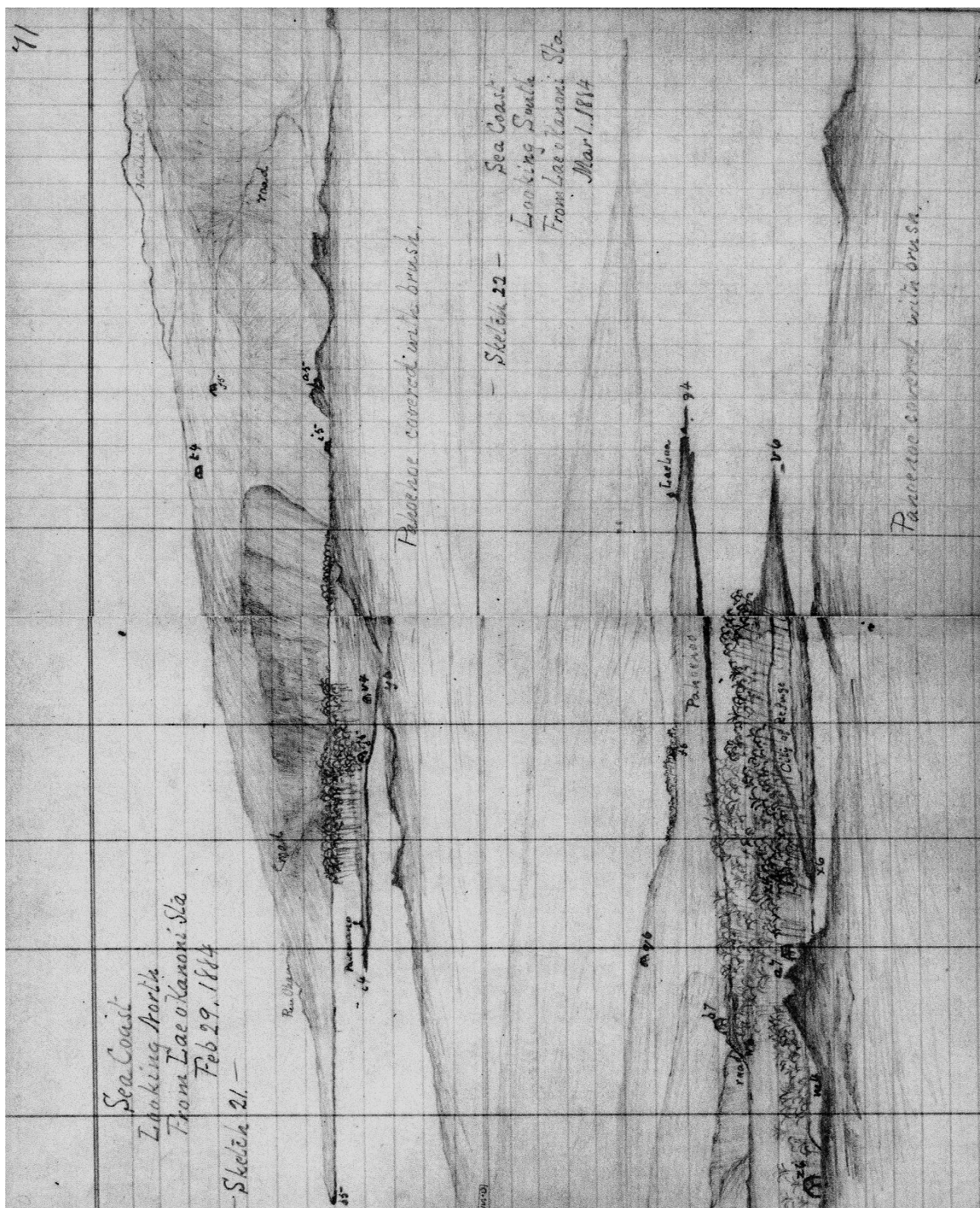


Figure 20. J.S. Emerson Field Book Sketch; Book 256:71 (State Survey Division).

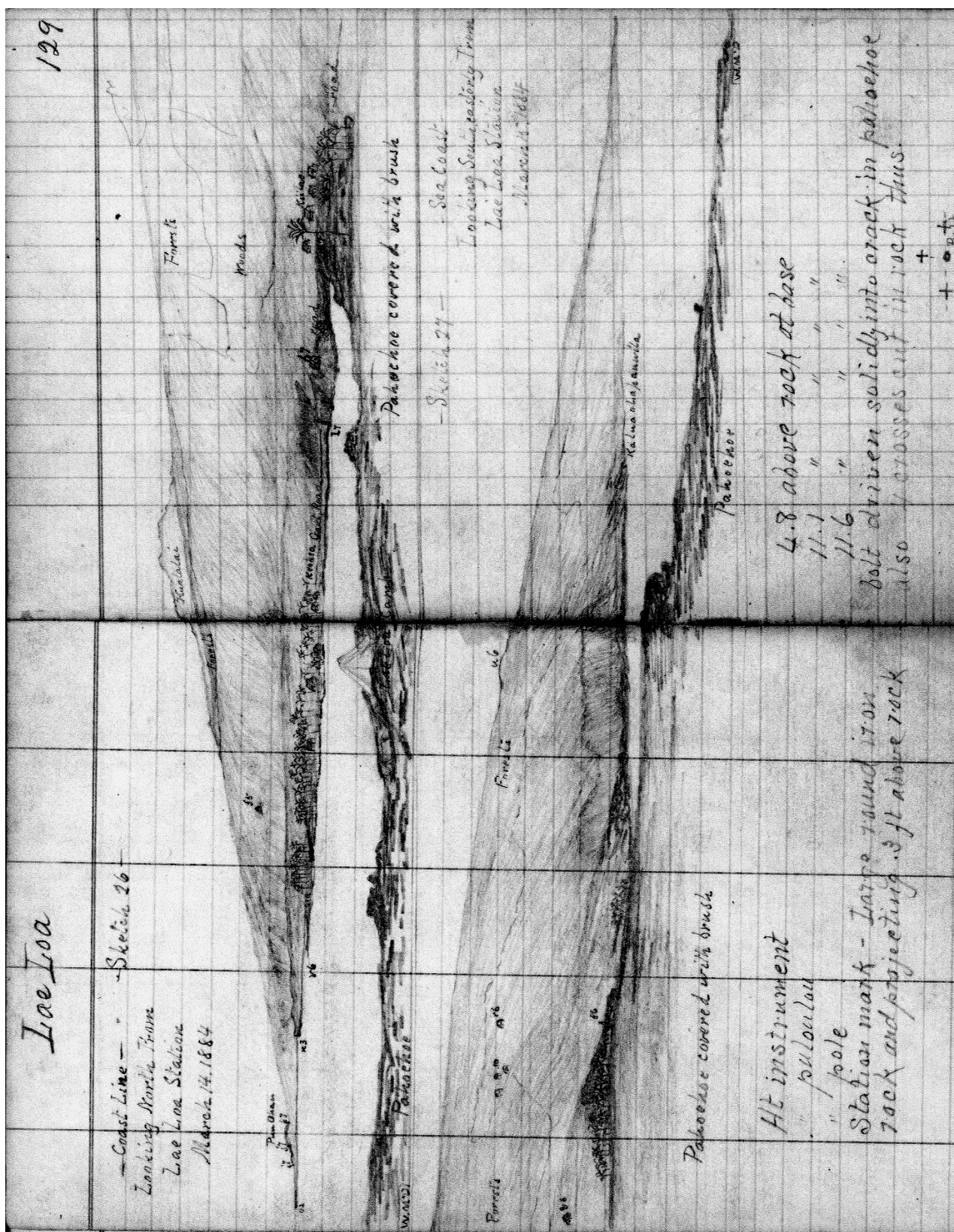


Figure 21. J.S. Emerson Field Book Sketch; Book 256:129 (State Survey Division).

## ***NĀ MO‘OLELO ‘OHANA: ORAL HISTORICAL STUDY***

The primary objective of the oral historical component of this study is to identify the existing knowledge about former land use, traditions, practices, and cultural sites of the study area. Recording oral histories is also an important component in the process of documenting the history of a community’s landscape. Oral history interviews help to demonstrate how certain knowledge is transmitted from generation to generation, thus assuring its continuance. Often, because the experiences conveyed are personal, the narratives are richer and more animated than those that may be typically found in reports that are purely archival in nature. Through the process of conducting oral history interviews valuable information can be learned that is at times overlooked in other forms of studies. Also, with the passing of time, knowledge and personal recollections undergo changes. Sometimes, that which was once important is forgotten, or assigned a lesser value and visa versa.

Today, when individuals (particularly those from outside the culture which originally assigned the cultural values to places, practices, and customs) are charged with evaluation of the cultural-natural landscape, cultural practices, and history (as required in laws and guidelines of historic preservation), their importance can be diminished. Thus, oral historical narratives provide both present and future generations with an opportunity to understand the cultural attachment—relationship between people and their environment.

Be reminded that while the oral history interview component of this study records a depth of cultural and historical knowledge for Ki‘ilae, Kauleoli, and neighboring lands of the Hōnaunau-Ho‘okena section of South Kona, the documentation is only an introduction to the history of the families and the land. In the process of conducting interviews, it is impossible to record all the knowledge or information that the interviewees possess. The records provide only glimpses into the stories being told, and of the lives of the interview participants. Every effort has been made to accurately relay the recollections, thoughts, and recommendations of the people who shared their personal histories in this study.

As would be expected, participants in oral history interviews sometimes have different recollections of history, or for the same location or events of a particular period. There are a number of reasons that differences are recorded in oral history interviews, among them are that:

1. recollections result from varying values assigned to an area or occurrences during an interviewees formative years;
2. they reflect localized or familial interpretations of the particular history being conveyed;
3. with the passing of many years, sometimes that which was heard from elders during one’s childhood 70 or more years ago, may transform into that which the interviewee recalls having actually experienced;
4. in some cases it can be the result of the introduction of information into traditions that is of more recent historical origin; and
5. some aspects of an interviewee’s recollections may also be shaped by a broader world view. In the face of continual change to one’s cultural and natural landscapes, there can evolve a sense of urgency in caring for what once was.

In general, it will be seen that the few differences of history and recollections in the cited interviews are minor. If anything, they help direct us to questions that may be answered through additional research, or in some cases, pose questions that may never be answered. Diversity in the stories told, should be seen as something that will enhance interpretation, and preservation of the resources within the lands of Ki‘ilae and Kauleoli. However, it will be seen that there is a general congruence between the archival data and the oral historical data. The congruence indicates that there is time-depth to aspects of the cultural knowledge as expressed, and practiced by members of the present generation.



## Study Methods and Approach

Between January 22<sup>nd</sup> and May 20<sup>th</sup> 2001, Kepā Maly of Kumu Pono Associates conducted fifteen oral history interviews, including site visits and follow up discussions with twenty-four participants. Additionally, an interview conducted by Kepā Maly in 1996 with Mrs. Margaret Maunu-Keākealani (born at Ki‘ilae in 1925, since passed away) is also included in the current study. Informal (non-recorded) consultation interviews were also conducted with four individuals with ties to the lands and families of the study area. The formal interviewees (n=25; 14 females and 11 males) ranged in age from 45 to 90 years old. Historical records pertaining to land ownership and tenure, and existing personal contacts in the South Kona area were used to help identify individuals with possible specific knowledge of, and historical ties to, the current study area. All of the interviewees can be characterized as belonging to one or more of the following categories: they have lived upon the lands of Ki‘ilae and Kauleolī (n=4), they have worked as ranch hands on the lands (n=4), they know the lands from traveling them with their extended family and friends (n=11), and/or they are descended from traditional residents of the lands of Ki‘ilae and Kauleolī (n=13). The interviewees provided information gained from their personal experiences ranging from about 1915 to the present. These covered a variety of topics including historic residency and land tenure; land use; landscape and cultural features; and fishing, farming, and ranching practices.

In preparation for the oral interviews a questionnaire outline was developed (Figure 22) that set the general direction of the interviews. However, it did not limit interviewees to those topics; aspects of the general and personal family histories and personal experiences that stood out as important to the interview participants were recorded as well. Interviews were conducted in a straightforward talk-story style. During the interviews several historic maps were referenced, and when appropriate, the approximate locations of sites discussed were marked on one or more of the maps. Depending on the location being discussed, and the nature of the resources or features being described, maps dating from 1888 (Register Map No. 1445) to 1965 (Jackson 1966) were referenced. Figure 23 (in pocket), is an annotated map, depicting various sites and features referenced during the interviews.

All of the recorded interviews were transcribed and returned (with the recordings) to the interviewees, and follow up discussions were conducted in review of the typed draft-transcripts. The latter process sometimes resulted in the recording of additional narratives with the interviewees. Following completion of the interview process, all of the participants in the tape-recorded interviews gave their permission to include their interviews in this study and for possible future reference by the investigators of this study. Readers are asked to respect the interviewees and their families, and to not quote this information without permission from the interview participants or their descendants. Rechtman et al. (2001:Appendix B) contains the complete interview transcripts along with information describing the background of each of the participants and their connection to the current study area.

Following the preliminary approval of the Ki‘ilae Farms Subdivision by the County Planning Director in 2002, there was an appeal to that approval and a subsequent administrative hearing was held at which time testimony was gathered from the appellants (Wayne Leslie, Protect Keopuka ‘Ohana, and Clarence Medeiros Jr. concerning among other things various cultural issues). Finally, in April and May of 2008 follow-up interviews were conducted one each with Alfred Medeiros, Clarence Medeiros Jr., and Jimmy Medeiros Sr.; the latter two individuals are full brothers and unrelated to the former individual.

### General Question Outline for Oral History Interviews: Ki'īlae and Kauleoli Vicinity, South Kona, Island of Hawai'i

This oral history interview program is being conducted in conjunction with a detailed study of archival and historical literature, and in conjunction with an archaeological survey of a portion of the lands of Ki'īlae and Kauleoli (TMK Overview Sheet 8-5-05). The interviews (in conjunction with the archival-historical research) will help document the history of residency and land use in the Ki'īlae-Kauleoli vicinity, and help identify traditional and customary practices and places of importance to the families of the land. With your permission, portions of the interview will be included in a report documenting the history of the Ki'īlae-Kauleoli vicinity, and used to help determine the best actions for future land use.

The following questions are meant to set a basic foundation for discussion during the oral history interview. Your personal knowledge and experiences will provide direction for the formulation of other detailed questions, determine the need for site visits, and/or other forms of documentation which may be necessary.

#### Interviewee—Family Background:

Name: \_\_\_\_\_ Phone #: \_\_\_\_\_

Address: \_\_\_\_\_

Interview Date: \_\_\_\_\_ Time: \_\_\_\_\_ to \_\_\_\_\_ Location: \_\_\_\_\_ Interviewer: \_\_\_\_\_

When were you born? \_\_\_\_\_ Where were you born? \_\_\_\_\_

Parents? (father) \_\_\_\_\_ (mother) \_\_\_\_\_

Grew up where? \_\_\_\_\_ Also lived at? \_\_\_\_\_

- Additional family background pertinent to the Ki'īlae-Kauleoli vicinity — Such as generations of family residency in area... (time period)?
- Kinds of information learned/activities participated in, and how learned...?
- Naming of the *ahupua'a* or sections of the land that are of particular significance in the history of the land and to native practices...?
- Knowledge of agricultural fields and practices, and areas of residency (water resources, types of crops, how used...)?
- Knowledge of villages or house sites – church, stores, community activities.
- Names of native- and resident- families and where did they lived?  
Ah Leong, Ahu, Davis (Peabody), Hose, Kaai, Kaainoa, Kahikina, Kailianu, Keliipaakaua, Kim, Makainai, Maunu, Paele, Palauolelo, Pi... others
- Who were/are the other families that came and/or come to collect area resources, and protocol?
- Gathering practices (who and what)? Shoreline and *mauka-makai* trail accesses?
- Knowledge of *heiau* (or other ceremonial sites), other cultural resources (for example – *kū'ula*, *ilina*...), and families or practices associated with those sites?  
Burial sites, practices, beliefs, and areas or sites of concern (ancient unmarked, historic marked / unmarked, family)...? Representing who and when interred ...?
- Fishing — describe practices (i.e., where occurred/occurring, types of fish; names of fishermen; and what protocols were observed...? (such as: permission granted, practices and methods of collection...?)  
land based *ko'a* (cross *ahupua'a*) — ocean based *ko'a*; *kilo i'a* (fish spotting stations) locations and types of fish?  
Names of *heiau* and *ko'a* etc.?
- Historic and Current Practices — What was growing on the land during youth (planted and wild)?  
How was water obtained (i.e. wells, caves, springs, catchment)? Changes observed in lifetime?
- Relationships with neighboring *ahupua'a* and residence locations?
- Historic Land Use: Agricultural and Ranching Activities...?  
(for example – paddock naming and rotation; fencing; planting activities; hunting and other practices...  
size of herd; relationship with other ranches; shipping; routes traveled...)
- Personal family histories of travel upon the trail ...?
- Do you have any early photographs of the area?
- Are there particular sites or locations that are of cultural significance or concern to you?
- Recommendations on how best to care for the natural and cultural resources in and neighboring the Ki'īlae-Kauleoli vicinity...?
- Do you have recommendations — such as cultural resource- and site-protection needs in the Ki'īlae-Kauleoli vicinity ...?  
Describe sites and define boundaries of those sites/locations and of the area of access via the trail/road...

Figure 22. Oral History Interview Questionnaire (designed to provide general guidance during the interview process).

## Overview of Historical Recollections and Family Connections

It became clear during the interview process that nearly all of the historic residents of Ki‘ilae and Kauleolī shared familial relationships with one another, some by marriage and others by direct lineal descent. Furthermore, interview participants, who come under the surnames of AhNee, Hose-Watson, Hua, Kahikina, Keākealani, Keli‘ipa‘akaua, Loando, Maunu, and Medeiros; all share family connections in some form with—Ahu, Kahinawe, Kau‘inui, Kupa, Naihe (Nika), Paila, and Polani—each of whom registered claims in the *Māhele* for *kuleana* at Ki‘ilae and Kauleolī. Other families (primarily Hawaiians) lived upon the land, worked the ranch, traveled across it, or had frequent interactions with families of Ki‘ilae and Kauleolī.

Specific residency and site location information for Ki‘ilae-Kauleolī (in the vicinity of Māmalahoa Highway) and the larger Keōkea-Ho‘okena community in the period between 1925 to 1960 was recorded in interviews with Madeline Leslie, Kaneyo Higashi (and her daughter Gloria Okamura), Hannah Kiwaha, Taro Fujimori, Alfred Medeiros, and August Loando. Through their interviews, we are able to associate various historical remains identified on the ground, with the former residences and agricultural fields of families who resided upon the land.

In the section of the current study that discusses *Residency and Land Use Through the 1900s*, the on-going residency relationship of a number of Hawaiian families to the lands of Ki‘ilae and Kauleolī is detailed. It may be added here, that little is remembered or known about Henry Dreyzhner, a member of the 1890 lessee’s association (this may be Hanele who is reported in Jackson’s 1966 study as having made salt on the flats at Kauleolī). Mrs. Mary Maunu-AhNee, thought that he may have been a close friend of the family, and possibly married to a grandaunt, but she was uncertain. Another non-Hawaiian resident, Daniel McKay, is remembered as having been a good friend of the Maunu-Kahikina families. In the period prior to McCandless’ acquisition of the land, McKay had a lease (it appears to have been informal), for a portion of the *kula* land at Ki‘ilae. His house, and watermelon and sweet potato gardens were enclosed in a large walled lot, which around 1950 was modified into a cattle trap (interviews with Mrs. Margaret Maunu-Keākealani, Mr. Charles Hua, Mr. Alfred Medeiros, and others).

All of the Ki‘ilae-Kauleolī residents mentioned above, along with other families of the area—like Keli‘ipī, Pi (Pi Manunu), Kailianu, Ka‘ai, Ka‘ainoa, Makainai, Gaspar and Kiwaha—practiced subsistence agriculture and fishing. Several of the elder Hawaiian interviewees share detailed descriptions of farming and fishing practiced on these lands. All of them also spoke with great *aloha* for the land. When asked, a couple of elders recalled hearing, and shared their recollections regarding the naming of Kauleolī. But only one interviewee, a native Hawaiian speaker spoke about possible meanings of Ki‘ilae.

*Kupuna* Mālia Kama Craver (a native of Ho‘okena), who grew up with children of the Maunu family, noted that in the years when she was between eight years old and her early teens, she heard her elders speaking about Ki‘ilae. On several occasions, she heard *tūtū* Pu‘unoni Ka‘upu, a noted historian of the region, speak to her aunt (Annie Kama Kauwē) about there being certain dark nights of the moon, when the sound of drums and chanting could be heard from Ki‘ilae. She also heard *tūtū* Keli‘ipī Manunu speak of chanting and *huaka‘i pō*, or night marchers, who would regularly walk the trails to the *makai* lands of Ki‘ilae. These processions would descend to the coast and follow the old trail past Alahaka and continue on to the Pu‘uhonua at Hōnaunau. *Tūtū* Keli‘ipī noted that not everyone could hear these things, but many people did. Similar accounts of *huaka‘i pō* were also shared by the Maunu sisters of Ki‘ilae, such events were a regular occurrence into the 1920s-1930s. It is *kupuna* Mālia’s belief that because of Ki‘ilae’s proximity to the *Pu‘uhonua*, it was a special place that was *kapu* in earlier times. Mr. Keli‘ipa‘akaua expressed similar thoughts about there being a special relationship between the families of Ki‘ilae and Hōnaunau, in that those of Ki‘ilae contributed to the support of the *ali‘i* community at Hōnaunau.

## Family Relations of the Ki'īlae-Kauleolī Vicinity (*Ka Pilina 'Ohana o Kahi Kokoke me Ki'īlae a me Kauleolī*)

During the process of conducting the interviews the recurrent theme of shared familial relationship was an important point conveyed by many of the interviewees. Several individuals could trace their genealogies to one or more of the historical residents of Ki'īlae and Kauleolī. These relationships also extended outside the boundaries of the study *ahupua'a* to the larger Hōnaunau-Ho'okena region and beyond. It is appropriate to acknowledge here, that Clarence A. Medeiros Jr. (who for years worked on genealogical research and land matters with his father, the late Clarence A. Medeiros Sr.), graciously shared information from his collection, that helped to tie together the pieces of genealogical history that were shared by study participants.

