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September 12, 2011

Via Hand DeliveryMr. Gary Hooser, Director  
Office of Environmental Quality Control  
235 South Beretania Street, Room 702  
Honolulu, Hawaii 96813Re: Draft Environment Impact Statement  
Project Name: Kahuku Village  
Project Location: Ka'u Hawaii; TMK: (3) 9-2-001:072OFC. OF ENVIRONMENTAL  
QUALITY CONTROL

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Dear Mr. Hooser:

This firm represents Nani Kahuku Aina LLC, the owner of the above referenced property. On behalf of Nani Kahuku Aina LLC, we hereby request publication of the subject Draft Environmental Impact Statement (DEIS) in the **September 23, 2011** issue of The Environmental Notice.

Enclosed are the following items:

- One (1) copy of the DEIS in pdf format and a completed OEQC publication form on CD; and
- DEIS Distribution List.


Please note that this is a republication of the DEIS. The original publication was in the August 8, 2011 issue of The Environmental Notice. However, copies of the comment and response letters to the EIS preparation notice were inadvertently omitted from the electronic version of the DEIS in the online version of The Environmental Notice, as well as from the CDs which were distributed to a number of agencies, organizations and individuals. Accordingly, the DEIS is being republished in its entirety and all recipients of the original CD are being provided with a new CD containing the DEIS in its entirety. No changes were made to the DEIS in any other respect. Because the hard copies of the original DEIS did contain a copy of the EISPN comment and response letters, those who originally received a hard copy of the DEIS will not be receiving another hard copy. Along those same lines, this confirms that OEQC staff has advised that another hard copy of the DEIS need not be delivered to your office with this transmittal.

Mr. Gary Hooser, Director  
Office of Environmental Quality Control  
September 12, 2011  
Page 2

If you have any questions, please contact the undersigned at 529-7304.

Very truly yours,

McCORRISTON MILLER MUKAI MacKINNON LLP



Randall F. Sakumoto

RFS:kry

Enclosures

Cc with enclosures:

County of Hawaii, Planning Department (attention: Bobby Jean Leithead Todd, Director)  
Nani Kahuku Aina LLC

**Publication Form  
The Environmental Notice  
Office of Environmental Quality Control**

Instructions: Please submit one hardcopy of the document along a with determination letter from the agency. On a compact disk, put an electronic copy of this publication form and a PDF of the EA or EIS. Mahalo.

**Name of Project:** Kahuku Village  
**Applicable Law:** Chapter 343, Hawaii Revised Statutes  
**Type of Document:** Draft EIS  
**Island:** Hawaii  
**District:** Kau  
**TMK:** (3) 9-2-001:072  
**Permits Required:** County General Plan amendment, State Land Use District Boundary Amendment, Zone Change, Special Management Area Permit, Subdivision Approval, Plan Approval, NPDES Permit, Grading and Building Permits

**Name of Applicant or Proposing Agency:**

Nani Kahuku Aina, LLC  
99-1324 Koaha Place  
Aiea, Hawaii 96701  
Ms. Katherine Peroff, Vice President  
(808) 487-1445

**Approving Agency or Accepting Authority:**

County of Hawaii Planning Department  
101 Pauahi Street, Suite 3  
Hilo, Hawaii 96720  
Ms. Bobby Jean Leithead Todd, Director  
(808) 961-8288

**Consultant**

PBR Hawaii  
1001 Bishop Street, ASB Tower, Suite 650  
Honolulu, Hawaii 96813  
Mr. Thomas S. Witten, ASLA, President  
(808) 521-5631

**Project Summary:**

Note: Availability of the Draft EIS was originally published in the August 8, 2011 edition of the Environmental Notice. However, the comment and response letters received on the EIS Preparation Notice were inadvertently omitted from the electronic version on OEQC's website and CD's distributed dated "July 2011". Hard copies of the Draft EIS contained the comment and response letters. New CD's dated "September 2011" will be distributed to agencies, organizations, and individuals who received a copy of the July 2011 CD. Hard copies are not being redistributed as they have not changed. Hard copies of the Draft EIS are available for public review at the Naalehu Public Library, Hilo Public Library, UH Hilo Library, State Main Library, and all Public Regional libraries.

The vision for Kahuku Village calls for balanced development, creating a community that respects and stewards the Site's natural and cultural resources. Revenue generating land uses will be balanced with and help to fund resource stewardship and preservation efforts. One of the cornerstones of Kahuku Village is the creation of the Kahuku Hawaiian Heritage Center (KHHC), a Hawaii nonprofit corporation. KHHC will be empowered to steward and preserve the Site's many resources. The KHHC also will formalize and perpetuate

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the research and education programs already conducted onsite, enable expansion of programs, and promote an awareness and appreciation for the many natural and cultural resources that the Kahuku ahupua'a possesses. Approximately 500-acres of land in the vicinity of Pöhue Bay will be dedicated to the Hawaiian Heritage Center (HHC), although it is anticipated that the KHHC will be entrusted to steward and protect significant natural and cultural resources throughout the Site.

Residential, commercial and visitor uses will be confined to a Mixed-Use Village in the makai portion of the Site. The Mixed-Use Village encompasses about 1,600 acres, exclusive of the HHC and Shoreline Conservation Area. Approximately 125-acres of land near Mämalahoa Highway adjacent to the Hawaiian Ocean View Ranchos development is proposed to be dedicated to State and County agencies for civic facilities. The balance of the site will remain as open space in the form of archaeological preserves, parks, trails, and other open space.

Ki'eki'e Ka'ū, kua makani; *He umauma pā'ia e ke A'eloā*

*Majestic Ka'ū, of the windswept back; Whose chest is raised to meet the A'eloā (trades) Wind*

# *Kahuku* VILLAGE

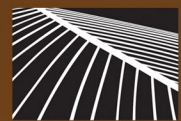
KAHUKU, KA'Ū, ISLAND AND COUNTY OF HAWAII

DRAFT ENVIRONMENTAL IMPACT STATEMENT

Volume I of III

July 2011

Prepared by :



PBR HAWAII  
& ASSOCIATES, INC.

# Draft Environmental Impact Statement

## Kahuku Village

*Kahuku Ahupua'a, Ka'u District, Island and County of Hawai'i, State of Hawai'i*

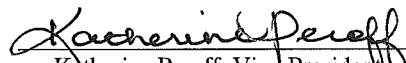
Prepared for:

**Nani Kahuku Aina, LLC**

Prepared by:

**PBR Hawaii**

This draft environmental impact statement and all ancillary documents were prepared under my direction or supervision and the information submitted, to the best of my knowledge, fully addresses document content requirements as set forth in Section 11-200-17, Hawai'i Administrative Rules.

  
Katherine Peroff, Vice-President  
Nani Kahuku Aina, LLC

**JULY 2011**

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**LIST OF ACRONYMS AND ABBREVIATIONS**

ACS	American Community Survey
ALISH	Agricultural Lands of Importance to the State of Hawai‘i
BMP	Best Management Practices
CDP	Community Development Plan
CDUP	Conservation District Use Permit
CWDA	Critical Wastewater Disposal Area
CZM	Coastal Zone Management
DBEDT	Department of Business, Economic Development, and Tourism
DLNR	Department of Land and Natural Resources
DNL	Day-Night Average Sound Level (also referred to as “Ldn”).
DOE	Department of Education
DOH	Department of Health
DOT	Department of Transportation
DWS	Department of Water Supply
EIS	Environmental Impact Statement
EISPN	Environmental Impact Statement Preparation Notice
EPA	Environmental Protection Agency
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
gpd	Gallons per day
HAR	Hawai‘i Administrative Rules
HELCO	Hawai‘i Electric Light Company, Inc.
HHC	Hawaiian Heritage Center
HOVE	Hawaiian Ocean View Estates
HRS	Hawai‘i Revised Statutes
KHHC	Kahuku Hawaiian Heritage Center
IRSWMP	Integrated Resources and Solid Waste Management Plan
kVA	Kilovolt-Amperes
LSB	Land Study Bureau
LUC	Land Use Commission
LUPAG	Land Use Pattern Allocation Guide
mgd	Million gallons per day
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination Systems
NRCS	Natural Resources Conservation Service
OEQC	Office of Environmental Quality Control
Ranchos	Hawaiian Ocean View Ranchos
SHPD	State Historic Preservation Division
SLUDBA	State Land Use District Boundary Amendment
SMA	Special Management Area
TIAR	Traffic Impact Analysis Report
TMK	Tax map key
UBC	Uniform Building Code
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WWTP	Wastewater treatment plant

## **LIST OF DEFINITIONS**

A number of words and phrases are used throughout this Environmental Impact Statement. Relative to Kahuku Village, they are defined as follows:

**Existing Access Road:** The existing unimproved road off of Māmalahoa Highway near the eastern boundary of the property that provides access to Pōhue Bay.

**Hawaiian Heritage Center:** The approximately 500-acre area in the vicinity of Pōhue Bay to be established as a cultural preserve and center for education and research.

**Kahuku Hawaiian Heritage Center:** The non-profit corporation that will be responsible for management of the Hawaiian Heritage Center.

**Kahuku Village:** The proposed Mixed-Use Village, Hawaiian Heritage Center, infrastructure and ancillary improvements.

**Mauka Community Facilities Reserve:** The approximately 100-acres of land in the northwest corner of the Nani Kahuku Aina property that is proposed to be dedicated to the County of Hawaii and State for civic uses.

**Project:** The proposed development, as described in Section 2.4 of this EIS.

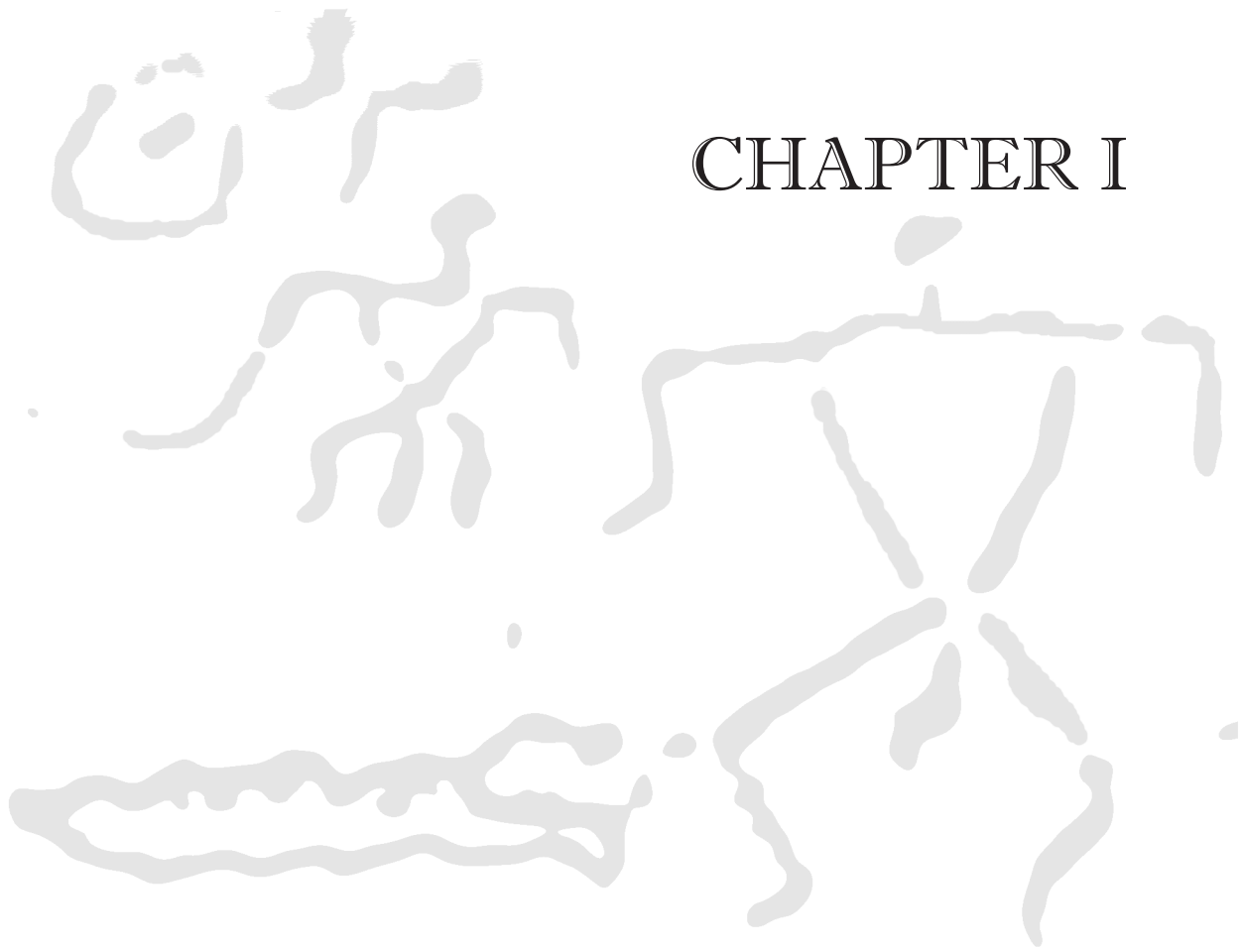
**Project Site:** The portion of the Site that is proposed to be developed.

**Proposed Access Road:** The new access road to be created with development of Kahuku Village off of Māmalahoa Highway, as shown in Figure 5.

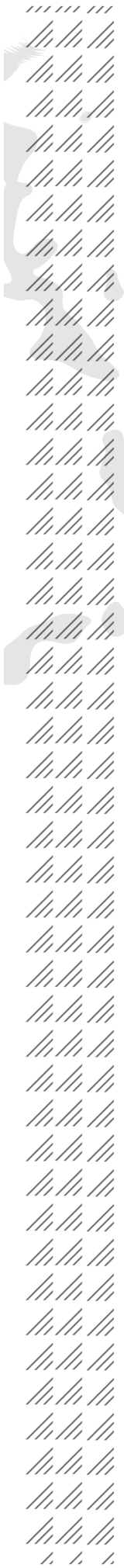
**Site:** All of the 16,457-acres of land owned by Nani Kahuku Aina, identified as TMK (3) 9-2-001:072.

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# CHAPTER I



INTRODUCTION AND SUMMARY





## 1 INTRODUCTION AND SUMMARY

This Draft Environmental Impact Statement (EIS) is prepared pursuant to Chapter 343, Hawai‘i Revised Statutes (HRS), and Title 11, Chapter 200, Hawai‘i Administrative Rules (HAR), Department of Health (DOH), State of Hawai‘i. Proposed is an applicant action by Nani Kahuku Aina, LLC for the creation of Kahuku Village, a master-planned, mixed-use community emphasizing cultural and natural resource stewardship located in the Ka‘ū region, Island of Hawai‘i.

### 1.1 PROFILE

<b>Project Name:</b>	Kahuku Village
<b>Location:</b>	Kahuku Ahupua‘a, Ka‘ū District, Island and County of Hawai‘i, Hawai‘i
<b>Judicial District:</b>	Ka‘ū
<b>Tax Map Key:</b>	TMK (3) 9-2-001:072
<b>Applicant/Landowners:</b>	Nani Kahuku Aina, LLC, a Delaware Limited Liability Company
<b>Land Area:</b>	16,456.547 acres
<b>Petition Area:</b>	Approximately 1,600 acres (to be refined/finalized with land survey)
<b>Existing Use:</b>	Vacant, open land with scrub vegetation and lava rock.
<b>Proposed Use:</b>	The majority of the Nani Kahuku Aina property will be undeveloped and remain as open space. Kahuku Village involves the creation of a Hawaiian Heritage Center and a Mixed-Use Residential and Commercial village in the makai portion of the property. The Kahuku Hawaiian Heritage Center will formalize and perpetuate programs to steward and preserve the natural and cultural resources on the property. The Mixed-Use Village will have neighborhood serving commercial uses, single- and multi-family residential units, a golf course, visitor accommodations, and neighborhood parks. A portion of the revenue generated from the Mixed-Use Village will supplement funding for programs and operations of the Hawaiian Heritage Center. Approximately 125-acres of land in the mauka portion of property near Māmalahoa Highway and adjacent to the Hawaiian Ocean View Ranchos development is proposed to be dedicated to State and County agencies for civic uses such as an elementary school, police substation, fire station, emergency medical clinic, and district park.

**Kahuku Village**  
Draft Environmental Impact Statement

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**Current**

**Land Use Designations:** State Land Use: Agriculture and Conservation  
Conservation District Subzones: General and Resource  
General Plan LUPAG: Extensive Agriculture, Conservation, Open Space  
County Zoning: Agriculture (A-20a), Open (O)  
Special Management Area (SMA): Approximately 355 acres is in the SMA

**Proposed**

**Land Use**

**Re-Designations:** State Land Use: Urban, Rural, Agriculture, Conservation  
County General Plan: Extensive Agriculture, Open Space, Medium Density Urban, Urban Expansion, Resort (Intermediate), Rural  
County Zoning: Project District

**Major Approvals/Permits**

**Required:** Compliance with Chapter 343, HRS  
County of Hawai'i General Plan Amendment  
State Land Use District Boundary Amendment  
Change of Zone  
Special Management Area Permit  
Subdivision Approval  
Plan Approval  
NPDES Permit  
Grading/Building Permits

**Accepting Authority:** County of Hawai'i Planning Department

**1.2 APPLICANT**

The applicant is Nani Kahuku Aina, LLC.

**Contact:** Mr. Valentine Peroff, President  
Ms. Katherine Peroff, Vice President  
99-0880 Iwaena Street  
Aiea, Hawai'i 96701

**1.3 ENVIRONMENTAL CONSULTANT**

Nani Kahuku Aina, LLC's environmental planning consultant for Kahuku Village is PBR HAWAII.

**Contact:** Mr. Thomas S. Witten, ASLA Telephone: (808) 521-5631  
President Fax: (808) 523-1402  
PBR HAWAII  
1001 Bishop Street, ASB Tower  
Suite 650  
Honolulu, Hawai'i 96813

#### **1.4 ACCEPTING AUTHORITY**

The County of Hawai'i Planning Department is the accepting authority for the EIS. Determination of the County of Hawai'i Planning Department as the accepting authority is in accordance with Chapter 343, HRS, which states that the authority to accept privately initiated EIS documents shall rest with the government agency empowered to issue permits for the project.

**Contact:** Ms. Bobby Jean Leithead Todd, Director  
County of Hawai'i Planning Department  
101 Pauahi Street, Suite 3  
Hilo, Hawai'i 96720  
Telephone: (808) 961-8288  
Fax: (808) 961-8742

#### **1.5 COMPLIANCE WITH STATE OF HAWAII AND COUNTY OF HAWAII ENVIRONMENTAL LAWS**

This document has been prepared in accordance with the provisions of Chapter 343, HRS, (Environmental Impact Statement Law) and Title 11, Chapter 200, HAR, Environmental Impact Statement Rules.

Section 343-5, HRS, establishes nine "triggers" that require the preparation of an environmental assessment or environmental impact statement. The triggers for Kahuku Village include, without limitation, the following:

- Reclassification of approximately 1,600 acres from the State Land Use Conservation District to the State Land Use Urban and Rural Districts;
- Development of a Hawaiian Heritage Center, roadway, infrastructure, and ancillary improvements within the State Land Use Conservation District;
- Possible use of the shoreline area as defined in Section 205A-41, HRS, for trails, signage, resource management, and recreational and cultural purposes.
- Proposed highway intersection improvements on Māmalahoa Highway (a State highway facility);
- Amendment of the County of Hawaii General Plan to recognize Kahuku Village and allow for its development;
- Development of a helicopter facility;
- Development of a wastewater treatment plant; and,
- Possible development of a bio-fuel power generating facility.

In addition, development of Kahuku Village may involve or impact State and/or County lands or funds relating to infrastructure improvements for public facilities, roadways, water, sewer, utility, drainage, or other facilities. While the specific nature of each improvement is not known at this time, this EIS is intended to address all current and future instances involving the use of State and/or County lands and funds relating to Kahuku Village.

This Draft EIS was preceded by the *Kahuku Villages Environmental Impact Statement Preparation Notice* (EISPN). Notice of the availability of the EISPN was published in the September 8, 2009 edition of the Office of Environmental Quality Control's (OEQC) *The Environmental Notice*. Copies of the EISPN were provided to appropriate government agencies

**Kahuku Village**  
Draft Environmental Impact Statement

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and other organizations (See Chapter 8.0). The public comment period for the EISPN ended October 7, 2009. Comments and responses on the EISPN were incorporated in this Draft EIS and the letters are provided in Chapter 11.0.

This environmental impact statement does not address impacts associated with development of facilities on the lands proposed to be dedicated to the State and/or County of Hawaii for civic uses (see Section 2.4.2.4). It is anticipated that separate environmental review will be undertaken when plans for the land are developed by the State and/or County. In addition, separate environmental review may be required for the proposed Veterans Administration facility and for a bio-fuel or similar power generating facility if electrical power is supplied by the Kamaoa Wind Farm (see Section 4.8.4)

## **1.6 STUDIES CONTRIBUTING TO THIS EIS**

A number of specific technical studies were prepared for Kahuku Village, and the full reports are included as appendices to this EIS. These studies include:

- A. Groundwater Resources Assessment
- B. Marine Water and Anchialine Pool Assessment
- C. Botanical Resources Assessment
- D. Wildlife Resources Assessment
- E. Cultural Impact Assessment
- F. Traffic Impact Analysis Report
- G. Traffic Noise Study
- H. Air Quality Study
- I. Civil and Electrical Infrastructure Assessment
- J. Geotechnical Engineering Report
- K. Property Demand & Supply Evaluation, Market Trend Analysis, and Project Acceptance Forecast
- L. Economic and Fiscal Impact Assessment
- M. Archaeological Inventory Survey

## **1.7 EXECUTIVE SUMMARY**

### **1.7.1 Kahuku Village Project Description**

The vision for Kahuku Village calls for balanced development, creating a community that respects and stewards the Site's natural and cultural resources. Revenue generating land uses will be balanced with and help to fund resource stewardship and preservation efforts. One of the cornerstones of Kahuku Village is the creation of the Kahuku Hawaiian Heritage Center (KHHC), a Hawaii nonprofit corporation. KHHC will be empowered to steward and preserve the Site's many resources. The KHHC also will formalize and perpetuate the research and education programs already conducted onsite, enable expansion of programs, and promote an awareness and appreciation for the many natural and cultural resources that the Kahuku ahupua'a possesses. Approximately 500-acres of land in the vicinity of Pōhue Bay will be dedicated to the Hawaiian Heritage Center (HHC), although it is anticipated that the KHHC will be entrusted to steward and protect significant natural and cultural resources throughout the Site.