The following paragraphs summarize the key relationships shared between interviewees in this study and historical residents of Ki'īlae and Kauleolī. While a complete genealogy for the referenced families is not provided, the information demonstrates the links between current families and the primary applicants for *kuleana* within Ki'īlae and Kauleolī during the *Māhele* of 1848. Further details on familial relationships are found in the transcripts of the oral history interviews and in the historical documentation cited in present study. The genealogical information is presented by names of the *kūpuna* traced forward to the present day.

Ahu (Keoni?) was a *Māhele* applicant for land at Ki'īlae and Kauleolī. Ahu and Uweloā were the parents of Ahu Pelio Kalalahua; Ahu Pelio Kalalahua and Loika Palaha were the parents of Hua Kalalahua Pelio; Hua Kalalahua Pelio and Wiwo'ole Keohoki'i (daughter of Paila Keohoki'i) were the parents of Charles Hua Sr. Charles Hua Sr. and Annie Zen Man Sing were the parents of Charles Hua Jr. (interviewee) and Pansy Wiwo'ole Hua-Medeiros (wife of the late Clarence A. Medeiros Sr.). The Medeiros' also claim directly descended from the Clark/Clarke line, a historic owner of Kauleolī Grant Parcel No. 1575, containing approximately 364 acres. Ahu and Keohoki'i descendants resided at Ki'īlae through about 1920.

Kupa Keli'ipa'akaua was a *Māhele* applicant for land at Ki'īlae and Kauleolī. Kupa Keli'ipa'akaua and Luisa Manunu were the parents of Joseph K. Keli'ipa'akaua Sr.; Joseph K. Keli'ipa'akaua Sr. was the father of Joseph K. Keli'ipa'akaua Jr. (interviewee).

Manunu (Joseph) was the maternal grandfather of Joseph K. Keli'ipa'akaua Jr. Manunu resided at Keōkea (the *mauka* residence was situated on, and crossed over the Keōkea-Ki'īlae boundary) and was a historic resident/lessee of land at Ki'īlae. Family genealogical records tie Joseph Manunu to Pī Manunu and Keli'ipī (Pī). Historical land records identify Moses Manunu and Malie Manunu Naihe-Kimeona as the children of Naihe. Naihe and his brother Nika were recipients of *kuleana* at Kauleolī during the *Māhele*. Historical records also identify Pī Manunu, Ben Pī, and Keli'ipī as tenant farmers at Ki'īlae.

Nika and Naihe were *Māhele* awardees of *kuleana* at Kauleolī. Historical records report that Nika died intestate, and that his brother Naihe, was his sole heir. The children of Naihe, Moses Manunu and Malie Kimeona, inherited their father's combined *kuleana* at Kauleolī. In 1908, Moses Manunu sold his interest in the Kauleolī *kuleana* (the agricultural parcel near Māmalahoa Highway (just below the electrical substation) to John Gaspar. Gaspar's daughter, Mary and her husband John Kiwaha, resided on the parcel through the 1920s. Herbert Gaspar Kiwaha, adopted son of John and Mary Kiwaha, married interviewee Hannah Min Kiwaha.

Paila was a *Māhele* applicant for land at Ki'īlae. Paila Keohoki'i (Paila) was the father of Wiwo'ole Keohoki'i; Wiwo'ole Keohoki'i married Hua Kalalahua Pelio (see Ahu above). Paila Keohoki'i's descendants resided at Ki'īlae through ca. 1920. Paila Keohoki'i's parents were Puolu (k) and Kamaunu (w). Kamaunu, also known as Maunu, is the source of the Keawe-Maunu line, which ties to Hamu (1850s residents at Kauleolī—tenants under James Atkins), and by marriage in approximately 1900 to the Kahikina line. Descendants of the Maunu-Kahikina line resided at Ki'īlae through 1935.

Kau'inui was a *Māhele* applicant for land at Ki'īlae. Kau'inui's descendants maintained *kula* and coastal residences, and agricultural parcels at Ki'īlae through the 1950s. The primary residence was near the Ki'īlae/Keōkea boundary, on the *makai* side of Māmalahoa Highway. Among Kau'inui's children were Solomon "Pipi" Kau'inui and Annie Ka'imi Kau'inui-Kāne. Pipi Kau'inui resided at Ki'īlae on the land previously maintained by his father and his son-in-law Joe "Gang" Kaōpūiki, who lived on the same land through about 1950. Annie Kau'inui-Kāne and her husband (Sam Kane) lived *makai* of Māmalahoa Highway, a short distance south of her birthplace. The Kāne house was situated on the north side of the Ki'īlae *mauka/makai* trail. Pipi Kau'inui, Joe "Gang" Kaōpūiki, and Sam Kāne also worked as cowboys in the Ki'īlae-

Kauleolī vicinity. Sharing familial relationships with the Kauī'inui and Kāne lines, the Smith Kaleohano and Henry Hose families (both of whom were tenants at Ki'īlae under various ranching interests) resided along Māmalahoa Highway south of the Kāne household.

Kahikina was a resident of Ki'īlae as early as 1888 (his house near the shore was a survey point referenced by J.S. Emerson). Kahikina was also a member of the 1890 Ki'īlae Lessees' Association, and maintained residences and agricultural fields *mauka* of Māmalahoa Highway, on the *kula*, below the highway, and on the shore. Beni Kahikina resided at Ki'īlae permanently until 1935, and continued part-time residency near the shore until about 1950. Beni's sister Elizabeth (Becky) married Samuel Maunu. Interviewees, Margaret Maunu Keākealani and Mary Maunu-AhNee (both of whom were born at Ki'īlae), are among the children of Becky and Samuel Maunu.

## Summary of Points Raised in Oral History Interviews

When interview participants learned that a portion of Ki'īlae would be conveyed to the National Park Service, all of them felt it was a good idea. Nearly all of the families (those based in the South Kona region) expressed interest in participating in some form with the landowner and National Park Service in facilitating site protection programs. All of the participants expressed concern about how the lands would be changed with development. Care of the trails, field system, residences, *ilina* (burial places), and other features is important to the families. In particular, it is believed that *ilina* should remain in place.

There was also concern expressed about the natural features of the land such as cave systems and habitat for Hawaiian bats ('*ōpe'ape'a*), which at least in earlier times were seen on the land. It was noted that at present there is not a good track record on lands of Ki'īlae-Kauleolī and other neighboring lands in regards to "sensitive" treatment of sites and the land. Bulldozing is now carefully watched and indiscriminant dozing will cause some members of the community to take steps to stop it (personal communication Jimmy Medeiros, Nancietta Lincoln-Ha'alilio, and families).

It was recognized that in the past ranching provided families with a way of remaining on the land or in the area, but that in those earlier times, there was less care given (and less that could be done) towards responsible use of the land. Insensitive destruction of cultural resources is not viewed as an acceptable behavior, and any use of the land whether it be in development or as a National Park with interpretive development, should be done in a culturally sensitive manner and in consultation with individuals descended from the traditional and Historic Period residents of Ki'īlae and Kauleolī.

Three former McCandless Ranch employees—Alfred Medeiros, August Loando, and Emil Spencer—participated in the interview program, and from them are recorded detailed descriptions of ranching operations in South Kona. Because the early ranches primarily focused on the wild cattle (*pipi 'āhiu*) that roamed from the mountain to the shore, ranching in the region was very different than those ranches of North Hawai'i. The primary uses on the *kula* lands of Ki'īlae and Kauleolī, below Māmalahoa Highway, were as cattle traps and rotating feed pastures (the *kula* lands of Ki'īlae were known as good fattening pastures). No bulldozing occurred on any of the lands until the early 1950s, and at that time, it is recorded that the primary dozer paths followed old trails or *ahupua'a* boundaries for stone wall construction and later metal fence work. Little bulldozing occurred in Ki'īlae, as the land was a better natural pasturage than Kauleolī; there being more soil and grass lands in Ki'īlae. Kauleolī was rockier and supported less pasturage (interviews with Alfred Medeiros, August Loando, and Emil Spencer). It was not until the recent bulldozing in Ki'īlae and Kauleolī that some community members become more vigilant and vocal about proposed land use in the area (see various interviewee/consultation program records).

During the interviews, there were eight primary ranching activities described in Ki'īlae and Kauleolī. Extending from Māmalahoa Highway to the shore, they were:

### *Māmalahoa Highway Vicinity:*

1. Ranch hand residences at Ki'īlae-Kauleolī (approximately six or seven houses);
2. Citrus orchard and residence at Kauleolī;
3. Development of small holding pens and traps at Ki'īlae-Kauleolī;
4. Widening of existing trails, or development of ranch trails to the *kula* lands and *kahakai* (shore lands). There was at least one trail each near the boundary walls of Ki'īlae-Keōkea, Ki'īlae-Kauleolī, and Kauleolī-Keālia);

*Kula Lands:*

5. Development of a large trap (ca. 1946) in the area marked as Daniel McKay's Kula Farm on Jackson's annotated site map of Ki'ilae (see Figure 11);

6. General use as pasturage. It was noted that the Kona rains used to be more frequent (seasons of rainfall were generally predictable). In those earlier years of the McCandless Ranch, the *kula* lands of Ki'ilae served as a fattening pasture. Water could not be easily transported to the *kula* lands until the late 1940s, when a catchment basin was developed and pipes laid in, from the boggy lands (around the 2,000 foot elevation) that feed the intermittent Ki'ilae Stream. In ca. 1884, the water source was named *Kahawai o Ki'o* by Emerson informant, Manunu (grandfather of J. Keli'ipa'akaua and *kupuna* of other interview participants). With water, came the development of formal traps on the *kula* lands;

*Kahakai Lands:*

7. Development of two traps along the *Alanui Aupuni*; (1) one at the Kauleoli well site (near the Kauleoli-Ki'ilae boundary), on the *mauka* side of the *alanui* (developed in the early 1940s); and one on the *makai* side of the *alanui*, a little south of the former Ki'ilae School lot. The trap was watered from Waiku'iakekela. Interviewee recollections date this trap, "Paris Pen," to the early 1900s; and

8. Herding of cattle from the Ki'ilae-Kauleoli uplands to the coastal *Alanui Aupuni*, down Alahaka (at Keōkea), and to a holding pen for transport from Hōnaunau.

#### **Further Information from Administrative Appeal and Follow-up Interviews**

During the appeal hearing for the tentative subdivision approval, the appellants (Wayne Leslie and Jimmy Medeiros Sr.) testified that they collected two varieties of medicinal plants (*pilo* and '*uhaloa*') from the *makai* portion of the development area. Also, Clarence Medeiros Jr. claimed that historically the *inika* plant found within the development area was used by Hawaiian warriors prior to battle for tattoo dye. However, *Inika* is Hawaiian for the English word ink and the *inika* plant refers to Malabar Nightshade or Ceylon Spinach (*Basella alba*). *Basella alba* is an invasive species and was introduced to Hawai'i in the nineteenth century, at a period of time subsequent to the era of Hawaiian conquest warfare, thus mistakenly associated with the Precontact Period by Mr. Medeiros. A native plant in the plumbago family commonly found in Kona, called '*ilie'e* (*Plumbago zeylanica*)' was traditionally used in tattooing practices, and was identified during a botanical survey within Kauleoli. This plant commonly occurs in the greater area and does not need to be specially protected.

The appeal was unsuccessful and the subdivision was ruled to be legal, and the following statement was issued as a result of the hearing process:

The cultural and natural resources within the subdivision are historic sites, burials, the possible *pilo* plant, and '*uhaloa*' plants. . . . Because the applicant could not find any *pilo* plants, and the testimony was not specific enough to locate the plant, it is not possible to include a condition requiring the preservation of this plant. The subdivider will, however, create an easement on the parcel *mauka* of the Old Government Road, which shall be shown on the final plat map, where individuals can cultivate *pilo* or other native plants. *Pilo*, or *maiapilo* (*Capparis sandwichiana*) is found in lowland lava areas in Kona, such as at Kohanaiki, Keopuka, Keauhou, Mahai'ula, and in the vicinity of the Kona Airport (including some plants along the right-of-way of the Queen Kaahumanu Highway). '*Uhaloa*' is an extremely common weed, found in vacant lots everywhere, and probably occurs along the Old Government Road as well as other publicly accessible areas. . .

Information was also provided that the *makai* portion (the only part visible from a small boat in the ocean) of the stone wall (SIHP Site 23151) that runs along the Ki'ilae-Kauleoli boundary is currently used by fisherman as a locational marker to find an offshore *ko'a* '*ōpelu*', or fishing ground. The archaeological and historical evidence suggests that this wall was first built between 1903 and 1928. Also during the hearing process and during recent interviews, Clarence Medeiros Jr. and others brought forward information that many more burials exist in the *mauka* Ki'ilae portion of the project area than were recorded during the inventory survey (Rechtman et al 2001). While these claims were and continue to be proffered, no physical evidence of

burials has been identified, nor has there been any corroborating oral information provided by other interviewees. In fact, as was discussed in an earlier section of this report, approximately 500 archaeological features, including 350 mounds, have already been impacted by bulldozing with an archaeological monitor present and there have been no burials encountered.

Clarence Medeiros Jr. also continues to contend that an error was made in the rights of inheritance of the Kauleolī lands upon the death of Henry Clark in 1866, when in 1869 the Kauleolī lands passed to Clark's brother and sister as opposed to Clark's supposed widow and children. Through his genealogical tie to Henry Clark from the children of Clark's widow, Clarence believes that the title of the Kauleolī lands is blemished.

## TEMPORAL SUMMARY OF PROJECT AREA SETTLEMENT PATTERNS

This section is a summary of the material presented in the preceding pages. It is organized chronologically into four general time periods: Precontact Period, Postcontact to the *Māhele*, The *Māhele* Period, and After the *Māhele*. This section is intended to provide a general synthetic overview of land use and settlement of the Ki'īlae and Kauleolī project area.

### Precontact Period (prior to 1779)

Most researchers today accept that the first Polynesians arrived on Hawai'i Island by A.D. 300-600, most likely, from the Marquesas or Society Islands (Cordy 2000; Emory in Tatar 1982:16-18). For generations following initial settlement, communities were clustered along the watered, windward shores of the island. Over a period of centuries, areas with the richest natural resources became populated and perhaps crowded, and by about A.D. 900 to 1100, the population began expanding to the leeward (*kona*) side and other more remote regions of Hawai'i (Cordy 2000:130). In Kona, communities were initially established along sheltered bays with access to fresh water and rich marine resources. Potable water (*wai*) in Kona, where there are no regular flowing streams to the coast, was found in springs and caves (found from shore to the mountain lands), or procured from rain catchments and dewfall.

By the fourteenth century (Schilt 1984), inland areas in Kona to around the 3,000-foot elevation were being turned into a complex and rich loosely connected system of dryland agricultural fields (today referred to as the Kona Field System). By the fifteenth century, residency in the uplands was becoming more permanent, and there was an increasing separation of the chiefly class from common people. In the sixteenth century the population stabilized and the *ahupua'a* land management system was established as a socioeconomic unit (see Allen 2001; Cordy 2000; Ellis 1963; Handy et al. 1972; Kamakau 1961; Kirch 1985; Kelly 1983; and Tomonari-Tuggle 1985).

Over the generations, the ancient Hawaiians developed a sophisticated system of land and resource management. By the time 'Umi-a-Līloa rose to rule the island of Hawai'i in ca. 1525, the island was divided into six districts. The district of Kona extends from the shore across the entire volcanic mountain of Hualālai and continues to the summit of Mauna Loa. Kona, like the other districts on Hawai'i, was further subdivided into smaller wedge shaped pieces of land that radiated out from the center of the island (*ahupua'a*), each under the jurisdiction of lesser chief-landlords (*konohiki*). Ki'īlae and Kauleolī are two such land units situated in an area now known as Kona Hema (South Kona), a part of an ancient subregion generally known as *Ka-pali-lua* (the two cliffs).

Native traditional accounts (e.g., *Ka'ao Ho'oniua Pu'uwai no Ka-Miki*; The Heart Stirring Story of Ka-Miki; and others) recorded in the early twentieth century prove us with possible etymologies for many of the place names of the South Kona region, including the *ahupua'a* of Ki'īlae and Kauleolī.

The priest-seer Ki'īlae-nui-a-'eho (Ki'īlae) was Alahaka's older brother, and he guarded the lands over looking the agricultural fields of Ka-ulu'ulu. The land of Ki'īlae was named for Ki'īlae-nui-a-'eho, a powerful 'ōlohe priest and reader of omens. Ki'īlae's wife was Kauleolī-a-Hina-iki, and the land of Kauleolī now bears her name. Ki'īlae and Kauleolī were the parents of Ka-hau-o-'ōhala-ke'e (The dew of 'ōhala-ke'e) and Wai-ku'i-a-Kekela (The spring opened by Kekela); and Ka-hau-o-'ōhala-ke'e was the mother of Uia.

An alternative derivation of the name for Kauleolī Ahupua‘a was provided by Kalokuokamaile of Nāpo‘opo‘o and recorded by Kelsey in 1933 (original Hawaiian language translated by K. Maly):

There was an elder brother and a younger brother, Lī was the elder. The younger brother had power, and living was his only task. The younger sibling gave the genitals of a dog to his elder brother, the genitals of a dog were the genitals of Lī.

*Ahupua‘a* were also divided into smaller individual units of land, generally oriented in a *mauka-makai* direction, and often marked by stone alignments. In these smaller land units (*‘ili*) the native tenants tended fields and cultivated crops necessary to sustain their families, and the chiefly communities with which they were associated. As long as sufficient tribute was offered and *kapu* (restrictions) were observed, the common people, who lived in a given *ahupua‘a* had access to most of the resources from the mountain slopes to the ocean. These access rights were almost uniformly tied to residency on a particular land, and were earned as a result of taking responsibility for stewardship of the natural environment, and supplying the needs of the chiefs (*ali‘i*) (see Kamakau 1961:372-377 and Malo 1951:63-67).

Thus, *ahupua‘a* resources supported not only the people who tended the land, but also contributed to the support of the royal community of regional and/or island kingdoms. This form of district subdividing was integral to Hawaiian life and was the product of strictly adhered to resource management planning. In this system, the land provided fruits and vegetables and some meat in the diet, and the ocean provided a wealth of protein resources. Also, in communities with long-term royal residents (like Hōnaunau just north of Ki‘ilae and Kauleolī), divisions of labor (with specialists in various occupations on land and in procurement of marine resources) came to be strictly adhered to. It is in the general cultural setting summarized above, that we find the *ahupua‘a* of Ki‘ilae and Kauleolī at the time of European contact.

## Postcontact to the *Māhele* (1779-1847)

On January 17, 1779 Captain James Cook and his men aboard the ships *Resolution* and *Discovery* anchored in Kealahou Bay on Hawai‘i Island. The Kingdom of Hawai‘i would never be the same again. Cook and his men began a long series of events that would ultimately, but not immediately, create a radical reorientation of life in the Hawaiian Islands. Causes for this change range from the eventual arrival of missionaries and the collapse of the *kapu* system, to the introduction of foreign technology and entanglement in the world economy, to the decline of population through the introduction of foreign diseases (Major 2001:29). However, life in Ki‘ilae and Kauleolī Ahupua‘a, sufficiently far removed from Kealahou Bay, the main port of call for early visitors to Hawai‘i Island, maintained a high degree of traditionalism for several generations. By 1848, the start of the *Māhele*, the general settlement pattern and environmental landscape of these two *ahupua‘a* may have looked much the same as it did when Cook was killed on the flats of Ka‘awaloa (Kealahou Bay) on February 14, 1779.

Commander Charles Clerke and Lieutenant James King, who accompanied and survived Cook, provide the earliest written description of life in the South Kona region (in Beaglehole 1967). A major focus of their descriptions was the presence of extensive walled plantations spanning the entire region and stretching as far as 6 or 7 miles inland. They observed such crops as taro, sweet potatoes, breadfruit, plantains (cooking bananas), sugar cane, and *wauke* (the “cloth” plant). The narratives are of direct importance to the Ki‘ilae-Kauleolī study area, as features of the plantation are evident on the ground in these lands. The plantation system was formally laid out, and in many instances bounded by walls and containing small mounds, similar to the garden system that was mapped as part of the current project. During the 1840 expedition of Commander Charles Wilkes, the regions agricultural practices were also described:

Cultivation is carried on in many places where it would be deemed almost impracticable in any other country. There are, indeed, few places where a plough could be used in this district, although there is a strip of good land from three to five miles wide, having the barren lava-coast on one side and the forest on the other. This strip produces, luxuriantly, whatever is planted on it, the soil being formed of decomposed lava, mixed with vegetable matter. The natives, during the rainy season, also plant, in excavations among the lava rocks, sweet-potatoes, melons, and pineapples, all of which produce a crop. (Wilkes 1845 [IV]:90)



Also, as a result of excursions into the mountain lands, Cook's crew (as did Wilkes) reported that most of the residences were situated near the shores, and that only a few good houses were observed inland. While in the forests, various activities and features were observed as well—among them were canoe making, bird catching, and the occurrence of trails. Cook's men also noted that the Hawaiians demonstrated knowledge of upland resources and travel to the mountain lands.

During an 1823 visit to the general project area by the Reverend Ellis, the following observations were made as the party departed from Hōnaunau and traveled “nearly half a mile, to a place called Keokea” (Ellis 1963:115), and the next day, Ellis and party explored the cliff of Keanae'e and the area near the Keōkea-Ki'īlae boundary.

After travelling half a mile, a singular appearance of the lava, at a small distance from the shore, attracted our attention, and, on examination, presented a curious phenomenon. it consisted of a covered avenue of considerable extent, from fifty to sixty feet in height, formed by the flowing of the lava, in some recent eruption, over the edge of a perpendicular pile of ancient volcanic rocks, from sixty to seventy feet high . . . As we passed along this vaulted avenue, called by the native Keanaee, we beheld a number of caverns and tunnels, from some of which streams of lava flowed. The mouths of others being walled up with stones, we supposed were used as sepulchers.

Mats, spread upon the slabs of lava, calabashes, &c. indicated some of them to be the habitations of men; others, near the openings, were used as workshops, where women were weaving mats, or beating cloth.

Settlement during this time period was still concentrated near the shore (along with work areas as observed by Ellis), but as Cook's men observed there were some residences inland, used by farmers tending their crops and others passing through on their way to the upland forest resources. This was a settlement pattern that would persist in Ki'īlae into the 1890s as described by informants during a 1965 oral interview program (Jackson 1966). By the early nineteenth century, goats, cattle, sheep, pigeons, and turkeys had become established on the island (Major 2001:30). New crops were also being introduced, but they spread slowly from the main centers of European contact where foreign ships stopped to resupply. In Ki'īlae and Kauleolī the traditional style of Kona agriculture seems to have continued relatively unchanged through this time period (except perhaps through the acceptance of foreign-introduce crops). However, kingdom-wide political events would soon foster dramatic changes, in the form of the Great *Māhele*, to the system of land tenure so long practiced in the Hawaiian Islands.