Residential, commercial and visitor uses will be confined to a Mixed-Use Village in the makai portion of the Site. The Mixed-Use Village encompasses about 1,600 acres, exclusive of the

HHC and Shoreline Conservation Area. Approximately 125-acres of land near Māmalahoa Highway adjacent to the Hawaiian Ocean View Ranchos development is proposed to be dedicated to State and County agencies for civic facilities. The balance of the site will remain as open space in the form of archaeological preserves, parks, trails, and other open space.

### **1.7.2 Summary of Proposed Impacts and Proposed Mitigation**

**Geology and Soils** – During construction, impacts associated with earthwork activities will be prevented and minimized by implementing appropriate Best Management Practices (BMPs). No significant impact to geological features will occur as significant geologic features such as anchialine ponds, prominent pu‘u, and coastal sea cliffs and beaches will remain in the State Land Use Conservation District and will not be developed. Appropriate mitigation measures will be implemented to address geologic hazards such as ground cracks and lava tubes. Section 3.2 provides a complete discussion of potential impacts and mitigation measures relating to geology and soils.

**Natural Hazards** – Flooding at the site does not presently occur and the threat of localized flooding following development will be prevented by installing appropriately sized and designed drainage systems. Establishment of a shoreline conservation zone extending at least 300-feet inland will reduce the threat of tsunami and sea cliff erosion. The shoreline conservation zone will also reduce the threat from sea level rise, as most habitable structures will be at least 20-feet above sea level. Hurricane hazard will be mitigated through compliance with the Hawai‘i County Code, which incorporates hurricane protection measures. Lava flow hazard will be mitigated by installing warning sirens to provide as early notification as possible for residents. Earthquake hazard will be mitigated through compliance with requirements of the Uniform Building Code and preparation of an earthquake engineering study to determine if any other specific structural design measures are necessary. Wildfire threat will be mitigated by providing firebreaks and consultation with the County Fire Department during the design phase of the project. Further discussion of mitigation measures relating to natural hazards is provided in Section 3.4.

**Groundwater** – Kahuku Village will use desalinated basal salt water and brackish water for potable and non-potable water needs. The project’s water resource assessment determined that the flow rate of brackish water along Kahuku Village’s shoreline would be reduced by about 5 percent at full build-out. The assessment also determined that Kahuku Village would not increase dissolved nutrient concentrations in underlying groundwater. Taking into account the findings of the water resource assessment, Kahuku Village’s near-shore marine and anchialine pond assessment determined that no adverse impact is expected to occur to marine or anchialine pond communities. Mitigation measures to be implemented to protect groundwater quality are provided in Section 3.5.

**Marine and Anchialine Pond Communities** – An assessment of the near-shore marine and anchialine pond communities has determined that Kahuku Village will have no negative impact to marine or anchialine pond environments so long as appropriate BMPs are implemented. Rare, threatened and endangered marine species that may be present in the vicinity of the Site include the endangered Hawksbill turtle, threatened green sea turtle, endangered Hawaiian monk seal, and two rare shrimp, *Metabetaeus Iohena* and *Halocaridina rubra*. Mitigation measures to be implemented to prevent impacts to nearshore marine and anchialine pond communities are provided in Section 3.6.

## **Kahuku Village**

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**Flora** – One endangered plant, a single halapepe tree (*Pleomele hawaiiensis*), was identified during the project’s botanical survey. The halapepe tree is located in an area not proposed for development. The botanical survey provided recommendations to protect coastal habitat, treatment of the halapepe tree, and to prevent impact to plant communities. All of the recommendations of the flora survey will be implemented, as discussed in Section 3.7.

**Fauna** – A survey of terrestrial wildlife resources at the project area did not encounter any endangered or threatened species. No significant impact to terrestrial wildlife resources is anticipated. All of the recommendations of the terrestrial wildlife survey will be implemented, as discussed in Section 3.8.

**Archaeological** – Kahuku Village’s archaeological inventory survey identified 60 significant sites, including 20 sites recommended for additional data recovery and 17 sites recommended for preservation. Six burial features are among the sites recommended for preservation. No significant impact to archaeological resources is anticipated as preservation and burial treatment plans will be prepared for the State Historic Preservation Division (SHPD) review and approval and all sites recommended for preservation will not be affected by development of Kahuku Village. Section 4.1 provides further discussion on mitigation measures relating to archaeological resources.

**Cultural** – Ongoing cultural practices at the project area include fishing, camping, hiking, gathering, and cultural ceremonies. Development of Kahuku Village will have a beneficial impact on these activities by enhancing access to the site for continuation of these practices. In addition, creation of the Hawaiian Heritage Center will assist in the preservation of Hawaiian cultural resources, beliefs, and practices representative of the project area. Impacts to cultural resources are discussed in Section 4.2.

**Noise** - In the short-term, construction noise impacts will occur during development of Kahuku Villages. Impacts will be mitigated by complying with State DOH construction noise limits and curfew hours. A traffic noise study prepared for Kahuku Village determined that project generated traffic will not increase noise levels on Māmalahoa Highway above the FHA/HUD acceptability threshold. Within Kahuku Village, long-term noise impacts will be mitigated by providing sufficient setbacks from project roads. Section 4.4 contains a full discussion of noise impacts.

**Air Quality** – Short-term air quality impacts may occur from fugitive dust and emissions from construction vehicles and equipment. Construction impacts will be mitigated by implementing appropriate BMPs and through proper maintenance of construction equipment and vehicles. An air quality study prepared for Kahuku Village determined that while project generated traffic will increase ambient concentrations of carbon monoxide and nitrogen dioxide along Māmalahoa Highway, concentrations will remain well within National and State standards. Potential buyers at Kahuku Village will be informed of the occurrence of vog and Nani Kahuku Aina is considering the provision of climate controlled community buildings that can be used by residents during vog episodes. Section 4.5 contains a full discussion of air quality impacts.

**Visual & Aesthetic** – Views and the rural character for travelers on Māmalahoa Highway will be unchanged since development will only occur on the makai portion of the property, which is about six miles makai from the highway. Significant natural geologic features such as Pōhue Bay and littoral cones will be protected by keeping them within the existing Conservation District. A shoreline conservation zone extending at least 300-feet inland will maintain the

## **Kahuku Village**

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Site's natural coastal setting and preserve scenic coastal views. Section 4.6 contains a full discussion of visual and aesthetic impacts.

**Traffic** – A Traffic Impact Analysis Report (TIAR) prepared for Kahuku Village has identified necessary improvements to mitigate traffic impacts. Traffic on Māmalahoa Highway in the vicinity of the Site is expected to operate at an acceptable Level of Service of “D” or better through full build-out of Kahuku Village. A full discussion of traffic impacts is provided in Section 4.3.

**Water** – At full build-out, Kahuku Village is expected to require 0.976 mgd of potable water and 1.543 mgd of non-potable water. Water for Kahuku Village will be provided by privately constructed and maintained desalination plants. Non-potable water will also be supplemented by recycled treated wastewater. A full discussion of water requirements for Kahuku Village is provided in Section 4.8.1.

**Wastewater** – At full build-out, Kahuku Village is expected to generate 5.702 mgd of wastewater. Wastewater will be treated by a privately constructed and maintained wastewater treatment facility. Section 4.8.2 contains a full discussion of the proposed wastewater system.

**Drainage** – During construction, BMPs will be implemented to minimize and control storm water runoff. Specific construction BMPs will be specified in Kahuku Village's National Pollutant Discharge Elimination Systems (NPDES) permit(s). Development of Kahuku Village will increase the rate of stormwater runoff as porous lava is replaced with impervious surfaces. The increase in runoff will be mitigated by detaining, retaining, and infiltrating runoff into the ground. No discharges to coastal waters or anchialine ponds will occur. Section 4.8.3 contains a full discussion of drainage system improvements.

**Electrical** – At full build-out, Kahuku Village's peak hour electrical demand is expected to be 31,394 kVA. Two sources of electrical power are being considered, including a connection to the Hawai'i Electric Light Company, Inc.'s (HELCO) facilities or a connection to the Kamaoa Wind Farm. A discussion of electrical system improvements and alternates being considered, as well energy saving measures under consideration, is provided in Section 4.8.4.

**Solid Waste** – At full build-out Kahuku Village is anticipated to generate 5,302 tons of solid waste per year. Waste diversion and recycling measures are being considered. Waste that cannot be recycled will be disposed of at a County landfill. Section 4.8.5 contains a full discussion of solid waste impacts.

**Population and Housing** – Kahuku Village is expected to have a resident population of about 2,378 persons at full build-out. The total daily population census, which includes residents, workers, and visitors is expected to be about 9,080 persons. Kahuku Village will help to satisfy the need for housing, including affordable housing. Approximately 1,050 residential units are proposed to be constructed, at least 20% of which will be affordable as required by Chapter 20, Article 1 of the Hawai'i County Code. A full discussion on population and housing is provided in Section 4.7.

**Economy** – An economic and fiscal impact assessment prepared for Kahuku Village determined that approximately 393 full time equivalent (FTE) construction and 1,509 FTE long-term jobs will be created. Hawaii County is expected to receive \$112.6 million in real property tax receipts during the 13-year construction/absorption period and \$15.9 million in annual collections after

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build out of Kahuku Village. Total tax revenue to the State in the form of income taxes, excise taxes, and transient accommodation taxes will total \$223.01 million during the construction period and \$22.5 million after build-out. After accounting for government services needed for Kahuku Village, it is conservatively estimated that Hawaii County and the State of Hawaii will realize respective net fiscal “profits” of \$9.8 million and \$250,000 annually at build-out of Kahuku Village.

**Schools** – Students residing at Kahuku Village would likely attend Nā‘ālehu Elementary School and Ka‘ū High School. In the long-term, as Kahuku Village is developed and population at nearby communities increases, new school facilities may be needed. Approximately 100-acres of land are proposed to be dedicated to the State and County of Hawaii, a portion of which may be used for school facilities.

**Public Services** – Residents of Kahuku Villages will likely require occasional police, fire suppression, and emergency medical services. Approximately 100-acres of land is proposed to be dedicated to the State and County of Hawai‘i for civic uses, a portion of which can be used to develop a new police sub-station, fire station, and emergency medical center.

### **1.7.3 Conformance with Land Use Plans and Policies**

**State Land Use Law, Chapter 205, Hawai‘i Revised Statutes** – The Site is currently in the State Land Use Agriculture and Conservation Districts. A petition for a district boundary amendment will be filed with the Land Use Commission (LUC) should the proposed amendment to the County General Plan be approved. Approximately 1,600 acres is proposed to be reclassified from the Conservation District to the Urban and Rural Districts. Section 5.1.2 contains a full discussion.

**Coastal Zone Management Act, Chapter 205A, Hawai‘i Revised Statutes** – The Coastal Zone Management Area as defined in Chapter 205A, HRS, includes all the lands of the State. As such, the Site is within the Coastal Zone Management Area. Section 5.1.3 contains discussion of Kahuku Village’s compliance.

**Hawai‘i State Plan, Chapter 226, Hawai‘i Revised Statutes** – The Hawai‘i State Plan (Chapter 226, HRS), establishes a set of goals, objectives, and policies that serve as long-range guidelines for the growth and development of the State. Kahuku Village is consistent with many of the goals, objectives, and policies set forth by the Hawai‘i State Plan. Section 5.1.4 contains a full discussion.

**State Functional Plans** – The Hawai‘i State Plan directs State agencies to prepare functional plans for their respective program areas. There are 14 state functional plans that serve as the primary implementing vehicle for the goals, objectives, and policies of the Hawai‘i State Plan. Section 5.1.5 discusses of Kahuku Village’s compliance.

**County of Hawai‘i General Plan** – Presently, the County of Hawai‘i General Plan Land Use Pattern Allocation Guide (LUPAG) designates lands at the project site as Extensive Agriculture, Conservation, and Open Area. To allow for creation of Kahuku Village, an amendment to the LUPAG is being proposed. About 1,713 acres is proposed to be designated for Rural, Medium Density Urban, and Resort use. Section 5.2.1 provides a discussion of the proposed amendments and Kahuku Village’s consistency with the County of Hawai‘i General Plan.



**Ka‘ū Community Development Plan** – The County of Hawai‘i Community Development Plan Program is intended to translate broad General Plan goals and policies into implementation actions applicable to specific regions. A draft of the Ka‘ū Community Development Plan is not expected to be available until 2012, however, Kahuku Village’s consistency with the Values and Vision statement adopted by the Ka‘ū CDP Steering Committee is provided in Section 5.2.2.

**County of Hawai‘i Zoning** – The existing zoning for the Site reflects the current General Plan LUPAG designations: The General Plan Open and Conservation areas are zoned Open (O), and the Extensive Agricultural area is zoned Agricultural-20 (minimum 20- acre lot size). If the General Plan Amendment is approved, then the Applicant will petition to rezone the Site to be consistent with the amended General Plan. A discussion of the proposed zone change is provided in section 5.2.3.

**Special Management Area** - The Hawai‘i Coastal Zone Management Program embodied in Chapter 205A, HRS, contains the general objectives and policies upon which all Counties within the State have structured specific legislation which created Special Management Areas (SMA). An SMA Permit will be procured for any development in the SMA.

#### **1.7.4 Alternatives**

**No Action Alternative** – Under the No Action alternative, no development would occur and the property would remain in its existing state. Impacts associated with Kahuku Village, both beneficial and adverse, would not occur. The No Action alternative was rejected because it is not consistent with the project’s objectives of protecting and stewarding natural and cultural resources, creating job opportunities, providing diverse housing opportunities, and increasing basic services.

**Agricultural Subdivision** - An agricultural subdivision of up to 415 lots could be developed on the 8,305 acres in the State Land Use Agricultural District. This alternative was rejected because it is inconsistent with the project’s objectives of protecting and stewarding the site’s natural and cultural resources, maximizing open space, creating job opportunities, providing diverse housing opportunities, increasing basic services, and leveraging low-key high quality visitor accommodations to subsidize community benefits.

**Alternate Development Plans** – Development of alternate development plans include development of Mauka and Makai Villages, or development of a project similar to the formerly proposed Hawaiian Riviera Resort. The consistency with these alternatives with project objectives is discussed in Section 6.3.

**Postpone Development** – Postponing development would have similar impacts to the No Action alternative until development commences. Resource protection and stewardship efforts would be hampered due to the lack of financial resources to fund programs. The project’s objectives of creating job opportunities, providing diverse housing opportunities, increasing basic services, and leveraging a low-key high quality resort to subsidize community benefits would only be attained when the project proceeds.

**Alternative Site** – Development of the project on an alternate site is discussed in Section 6.5. This alternative is not considered feasible, however, due to the site-specific nature of the project’s objectives and dependence of Kahuku Village on the site’s resources.

### **1.7.5 Cumulative Impacts**

Cumulative impacts are those that result from the incremental impact of the action when added to other past, present and reasonably foreseeable future actions. Together with other existing and anticipated development in the region, Kahuku Village has the potential to generate cumulative impacts including impacts to regional traffic volumes and demand on public services such as school facilities, and police and fire protection services, and groundwater resources. A full discussion of cumulative impacts is provided in Section 7.2.

### **1.7.6 Secondary Impacts**

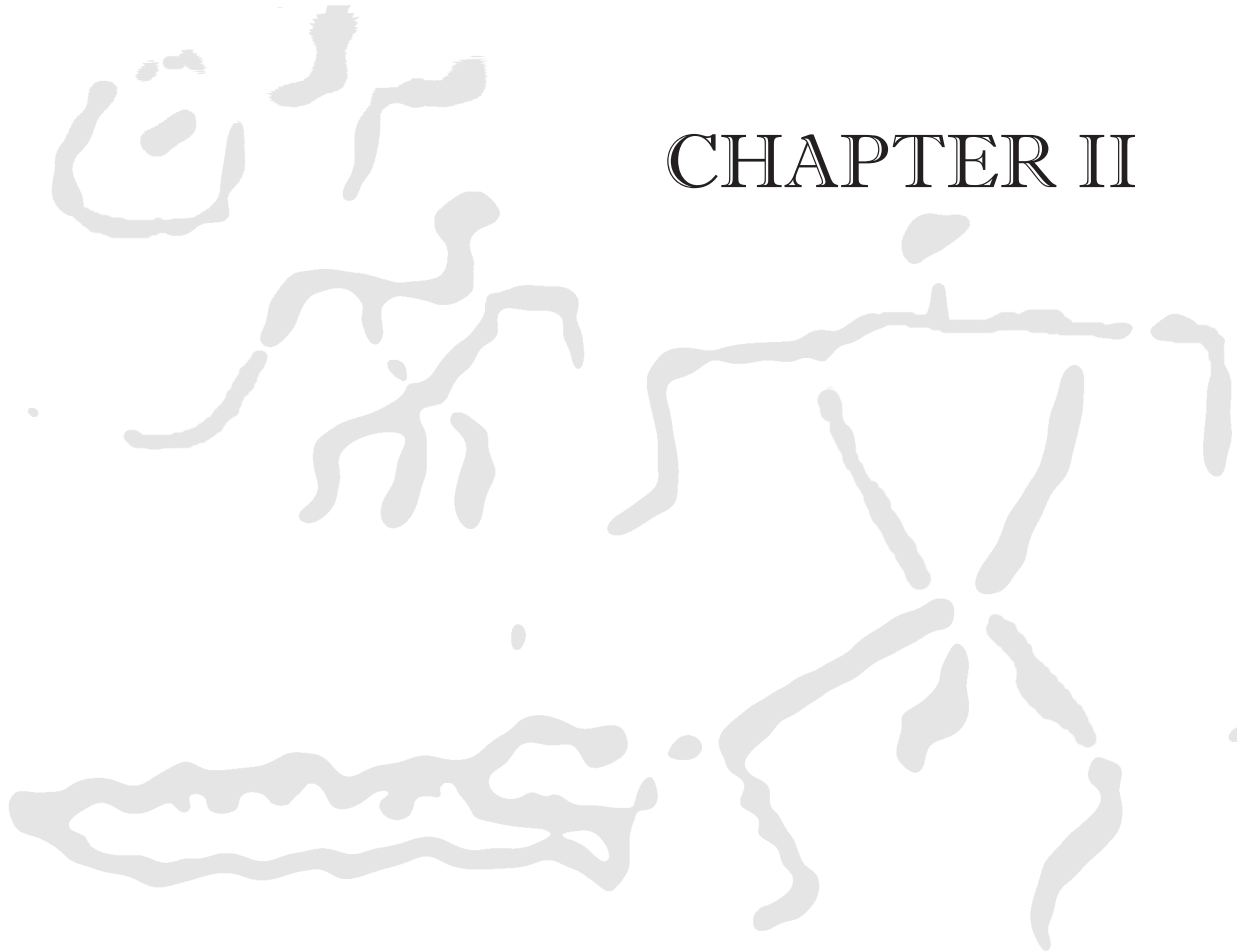
Secondary impacts include those that are caused by the project and occur later in time or are farther removed in distance, but are still reasonably foreseeable. They may include growth inducing effects, induced changes in the pattern of land use, environmental impacts, socio-economic impacts, or fiscal impacts. A full discussion of Kahuku Village's secondary impacts is provided in Section 7.3.

### **1.7.7 Unresolved Issue**

**Electrical Power** - As discussed in Section 4.8.4, two sources of electrical power are being considered for Kahuku Village: 1) a connection to HELCO's facilities, or 2) a connection to the Kamaoa Wind Farm. The decision of which alternate to pursue will be made based upon factors such as reliability of power supply, construction and operational costs, and availability of easements or access rights for transmission lines.

**Schedule for Development of Civic Uses** – Approximately 100-acres of land in the northwest corner of the Site are proposed to be dedicated to the State and/or County for the construction of regional-serving civic facilities such as an elementary school, district park, police sub-station, fire station and emergency medical center. It is anticipated that these facilities will be constructed by the State and County when they are needed and resources are available. A subsequent Environmental Assessment or Environmental Impact Statement may be required prior to the development of facilities.

# CHAPTER II



KAHUKU VILLAGE DESCRIPTION



## **2 KAHUKU VILLAGE DESCRIPTION**

This section includes background information, a general description of the proposed Kahuku Village, the development timeframe, and preliminary development costs.

### **2.1 BACKGROUND INFORMATION**

#### **2.1.1 Project Location**

The Nani Kahuku Aina property, hereafter referred to as the “Site”, is located within the Ka‘ū Judicial District, near the southern tip of the island of Hawai‘i. See Figure 1, Location Map. The Site is comprised of a single tax map key (TMK) parcel identified as TMK (3) 9-2-001:072, and encompasses 16,456.547 acres. See Figure 2, Tax Map Key. The Site is situated on the southwestern slope of Mauna Loa between the Māmalahoa Highway and the ocean. The distance from Māmalahoa Highway to the ocean at the Site is about 6.5-miles. Along the shoreline, the Site extends from Pōhue Bay at its western boundary to Kaimu‘uwale at its eastern boundary, a distance of approximately five-miles. See Figure 3, Aerial Photograph.

#### **2.1.2 Existing Uses**

Recreational and scientific uses are the only current existing uses. The Kahuku ahupua‘a has been known for its fishing due to the location of pockets of very deep water that are accessible from the shore. The area has been known to local fishermen for catching ‘ahi, aku, a‘u, ulua, mahimahi and ‘ōpelu, and for limited overnight camping related to fishing.