## The *Māhele* Period (1848-1852)

In 1848, the Hawaiian system of land tenure was radically altered by the *Māhele 'Āina* (Land Division). This change in land tenure was promoted by Christian missionaries, the growing Western population of Hawai'i, and foreign business interests in the island kingdom. Generally, foreign individuals were hesitant to enter business deals on leasehold land. The *Māhele* defined the land interests of Kamehameha III (the King), the high-ranking chiefs, and the *Konohiki*. As a result of the *Māhele*, all land in the Kingdom of Hawai'i came to be placed in one of three categories: (1) Crown Lands (for the occupant of the throne); (2) Government Lands; and (3) *Konohiki* Lands (Chinen 1958:vii and Chinen 1961:13).

The “Enabling” or “Kuleana Act” (December 21, 1849) laid out the framework by which native tenants could apply for, and be granted fee-simple interest in “*kuleana*” lands, and their rights to access and collect resources necessary to their life upon the land in their given *ahupua'a*. The lands awarded to native tenants became known as “*Kuleana* Lands.” All of the claims and awards (the Land Commission Awards or LCAw.) were numbered, and the LCAw. numbers remain in use today to identify the original owners of lands in Hawai'i. In the *Māhele* claims for Ki'īlae, Kauleolī, and neighboring lands, we find documentation of residency both near the shore, and in the uplands; cultivation (within *kihapai*, *mo'o āina*, and *mala*) of taro, sweet potatoes, breadfruit, bananas, sugar cane, arrow root, coconuts, *Cordia* trees, *Prichardia* palms, orange trees, and coffee. We also learn about the use of stone mounds (*umu*) associated with nearshore fishing practices and the construction of stone enclosures built as goat corrals (*Pā kao*).

Although a total of 20 claims (19 for *kuleana*) were made in Ki‘ilae and Kauleolī Ahupua‘a, only three were awarded. One was awarded to George Davis Hū‘eu (the *Ali‘i-Konohiki* awardee of Ki‘ilae), and the others to Nika and his younger brother Naihe, the sole native tenant awardees in Kauleolī. Claimants for several of the *kuleana* in both *ahupua‘a* indicated that their rights of residency and land use dated back to at least 1819, and were handed down from their parents and grandparents. Other claimants stated that their rights were granted by pre-*Māhele* *konohiki*, generally dating from the 1830s to the early 1840s.

Archival and oral historical research provides documentation that many of the claimants and their descendants remained on their *kuleana* lands in Ki‘ilae and Kauleolī as tenants under the *Konohiki* (living much as their ancestors had prior to the *Māhele*). In the case of Ki‘ilae, where George Davis Hū‘eu, and his heirs were part time resident *Konohiki* (from at least the 1820s to the 1920s), their sustenance and support required the presence of a resident population. Thus, the native tenants continued their varied land use practices (e.g., cultivation of various crops, field development, *mauka-makai* residency and travel, access to shore fisheries, and other practices associated with daily life). As noted in the historical record, Hū‘eu’s *Māhele* Award specified, “the rights of the people therein, are retained” (*Māhele* Award Book 10:394 June 17, 1852). This acknowledgement of the “rights” of the native tenants under Hū‘eu (and his heirs) was also reaffirmed in a lease executed between Hū‘eu heirs and the native tenants, covering the period between 1890 to 1910 (Liber 150:162-165). The agreement granted leasehold rights of the entire *ahupua‘a* to the families residing upon the land, with the exception of the lot called “Kapulani,” the historic (late 1800s-early 1900s) residence of the Hū‘eu-Davis heirs (see Figure 11).

Nika (LCAw. 9459) and Naihe (LCAw. 10405) each claimed and received one parcel at Kauleolī. Nika’s claim was for a taro and sweet potato parcel (of 4 and 17/100ths acres), and his house was at Keōkea. Naihe’s sole claim was a house lot (of 6/10ths acre) at the Kauleolī coast, where he had resided for 13 years at the time of his claim. The bulk of Kauleolī was retained as government land and later sold as grants.

It is important to note the the terms commonly used in *Māhele* records of Central and South Kona relative to the elevationally discrete cultivation zones (e.g., *kula*, *kalu‘ulu*, *‘āpa‘a*, *‘ama‘u*) were not used by claimants for land in Ki‘ilae and Kauleolī. Rather, the entire area below the upper Government Road was referred to as the *kula*.

## After the *Māhele* (1853-1950s)

Following the *Māhele*, Kauleolī was sold in three separate grants. Grant 3051 containing the portion of Kauleolī above the *mauka* Government Road was sold to Palaualelo in 1863. Grant 3708 of roughly 15 acres just *makai* of the *mauka* Government Road adjacent to Keālia Ahupua‘a was sold to William Wright in 1894. Grant 1575, containing 364 acres, and taking in almost all of the land extending from the *mauka* Government Road to the sea, was sold to James Atkins in 1853. Atkins was an English resident of Hawai‘i, who arrived in Kona in 1827. He and his wife may have lived in a historic stonewall enclosed residential complex (Site 23168), located near the Kauleolī-Ki‘ilae boundary wall mid-way between the *mauka* Government Road and the shore. Atkins business interests included logging and ranching, and it is assumed that his residency in Kauleolī centered on ranching endeavors. Atkins sold his interest in Grant 1575 to Henry Clark in July of 1857.

At least from 1890 to the 1930s, portions of Kauleolī and portions of Ki‘ilae, extending from about one-half mile above the *mauka* Government Road to the shore, were used by Hawaiian families (lessees and several descendants of the *Māhele* award applicants) for residence and agriculture, much as has been reported in the claims for *kuleana* cited in Appendix A. The families maintained homes near the *mauka* Government Road and near the shore, and cultivated fields above the *mauka* residences and on the *kula* to about the 500-foot elevation. Oral history interviews (Jackson 1966, and in this study) record that there was regular travel between the *mauka* lands and the near shore residences. Crops like sweet potato, yams, pumpkins, gords, watermelon, sugarcane, papaya, banana, arrowroot and coffee were reported to have been cultivated in the *kula* area (below the *mauka* Government Road to about 500 feet elevation) and the primary taro fields were in the uplands above the *mauka* residences. Subsistence agriculture and fishing were the means of life upon the land. Jackson (1966) informants relate that in the 1890s the population of Ki‘ilae Village at the coast was around 100 made up of perhaps 20 extended families.

It was however, around the turn of the century that the changing regional economy had a significant effect on the viability of coastal habitation and the more traditional lifestyle. The *mauka* residential area (along current Māmalahoa Highway) became a commerce center with shops and saloons, and to acquire needed resources, cash (and thus having gainful employment) became increasingly important. Although, at least one shop keeper made *poi* deliveries to coastal Ki‘ilae, the majority of village inhabitants dispersed in pursuit of employment; many moving to the *mauka* portions of Ki‘ilae and adjacent *ahupua‘a*. It is reported by Jackson (1966, Maggie Kahikina Garso interview) that only one family was living in the coastal village in 1913; and that other former residents were living above the *kula* gardens, which remained in use until the 1920s. One of Jackson’s (1966) informants explains how it was in these *kula* gardens that all of the economically important crops were cultivated, although their daily subsistence was supplemented by fishing, and more importantly during this period, by purchases from the various stores.

In 1903, a lease for 1,000 acres at Ki‘ilae was signed between the Hū‘eu-Davis heirs (Lucy Peabody et al.) and J. D. Paris for ranching privileges in the *mauka* lands. Paris’ lease took the entire *ahupua‘a*, but Hawaiian families (farmers and fishermen, as well as those who worked in ranching operations), continued to live on the lands much as they had in the preceding century. During the Paris leasehold (ca. 1903-1928), ranching operations—formerly limited to pastures above the *mauka* Government Road—were expanded to include the entire length of the *ahupua‘a*. During this period, the cattle were herded from the mountain lands along the Ki‘ilae trail (Site 23146) to the shore. On the *kula* lands where crops were cultivated in formal fields, the trail was walled on both sides to keep cattle out of the fields. Also a corral (the “Paris Pen”) and a windmill were constructed near Ki‘ilae village, from where the cattle were shipped off island.

By 1918 in Kauleolī and ca. 1928 in Ki‘ilae, L.L. McCandless and A.C. Dowsett began leasing and purchasing land in both *ahupua‘a*. The land was primarily used for McCandless Ranch activities, which led to restrictions in access to the *mauka/makai* resources. The ranch maintained several houses near the *mauka* Government Road where the ranch hands and their families lived; residency along the shore during this period, without the support of the upland resources, further declined. The *mauka* residents formed a local community that was integrated with other neighboring South Kona communities. Interview participants in the current study describe the make-up of the community as mixed Hawaiian, Chinese, Japanese, Korean, and *haole*. The kids of these families all went to school together at Ho‘okena, and many of the adults worked directly for the McCandless Ranch or in the various shops along the highway. The two primary stores that were established just prior to this period (Higashi store in Keōkea and Fujihara Store in Keālia) supplied most of the commercial items to the area residents. Both of these stores are still in operation today. The McCandless Ranch remained in operation in Ki‘ilae and Kauleolī Ahupua‘a until the 1970s.

It was in the 1930s that members of the last native family relocated to other areas of South Kona and to other parts of the Hawaiian Islands. The final abandonment of Ki‘ilae and Kauleolī by native families resulted from several factors. One key factor was the passing away, or failing health of older family members. Other important factors were that the economic conditions—the change to a cash economy—combined with the lack of access to resources, made continued residency nearly impossible for native families in this portion of South Kona. Thus, ending the story of Hawaiian settlement in Ki‘ilae and Kauleolī Ahupua‘a.

## IDENTIFICATION AND MITIGATION OF POTENTIAL CULTURAL IMPACTS

The OEQC guidelines identify several possible types of cultural practices and beliefs that are subject to assessment. These include subsistence, commercial, residential, agricultural, access-related, recreational, and religious and spiritual customs. The guidelines also identify the types of potential cultural resources, associated with cultural practices and beliefs that are subject to assessment. Essentially these are nature features of the landscape and historic sites, including traditional cultural properties. In the Hawai‘i Revised Statutes—Chapter 6E a definition of traditional cultural property is provided.

“Traditional cultural property” means any historic property associated with the traditional practices and beliefs of an ethnic community or members of that community for more than fifty years. These traditions shall be founded in an ethnic community’s history and contribute to maintaining the ethnic community’s cultural identity. Traditional associations are those demonstrating a continuity of practice or belief until present or those documented in historical source materials, or both.

The origin of the concept of traditional cultural property is found in National Register Bulletin 38 published by the U.S. Department of Interior-National Park Service. “Traditional” as it is used, implies a time depth of at least 50 years, and a generalized mode of transmission of information from one generation to the next, either orally or by act. “Cultural” refers to the beliefs, practices, lifeways, and social institutions of a given community. The use of the term “Property” defines this category of resource as an identifiable place. Traditional cultural properties are not intangible, they must have some kind of boundary; and are subject to the same kind of evaluation as any other historic resource, with one very important exception. By definition, the significance of traditional cultural properties should be determined by the community that values them.

It is however with the definition of “Property” wherein there lies an inherent contradiction, and corresponding difficulty in the process of identification and evaluation of potential Hawaiian traditional cultural properties, because it is precisely the concept of boundaries that runs counter to the traditional Hawaiian belief system. The sacredness of a particular landscape feature is often times cosmologically tied to the rest of the landscape as well as to other features on it. To limit a property to a specifically defined area may actually partition it from what makes it significant in the first place. However offensive the concept of boundaries may be, it is nonetheless the regulatory benchmark for defining and assessing traditional cultural properties. As the OEQC guidelines do not contain criteria for assessing the significance for traditional cultural properties, this study will adopt the state criteria for evaluating the significance of historic properties, of which traditional cultural properties are a subset. To be significant the potential historic property or traditional cultural property must possess integrity of location, design, setting, materials, workmanship, feeling, and association and meet one or more of the following criteria:

- A Be associated with events that have made an important contribution to the broad patterns of our history;
- B Be associated with the lives of persons important in our past;
- C Embody the distinctive characteristics of a type, period, or method of construction; represent the work of a master; or possess high artistic value;
- D Have yielded, or is likely to yield, information important for research on prehistory or history;
- E Have an important value to the native Hawaiian people or to another ethnic group of the state due to associations with cultural practices once carried out, or still carried out, at the property or due to associations with traditional beliefs, events or oral accounts—these associations being important to the group’s history and cultural identity.

While it is the practice of the DLNR-SHPD to consider most historic properties significant under Criterion D at a minimum, it is clear that traditional cultural properties by definition would also be significant under Criterion E. A further analytical framework for addressing the preservation and protection of customary and traditional native practices specific to Hawaiian communities resulted from the *Ka Pa‘akai O Ka‘āina v Land Use Commission* court case. The court decision established a three-part process relative to evaluating such

potential impacts: first, to identify whether any valued cultural, historical, or natural resources are present; and identify the extent to which any traditional and customary native Hawaiian rights are exercised; second, to identify the extent to which those resources and rights will be affected or impaired; and third, specify any mitigative actions to be taken to reasonably protect native Hawaiian rights if they are found to exist.

As testified to during the administrative hearings, several botanical species (primary among which are *pilo* 'uhaloa and hau) were identified as plants that are collected from the development area as part of native Hawaiian customary practices. While these rights were asserted, the testimony was unclear as to when, where and how these resources were obtained. Being fairly common to Kona, the botanical species cited are not unique to the development area, and there is little indication and unclear supporting documentation that the development area has been actively utilized for gathering purposes. Nevertheless, as a condition of subdivision approval and as mitigation for any perceived impacts, an easement was created adjacent to the Old Government Road where cultivation and gathering of native plants may be conducted.

It has also been suggested that the portion of Ki'īlae-Kauleolī boundary wall (SIHP Site 23151) that is visible from a boat on the ocean is used as a reference marker for locating an offshore *ko'a* 'ōpelu. While the historical record indicates that Site 23151 was built during the twentieth century, the cultural nature and antiquity of such a practice is well documented at various other locations. This wall is being preserved and the development of Ki'īlae Farms will have no impact on the use of this wall as a sighting marker.

Concerns have also been expressed, most strongly by members of the Medeiros family, that descendants of the area feel a sense of *kuleana* to care for the land. That *kuleana* could be interpreted as a traditional cultural practice, although one that may not have been continuously practiced. In any case, the developer has entered into an agreement with Jimmy Medeiros Sr. to assist in the monitoring of the land-altering activities and to provide cultural consultation with respect to the protection and preservation of cultural sites.

As a result of the archaeological inventory survey (Rechtman et al. 2001) that was conducted for the overall project area (the current development area and the "donation area"), within the development area, twenty-eight sites were identified that had the potential to be impacted by the proposed development. These impacts could be direct, as the result of development activities; or indirect, resulting from increased access and site visitation traffic. Four of these sites (SIHP Sites 23200, 23201, 23202, and 23203) are burial sites within lava tubes (see Figure 24), all are considered significant under both Criterion D and Criterion E, and all are preserved according to an approved burial treatment plan (Rechtman and Dougherty 2002). One additional burial site (SIHP Site 23180 Feature 125; see Figure 24), also considered significant under Criteria D and E, was discovered and preserved during data recovery fieldwork. All of the previously identified burial sites are protected by the placement of iron grates blocking the tube entrances and orange construction fencing was placed along their interim preservation buffers as specified in the burial treatment plan. Twelve sites (SIHP Sites 23140, 23152, 23157, 23179, 23180, 23181, 23182, 23183, 23184, 23185, 23187, and 23191), all considered significant under Criterion D (Site 23184 was also considered significant under Criteria A and C), were subject to data recovery, the successful completion of which will serve to mitigate potential impacts. An additional twelve sites (SIHP Sites 23151, 23165, 23168, 23186, 23188, 23189, 23192, 23193, 23194, 23195, 23196, and 23197) were identified for preservation (see Figure 24), and their treatment is described in an SHPD-approved archaeological preservation plan (Rechtman 2004). Two of these sites (SIHP Sites 23196 and 23197; see Figure 24) are interpreted as *heiau* and are considered significant under Criteria D and E. A third site (SIHP Site 23193; see Figure 24) is a Precontact refuge cave that embodies the distinctive attributes of such sites (Figure 25), possesses a tremendous research potential, and is the type of site that was of significant cultural value; thus it is considered significant under Criteria C, D, and E. Although no longer a utilized resource, this site was once a secure location during times of sociopolitical uncertainty; and as such, was clearly associated with traditional beliefs and events, and was part of the former inhabitants' cultural identity. Logic dictates that this site was likely a named place and ritually imbued with supernatural power.

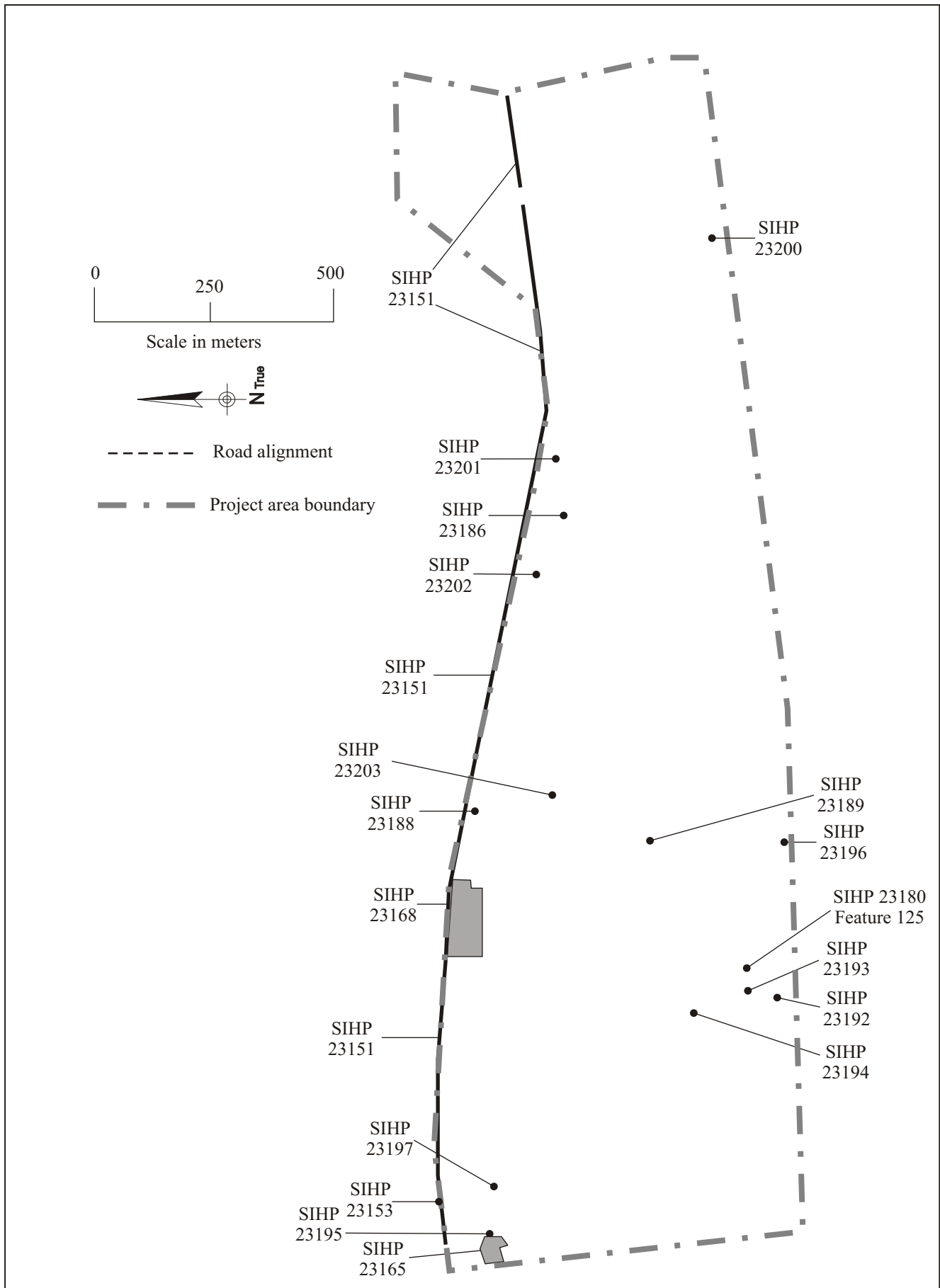


Figure 24. Distribution of preservation sites within the development area.

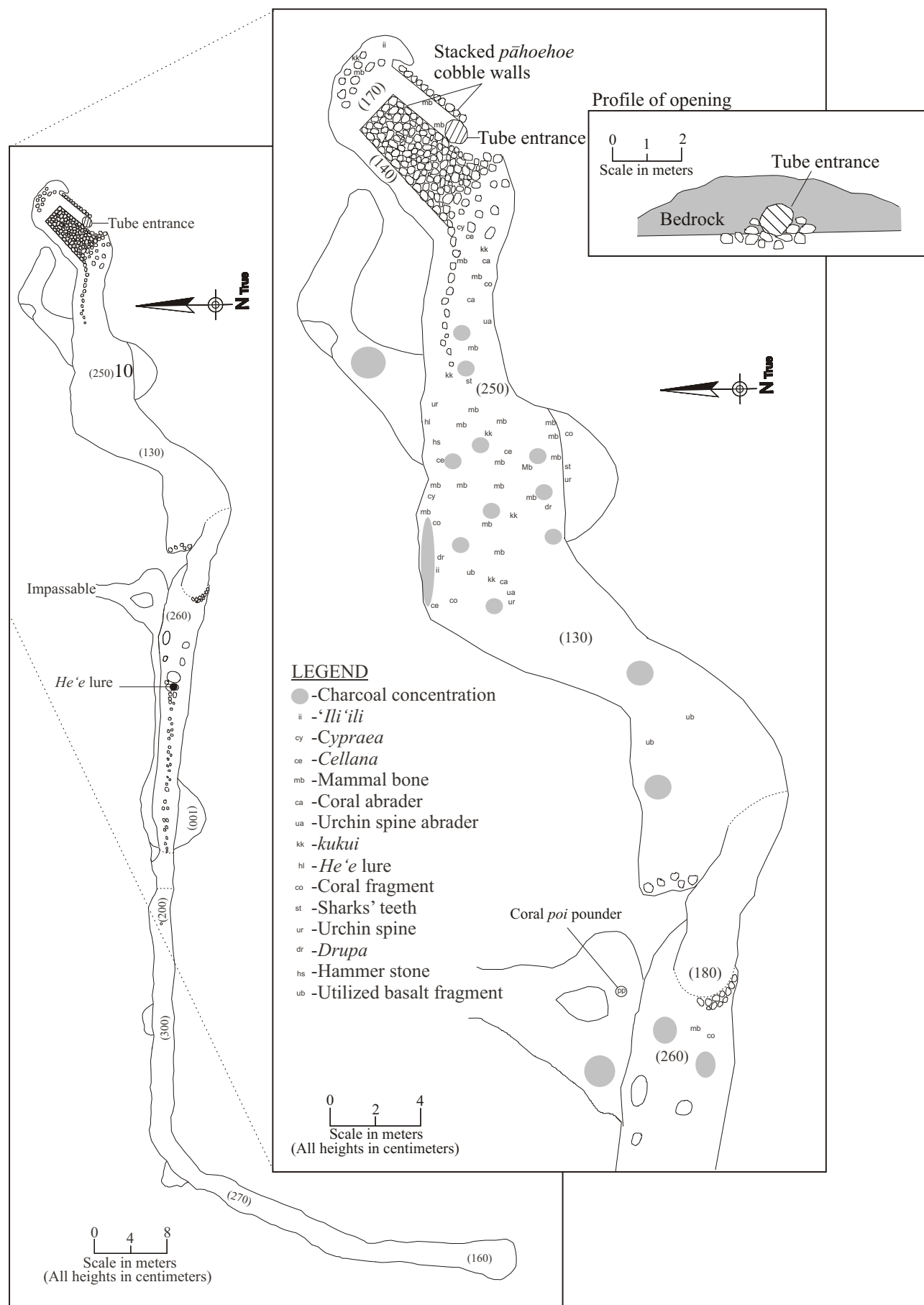


Figure 25. SIHP Site 23193 plan view.