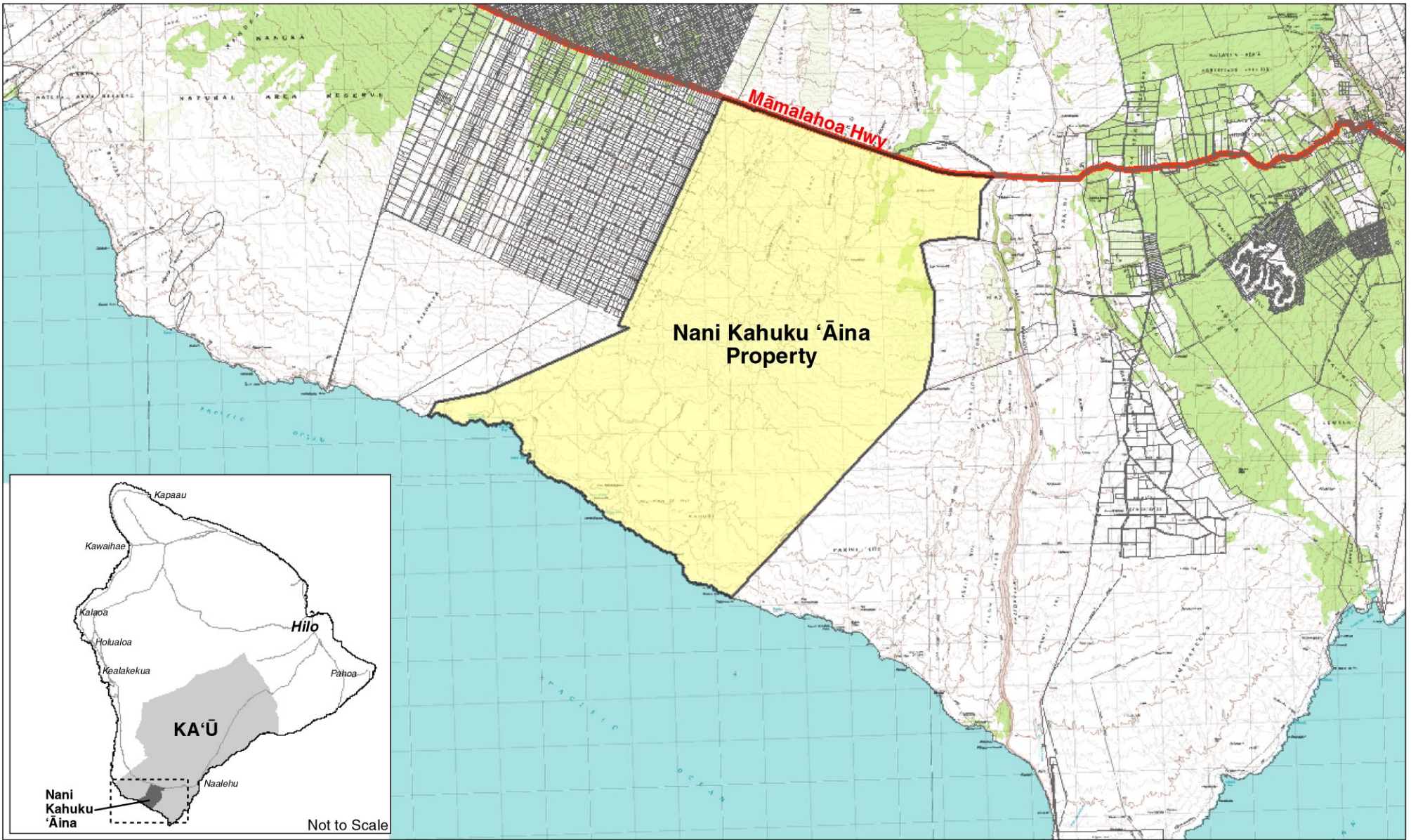
Pōhue Bay is one of several coastal areas along the Site’s shoreline that has been part of the Hawksbill turtle recovery project. The Applicant has participated in the Hawai‘i Island Hawksbill Turtle Recovery Project which seeks to protect habitat for this critically endangered sea turtle. To better study both the Hawksbill and Green sea turtles, researchers from the U.S. Fish and Wildlife Service and University of Hawai‘i at Hilo are allowed overnight camping privileges on the Site.

The Site has been utilized by a variety of research organizations since the Applicant acquired it. Partnerships have been formed between the Applicant and the U.S. Fish and Wildlife Service, the National Park Service, and NASA. The partnerships allow these organizations to conduct a variety of research activities from flora/fauna inventory to lunar landing research. The Applicant has also partnered with the Edith Kanaka‘ole Foundation to provide Site access to cultural practitioners and educators for the purpose of perpetuating the Hawaiian culture.

#### **2.1.3 Surrounding Uses**

Land uses in the vicinity of the Site are as follows:

North (Mauka). Māmalahoa Highway (also known as Hawai‘i Belt Road) defines the northern boundary of the Site. Mauka of the highway, the Federal government purchased the former Kahuku Ranch lands from the Damon Estates in 2004 to add to the Hawai‘i Volcanoes National park. See Figure 4, Surrounding Land Owners.



**LEGEND**

- Nani Kahuku 'Āina Property
- 2010 Hawai'i TMK
- Major Road

**FIGURE 1**

Location Map

**KAHUKU VILLAGE**

Nani Kahuku 'Āina LLC

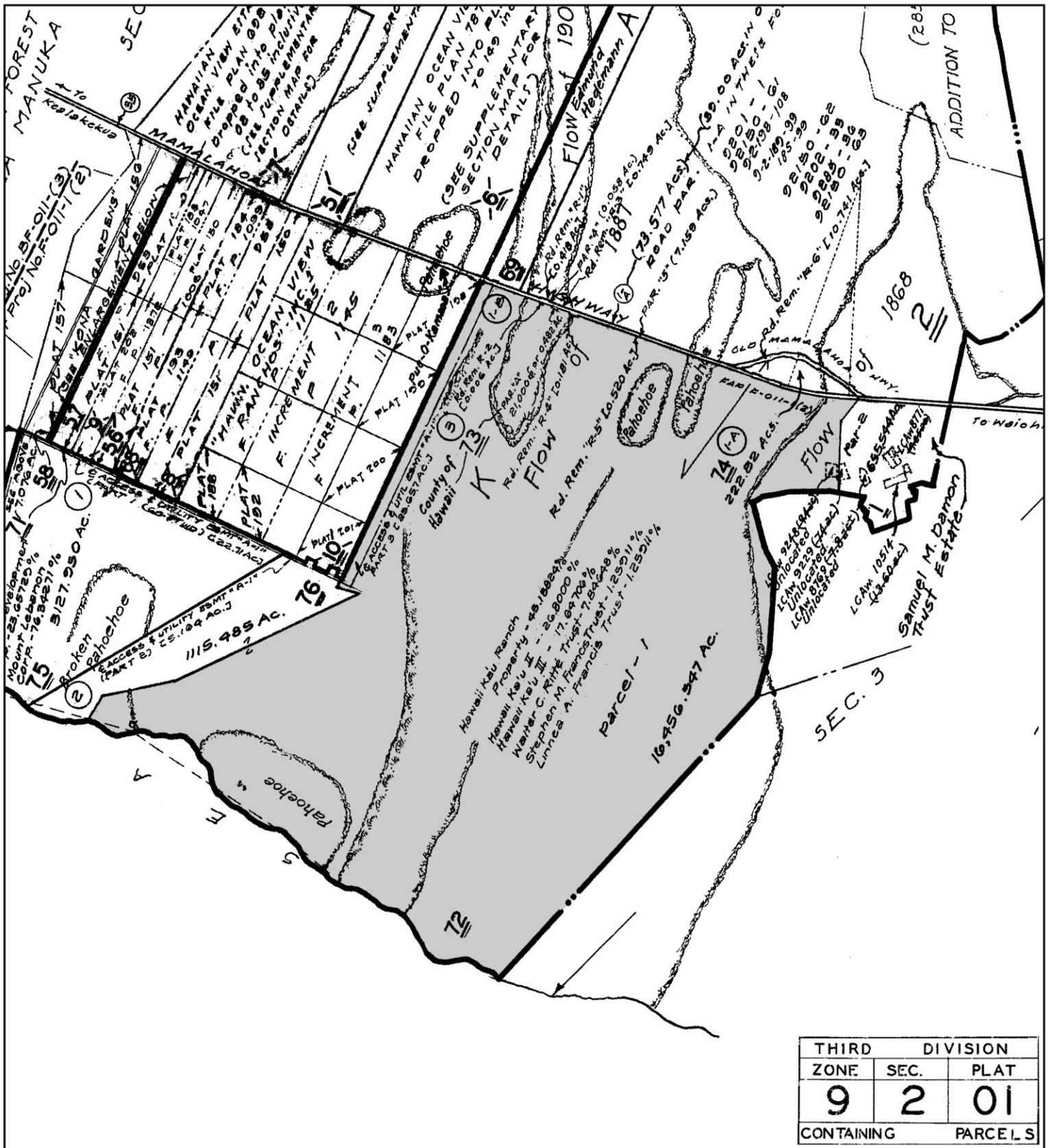
Ka'u, Hawai'i

North


Lineal Scale (in feet)



Source: U.S Geological Survey (GIS); Hawai'i TMK, 2010 (GIS)  
 Disclaimer: This graphic has been prepared for general planning purposes only.