It is clear from the historical record that the native inhabitants of the Ki'īlae area made a concerted effort to maintain a traditional lifestyle in the face of westernization. Rather than participate in the *Māhele* and carve out private landholdings, they worked collectively to maintain a village and the traditional *konohiki-maka'āinana* relationship. Perhaps succumbing to western legal pressures, in 1890 they entered into a lease agreement that lasted until 1902, to use Ki'īlae Ahupua'a in a more or less traditional way, codifying the traditional relationship. It is argued here that this lease area could be considered a traditional cultural property (TCP) and be significant as a TCP under Criterion E. This area would contain many archaeological sites that were recorded during the inventory survey including four agricultural sites (SIHP Sites 23137, 23138, 23139, and 23140; see Figure 5), two burial sites (SIHP Sites 23148 and 23149; see Figure 8), five temporary habitation sites (SIHP Sites 2323141, 23141, 23143, and 23145; Figure 7), eight homestead sites (SIHP Sites 23065, 23067, 23070, 23075, 23089, 23098, 23104, and 23108; Figure 6), and the *mauka/makai* Ki'īlae Trail (SIHP Site 23146; see Figure 6). A TCP in and of itself, the Ki'īlae Trail (SIHP Site 23146), determined to be significant under Criteria D and E, was the major artery upon which the *ahupua'a* inhabitants transported their life sustaining resources: coastal resources (i.e., fish and salt) flowing *mauka*, and agricultural resources flowing *makai*. This pattern remained an integral part of life through the period of the native tenant lease and until the 1930s, when the last permanent resident of the area left. Although not within the development area, this trail is a key element to the cultural landscape that is being considered here collectively as a traditional cultural property. National Register Bulletin 38 defines such properties as significant because of their association with "cultural practices or beliefs of a living community that (a) are rooted in that community's history; and (b) are important in maintaining the continuing cultural identity of the community." The fact that that community no longer exists or has been dispersed does not diminish the significance of the formerly intact community's actions.

The questions then are: What is the impact of the current development on the Ki'īlae cultural landscape?; and, What steps have been taken to mitigate any such impact? The boundary of the development area was in part defined by the distribution of archaeological features. The development area within Ki'īlae Ahupua'a was restricted to a roughly 50-acre portion of the *ahupua'a* adjacent to Māmalahoa Highway and south of the Ki'īlae Trail that contained the sparsest distribution of archaeological features, thus minimizing the impacts. The archaeological studies documented a dense distribution of features in a 238 acre area from the *makai* Government road to about the 600 foot elevation and in a roughly 100 acre area between 600 feet elevation and Māmalahoa Highway. Through the transfer of 238 acres of Ki'īlae Ahupua'a to the National Park Service and the setting aside of an additional roughly 100 acre "donation area" that contains the Ki'īlae Trail, the developer has secured the preservation of roughly 340 acres of Ki'īlae Ahupua'a containing perhaps the densest concentration of relatively undisturbed archaeological features in the South Kona region. This wholesale preservation is considered an important aspect of the mitigation efforts enacted by the developer, and by any reasonable measure should serve to mitigate impacts to the cultural landscape of that portion of Ki'īlae Ahupua'a that extends from Māmalahoa Highway to the shore.



## REFERENCES CITED

- Alexander, W.  
1891 *A Brief History of Land Titles in the Hawaiian Kingdom*. Hawaiian Almanac and Annual for 1891. Honolulu. T.G. Thrum.
- Allen, M  
1984 Archaeological Reconnaissance Survey, Waiono Meadows Development Project Area, Puapua'a 1<sup>st</sup> and 2<sup>nd</sup>, Holualoa 1<sup>st</sup> and 2<sup>nd</sup>, North Kona, Island of Hawaii (TMK:7-5-15:2,12 and 7-6-2:1,14). PHRI Report 119-070584. Prepared for Waiono Meadows Ranch, Ltd.
- 2001 *Gardens of Lono Archaeological Investigations at the Amy B. H. Greenwell Ethnobotanical Garden, Kealahou, Hawaii*. Bishop Museum Press, Honolulu Hawaii.
- Apple, R.  
1966 Pre-Restoration Study of the Hale-O-Keawe Platform, Honaunau Bay, South Kona, Hawaii. National Park Service.
- Armstrong, R  
1983 *Atlas of Hawaii*. Honolulu: University of Hawaii Press. (Second edition)
- Beaglehole, J.  
1967 *The Journals of Captain James Cook*. Cambridge: Hakluyt Society.
- Beckwith, M.  
1970 *Hawaiian Mythology*. Honolulu: University of Hawaii Press.
- Binford, L.  
1972 *An Archaeological Perspective*. Seminar Press: New York.
- Bingham, H.  
1969 *A Residence of Twenty-one Years in the Sandwich Islands*. Praeger Publishers, New York, Washington & London (Reprint of 1855 edition).
- Bowser, G. (compiler)  
1880 *The Hawaiian Kingdom Statistical and Commercial Directory and Tourists Guide*. Honolulu: Bowser and Co.
- Bryan, E., Jr., K. Emory, C. Wentworth, A. Greenwell, M. Neal, A. Suehiro, E. Kay, J. Stokes, D. Barrère, and M. Kelly  
1957 The Natural History of Hōnaunau, Kona, Hawai'i." Two volumes plus plates. Ms. in Department of Anthropology, Bernice P. Bishop Museum.
- Bryan, E., and K. Emory  
1986 The Natural History of Hōnaunau, Kona, Hawai'i. Departmental; report Series 86-2. Honolulu: Bernice P. Bishop Museum, Department of Anthropology.
- Burtchard, G.  
1995 Population and Land Use on the Keauhou Coast, the Mauka Lands Inventory Survey, Keauhou, North Kona, Hawai'i Island. Part I: Narrative Volume. International Archaeological Research Institute, Inc. Prepared for Belt Collins and Associates and Kamehameha Investment Corp.

- Chinen, J.  
1958 *The Great Mahele: Hawaii's Land Division of 1848*. Honolulu: University of Hawaii Press.
- 1961 *Original Land Titles in Hawaii*. Privately published.
- Ching, F.  
1971 *The Archaeology of South Kohala and North Kona: Surface Survey, Kailua-Kawaihae Road Corridor*. Hawai'i State Archaeological Journal 71-1, Department of Land and Natural resources, State of Hawai'i.
- Clark, M., and R. Rechtman  
2002 Archaeological Investigation of SIHP Site 6482 (TMK:3-7-5-19:40), Kahului 1<sup>st</sup> Ahupua'a, North Kona District, Island of Hawai'i. Rechtman Consulting Report RC-0006, Prepared for Adventure Resorts, Inc.
- Cordy, R.  
1981 *A Study of Prehistoric Social Change: The Development of Complex Societies in the Hawaiian Islands*. New York: Academic Press.
- 1995 Central Kona Archaeological Settlement Patterns. State Historic Preservation Division, Department of Land & Natural Resources, State of Hawai'i.
- 2000 *Exalted Sits the Chief. The Ancient History of Hawai'i Island*. Mutual Publishing: Honolulu, Hawai'i.
- Cordy, R., Tainter, R. Renger, and R. Hitchcock,  
1991 An Ahupua'a Study: The 1971 Archaeological Work at Kaloko Ahupua'a, North Kona, Hawai'i. Western Archaeological and Conservation Center *Publications in Anthropology* No. 58. Prepared for the National Park Service, U.S. Department of the Interior.
- Earle, T.  
1978 *Economic and Social Organization of a Complex Chiefdom: The Halele'a District, Kaua'i, Hawai'i*. *Anthropological Papers* No. 63. Museum of Anthropology, University of Michigan.
- Ellis, W.  
1963 *Journal of William Ellis*. Honolulu: Advertiser Publishing Co., Ltd.
- Emory, K.  
1970 Inventory of Archaeological and Historical Sites in the Districts of Kona and Ka'u and in Anaehoomalu, South Kohala, Island of Hawaii. Departmental Report Series 70-12 (Report 61-1, Reprinted 1971) Department of Anthropology, B.P. Bishop Museum, Honolulu. Prepared for The Department of Land and Natural Resources, State of Hawaii.
- Fornander, A.  
1916-19 Fornander Collection of Hawaiian Antiquities and Folklore. (9 vols.) Honolulu: Bishop Museum Press.
- 1973 *An Account of the Polynesian Race: Its Origin and Migrations*. Tokyo: Charles E. Tuttle Co., Inc.
- Greene, L.  
1993 *A Cultural History of Three Traditional Hawaiian Sites on the West Coast of Hawai'i Island*. United States Department of the Interior, National Park Service, Denver Service Center.

- Han, T., S. Collins, S. Clark, and A. Garland  
1986 *Moe Kau a Ho‘oilo: Hawaiian Mortuary Practices at Keopu, Kona, Hawai‘i*. Chapter VII. Artifacts and Manuports from the Keopu Burial Site. Departmental Report Series 86-1. Department of Anthropology, B.P. Bishop Museum, Honolulu. Prepared for Hawaii Department of Transportation.
- Handy, E.S.C., E.G. Handy, with M. Pukui  
1972 *Native Planters in Old Hawaii, Their Life, Lore, and Environment*. B.P. Bishop Museum Bulletin 233. B.P. Bishop Museum Press.
- Handy, E.S.C., and M. Pukui  
1978 *The Polynesian Family System in Ka‘u, Hawai‘i*. Second Edition. Tokyo: Charles E. Tuttle Company.
- Haun, A., J. Henry, J. Jimenez, M. Kirkendall, K. Maly, and T. Wolforth  
1998 Alii Highway Phased Mitigation Program Phase I—Archaeological Intensive Survey, Summary, Vol. I PHRI Report 1320-052798.
- Hommon, R.  
1976 *The Formation of Primitive States in Pre-Contact Hawaii*. Ph.D. Dissertation (Anthropology), University of Arizona, Tucson. University Microfilms, Inc., Ann Arbor, Michigan.
- I‘i, J.  
1959 *Fragments of Hawaiian History*. Honolulu: Bishop Museum Press.
- Jackson, F.  
1966 “Ki‘ilae Village, South Kona, Hawaii (A Report of its Political, Economic, Social, and religions history, from Earliest Mention to Modern Times).” National Park Service Contract Study.
- Kamakau, S.  
1961 *Ruling Chiefs of Hawaii*. Honolulu: Kamehameha Schools Press.  
1964 *Ka Po‘e Kahiko: The People of Old*. B.P. Bishop Museum Special Publication 51. Bishop Museum Press, Honolulu.  
1976 *The Works of the People of Old*. B.P. Bishop Museum Special Publication 61. Bishop Museum Press, Honolulu.  
1991 *Tales and Traditions of the People of Old, Nā Mo‘olelo a ka Po‘e Kahiko*. Bishop Museum Press, Honolulu.
- Kame‘eleihiwa, L.  
1992 *Native Land, and Foreign Desires*. Honolulu: Bishop Museum Press.
- Kawachi, C.  
1989 An Upland Habitation and Agricultural Complex in North Kona, Hawai‘i Island. Master’s Thesis, Department of Anthropology, University of Hawai‘i.
- Kekahuna, H., and J. Kelsey  
1956 (Annotated) Map of Ki‘ilae, South Kona, Hawai‘i. (June 30.)

- Kelly, M.  
1983 *Na Mala O Kona: Gardens of Kona. A History of Land Use in Kona, Hawai'i.* Departmental Report Series 83-2. Department of Anthropology, B.P. Bishop Museum, Honolulu. Prepared for the Department of Transportation, State of Hawaii.
- Kinney, H.  
1913 *The Island of Hawaii.* Hilo Board of Trade.
- Kirch, P.  
1979 Marine Exploitation in Prehistoric Hawaii: Archaeological Investigations at Kalahuipua'a, Hawai'i Island. *Pacific Anthropological Records* No. 29. Department of Anthropology, B.P. Bishop Museum, Honolulu.
- 1985 *Feathered Gods and Fishhooks: An Introduction to Hawaiian Archaeology and Prehistory.* University of Hawai'i Press, Honolulu.
- Kolb, M.  
1991 Social Power, Chiefly Authority, and Ceremonial Architecture, in an Island Polity, Maui, Hawaii. Dissertation, University of California, Los Angeles. UMI Dissertation Services, Ann Arbor.
- Kuykendall, R., and A. Day  
1970 *Hawaii: A History; From Polynesian Kingdom to American Statehood.* Englewood Cliffs: Prentice-Hall, Inc. (New Revised Edition)
- Ladd, E.  
1969 A Preliminary Archaeological Survey of the North Shore of Hōnaunau Bay, South Kona, Hawaii. Bishop Museum, Honolulu.
- 1986 *Ki'ilae Village Test Excavations: Archaeology at Pu'uhonua o Honaunau National Historical Park.* Publications in Anthropology No 35, WACC, Tucson.
- Ladefoged, T., G.F. Somers, and M.M. Lane-Hamasaki  
1987 A Settlement Pattern Analysis of a Portion of Hawaii Volcanoes National Park. National Park Service, Department of the Interior.
- Lyman, C.  
n.d. The Journal of Chester S. Lyman (1846-1847). Type-written manuscript (919.69 L 98): Hawaiian Mission Children's Society Library.
- Lyons, C.  
1875 Land Matters in Hawaii. *Islander*, Honolulu.
- Major, M.  
2001 An Agricultural History of Kealahakua. In *Gardens of Lono: Archaeological Investigations at Amy B. H. Greenwell Ethnobotanical Garden, Kealahakua, Hawai'i.* Edited by M. Allen, Bishop Museum Press, Honolulu.
- Malo, D.  
1951 *Hawaiian Antiquities.* Honolulu, B.P. Bishop Museum.
- Maly, K. (translator)  
1992-1999 *Ka'ao Ho'oniua Pu'uwai no Ka-Miki* (The Heart Stirring Story of Ka-Miki). A translation of a legendary account of people and places of the island of Hawai'i. published in the Hawaiian Newspaper *Ka Hōkū o Hawai'i*; January 8, 1914 - December 6, 1917.

- Maui Historical Society  
1990 *Island of Maui Cemetery Directory (Map and History).*
- McEldowney, H.  
1979 Archaeological and Historical Literature Search and Research Design: Lava Flow Control Study, Hilo, Hawai'i. Department of Anthropology, B.P. Bishop Museum, Honolulu. Prepared for U.S. Army Engineer Division, Pacific Ocean.
- Newman, T.  
1970 Hawaiian Fishing and Farming on the Island of Hawaii in A.D. 1778. Department of Land and Natural Resources, Division of State Parks.
- Nogelmeyer, M. (Editor)  
2001 *He Lei no Emalani: Chants for Queen Emma Kaleleonalani.* Queen Emma Foundation and Bishop Museum Press, Honolulu.
- O'Hare, C., and T. Wolforth  
1998 Archaeological Inventory Survey of the Gomes Property Parcel, Land of Kahului 1st, Island of Hawaii (TMK:3-7-5-19:5,38,40). PHRI Report 1807-101098. Prepared for Towne Development of Hawaii, Inc.
- Pearson, R.  
1969 *Archaeology on the Island of Hawaii.* Asian and Pacific Archaeology Series 3. Social Science Research Institute, University of Hawaii.
- Pukui, M., and A. Korn  
1973 *The Echo of Our Song. Chants and Poems of the Hawaiians.* University Press of Hawaii, Honolulu.
- Raab, M., and A. Goodyear  
1984 Middle-range Theory in Archaeology: a Critical Review of Origins and Applications. *American Antiquity* 49(2):255-268.
- Rechtman, R.  
1999 Archaeological Inventory Survey of the Norrie Property, Ka'awaloa Ahupua'a, Island of Hawai'i. PHRI Report 1978-090799.  
  
2002 Archaeological Mitigation Plan for Fourteen Sites in the Ki'ilae Estates Development Area (TMK:3-8-5-05:19,22), Ki'ilae and Kauleoli Ahupua'a, South Kona District, Island of Hawai'i. Rechtman Consulting Report RC-0138. Prepared for Mr. Steven A. Jiran, Ki'ilae Estates, Makawao, Hawai'i.  
  
2004 Archaeological Preservation Plan for Twelve Sites in the Ki'ilae Farms Subdivision, Kauleoli Ahupua'a, South Kona District, Island of Hawai'i (revised June 2004). Rechtman Consulting Report RC-0138. Prepared for Mr. Steven A. Jiran, Ki'ilae Estates, LLC, Wailuku, Hawai'i.
- Rechtman, R. and M. Clark  
2002 Archaeological Inventory Survey of Conservation District Land in Kauleoli Ahupua'a (TMK: 3-8-5-05:19, 20), Kauleoli Ahupua'a, South Kona District, Island of Hawai'i. Report RC-0103. Prepared for Mr. Steven Jiran, Ki'ilae Estates, LLC.
- Rechtman, R., and D. Dougherty  
2002 Burial Treatment Plan for the Ki'ilae Estates Development Area (TMK:3-8-5-05:19), Kauleoli Ahupua'a, South Kona District, Island of Hawai'i. Rechtman Consulting Report RC-0065. Prepared for Ki'ilae Estates, LLC, Makawao, Hawai'i.

- Rechtman, R., and L. Hauani‘o  
 2008 Interim Archaeological Monitoring Report: Ki‘ilae Farms Subdivision (TMKs:3-8-5-05:19, 22, 26, 27), Ki‘ilae and Kauleolī Ahupua‘a, South Kona District, Island of Hawai‘i. Rechtman Consulting Report RC-0479. Prepared for Mr. Steven Jiran, Ki‘ilae Estates, LLC, Wailuku, Hawai‘i.
- Rechtman, R., K. Maly, M. Clark, D. Dougherty, and O. Maly  
 2001 Archaeological Inventory Survey of the Ki‘ilae Estates Development Area (TMK:3-8-5-05:19, 22, 26, 27), Ki‘ilae and Kauleolī Ahupua‘a, South Kona District, Island of Hawai‘i. Volumes I and II. Rechtman Consulting Report RC-0034. Prepared for Mr. Steven Jiran, Ki‘ilae Estates, LLC, Makawao, Hawai‘i.
- Reinecke, J.  
 n.d. Survey of Hawaiian Sites, 1929-1930. Manuscript in Department of Anthropology, B.P. Bishop Museum, Honolulu.
- Schilt, R.  
 1984 Subsistence and Conflict in Kona, Hawaii. An Archaeological Study of the Kuakini Highway Realignment Corridor. *Departmental Report Series* 84-1. Department of Anthropology, B.P. Bishop Museum, Honolulu. Prepared for the Department of Transportation, State of Hawaii.
- Soehren, L., and T. Newman  
 1968 Archaeology of Kealahou Bay. Department of Anthropology, B.P. Bishop Museum, Honolulu, and University of Hawaii-Manoa.
- Soehren, L., and D. Tuohy  
 1987 *Archaeological Excavations at Pu‘uhonua o Hōnaunau National Historical Park, Hōnaunau, Kona, Hawai‘i*. DRS 87-2, Bishop Museum, Honolulu.
- Somers, G.  
 1986 Mapping and Stabilization of Alahaka and Oma‘o Heiau.: Archaeology at Pu‘uhonua o Honaunau National Hisotrical Park. NPS, Honolulu.
- Stokes, J., and T. Dye  
 1991 *Heiau of the Island of Hawai‘i*. *Bishop Museum Bulletin in Anthropology* 2. Bishop Museum Press, Honolulu.
- Tatar, E.  
 1982 *Nineteenth Century Hawaiian Chant*. *Pacific Anthropological Records* No. 33. Department of Anthropology, B.P. Bishop Museum, Honolulu.
- Thrum, T.G.  
 1908 *Heiaus and Heiau Sites Throughout the Hawaiian Islands*. Island of Hawaii. Hawaiian Almanac and Annual for 1909. Honolulu: T.G. Thrum.
- Tomonari-Tuggle, M.  
 1985 Cultural Resource Management Plan, Cultural Resource Management at the Keauhou Resort. PHRI Report 89-060185. Prepared for Kamehameha Investment Corp.
- Tuohy, D.  
 1965 Salvage Excavations at City of Refuge National Historical Park, Honaunau, Kona, Hawaii. Typescript in Library, BPBM.

- Vancouver, G.  
1798 *A Voyage of Discovery to the North Pacific Ocean, and Round the World*, Volumes 1-3. London: Robinsons and Edwards.
- Wilkes, C.  
1845 *Narrative of the United States Exploring Expedition During the Years 1838-1842*, Under the Command of C. Wilkes, U.S.N. Vol. 4. Philadelphia: Lea and Blanchard.
- Wolfe E., and J. Morris.  
1996 *Geologic Map of the Island of Hawai'i*. Geologic Investigations Series Map 1-2524-A. U.S. Department of the Interior, U.S. Geological Survey.
- Wolforth, T.  
1998 Data Recovery for the New Konawaena School: Kona Field System Development in the 'Āpa'a. Report 1659-1010-98, PHRI. Submitted to Department of Accounting and General Services, Honolulu.
- 1999 Archaeological Inventory Survey for Residential Lot 15 in Ho'omalū on Ali'i Development: Agricultural Use of the Upper Kūla of the Kona Field System, Kaunakakai Ahupua'a, North Kona District, Island of Hawai'i. PHRI Report 1944-082099.
- 2000 An Archaeological Reconnaissance of Approximately 720 Acres of the Ki'īlae Estates Project Area, Portions of Ki'īlae and Kauleolī Ahupua'a, South Kona District, Island of Hawai'i. SCS Project 239. Prepared for Ki'īlae Estates and CMI Development, Inc., Makawao.