**LEGEND**

 Nani Kahuku 'Āina Property

**FIGURE 2**  
Tax Map Key

**KAHUKU VILLAGE**

Nani Kahuku 'Āina, LLC

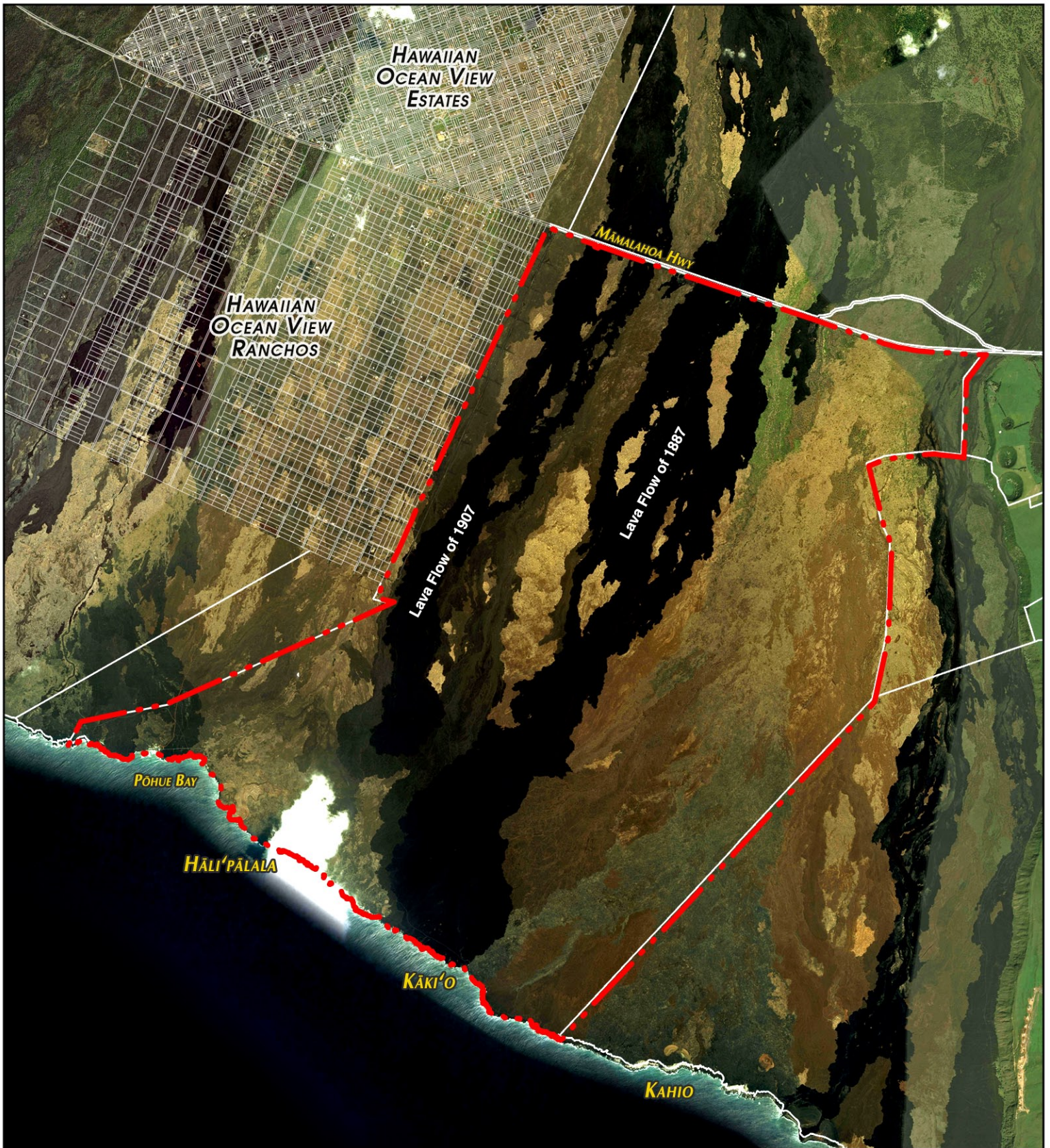
Ka'ū, Hawai'i

North




NOT TO SCALE





**LEGEND**

 Nani Kahuku 'Āina Property

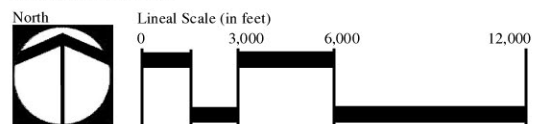
**FIGURE 3**

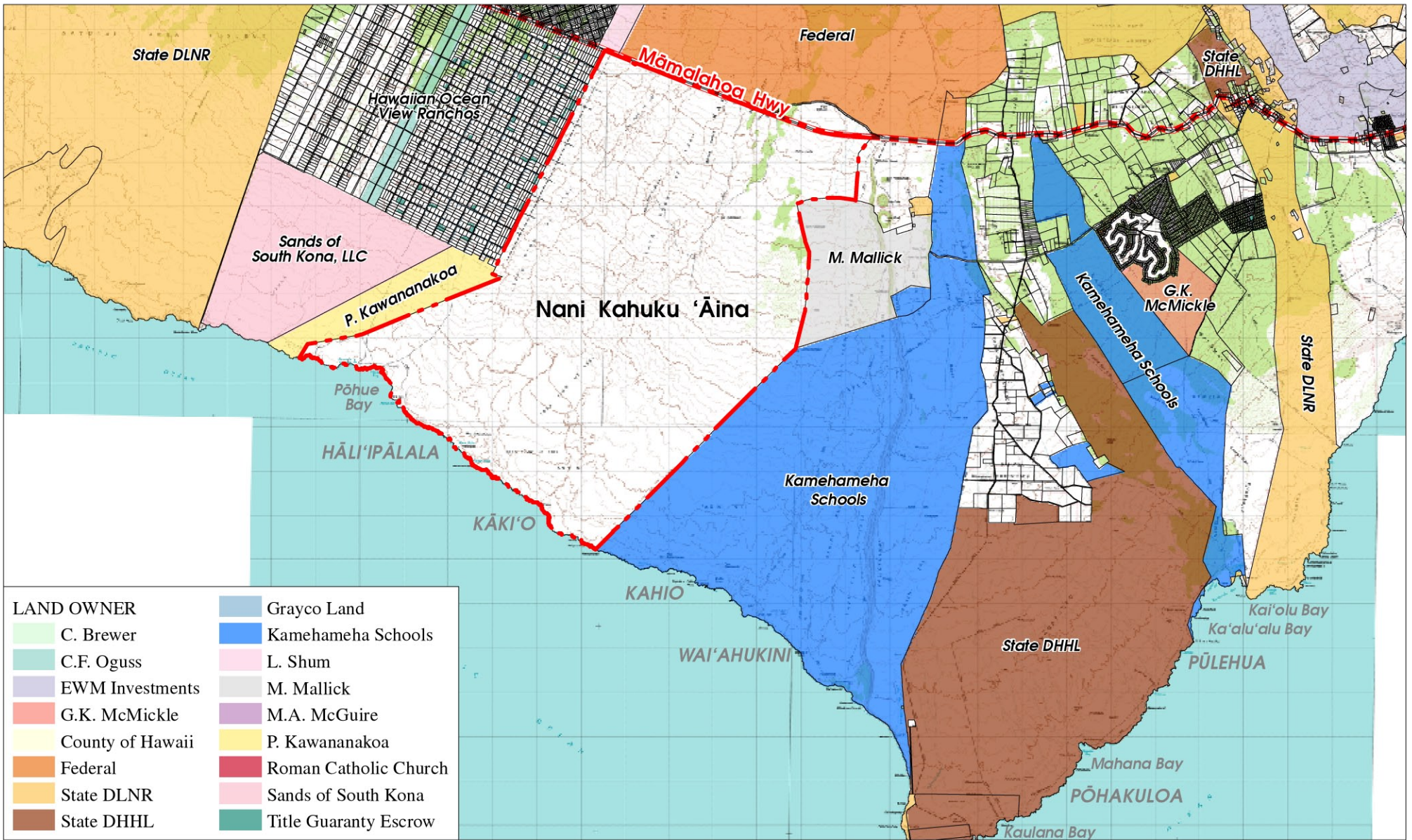
Aerial Photograph

**KAHUKU VILLAGE**

Nani Kahuku 'Āina, LLC

Ka'ū, Hawai'i

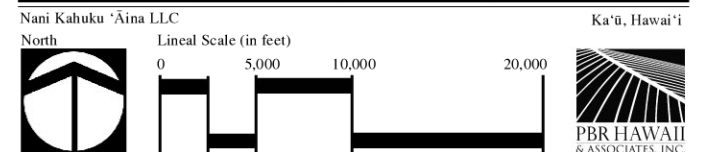




**LEGEND**

- Nani Kahuku 'Āina Property
- 2010 Hawai'i TMK
- Major Roads

**FIGURE 4**  
Surrounding Land Owners  
**KAHUKU VILLAGE**



Source: U.S. Geological Survey (GIS); Hawai'i TMK, 2010 (GIS)  
Disclaimer: This graphic has been prepared for general planning purposes only.



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East (Toward South Point). Vacant undeveloped lands owned by the S.M. Damon Trust, M. Mallick, and Kamehameha Schools are located east of the Site.

West (Toward Kona). West of the Site is the Hawaiian Ocean View Ranchos development and an undeveloped parcel owned by P. Kawananakoa. Hawaiian Ocean View Ranchos, sometimes referred to as Hawaiian Ranchos, consists of 1,229 one-to three-acre lots makai of Māmalahoa Highway between mile markers 76 and 78. Although subdivided in the 1950s, most of the lots are not developed. The terrain varies from rugged lava fields to some lots containing ‘ōhi‘a trees and other vegetation. Water is provided by catchment systems only with electrical power available to some, but not all, of the lots. The Hawaiian Ranchos development is roughly between the 500 to 1,500-foot elevation level with vacant lands below.

Directly mauka of Hawaiian Ocean View Ranchos is the Hawaiian Ocean Views Estates development. Hawaiian Ocean View Estates (HOVE) consists of 10,697 one-acre lots mauka of Māmalahoa Highway. Similar to Hawaiian Ocean View Ranchos, the terrain varies from rugged lava fields to lots containing ‘ōhi‘a trees and other vegetation. Water is by catchment only with power to some, but not all, lots. The development begins at the 1,500 foot elevation at Māmalahoa Highway and extends to the 5,000-foot elevation.

#### **2.1.4 Land Ownership**

The landowner and applicant of the subject property is Nani Kahuku Aina Properties, a Delaware limited liability company (hereinafter referred to as “Applicant”). The Applicant owns the subject property in fee simple. Contact information for the Applicant is as follows:

Mr. Valentine Peroff, President  
Ms. Katherine Peroff, Vice President  
99-0088 Iwaena Street  
Aiea, Hawai‘i 96701

#### **2.1.5 Property Description**

The Site consists primarily of pāhoehoe and ‘a‘ā lava with pockets of topsoil. Due to the lack of topsoil and fresh water, historically the area was used for ranching but not for crops, although ranching no longer occurs on the Site. Currently, there are no economic uses within the Site and nearly the entire site is vacant and undeveloped. Where vegetation does exist, it is concentrated in small pockets surrounded by barren lava fields. Plant species include several members of the morning glory family, hala, and coconut in the coastal regions and pockets of ‘ōhi‘a and lama forest communities on the mauka portion of the property.

The Site elevation ranges from sea level at the coast to about 2,000-feet at Māmalahoa Highway. The distance from Māmalahoa Highway to the ocean is about six miles. Approximately five miles of the Site abuts the shoreline. The coastal geography is rugged and rocky, containing a mix of sea cliffs, ledges, pockets of sandy beaches, and tidal pools.

The property contains a number of natural and cultural features. These features include numerous archaeological and cultural sites, and notable marine resources such as anchialine pools and nesting grounds for the endangered Hawksbill and Green Sea turtles. Protection and preservation of these resources is a priority of the Applicant.

Approximately 8,056 acres of the Site is within the State land use Conservation District and the remainder—about 8400 acres—is within the State land use Agricultural District. In general, the mauka half of the property is within the Agricultural District and the makai half is in the Conservation District. The portion of the Site in the Conservation District is designated as Open Space or Conservation on the County of Hawai‘i LUPAG. Lands in the State Land Use Agricultural District are designated as Extensive Agricultural on the LUPAG. With regard to zoning, areas designated by the LUPAG as Open Space or Conservation are zoned Open, and areas designated as Extensive Agricultural are zoned Agricultural-20 (minimum 20-acre lot size).

### **2.1.6 Overview of the Region**

Located on the southern and eastern flanks of Mauna Loa, the Ka‘ū district is the largest on the Big Island. Historically, the Ka‘ū district has been relatively independent, isolated from the rest of the island. Historical data indicates that Ka‘ū was probably settled very early by Polynesian voyagers. As population increased, the rest of the island was inhabited. Most of the early settlement in Ka‘ū consisted of small fishing villages.

Ka‘ū has the second smallest population of the nine districts on the Big Island, second only to that of North Hilo. The district, however, has experienced higher than average growth in recent years, increasing by 31.3% between 1990 and 2000, compared to an islandwide increase of 23% for the same period. Much of the increase in the Ka‘ū population has been concentrated in Ocean View and other smaller communities.

The Ka‘ū district has large non-conforming subdivisions created prior to the adoption of the present Subdivision and Zoning Codes. While building activity continues, the subdivisions lack basic infrastructure systems such as water and, in some cases, electricity. Most of the interior roads of the subdivisions do not meet current standards. The subdivisions are also not located near areas of employment.

Prior to the closing of its sugar operations in Ka‘ū in 1996, Ka‘ū Agribusiness was the primary employer within the district. Today, macadamia nuts are the major crop grown within the district. Other crops, such as bananas, avocados, tomatoes, carnations, vegetables, coffee and hardwoods are cultivated on a limited scale.

### **2.1.7 History of the Property**

The Site and adjacent lands previously had been planned for development. In the late 1980’s Palace Development Corporation proposed the Hawaiian Riviera Resort project. The project, encompassing roughly 3,245 acres, was envisioned to create a major visitor destination area with a luxury hotel, various resort condominium structures, residential home sites, commercial space, three 18-hole golf courses, and recreational facilities. In addition, a marina, cruise ship docking facility, petroglyph park, and cultural center were planned. In 1991, the LUC reclassified approximately 732 acres of the Site and an adjacent parcel from the Conservation District and 440 acres from the Agricultural District to the Urban District. However, in 1995, the LUC rescinded the reclassification through a “constructive withdrawal” of Docket No. A88-630.

## **2.2 STATEMENT OF PURPOSE AND NEED**

For many years, sugar dominated the agricultural industry in the Ka‘ū district and was a major employer of residents. Ka‘ū Sugar Company, however, ceased operations in 1996 and since then no other agricultural enterprises or industries have been able to provide significant replacement jobs. Consequently, unemployment in the Ka‘ū district is high and many residents must travel long distances to Hilo, Kona, or South Kōhala for work.

The County of Hawai‘i’s General Plan indicates a need to provide a broader range of public and community services in the Ka‘ū district. The closest elementary school for residents of HOVE and HOVE is Nā‘ālehu Elementary and Intermediate School, approximately 10 miles east of the Site. The General Plan encourages the development of a new K-8 school at Ocean View. In addition, although a police substation is located at HOVE, it is unmanned and the area is served only by a volunteer fire department. There is also a lack of easily accessible safe swimming areas in the district.

Although the Ka‘ū district’s population is the second lowest of the County’s nine districts, the district is experiencing higher than average growth. The increasing population creates a need to provide housing for residents in a planned community with access to basic infrastructure and neighborhood services. While presently there are many house lots available in the district, many of them are in non-conforming subdivisions that lack water and electricity, and are distant from employment and neighborhood commercial uses.

Last, there is a need to enhance awareness and appreciation of, and accessibility to, the natural and cultural resources at the Site. The Applicant seeks to strike a balance between preserving and protecting the Site’s resources and features, providing greater public access to coastal and cultural resources, and developing revenue generating land uses, a portion of which will supplement funding for resource stewardship, education, and preservation efforts.

## **2.3 STATEMENT OF OBJECTIVES**

The Applicant’s objective in developing Kahuku Village is to responsibly develop the Site in a manner consistent with the desires of the Ka‘ū community and to balance protection and preservation of the Site’s natural and cultural resources with revenue generating land uses that will supplement funding for long-term management of the Site’s resource. Taking into consideration the Site’s resources, constraints, community values, and regional needs, the Applicant’s proposes to attain the following project objectives:

- Maximize open space. The Site encompasses 16,457 acres and the vast majority, about 90 percent, is proposed to remain undeveloped. An objective of the project is to confine development to the lower elevations of the Site to economize infrastructure costs and maximize the amount of land to remain in open space.
- Protect and steward the Site’s precious natural and cultural resources. With input from the community, kūpuna, and scientists, an objective of the project is to develop a master plan that is sensitive to the natural and cultural resources. A konohiki-inspired Integrated Natural and Cultural Resources Management Plan will be prepared, specifying measures to preserve and protect the Site’s resources.
- Incorporate sustainable principles and practices. Environmental impacts will be minimized by incorporating, where feasible, alternative electrical energy generation practices, water and energy conservation measures, “green-building” practices, low-

impact development drainage techniques, recycling wastewater, and encouraging food gardens for home use and farmer's markets.

- Create job opportunities. Since C. Brewer's closing of the Ka'ū Sugar Company in 1996 there have been no significant replacement jobs. Many Ka'ū's residents must commute to Hilo or resorts in Kona or South Kōhala. In recognition of the need for jobs in Ka'ū, an objective of Kahuku Village is to provide job opportunities and training programs closer to home for a diversity of skill levels.
- Provide diverse housing opportunities. To support a workforce, an objective of Kahuku Village is to provide a diverse range of housing opportunities in terms of income, special needs (e.g., elderly), tenure (for-sale and rental), and type (e.g., single-family, multi-family) within a mixed-use rural community.
- Increase basic services. In recognition of Ka'ū's remoteness and lack of basic services, an objective of the project is create a critical concentrated population mass to support basic services such as medical, schools, retail, and emergency response.
- Leverage low-key, high-quality visitor accommodations to subsidize community benefits. To generate income that could subsidize community benefits, an objective is to develop a limited area of the Site for visitor accommodations. This area would be designed to attract those who: 1) desire a remote, scenic, quiet get-away; and 2) seek to learn about Hawaiian history, culture and practices, or about the Site's natural resources.

## **2.4 KAHUKU VILLAGE DESCRIPTION**

### **2.4.1 Changes from the EISPN**

Due to input received following publication of the EISPN, the extent of the project has been reduced, in terms of both acreage and proposed uses. As described in the EISPN, the project entailed the development of a Mauka Village, Makai Village, Hawaiian Heritage Center, golf course, airport/helipad, and agricultural/energy lots. Up to 3,090 residential, condominium, hotel, and agricultural units were proposed and 8,425 acres were proposed to be reclassified from the State Land Use Conservation and Agriculture districts to the Urban, Rural, and Agriculture districts.

To maintain a larger proportion of the Site as open space, particularly along Māmalahoa Highway—the most visible portion of the Site—the Mauka Village is no longer being proposed. The only development proposed in the mauka portion of the Site is the dedication of lands for civic facilities that may include an elementary school, a district park, police station, fire station, and an emergency medical facility. An airport and agricultural/energy lots are also no longer being proposed.

As described in Section 2.4.2, the project now entails only the development of a Hawaiian Heritage Center and a Mixed-Use Village in the makai portion of the Site. Approximately 1,650 residential and visitor units are proposed and approximately 1,600 acres are proposed to be reclassified from the Conservation district to the Urban and Rural districts.

### **2.4.2 Kahuku Village**

The vision for Kahuku Village calls for balanced development, creating a community that respects and stewards the Site's natural and cultural resources. Development of revenue generating land uses will be balanced with resource stewardship and preservation efforts. A

## **Kahuku Village**

### Draft Environmental Impact Statement

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major component of Kahuku Village will be the Hawaiian Heritage Center, which will be empowered to steward and preserve the Site's many resources. The Hawaiian Heritage Center also will formalize and perpetuate the research and education programs already conducted onsite, enable expansion of programs, and promote an awareness and appreciation for the many natural and cultural resources of the Kahuku ahupua'a.

Residential, commercial and visitor uses will be limited to a Mixed-Use Village in the makai portion of the Site. The Mixed-Use Village encompasses about 1,600 acres, exclusive of the Hawaiian Heritage Center and Shoreline Conservation Area. Approximately 125-acres of land near Māmalahoa Highway adjacent to the Hawaiian Ocean View Ranchos development is proposed to be dedicated to State and County agencies for civic facilities. The balance of the Site will remain as open space in the form of archaeological preserves, parks, trails, and other open space. See Figure 5, Overall Concept Plan. A description of the project's components is as follows:

#### **2.4.2.1 Hawaiian Heritage Center**

##### Overview

The Hawaiian Heritage Center is proposed to be one of the cornerstones of Kahuku Village. Kahuku Hawaiian Heritage Center, a Hawai'i nonprofit corporation (KHHC), will be established as a 501c(3) non-profit organization, in accordance with the Internal Revenue Service rules governing tax-exempt organizations in the United States.

KHHC will play a prominent role in the overall master planning of Kahuku Village, and will advocate that existing stewardship and future educational opportunities be planned through the nurturing of the natural and cultural resources of the Hawaiian Heritage Center. KHHC shall serve as the organizational and management entity with the primary mandate of the protection, preservation, management, education, and revitalization of identified natural and cultural resources of the property.

KHHC shall be governed by a board of directors, which shall include but not be limited to persons and/or organizations representing the Hawaiian community, private and public education, the University of Hawaii, and state and/or federal resource agencies.

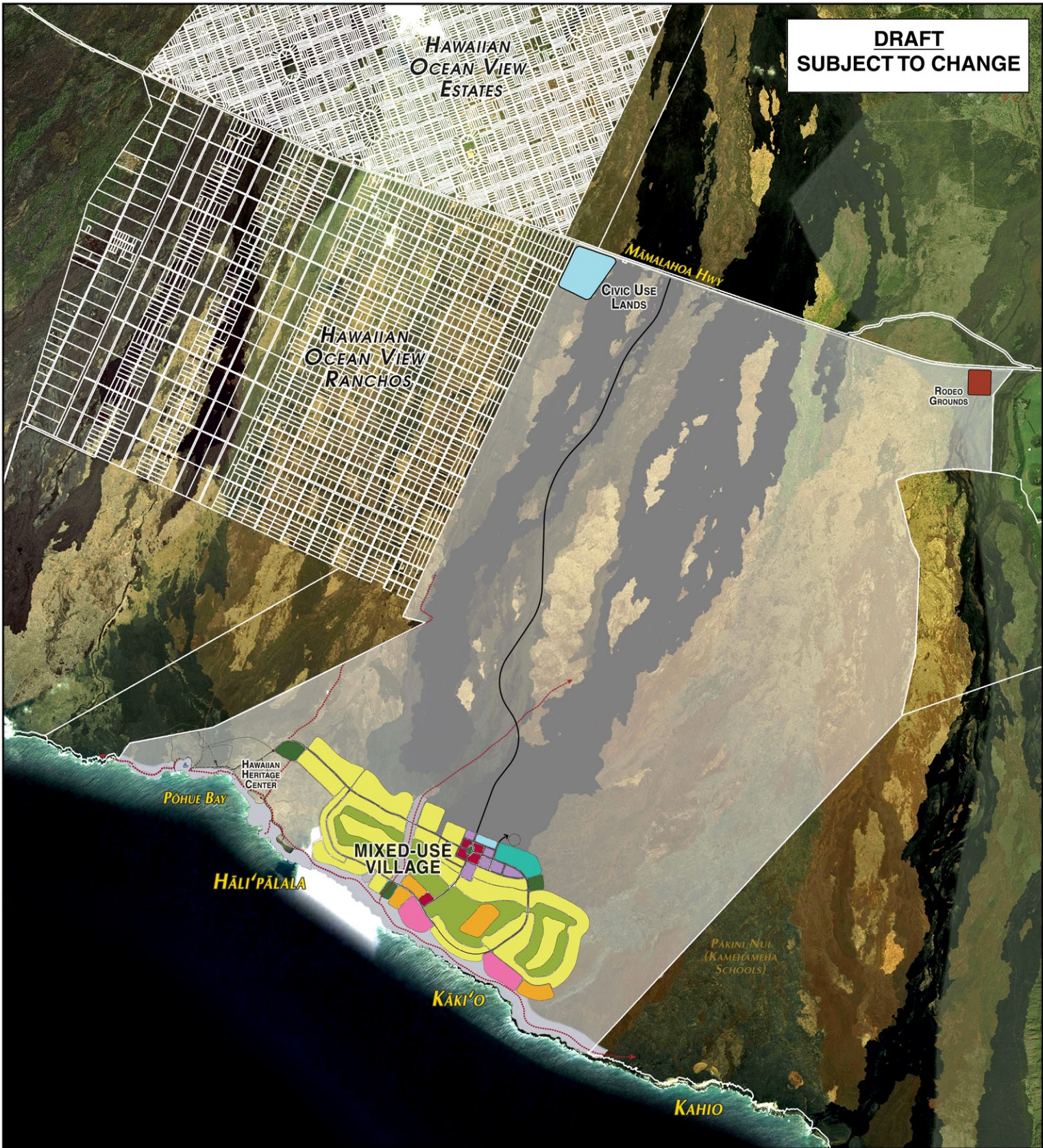
KHHC will enter into an agreement with the owner/developer of Kahuku Village in which a portion of revenues from the sales and/or operations of various components of Kahuku Village be set aside to supplement the revenue of KHHC and thereby allow it to implement its long-term vision and mission.

It is currently anticipated that about 40 jobs will be created to operate the Hawaiian Heritage Center, with funding coming from a variety of sources including grants, some fee for service, and future revenue from the adjacent planned development.