## APPENDIX A—MĀHELE RECORDS

### Glossary of Hawaiian Words and Abbreviations used in Māhele Claims:

Alani – orange trees.

FR – Foreign Register

Ili – land sections of varying sizes and configurations, part of the land management system within the larger ahupua‘a.

Kalo – taro.

Kihapai – dry land planting field (e.g., kihapai kalo and kihapai uala — a dry land taro and sweet potato fields; in the larger system of “plantations,” the planting areas are often marked by walls, clearings, stone mounds, and planting pits etc...)

Ko – sugar cane.

Konohiki – land overseer, chief or owner of the larger land division.

Kope – coffee trees.

Kou – Cordia trees.

Kula – an open dry land cultivating field (later, also used to describe pasture land).

Loulu – native Pritchardia palms.

MA – Mahele Award Book

Maia – bananas.

Mala - a dry land cultivating field (e.g., mala kalo - taro field).

Moo aina – a cultivated strip of land, often marked with stone alignments, running mauka-makai.

Niu – coconut trees.

NR – Native Register

NT – Native Testimony

Pa hale – house lot.

Pia – arrowroot.

RP – Royal Patent

Uala – sweet potatoes.

Ulu – breadfruit trees.



## **Ahupua‘a of Ki‘ilae and Kauleoli (some Ki‘ilae/Kauleoli Claims Combined with Neighboring Lands)**

Ki‘ilae Ahupua‘a

Award No. 8521-B

Awardee: G.D. Hueu, Ki‘ilae Ahupua‘a, Kona, issue the land title Feb. 12, 1848

G.D. Hueu

Part 3

He has claimed his ahupuaa, Ki‘ilae, Island of Hawaii, as he received this place from the King, Kamehameha III in the land division in the year 1848. He has possessed it without opposition to this time. Thus, we confirm the property rights of G.D. Hueu... But, the rights of the people therein, are retained... 17, June 1852.

Source: Buke Māhele p. 165, NR 3:709, MA 10:394

Ki‘ilae Ahupua‘a

Award No. 8674

Awardee: Kahinawe

Here is Kahinawe, who has a property right upon which he lives permanently, he lives at Kiilae, Island of Hawaii; 1 kihapai kalo, and 6 kihapai uala.

Source: NR 8:537

Ki‘ilae Ahupua‘a

Award No. 8675

Awardee: Kupa

Here is Kupa, who has a property right; 6 kihapai kalo, and 7 kihapai uala; gotten from Kamahiai. Kiilae, Island of Hawaii.

He has no property. Polani denied that he had any property.

Source: NR 8:537, NT 8:557

Ki'ilae Ahupua'a  
Award No. 10121  
Awardee: Meaalii (deceased) Heir Kaula

I have two pa hale at Kiilae, Island of Hawaii. Also 33 kihapai kalo, 12 mala uala, 1 mala kope, and 1 alani tree.

Imakua and Oahu Sworn: We know his parcel, the ili of Kaohe at Kiilae Ahupuaa, gotten from his father (or uncle), Kuaana, and inherited by him in the year 1819. Imakua and Oahu Sworn: We know his ili, Kaluaiki, at Kiilae Ahupuaa, from Hueu in the year 1819. No one has objected. The boundaries on all sides are not known.

Source: NR 8:583, NT 8:522

---

Ki'ilae Ahupua'a  
Award No. 9461 (replaced by No. 9472)  
Awardee: Polani

There is a permanent dwelling right in the lot of Paila (for Polani). From Kiko, came 5 kihapai kalo; and 5 kihapai uala from Polani. In the ili of Papuaa there is 1 kihapai kalo, gotten from Opunui. In the land of Kiilae, in the ili of Piahulihuli there is 1 kihapai uala, gotten from Puhipau. For Kiko. In the property of Polani, land of Keokea, in Papuaa ili, there are 4 kihapai kalo, and 20 kihapai uala, gotten from Uhai. There is 1 pa hale (house lot), 1920 feet in circumference.

Kupa Sworn: I know his land. Parcel 1, 7 kihapai uala in the ili of Kaohe, Kiilae Ahupuaa. Gotten from Polani's father in the year 1819, Parcel 2, a pa hale in the ili of Paukauila, at Kiilae, in the year 1819.

Source: NR 8:554, NT 8:566

---

Ki'ilae Ahupua'a  
Award No. 9877-B  
Awardee: Puhipau (deceased, inherited by Kahaupuu (f.))

In the ili of Piahulihuli, there are 4 cultivated kihapai. Not previously made known [referencing Puhipau's original claim, No. 9749, for lands in the ahupuaa of Kalahiki and vicinity]. There is a parcel in the ili of Piahulihuli at Kiilae Ahupuaa.

From his parents in the year 1819. No one has opposed him. The boundaries are surrounded by the land of the Konohiki.

Source: NR 8:641, NT 8:523

---

Ki'ilae Ahupua'a  
Award No. 9878  
Awardee: Kauinui

In the ili of Kaohia, 7 cultivated kihapai.

Source: NR 8:641

---

Ki'ilae Ahupua'a  
Award No. 9879  
Awardee: Mee

In the ili of Kapahukauila there are 7 cultivated kihapai, and one mala kope.

Meaalii and Haupenu Sworn: We know his land in the ili of Kapahukauila at Kiilae Ahupuaa, gotten from his parents in 1819.

Source: NR 8:641-642, NT 8:571

---

Ki'ilae Ahupua'a  
Award No. 9880 & 7287  
Awardee: Davida

10 kihapai, 2 cultivated, the land is Kiilae. Here is my house lot, 131 and a half feet long, by 72 and a half feet wide.

Kauinui [&] Puhipau; house lot is 99 and one half feet long, by 68 and a half feet wide. The land is Kilae [Kiilae].

Mea'lii and Haupenu Sworn: We know, that in the ili of Kaohe, ahupuaa of Kiilae, an enclosed house lot.

Source: NR 8:642, NR 8:256, NT 8:571

---

Ki'ilae Ahupua'a & Keōkea Ahupua'a  
Award No. 7045  
Awardee: Kaolulo

A house pa hale (enclosed house lot), 20 fathoms long by 15 fathoms wide. My claim for cultivated land is 2 mala kalo, 2 mala uala, 2 alani trees, 5 loulou trees, and at Papuaa there are 3 mala kalo and 2 mala uala. Paila and Imakua Sworn: We know his lands; Parcel 1 in the ili of Kaohe at Kiilae ahupuaa, gotten from Puhipau in the year 1819. Parcel 2 is 4 kihapai kalo and uala in an ili of Keokea Ahupuaa, gotten from Polani in the year 1840. Parcel 3, a pa hale. No one has objected. The boundaries are surround by the land of the Konohiki.

Source: NR 8:105, NT 8:522

---

Ki'ilae Ahupua'a, Kauleoli Ahupua'a & Keōkea Ahupua'a  
Award No. 9460  
Awardee: Kalapawai

Property rights of Kalapawai: Kiilae is the land, Kalehua is the ili, gotten from Haolekeokeo. In the ili of Kaohe there are 2 kihapai kalo, and 3 kihapai uala; received from Kuaana. In the ili of Kapahukauila, there is 1 kihapai kalo, gotten from Kauinui; also in the ili of Kaohia, there is 1 kihapai kalo. In the land of Kauleoli, in the ili of Kapia, there are 2 kihapai uala, gotten from Nika; in the ili of Haleolono there are 3 kihapai kalo, gotten from Kaulukou. In the land of Keokea, in the ili of Papuaa, there is 1 kihapai kalo, gotten from Makaike.

Oahu and Kapahunui Sworn: We know his land. Parcel 1, is in the ili of Kalehua at Kiilae Ahupuaa, gotten from his in-laws in the year 1839. Parcel 2, 4 kihapai kalo and uala in the ili of Kaohe at Kiilae Ahupuaa, gotten from Kuaana in the year 1828. Parcel three, 2 kihapai kalo in the ili of Papuaa at Keokea Ahupuaa, from Makaike in the year 1847. Parcel 4 a pa hale in the ili of Kaohe at Kiilae ahupuaa, from Kaulukou in the year 1847. No one has opposed him.

Source: NR 8:554, NT 8:523

---

Ki'ilae Ahupua'a & Keōkea Ahupua'a  
Award No. 7013  
Awardee: Kukapu

A house lot, 20 fathoms by 15 fathoms. My claim is also for kihapai at Papuaa; there are 5 mala kalo, 3 mala uala, 1 mala kobe; also at Kapahukauila, there is 1 alani tree, 3 niu trees, 4 kou trees, and 1 mala maia.

Nika and Paila Sworn: we know his land, he died, and Kamipili is his son (heir). Parcel 1 is 3 kihapai kalo and coffee, in the ili of Papuaa at Keokea; given to him by Kalaikuiha in the year 1836. Parcel 2 is a pa hale at Kiilae Ahupuaa. It was enclosed with a wall in 1819, with one house on the lot. The boundaries are surrounded by the land of the Konohiki.

Source: NR 8:104, NT 8:521

---

Ki'ilae-Keōkea  
Award No. 10379  
Awardee: Namakelua

This is an explanation to you land commissioners. Kealaehu is the name of this place [Kealaehu is the name of the ancient trail that crosses the uplands of South and North Kona, and descends to Kiholo from the 'Akahipu'u vicinity. The name Kealaehu is given as a reference point in many Mahele claims of North and South Kona. The trail is near the Mamalahoa Highway alignment.]. To the uplands 4,200 feet; on the East adjoining Kiilae, on the west adjoining Honaunau, and the aki [place where aki grass grows] is the division at the shore, this is for you the commissioners of land and house lots.

Uhai Sworn: knows the land claimed by Namakelua, but he lives under me.

Source: NR 8:592, NT 8:575

---

Kauleolī Ahupua‘a  
Award No. 10405  
Awardee: Naihe

Here is my claim at Kauleoli 2, on the south is Kealia 1, on the north is Kauleoli 1. My land was from Namilimili, as well as my pa hale. Namilimili died on Kauai, and I am the only one who dwells upon this land and in the house. Namilimili received it from Kamehameha I, and I received it from Namilimili. I have held it for 13 years.

Nika and Paila Sworn: We know his parcel of land in the Ahupuaa of Kauleoli, it was given him by Namilimili in the year, 1831. No one has opposed him. The boundaries are surrounded by the land of the Konohiki. (Figure A-1 at the end of this Appendix)

NR 8:595, NT 8:521

Kauleolī Ahupua‘a, Ki‘ilae Ahupua‘a & Keōkea Ahupua‘a  
Award No. 7299  
Awardee: Kahaolekeokeo (for Ahu and Kaupai)

The property rights of Ahu at Kona, six kihapai uala. Kauleoli is the ahupuaa. In the ahupuaa of Kiilae, six kihapai uala and 4 kihapai kalo; from Kahaolekeokeo. The house is 126 long and 126 wide. House lot and land of Kaupai at Kona, Keokea Ahupuaa, in the ili of Papuaa; 8 kihapai kalo, and 6 kihapai uala; gotten from Imakua. The house is 43 wide and 61 long.

Source: NR 8:257

Ki‘ilae Ahupua‘a & Keōkea Ahupua‘a  
Award No. 9462  
Awardee: Paila

(for Paila) His ili is the land of Kiilae was gotten from Palila. In the ili of Papuaa; there are 6 kihapai kalo, and 4 kihapai uala, gotten from Kahaolekeokeo. In the ili of Kaohe there are 3 kihapai kalo and 3 kihapai uala, gotten from Kuaana. In the ili of Kapahukauila there are 3 kihapai kalo and 2 kihapai uala, gotten from Mee. In the land of Keokea, in the ili of Kamuku there are 2 kihapai kalo, gotten from Mee. In the ili of Keakea there is 1 kihapai kalo, gotten from Kalei. There is 1 pa hale, 432 feet in circumference.

Imakua and Oahu Sworn: We know his land Parcel 1, is 6 kihapai kalo, and 4 kihapai uala, in the ili of Papuaa at Kiilae Ahupuaa. Parcel 2, 3 kihapai kalo and 3 kihapai uala in the ili of Kaohe, at Kiilae. Given to him by Kuaana in the year 1845. Parcel 3 is 3 kihapai kalo and 3 kihapai uala at Paukauila, gotten from Mee in the year 1845, Parcel 4, a kihapai kalo from Kalei in the year 1845. The pa hale has two houses in it at Paukauila, Kiilae Ahupuaa. The boundaries on all sides are not clear. No one has objected.

Source: NR 8:554- 555, NT 8:522

Kauleolī Ahupua‘a & Keōkea Ahupua‘a  
Award No. 9459  
Awardee: Nika

Nika’s property right is in the land of Kauleoli; 1 kihapai kalo and 1 kihapai uala, received from Kekualoa. In the land of Keokea, at Papuaa, there are 4 kihapai kalo and 1 kihapai uala, received from Kaleikuiha. 1 pa hale, 192 feet in circumference.

Naihe and Oahu Sworn: We know parcel 1 in the ahupuaa of Kauleoli, it was by Kekualoa to his parents in the year 1819. It was inherited by Nika from his parents in the year 1843. Parcel 2 is 5 kihapai kalo and uala in the ili of Papuaa, in the ahupuaa of Keokea, given him by Kalaikuiha in the year 1847. No one has objected. The boundaries are surrounded by the land of the Konohiki (see Figure A-1 at the end of this Appendix).

Source: NR 8:554, NT 8:521, (MA 7:526 & RP 3865, 16:489)

---

Ki‘ilae Ahupua‘a & Keōkea Ahupua‘a  
Award No. 9463  
Awardee: Holoua

Holoua’s pa hale is 960 feet in circumference. The property rights of Holoua are in the ili of Papuaa, 7 kihapai kalo and 10 kihapai uala, gotten from Polani. In the land of Kiilae, in the ili of Piahulihuli are 8 kihapai kalo and 5 kihapai uala, gotten from Puhipau; in the ili of Pahukauila there are 8 kihapai kalo and 5 kihapai uala, gotten from Mee. In the land of Keokea, ili of Kaulukaa, there is 1 kihapai uala gotten from Kaawa; in the ili of Pailima, there is 1 kihapai uala gotten from Muki. Niau is the ili gotten from Nika (Figure A-2 at the end of this Appendix).

Paila and Kupa Sworn: We know his land. Parcel 1 is in the ili of Papuaa at Keokea Ahupuaa. From Polani in the year 1840. Parcel 2, a kihapai kalo in the ili of Piahulihuli at Kiilae, was from Puhipau in the year 1840. Parcel 3, a pa hale in the ili of Papuaaiki at Keokea Ahupuaa, was from his parents in the year 1819.

Source: NR 8:555, NT 8:557, (MA 3:512-513)

#### **Ahupua‘a of Keōkea and Hōnaunau (north of Ki‘ilae Ahupua‘a)**

Keōkea Ahupua‘a  
Award No. 7712  
Awardee: M. Kekuanaoa

He has claimed his Ahupuaa, Keokea, at Kona, Hawaii, because he received this land from the King, Kamehameha III at the time of the Land Division in the land division in the year 1848. He has possessed it without opposition to this time. Thus, we confirm the property rights of G.D. Hueu... But, the property rights of the people therein, are retained... 19, June 1852.

Source: MA 9:253, (RP 6852, 25:55)

---

Keōkea Ahupua‘a  
Award No. 9465  
Awardee: Kawelo

Here is my ili land at Keokea, gotten from Uhai, there are 25 kihapai kalo and 13 kihapai uala; I also have 1 pa hale, 1306 feet in circumference.

Uhai Sworn: I know his land. Parcel 1, ili of Keakea at Keokea Ahupuaa, I gave it to him in the year 1840. Parcel 2, a pa hale in the ili of Kahalau, at Keokea, gotten from his parents in the year 1819.

Source: NR 8:555, NT 8:535, (MA 3:510 & RP 3311, 14:415)

---

Keōkea Ahupua‘a  
Award No. 9464  
Awardee: Makaike

I have a pa hale claim, it is 1212 feet in circumference. There is a property right in the land of Keokea, ili of Papuaa with 19 kihapai kalo and 9 kihapai uala, gotten from Polani. In the ili of Ulukaakaa there are 6 kihapai uala, gotten from Kaawa. We are the people who claim this property and the pa hale. To you the Commissioners with love.

Keawe and Kaumaka Sworn: We know: Parcel 1 is 19 kihapai kalo & 9 kihapai uala, in the ili of Papuaa at Keokea. Gotten from Polani in the year 1839. Parcel 2 is 6 kihapai uala in the ili of Ulukaa at Keokea Ahupuaa. Gotten from Kaawa in the year 1840. Parcel 3, a pa hale in the ili of Pailima, Keokea Ahupuaa. Gotten from his parents in the year 1819. Surrounded by the land of the Konohiki. (Figure A-3 at the end of this Appendix)

Source: NR 8:555, NT 8:558, (MA 3:513 & RP 6254, 23:675)

---

Keōkea Ahupua‘a  
Award No. 9467  
Awardee: Manuia

Here is my ili land at Kamuku, there are 19 kihapai kalo and 14 kihapai uala; I have 1 pa hale, 543 feet in circumference.

Uhai Sworn: I know his land. A parcel in the ili of Kamuku at Keokea Ahupuaa. I gave it to him in the year 1840. Parcel 2, a pa hale in the ili of Alakai, from his parents in the year 1819. No one has objected. The boundaries are surrounded by the land of the Konohiki.

Source: NR 8:552, NT 8:554, (MA 3:511 & RP 3372, 14:537)

---

Keōkea Ahupua‘a  
Award No. 9469  
Awardee: Mukoi

Here is my ili parcel, Paikapahu, gotten from Uhai, 6 kihapai uala, 1 kihapai kope, 1 kihapai pia, and 1 pa hale, 426 feet in circumference.

Uhai Sworn: I know his land, a parcel in the ili of Paikapahu at Keokea. I gave it to him in the year 1840. Parcel 2, a pa hale in the ili of Alakai, gotten from his parents in the year 1819.

Source: NR 8:556, NT 8:554, (MA 3:514 & RP 3308, 14:409)

---

Keōkea Ahupua‘a  
Award No. 9470  
Awardee: Muki

Here are my ili parcels, there are two ili lands, Pailima and Alakai, there are 50 kihapai kalo, 17 kihapai uala, gotten from Uhai; and 1 pa hale, 522 feet in circumference.

Uhai Sworn: I know his land. A parcel in the ili of Pailima at Keokea; I gave it to him in the year 1840. No one has objected. The boundaries are surrounded by the land of the Konohiki.

Source: NR 8:556, NT 8:554, (MA 3:511)

---

Keōkea Ahupua‘a  
Award No. 9476  
Awardee: Kaio

Kaio’s permanent property right in the ili of Kalalau, there are 20 kihapai kalo, 40 kihapai uala, 1 kihapai kope, 2 kihapai maia, and 1 kihapai ko.

Uhai and Kapiioho Sworn: We know his land, in the ili of Kalalau, at Keokea Ahupuaa. Gotten from his parents in the year 1819, It is at peace, there is no one who has opposed him. The boundaries are surrounded by the land of the Konohiki.

Source: NR 8:557, NT 8:535, (MA 3:512 & RP 3202, 14:197)

---

Hōnaunau Ahupua‘a  
Award No. 216-B  
Awardee; Kanehailua

Honaunau, Kona, Hawaii.  
31 kihapai kalo in the ili of Honiuli, gotten from Koni; (he is) living in the lot of Kaumaumanui.

Kahehuna and Moii Sworn: We know his pa hale in the ili of Ohiki, at Honaunau. It was from his parents in 1819. No one has objected. The boundaries are surrounded by the land of the Konohiki.

Source: NR 8:571, NT 8:547, (MA 7:318 & RP 3188, 14:169)

---



Hōnaunau Ahupua‘a (Honiuli nui)

Award No. 8507

Awardee: Anton Fernandes

January 24, 1848

The undersigned has held a strip of land in Kona Hawaii, in Honaunau. The name of my land is Honiuli. I have held it 17 years. I cultivated a part of it. I have been 28 years in the islands. I am a colored man from the West Indies, have a native wife and 13 children.

Saturday December 15, 1849. Nuuanu and Kanehailua Sworn deposed: They know the claim of Antonio Fernandez to be in the Ili Honiuli, Ahupuaa of Honaunau, gift of Kuakini, A.D. 1830; is bounded East, by land of Konohiki; North, by the ili Lilioulu; West, by stone wall; South, by the ili of Honiuliiki. I know of no counter claim. Note: Antonio Fernandez, has resided in Honaunau since the year 1834. In 1830 the head man of Honaunau pulled up the potatoe & kalo of Fernandez, who complained to Govr. Adams, the Governor ordered Fernandez to go down to Honaunau, and take the land of the head man in compensation for the loss he had sustained, but Antonio begged the Governor to give him a spare piece of land, as he was afraid the Natives would injure him if he took the head man's land. The Governor then gave him the present land he now holds, and for which this is his claim...

Nuuanu and Kanehailua Sworn: We know his land. Parcel 1, the ili of Honiuli at Honaunau, it was given by Kuakini in the year 1839. The boundaries are thus: to the uplands, amaumau fern; north, the ili of Oulu; on the shoreward side, a stone wall; to the south, the ili of Honiuliiki. The size of the ili is known by the survey of Mr. T. Metcalf. Here is the ili, 22 1/3 acres. No one has opposed him (Figure A-4 at the end of thi Appendix).

Signed - Anton Fernandes

Source: FR 3:20, FT 5:57-58, NT 8:527, (MA 3:33 & RP 3452, 15:27)

---

#### **Ahupua‘a of Keālia and Kauhakō (south of Kauleoli Ahupua‘a)**

Keālia 1 Ahupua‘a

Award No. 7702 & 10382

Awardee: Kooka (Nakooka)

Greetings to you the commissioners who quiet land titles, I am Nakooka, I petition to you for my property, my own pa hale; it is a pa hale 17 anana (fathoms) long and 16 wide; there are many trees planted, some planted by my own hands, a niu (coconut tree), a loulu (Pritchardia palm), some alani (orange trees) there in the uplands; there are also some umu ohua (stone mounds for trapping ohua fish) made by my own hands, and a goat corral; that is all of by personal claim.

Nawaa and Makaokalani Sworn: We know his land. Parcel 1 in the ili of Ilikahi, at Hookena Ahupuaa, from Manuhaaipo in the year 1839. Parcel 2, a pa hale at Kealia 1, from his grandparents in the year 1819. No one has opposed him. The boundaries are surrounded by the land of the Konohiki. (Figure A-5 at the end of this Appendix)

Source: NR 8:506, NT 8:527, (MA 3:525 & RP 2636, 12:141)

---

Keālia 1 Ahupua‘a  
Award No. 7702-C  
Awardee: Nawaa

Makaokalani and Kakau Sworn: We saw Kalama write his claim, and we know his land parcels. Parcel 1 is 8 kihapai kalo in the ili of Kaiko at Kealia 1, gotten from Kanehaku in the year 1839. Parcel 2, a kihapai in the ili of Palianiki at Kealia 2, gotten from Keliiaukai in the year 1839. No one has objected. The boundaries are surrounded by the land of the Konohiki. (Figure A- 6 at the end of this Appendix)

Source: NT 8:527, (MA 3:531 & RP 6482, 24:335)

---

Keālia 1 Ahupua‘a  
Award no. 7703  
Awardee: Kanuha

Commissioners to quiet land titles. I am Kanuha, and I petition you for my personal property, an alani tree, a mala kope (coffee field), some niu trees; that is my own property.

Pihalani and Kaumaka Sworn: We know his land. A pa hale in the ili of Niulii at Kealia 1 Ahupuaa. Gotten from Kaumaka in the Year 1839. No one has objected.

Source: NR 8:506, NT 8:540

---

Keālia 1 Ahupua‘a  
Award No. 7704  
Awardee: Kaumaka

Commissioners to quiet land titles. I, Kaumaka, petition you for my own property, a moo aina, planted trees, 5 loulou, 3 alani trees, a goat corral (pa kao), many niu trees, and a kou tree; that is my own claim.

NR 8:506-507

---

Kauhakō Ahupua‘a  
Award No. 7574  
Awardee: Holi

Petition for a moo aina at Kahuako [sic], not a pa hale; there are 2 mala kalo in my moo aina and 1 mala uala at Haleolono, from Kaoono. The moo aina is from Kamaino. Petition for a [house] lot and moo aina at Kahuako [sic], 1 kihapai kalo, 1 kihapai uala, and a kou tree at Hookena. This lot and moo aina is for Holi. There are some ulu (breadfruit trees) on my moo aina, 1 kula mahiai ia (cultivated field), it is for you to hear, commissioners who quiet land titles.

Kauwe and Kealoha Sworn: We know his land. Parcel 1, an ili in Kauhako, Pohue is the name of the ili. It was gotten from his parents in olden times, from Kaholowaa. Parcel 2, a pa hale at Kauhako, from the parents. No one has objected. (Figure A-7 at the end of this Appendix)

Source: NR 8:505, NT 8:532, (MA 3:545 & RP 7497, 28:41)

---

Kauhakō Ahupua‘a  
Award No. 7574-B  
Awardee: Kamaino

Puhipau and Kuoha Sworn: We know his ili, it is Puhau in the land of Kauhako. It was given him by Nuole in the year 1833. No one has objected.

Source: NT 8:520, (MA 3:546 & RP 8037, 34:321)

---

Kauhakō Ahupua‘a & Ho‘okena Ahupua‘a  
Award No. 7720  
Awardee: Kahanaukama

Greetings to you Commissioners who quiet land titles. I am one who has a property right, and petition before you. Here is my property, a pa hale at Kauhako, at Kona Hawaii, 43 yards (iwilei) long, by 23 yards wide. That is my only property, a dwelling at the shore. In the uplands there is a kihapai at Hookena, a kihapai kalo. That is it... January 25, 1848.

Kauwe and Keawepo Sworn: We know his land. Parcel 1 a pa hale in the ili of Haleolono at Kauhako Ahupuaa, gotten from Kaholoaa in the year 1819. Parcel 2, 2 kihapai kalo in the ili of Puulena, Hookena Ahupuaa. Parcel 3, a kihapai kalo in the ili of Kahookiwikiwi, gotten from Pahupu in the year 1819. No one has objected to him.

Source: NR 8:507, NT 8:529, (MA 3:591)

---

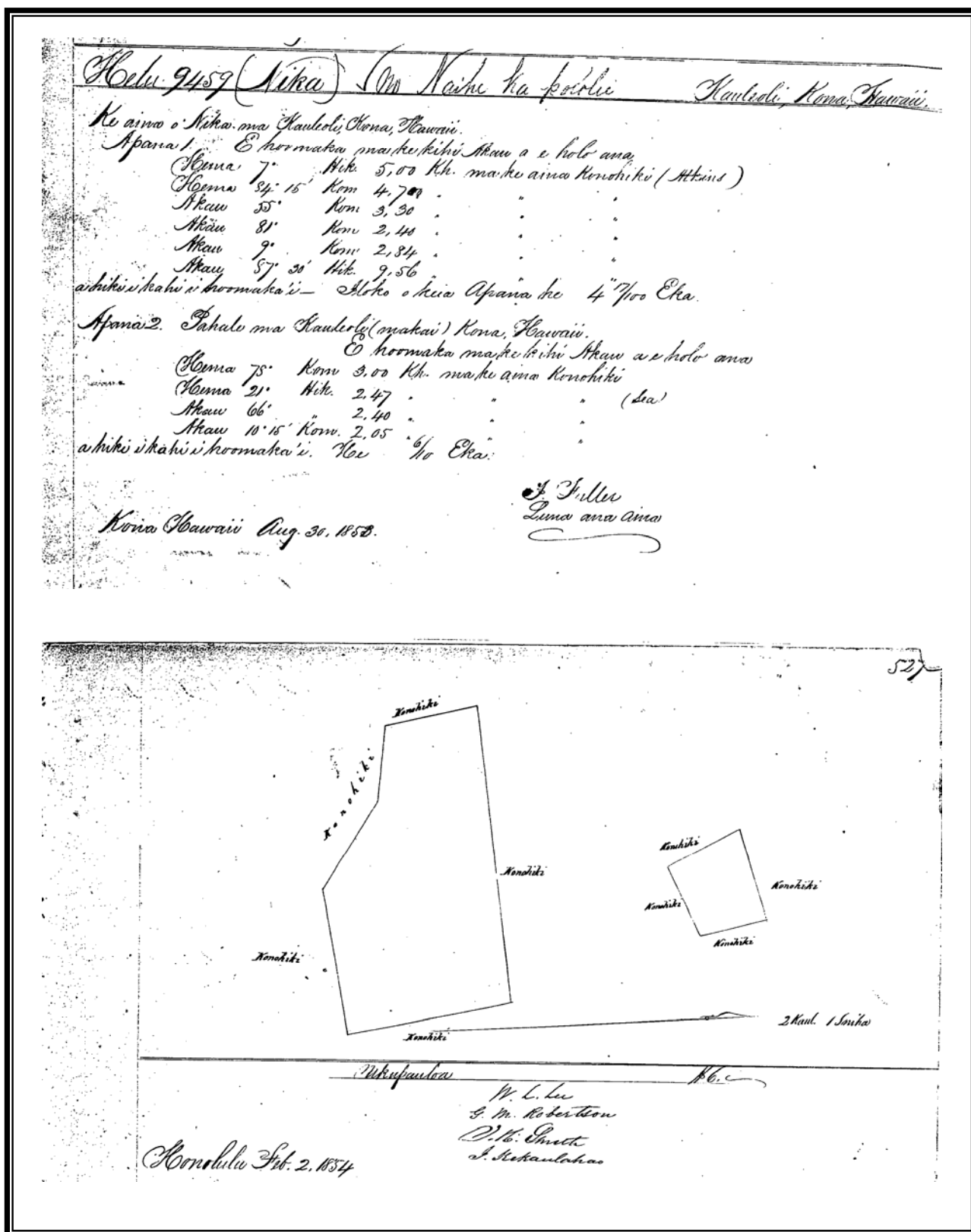


Figure A-1. Survey of Land Commission Awards 9459 & 10405; Nika and Naihe (Apana 1 & 2), at Kauleoli (Māhele Award Book 7:526-527)

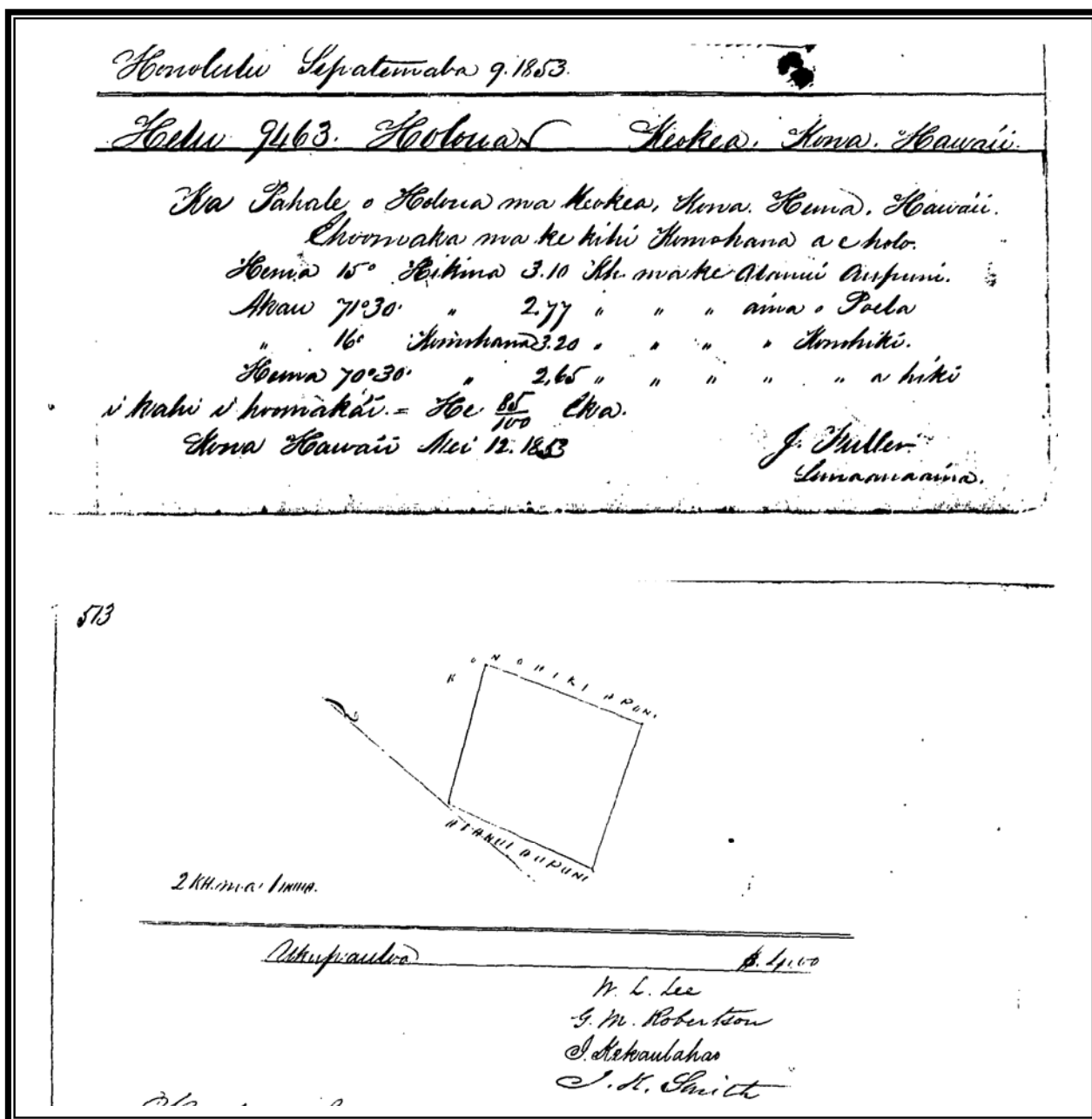


Figure A-2. Survey of Land Commission Award 9463; to Holoua (Holowaa), 'Ili of Papuaa, at Keokea (Mahele Award Book 3:512-513).

Honolulu September 9, 1853.

Cell 9464, Makaike. ✓ Keōkea, Kona, Hawaii.

Apiana 1. Ila Pahale, Makaike, ma Keōkea, Kona, Kona, Hawaii.

Chomaka ma kekahi Maui a e holo.

Kona 34° Hōkina 380 Ila ma ke āhau.

" 80°30' Hōkina 2,114 " " " Kai.

Maui 27°45' " 2,96 " " " āina i Hōhiki.

" 57°30' Hōkina 1,97 " " " " " āhiki.

āhiki i kahi i hōmakāi = He 2 1/2 Eka.

Apiana 2. Aina maika, Makaike, ma Keōkea, Kona, Kona.

Chomaka ma kekahi Hōkina a e holo.

Maui 36° Hōkina 2,37 Ila ma ke āina i Hōhiki.

Kona 70° " 385 " " " āhiki.

" 74°15' " 3,97 " " " āina i Hōhiki.

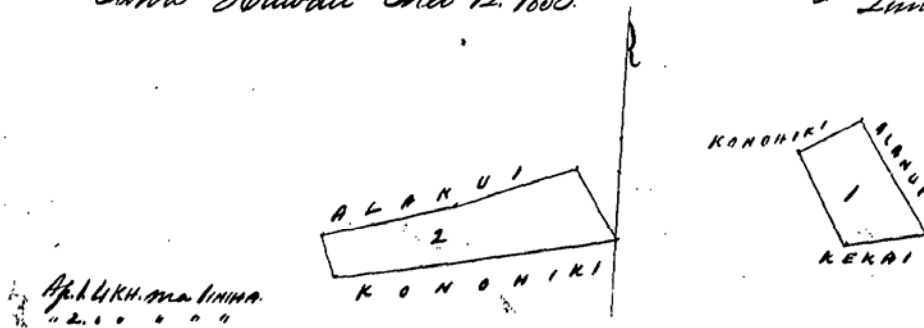
" 20°30' Hōkina 1,18 " " " āina i Hōhiki.

Maui 79°30' " 8,55 " " " āhiki.

āhiki i kahi i hōmakāi = He 1 2/10 Eka.

Kona Hawaii Mei 12, 1853.

J. Fuller  
Lunaanama.



Ukupaule

4,000

M. L. Lee

G. M. Robertson

J. Kakaubakau

C. H. Smith

Honolulu September 9, 1853

Figure A-3. Survey of Land Commission Award 9464; to Makaike, 'Ili of Pailima, at Keōkea (Māhele Award Book 3:513).

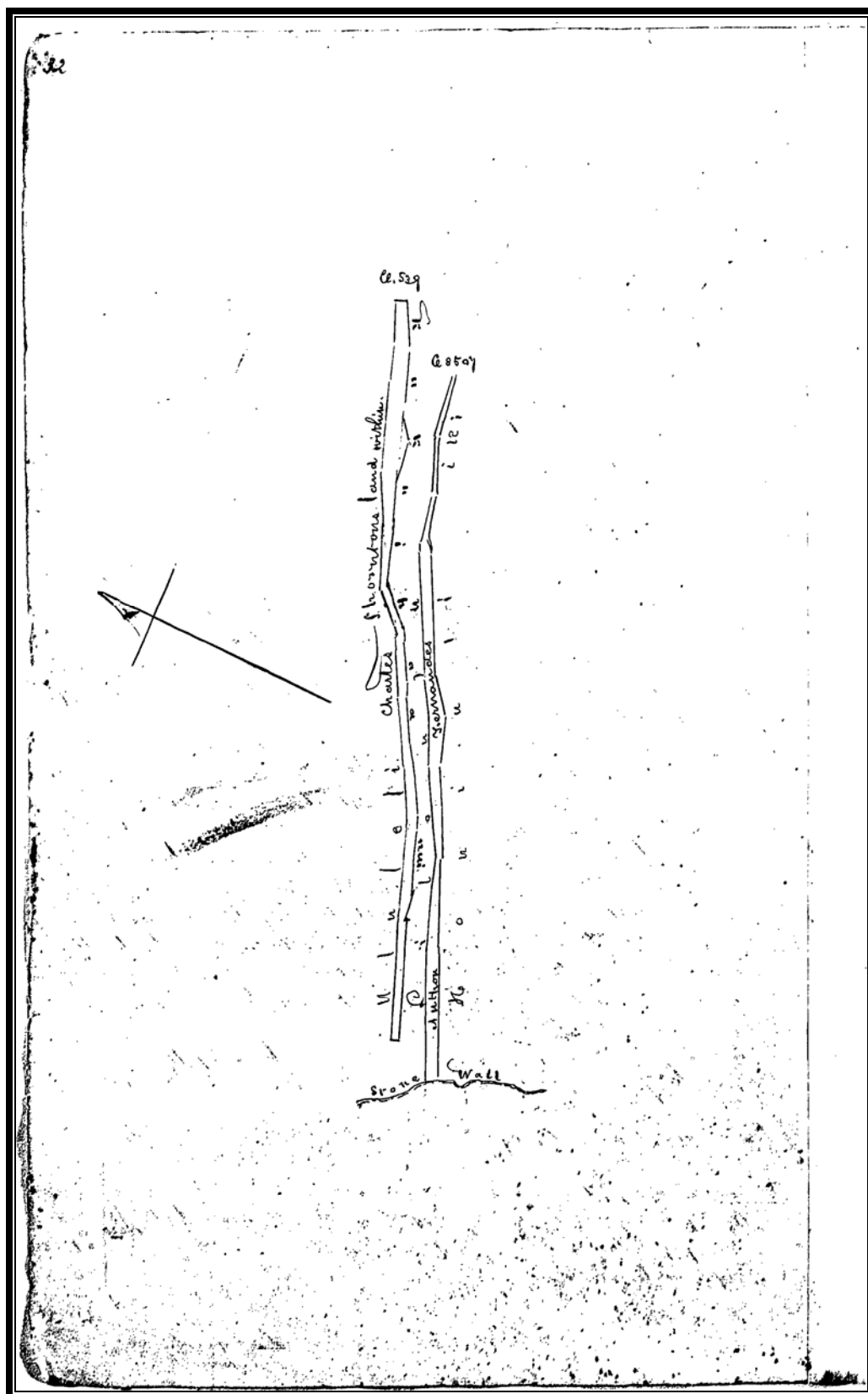


Figure A-4. Survey of Land Commission Award 8507; to A. Fernandes, 'Ili of Honiuli nui, at Hōnaunau (Māhele Award Book 3:32).





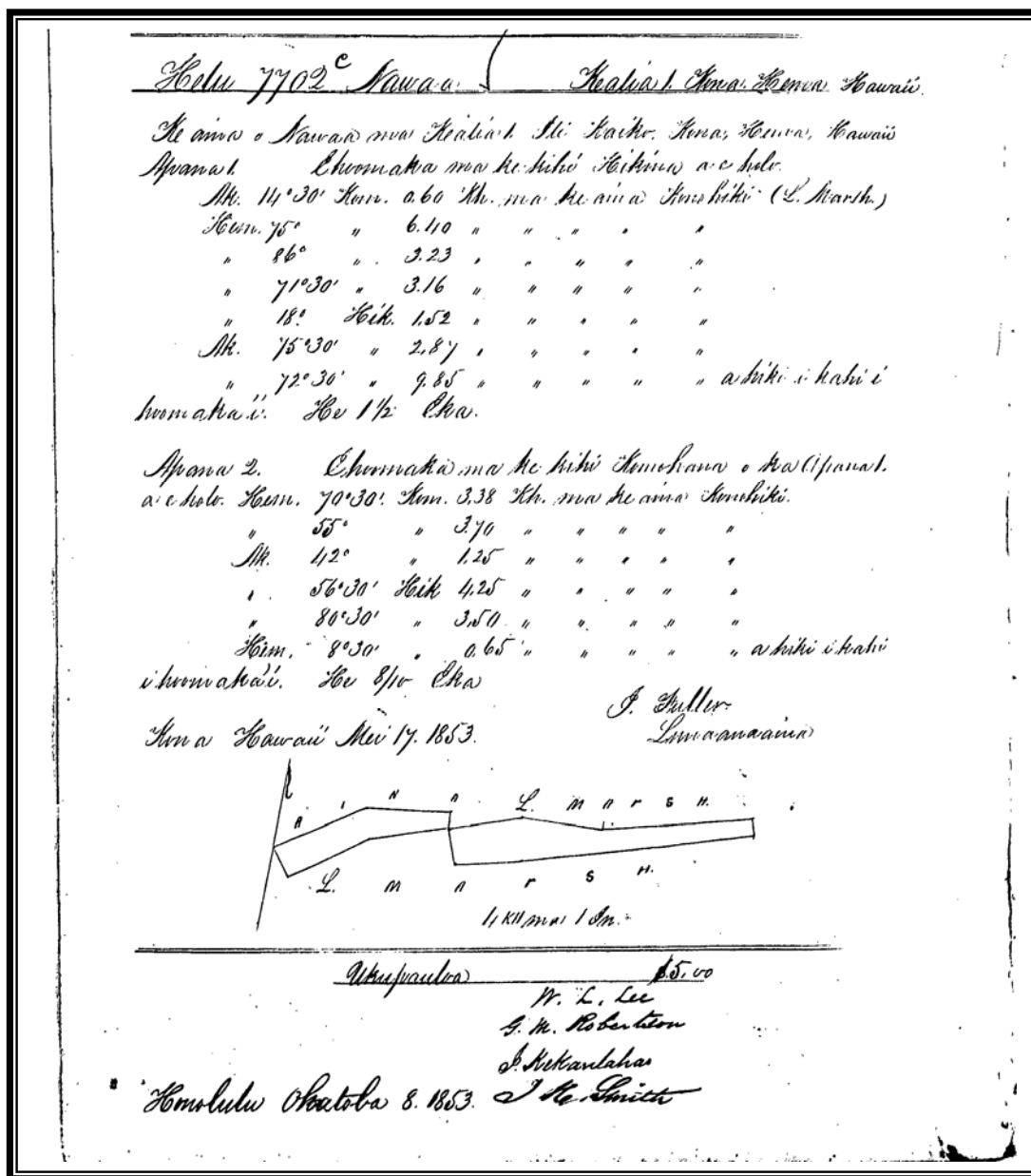


Figure A-6. Survey of Land Commission Award 7702-C; Nawaa in ‘Ili of Kaiko, at Keālia 1 (Māhele Award Book 3:531).

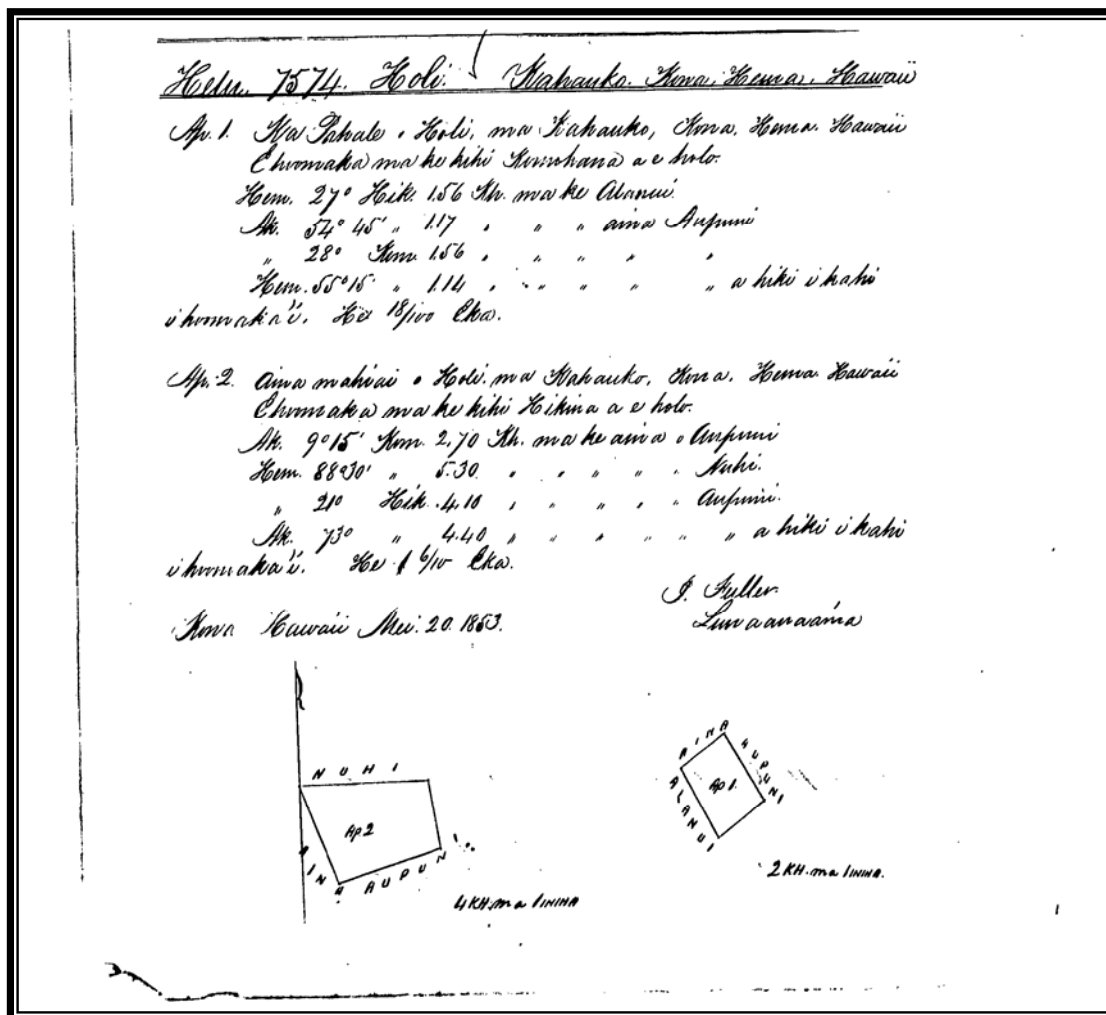


Figure A-7. Survey of Land Commission Award 7574; Holi at Kauhakō (Māhele Award Book 3:545).

## **Appendix 4**

### **Visual Impact Assessment**

# **Visual Impact Assessment Ki‘ilae Farms Subdivision Ki‘ilae and Kauleoli, South Kona**

## **Introduction**

This analysis was developed for Ki‘ilae Estates LLC as part of an appeals process for subdivision approval of its proposed 45-lot subdivision on undeveloped land at Ki‘ilae and Kauleoli, south of Pu‘u Honua o Honaunau National Park in South Kona, on the island of Hawai‘i.

The purpose is to describe the impacts that the project will have on the visual resources in the area and propose mitigation to minimize any adverse impacts. To accomplish these objectives, the following steps have been undertaken:

- Photographic depiction of the project sites and environs, including views of the existing area from key vantage points;
- Review of the scenic views and resources listed as important in the Hawai‘i County General Plan, as well as other scenic views, and their relationship to the site and proposed project, with map depiction of key view planes;
- Discussion of elements of proposed project that could impact scenery and viewplanes;
- Mauka-makai profiles that include the existing topography and buildings along with proposed structures along key view corridors; and
- Analysis that integrates the above and makes conclusions about the total visual impact, including proposed mitigation measures, where appropriate.

Map figures referenced in this report are contained in **Appendix 1**, photographic figures are contained in **Appendix 2**, and profiles are contained in **Appendix 3**.

## **Property Location and Existing Appearance**

The property consists of two parcels of land totaling about 499 acres, stretching from about 40 to 900 feet above sea level, with a somewhat steep average slope of over 10% (**Map Figures 1-2**). The site is undeveloped and contains vegetation that, although almost uniformly alien, varies somewhat by elevation and substrate (**Photo Figures 1-2**). Near the coast, trees are capable of tapping groundwater, and where soil conditions are favorable a closed-canopy forest of kiawe (*Prosopis pallida*), opiuma (*Pithecellobium dulce*) and koa haole (*Leucaena leucocephala*) is present, with an understory of guinea grass (*Panicum maximum*) and a number of other alien plants (**Photo Figure 3**).

Above the lowest elevation zone, vegetation becomes markedly shrubbier and open, with scattered trees 10-20 feet high (**Photo Figure 4**). Above 400 feet in elevation the average tree height increases, the canopy closes in, and larger trees (30-40 feet) are more common (**Photo Figure 5**).

Current land uses on surrounding properties consist of the National Park makai and northwest, rural uses to the east (makai) near Mamalahoa Highway, and mostly unused, former grazing lands on the north, west and south sides. The General Plan designation for surrounding properties includes Important Agricultural Land (to the northeast), Extensive Agriculture (to the east, south, and north-

central), and Conservation (to the northwest). The land makai is in the State Land Use Conservation District. It can thus be expected that farms and residences will come to occupy some of the surrounding lands in the mauka areas, and that Conservation uses will dominate in the makai surrounding lands.

## Scenic Resources and Viewplanes in Project Area

At present, the scenic value of the property for the public is based on views shoreward from Mamalahoa Highway (State Highway 11), and views across Ki‘ilae and Kaulaoli from Ke Ala O Keawe Road (also known as Pu‘u Honua O Honaunau road, State Highway 160). There do not appear to be specific laws, regulations or guidelines in the County of Hawai‘i for determining whether a proposed subdivision will have scenic impact. The approach taken here is to discuss scenic areas identified in the Hawai‘i County General Plan, and evaluate whether the development would substantially interfere with or detract from views of these resources from public viewpoints such as State Highways, scenic lookouts or park vistas.

The Hawai‘i County General Plan identifies areas of natural beauty and important viewplanes for various places in Hawai‘i County. In this area, the following areas are noted:

Honaunau Bay & Scenic View from Ke Ala O Keawe Road	8-4-11, 12, 13	Honaunau, Keokea
Kealia Beach	8-5-05:1	Kealia
Kiilae	8-5-05:19	Kiilae

Because of a combination of topography, intervening structures and vegetation, public views of Ki‘ilae and Kaulaoli are very limited from Mamalahoa Highway (State Highway 11) (**Photo Figures 6-7; Map Figure 1**). In places, especially at and near the scenic lookout that where Ke Ala O Keawe Road makes its closest approach (**Map Figure 1**), there are good views of the truly scenic areas of K‘ilae and Kaulaoli, the coast and adjacent properties. It is important to note that the coastal area is not included in the proposed subdivision. From Ke Ala O Keawe views across the proposed subdivision area are possible, especially on days with less vog (**Photo Figures 8-10**). The site is mostly hidden from view from portions of the National Park currently visited by the public.

## Proposed Project

Ki‘ilae Estates LLC proposes a 45-lot agricultural subdivision, which will be called Ki‘ilae Farms. The lot layout is depicted in **Map Figure 1**. The residential and agricultural structures on the agricultural lots would be bound by a number of Covenants, Conditions, and Restrictions (CC&Rs) that would dictate their appearance. Most relevant to this report, which considers views from outside the subdivision and across it, are the architectural design standards related to building height:

“12.2 **Height of Improvements.** Because the landscape is rolling, and because low buildings will maintain cooler summer daytime temperatures, single story buildings are encouraged. The maximum elevation of any dwelling or other improvement shall not exceed 30 feet. The maximum 30-foot elevation shall be the vertical distance measured from the highest point from natural grades adjacent to or under the dwelling or other improvement to the highest point on the roof, not including

chimneys. In addition to the 30-foot height limit described above, no portion of a dwelling or other improvements shall be more than 30 feet high measured from the natural grade directly below. Chimneys, roof vents and other architectural projections may exceed the height limitations by no more than 6 feet.”

The subdivision lot layout provides for fairly large lots and thus low-density development (45 lots over about 500 acres).

## Mauka-Makai Profiles Through Project Site

**Map Figure 3** depicts the locations of nine “sightlines” from typical viewing areas on Mamalahoa Highway and Ke Ala O Keawe Road extending across Ki‘ilae and Kauleoli towards the shoreline. **Profiles A-I** are side views that correspond to these sightlines and illustrate the position and height of the ground surface, typical vegetation, and the proposed structures. In order to be conservative (i.e., to account for maximum visual impact), it was assumed in the profiles that structures would be built near the highest point within each lot. The structures are also arranged on the profiles so that more are “skewed” than would be likely according to chance in this low-density development. Elevations were derived from 40-foot topography of USGS maps, and the profiles were generated using an ARC-VIEW © Geographic Information System (GIS) routine.

The purpose of the profiles is to illustrate direct lines of sight. It is important to note that for ease of interpretation, these profiles incorporate *significant vertical exaggeration*. Slopes are not as steep and structures are not as tall and narrow in reality as they appear on the profile. Sightlines, however, are not distorted by consistent vertical exaggeration.

## Impact of Project on Scenic Resources and Viewplanes and Proposed Mitigation

**Views across Ki‘ilae and Kauleoli from Mamalahoa Highway (State Highway 11).** As illustrated in **Photo Figure 6**, views of the project area from Mamalahoa Highway are largely blocked by topography, vegetation and structures. In a few spots, gaps are present, with foreground views of monkeypod savanna and a background view of the coastal plain (**Photo Figure 7**). The middle-ground slopes are largely hidden because of the view angle over the steep topography and the shielding effect of foreground trees. **Profiles A-D** illustrate how structures might protrude above the landscape and interact with direct views of the shoreline. From south of Kealia, as shown in **Profile A**, even in those rare areas where a clear highway view is available, a topographic ridge found in Kealia would tend to obscure views across to Ki‘ilae and Kauleoli. **Profiles B-D** run through the long axis of the subdivision, almost directly mauka-makai. Although in general any residences would likely be hidden from the highway by vegetation, at least in some locations where there is a clear view from the highway there is potential for the upper part of a home to be visible. There are even some locations in the subdivision that a home might be interposed between a viewer on the mauka end of **Profile B** and the shoreline. This location, just south of Kealia, is heavily vegetated and there are currently no makai views. For viewers in those few gaps near the junction of Mamalahoa Highway and Ke Ala O Keawe Road, the subdivision lots lie in a shallow hollow just mauka of gentle slope that extends towards the sea, and homes would not likely be visible, and if visible, would not be likely to interfere with views of the shoreline.

*Views across Ki‘ilae and Kauleoli from Ke Ala O Keawe Highway (State Highway 160).* On the mauka part of this road, as indicated in **Profile F**, topography would generally shield homes in the proposed subdivision from view. When vog is not too heavy, there are good views of the landscape to the south for drivers on Ke Ala O Keawe along about a mile-long section from Milepost 2 (**Photo Figure 8**) to the scenic lookout (**Photo Figure 9**). As indicated in **Profiles G-I**, slopes drop off just south of the road and vegetation is generally lower than on Mamalahoa Highway, promoting views. However, the mile width between the road and the proposed subdivision also contains many ridges that currently obscure views of Ki‘ilae and Kauleoli. Further down, at **Profiles G** and **H**, at least some homes might be visible, though back-dropped against vegetation or sea, not shoreline. At the scenic viewpoint on the highway, located at elevation 260 feet above sea level, **Profile I** shows that the makai homes would be hidden by topography and there would be no interference with views of the shoreline. Views across Ki‘ilae and Kauleoli on the cross-slope, although not indicated in any profile, might contain the tops of a few homes, with a backdrop of vegetation from areas further south. Below the scenic lookout there are few views until the entrance road to Pu‘u Honua O Honaunau, where drivers have a brief glimpse across the landscape to the south (**Photo Figure 10**).

It should be understood that this analysis considers impacts to public viewpoints and not to individual homeowners. Those homes on the makai side of Mamalahoa Highway with expansive views of the coastline or Ki‘ilae and Kauleoli will undoubtedly have views of the structures, which in just the right circumstances may be interposed between the viewer and the shoreline. To be fair, these homes with expansive views are themselves visible from many viewpoints and may also block shoreline views, especially in areas with smaller lots.

## Summary and Recommendations

Because of shielding topography and existing homes and vegetation, the 45 proposed homes would interfere little with existing views from Mamalahoa Highway across Ki‘ilae and Kauleoli to the shoreline. Importantly, the substantial area makai of the Old Government Road in these ahupua‘a are not included in the subdivision. Because this area is in the State Land Use Conservation District, extensive development is unlikely and it will retain its scenic value. At a few locations on the highway, vegetation clearing might cause some homes to be visible and even interposed in front of the shoreline. In general, the long distance to the homes, averaging more than a mile away, would render any interference very minor. From Ke Ala O Keawe Highway, the tops of a few homes might be visible along the cross-slope, but there would be little or no interference with shoreline views, especially considering that no development near the shoreline is proposed. The total visual impacts of the projects are generally minor, but are magnified by the context – an area that is currently undeveloped, near a National Park – where built structures represent at least some level of intrusion. However, it is important to bear in mind that the landscape is not “pristine” and is in fact dominated by invasive species. Nevertheless, I recommend consideration of strategic landscaping with native trees (e.g., wiliwili, kou and milo) near residences, in order to minimize concerns about views from Ke Ala O Keawe Highway.

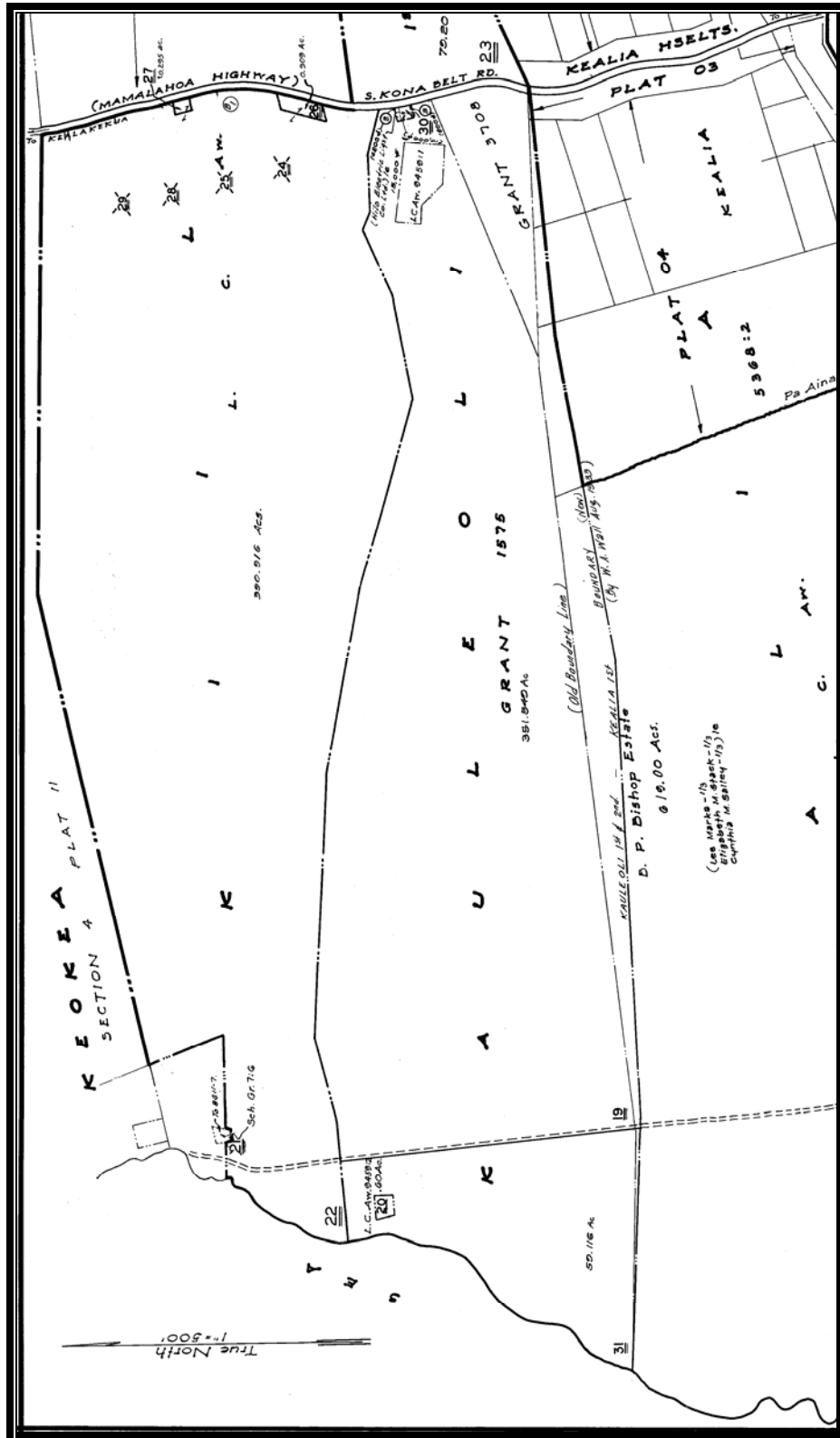
## **Appendix 1**

### **Map Figures**

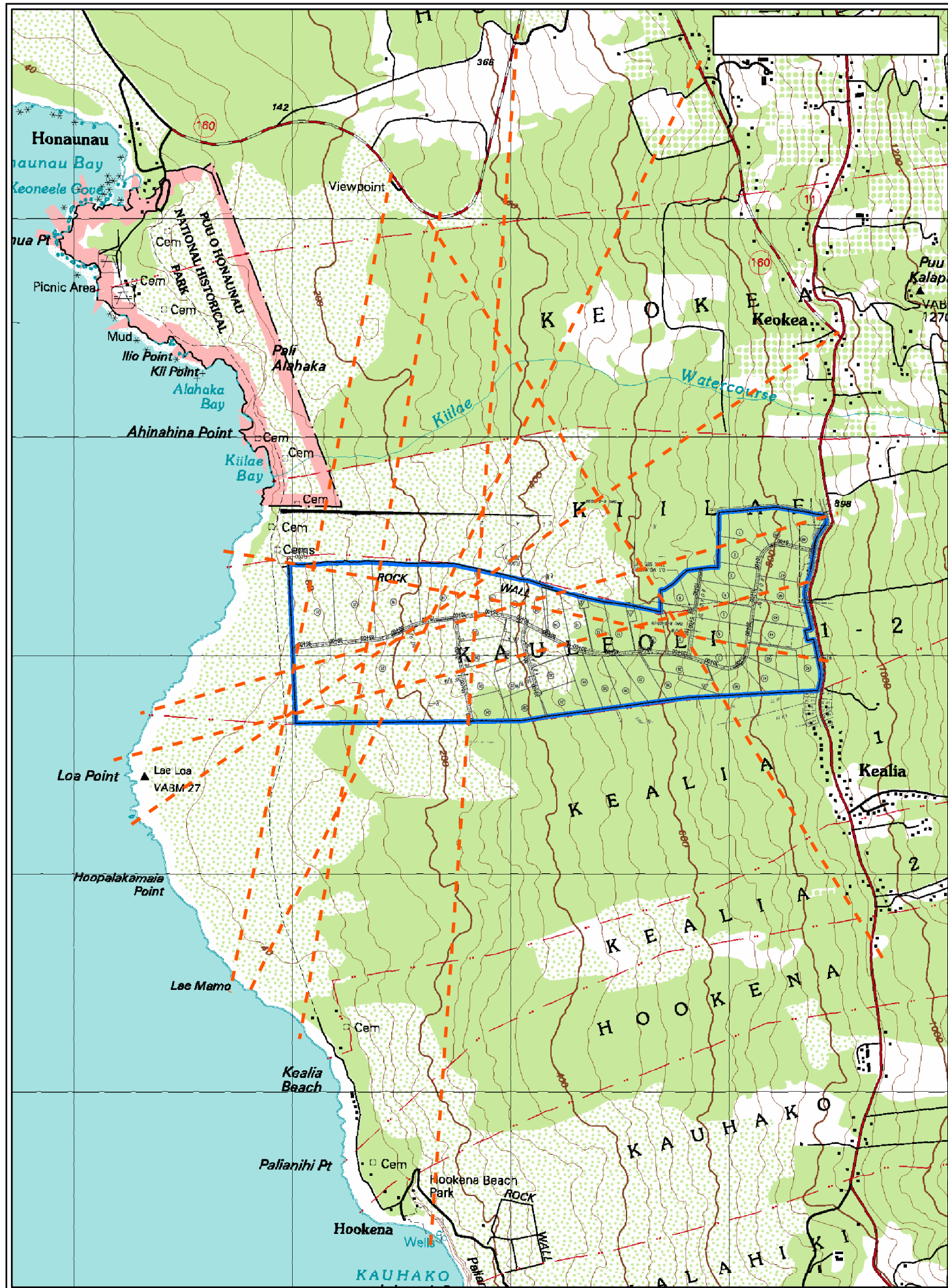




Map Figure 2 – TMK Map







## **Appendix 2**

### **Photographic Figures**

**Photo Figure 1 – Aerial View from Makai**



**Photo Figure 2 – Aerial View from Mauka**





**Photo Figure 3 – Vegetation Near Coast**



**Photo Figure 4 – Vegetation of Lowlands**





**Photo Figure 5 – Upland Vegetation**



**Photo Figure 6 – Typical Mamalahoa Highway View**





**Photo Figure 7 – Mamalahoa Hwy View Gap, with Coast**



**Photo Figure 8 – Ke Ala O Keawe View**

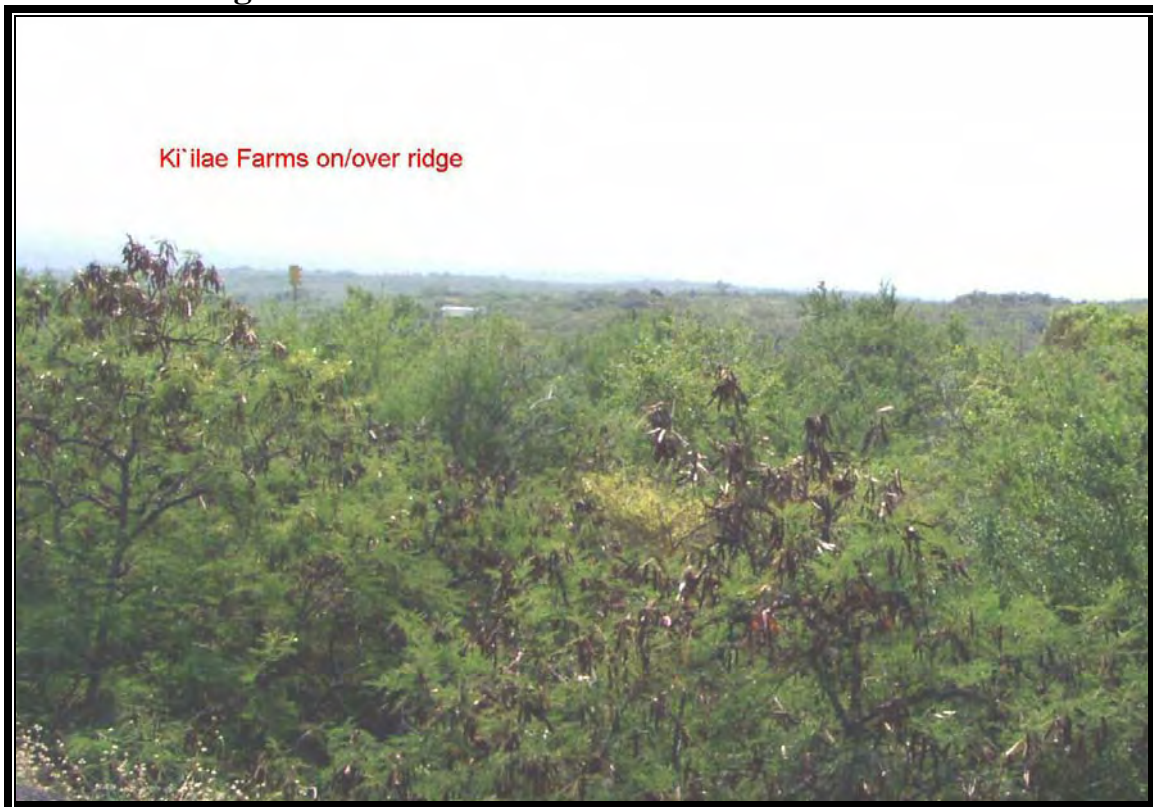




**Photo Figure 9 – View from Scenic Lookout, Ke Ala O Keawe**



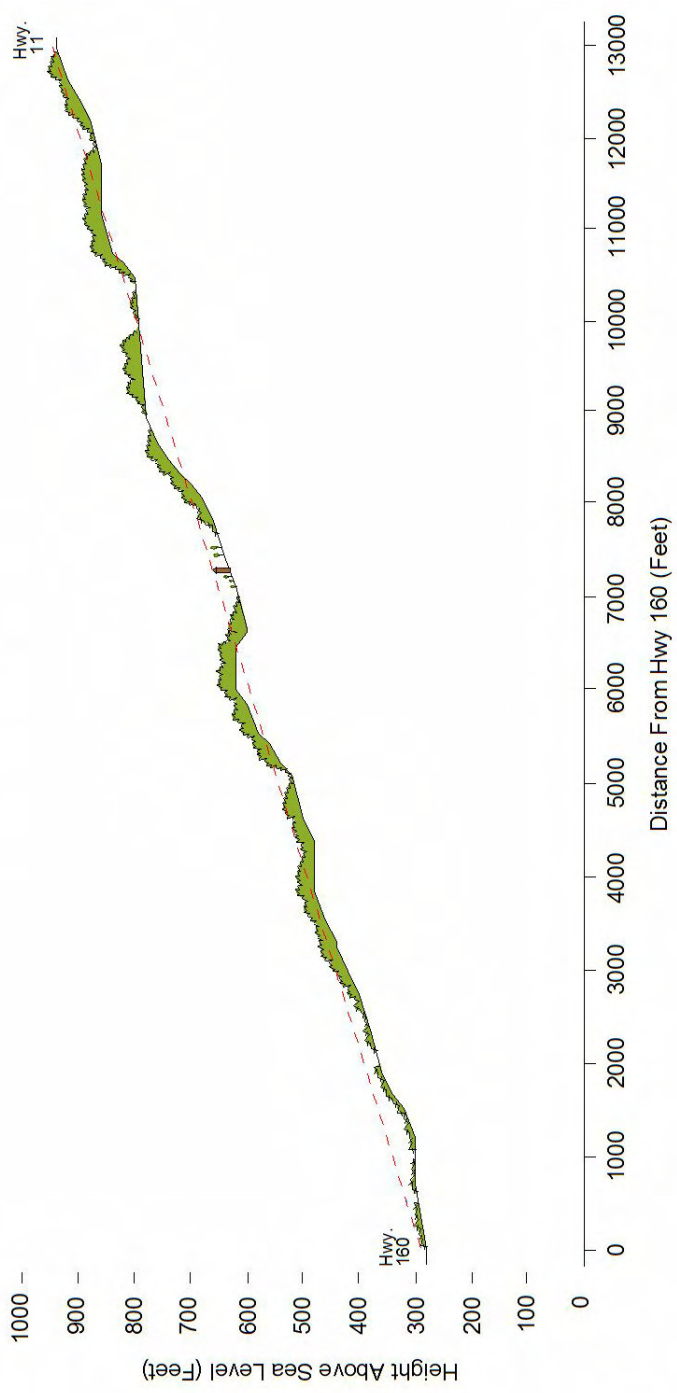
**Photo Figure 10 – View from Entrance Rod to National Park**



## **Appendix 3**

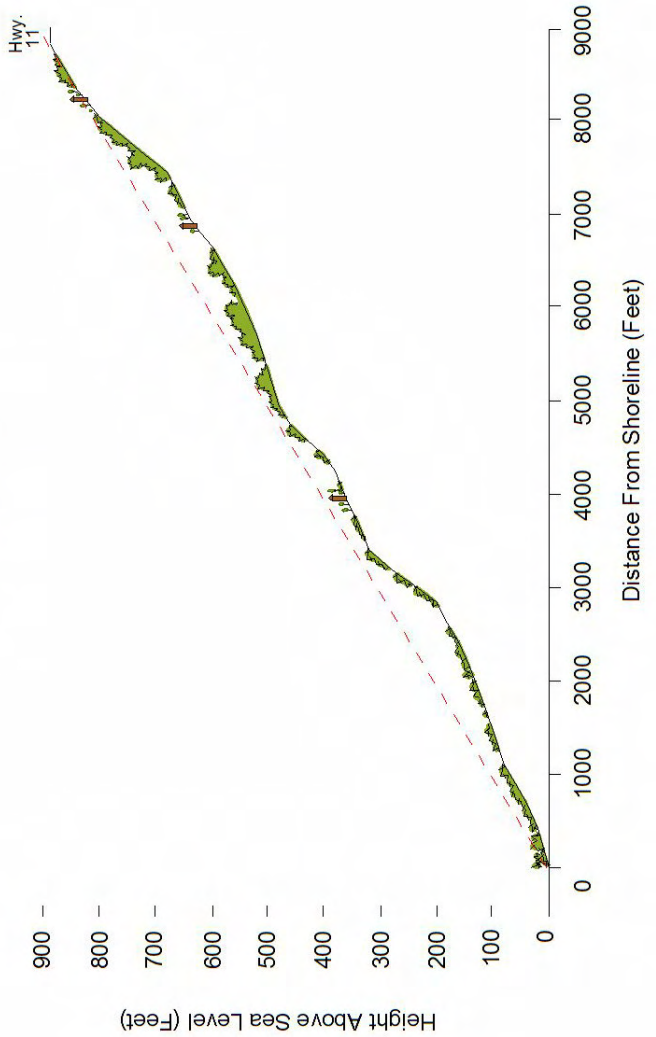
### **Profiles**

Profile A

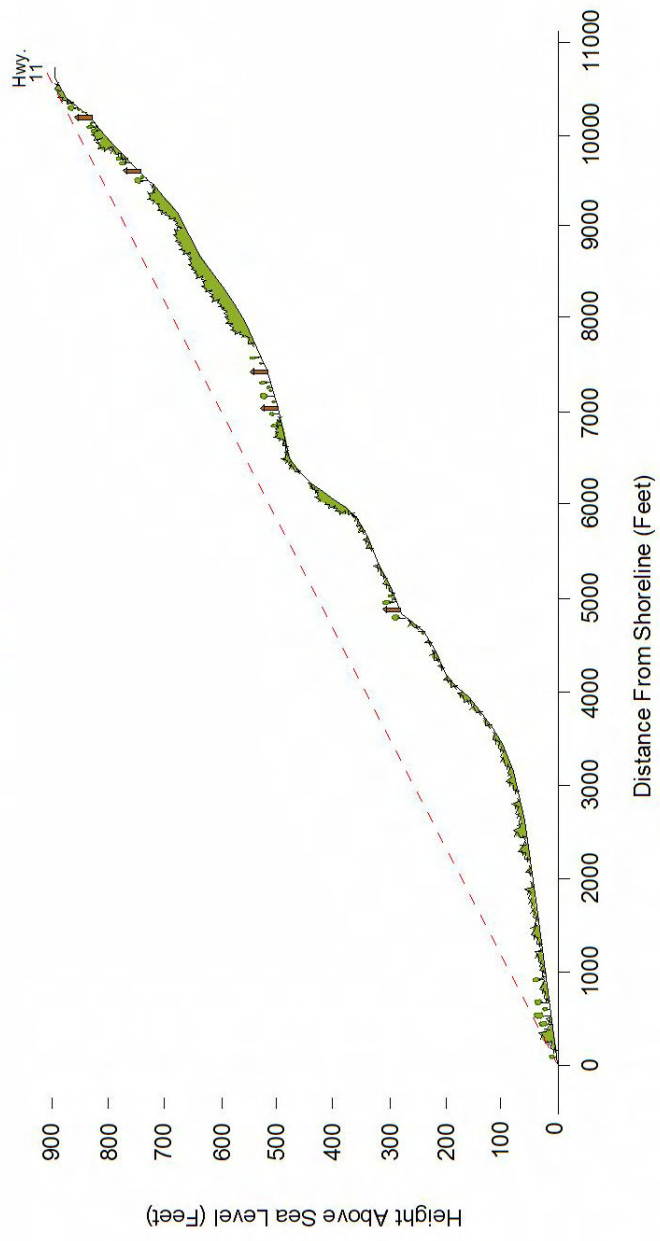


Note: The Origin of this Profile is Not the Shoreline (Refer to Map Figure 3).

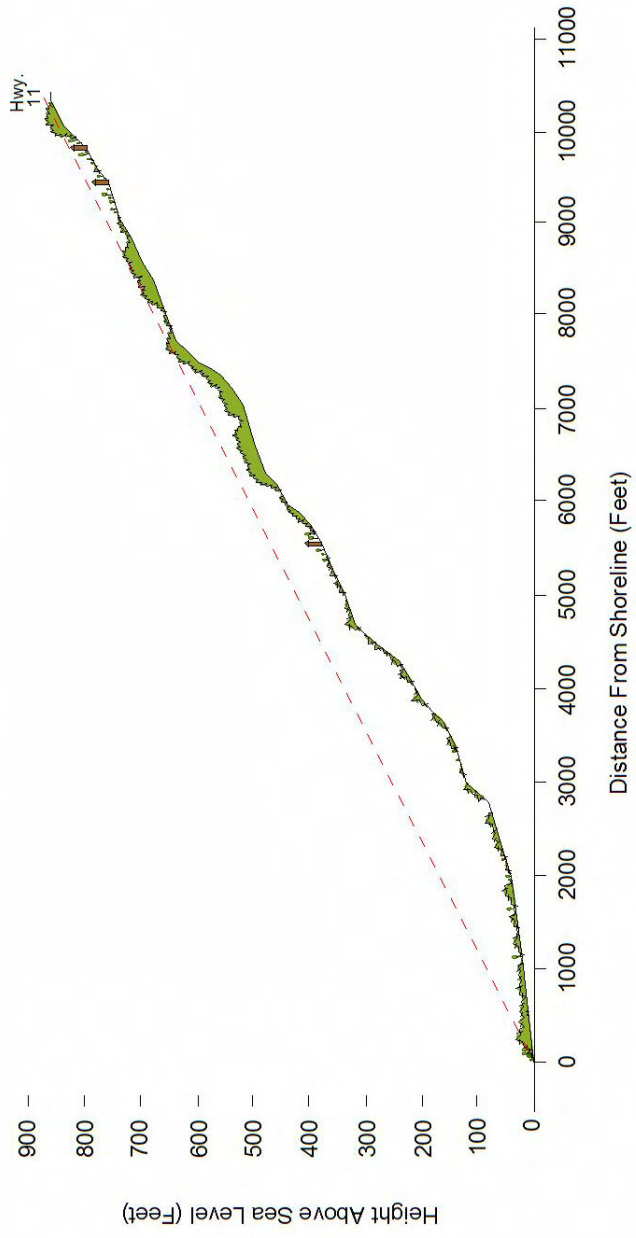
Profile B



Profile C

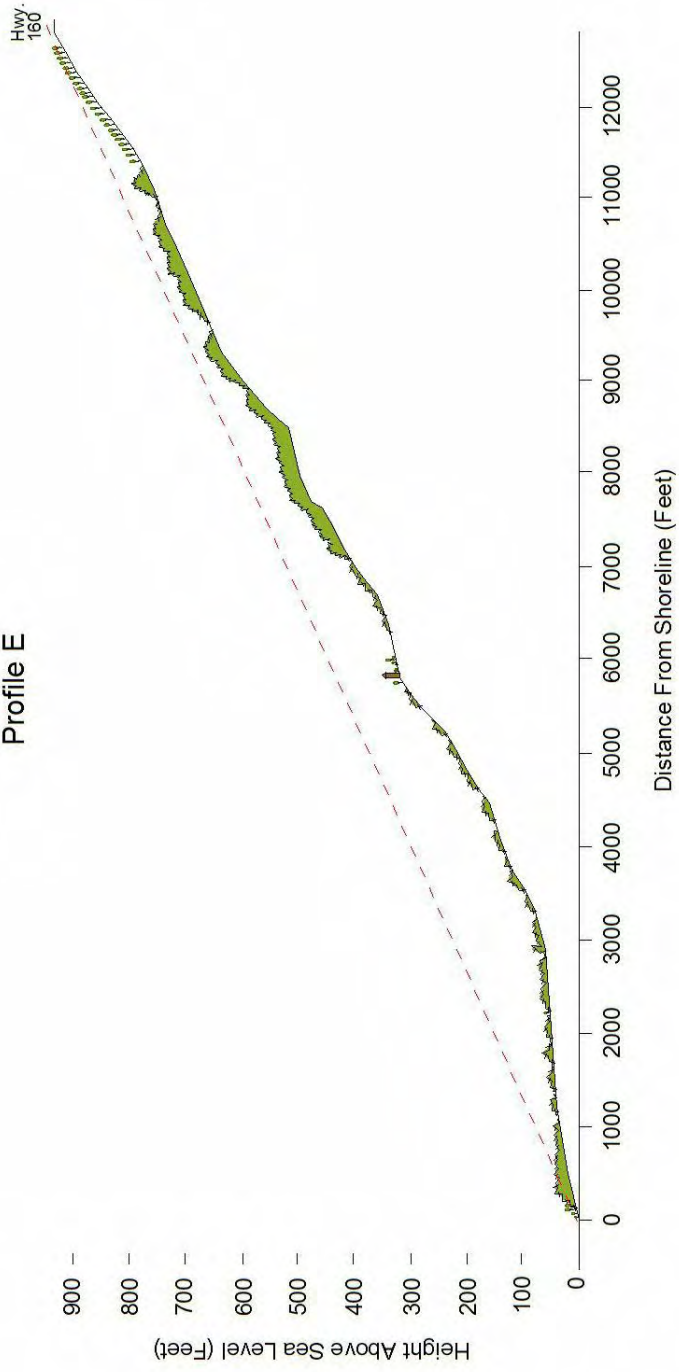


Profile D

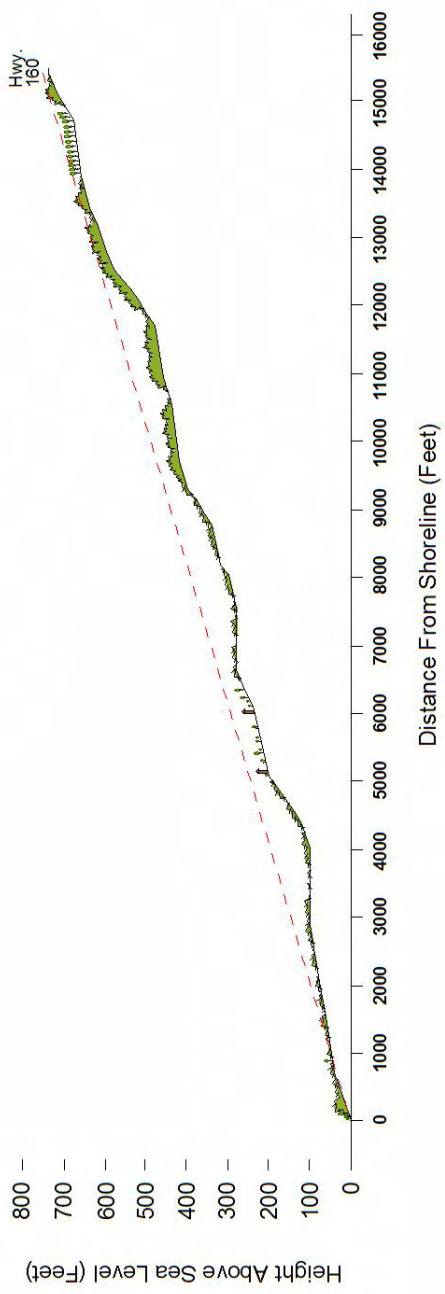




Profile E

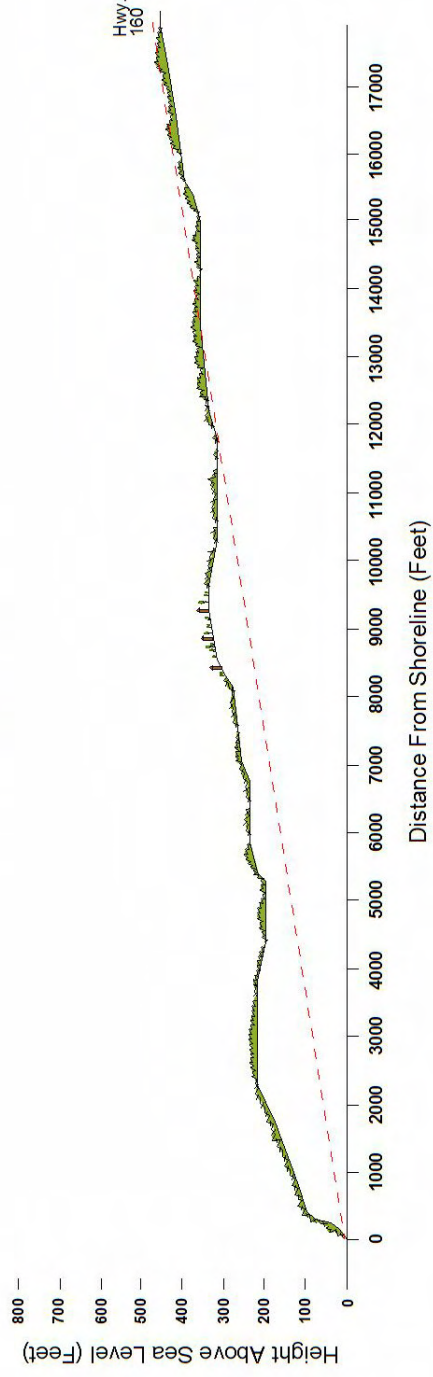


Profile F

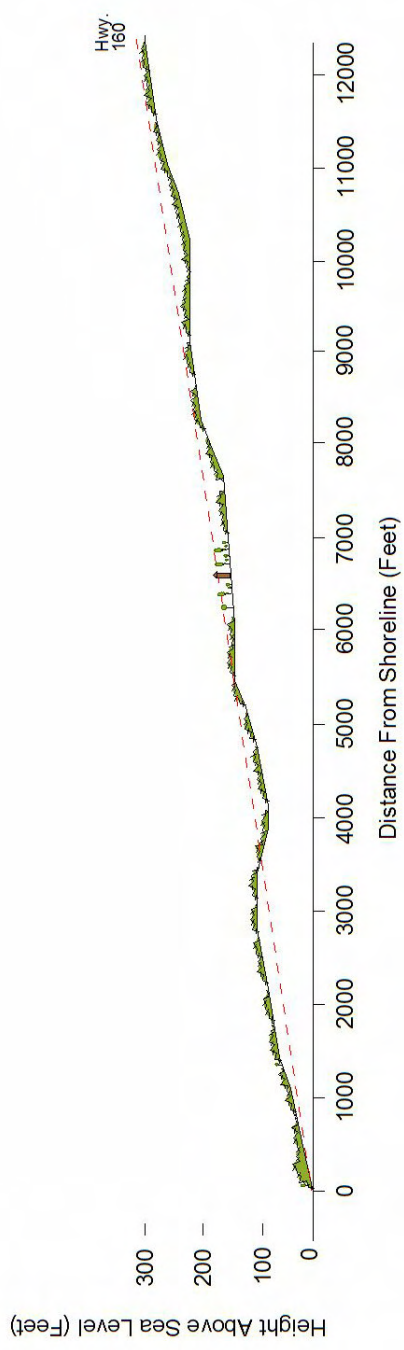




Profile G



Profile H



Profile I