##### Vision of the KHHC

The lands of Kahuku Village represent a unique opportunity to study, learn, and recreate due in part to its remoteness, history and geophysical characteristics that may be unmatched throughout the island and State of Hawaii. Nearly 16,500 acres of land including approximately five miles of coastline are relatively unchanged since pre-western contact in the late 1700's. A portion of

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SUBJECT TO CHANGE**



**LEGEND**

 Rural Residential Lots	 Village Mixed-use	 Golf Course (18-hole)
 Visitor Accommodation Units	 Civic Space	 Shoreline Open Space & Cultural Preserve
 Multi-Family	 VA Facility	
 Hawaiian Heritage Center	 Park	
 Commercial	 Rodeo Grounds	

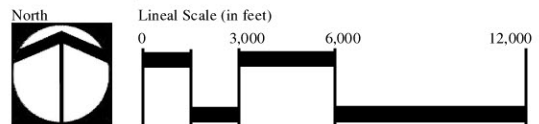
**FIGURE 5**

Overall Concept Plan

**KAHUKU VILLAGE**

Nani Kahuku 'Āina, LLC

Ka'ū, Hawai'i



Source: Google Earth; PBR Hawaii  
Disclaimer: This graphic has been prepared for general planning purposes only.

## **Kahuku Village**

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the area contains one of the largest petroglyph fields (approximately 200 acres) in Hawai‘i and also one of the largest active nesting grounds for the Hawksbill turtle. A system of anchialine ponds also dot the coastline which is part of the ancient connection to the sea.

The vision and mission of KHHC will be to balance property ownership needs with the needs of the Ka‘ū district, including cultural preservation and education efforts, and help to anchor and provide a long-term opportunity to develop the scientific, educational, and cultural assets of the area for the community, interested travelers and broader public use.

It is intended that KHHC will become the active steward of the Hawaiian Heritage Center. Education, mentorship, leadership, and career opportunity programs will be developed based upon the existing natural, cultural, and marine resources of the area. In effect, KHHC, through its stewardship responsibilities, will develop opportunities to encourage “community classrooms” for students and interested community participants and visitors to learn in an authentic learning environment. Overnight stays utilizing campsites, tentalows, and minimal support facilities have been included as part of the community classroom experience, which will also take advantage of the brilliant night skies.

KHHC shall adopt an appropriate vision and mission statement that embodies these ideals utilizing the Hawaiian host culture and practices as a preferred methodology. As a non-profit organization, it will specifically pursue local, state, federal, and private foundation national and international funding opportunities, including grants, to enhance the implementation of programs in an effort to maximize its reach to interested students from Hawai‘i and around the world.

Lastly, KHHC shall actively pursue partnerships with entities that share similar missions in land management, stewardship of marine, wildlife, and cultural resources and education. KHHC hopes to build upon existing relationships with the University of Hawai‘i at Hilo, the U. S. Fish and Wildlife Service and others that have helped to protect the Hawksbill turtle nesting grounds at Pōhue Bay.

The nurturing of partnerships with existing schools and non-profit organizations that have already developed culture-based educational programs and curricula will also help to jump start educational programs specifically suited to the unique characteristics of the Site.

In 2001, the Native Hawaiian Educational Council, in collaboration with the University of Hawai‘i at Hilo and many other organizations, developed a template for building and sustaining healthy communities called “Nā Honua Maui Ola.”

KHHC intends to incorporate appropriate models that would apply to the proper stewardship and long-term protection of the Hawaiian Heritage Center.

#### The Concept of Community Classroom

Native Hawaiian education has recently been a primary focus for the Hawai‘i Department of Education (DOE) as it seeks to find ways to help students, particularly students of Hawaiian ancestry, meet current standards established in 2001 by Congress. “No Child Left Behind” has heightened community awareness about student performance and achievement in the public school system.

## **Kahuku Village**

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In 2006, the DOE, the Kamehameha Schools, the Office of Hawaiian Affairs and many community organizations and educators, started the “Na Lau Lama Statewide Initiative” to examine and begin to quantify “best practices” in Native Hawaiian education. In 2009, a final report of this initiative was published, called “Teaching with Aloha” which identified a series of “best practices,” including the use of “community classrooms.”

Community classrooms are defined as opportunities for students of all ages to “go outside” of the traditional classroom and learn and explore settings, environments, cultural sites, etc. where students learn and apply knowledge first hand. In Hawaiian, the concept of “ma ka hana ka ‘ike” “learn by doing” is a fundamental practice that is a cornerstone for learning and teaching.

These community classrooms have become increasingly important to the total educational experience for all students in Hawaii. The most successful community classrooms have been sites in which appropriate curriculum has been developed, resource (scientific and/or cultural) people have been available, and teachers and families have had life experiences and/or pre-training in developing strategies that best meet the needs of their students.

It is intended that KHHC will be the entity to help make all of this possible for visiting students and teachers to have a meaningful educational experience. Through this educational effort, it will help KHHC inspire and identify ongoing stewards that could lead to career and employment opportunities in the future.

Through partnerships with interested universities, government, and resource management agencies, KHHC will also proactively seek ongoing research projects that will promote stewardship of the Site’s resources as well as provide an environment for learning.

It is also envisioned that annual conferences and field visits be held at the Hawaiian Heritage Center in which both local and global practitioners and scientists will be able to share and collaborate on research.

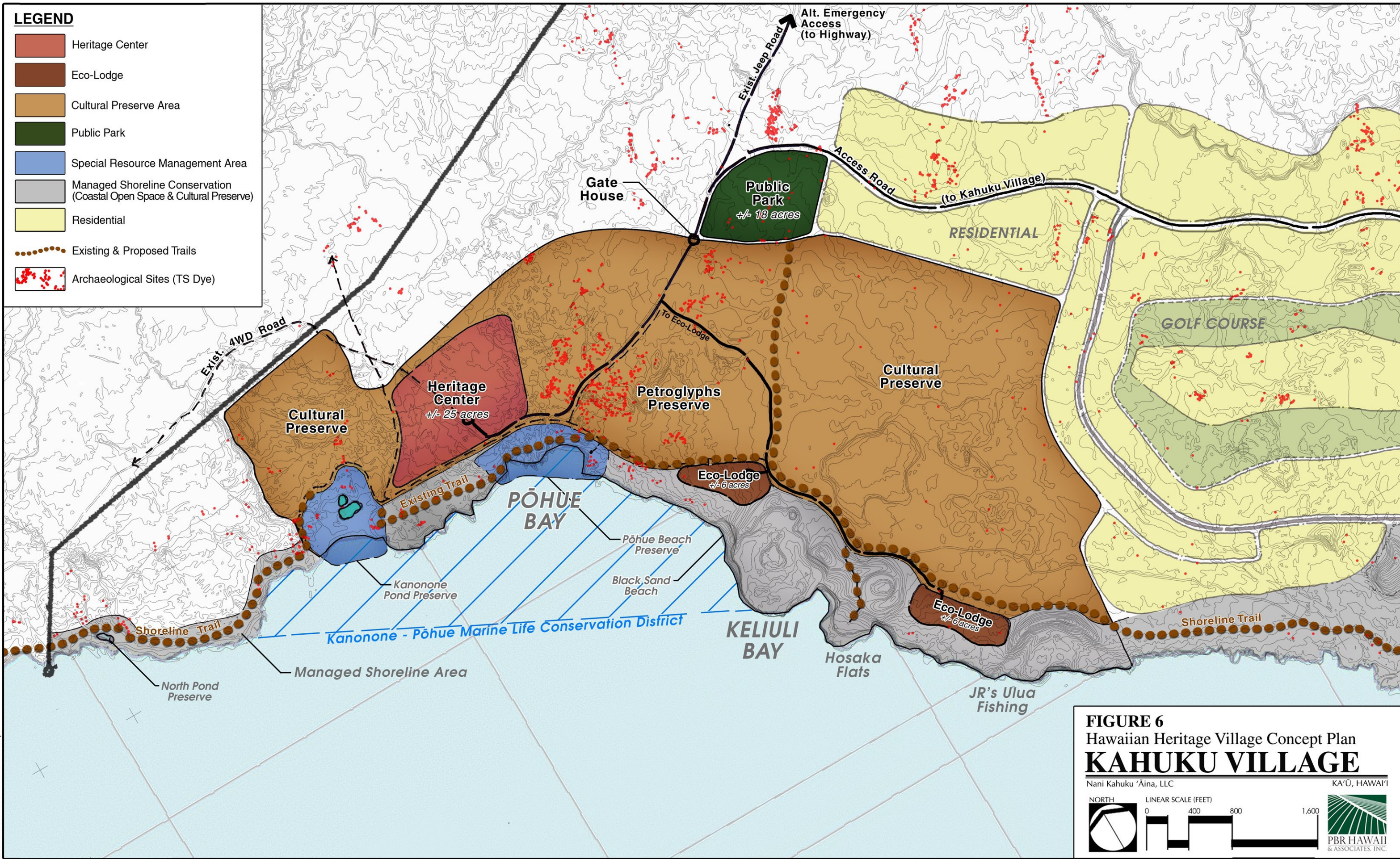
The Hawaiian Heritage Center at Kahuku Village represents an ideal setting to cultivate culture-based education practices with specific emphasis on the natural, marine, and cultural resources of the site. The formation and long-term educational and financial sustainability of KHHC will provide a framework and entity in which to cultivate, perpetuate, and integrate culture-based and modern education practices.

#### KHHC Lands and Facilities

Approximately 500-acres in the vicinity of Pōhue Bay, where many of the Site’s natural and cultural resources are clustered, would be set aside for the Hawaiian Heritage Center. See Figure 6. It is envisioned, however, that the KHHC would also be empowered and responsible for managing all of the significant natural and cultural resources throughout the 16,547-acre Site. A konohiki-inspired Integrated Natural and Cultural Resources Management Plan specifying appropriate measures to protect significant natural resources will be developed in consultation with the project partners, knowledgeable kūpuna, and other stakeholders.

Facilities that may be developed within the Hawaiian Heritage Center include a visitor’s center, classrooms, meeting space, laboratories, dormitory housing for researchers and students, a caretaker’s residence, comfort stations, and campgrounds. The majority of lands designated for the Hawaiian Heritage Center would remain in the State Land Use Conservation District.





**FIGURE 6**  
 Hawaiian Heritage Village Concept Plan  
**KAHUKU VILLAGE**  
 Nani Kahuku 'Āina, LLC  
 KA'Ū, HAWAII  
 NORTH  
 LINEAR SCALE (FEET)  
 0 400 800 1,600  
 PBR HAWAII & ASSOCIATES, INC.

©: Hawaii Nani Kahuku Aina Photoshop

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Approximately 40-acres is proposed to be redistricted to the State Land Use Rural District to accommodate facilities such as a visitor's center, research laboratories, staff and dorm housing, and campgrounds.

#### **2.4.2.2 Mixed-Use Village**

The Mixed-Use Village will consist of neighborhood serving commercial establishments, single- and multi-family residential units, an 18-hole golf course, two hotel sites, parks, civic uses, and a Veteran's Administration Facility. See Figure 7, Mixed-Use Village Concept Plan. A village green surrounded by neighborhood serving retail establishments, mixed-use residential/commercial uses, and civic uses will form the core of the mixed-use village. Approximately 50 acres will be set aside near the village core for the proposed Veterans Administration Facility. The VA facility is expected to be a moderately sized complex with about 130 beds and 45,000 sq. ft. of floor area. A helipad to facilitate emergency transports will be located near the Veterans Administration Facility. The helipad will be located away from residential sites and will not be used for commercial tour or private operations.

A diverse range of residential units, from affordable workforce housing units to estate lots will be located in the Mixed-Use Village. Approximately 1,050 residential units are proposed, including single-family units, multi-family units, live-work units, senior housing, and estate lots.

The two sites for visitor accommodations will be designed to be consistent with the rural character of the region. Buildings would be low-rise and setback from the shoreline by a shoreline conservation buffer. It is envisioned that the visitor accommodations would cater to individuals with a desire to experience the Site's natural setting and rich cultural and natural resources.

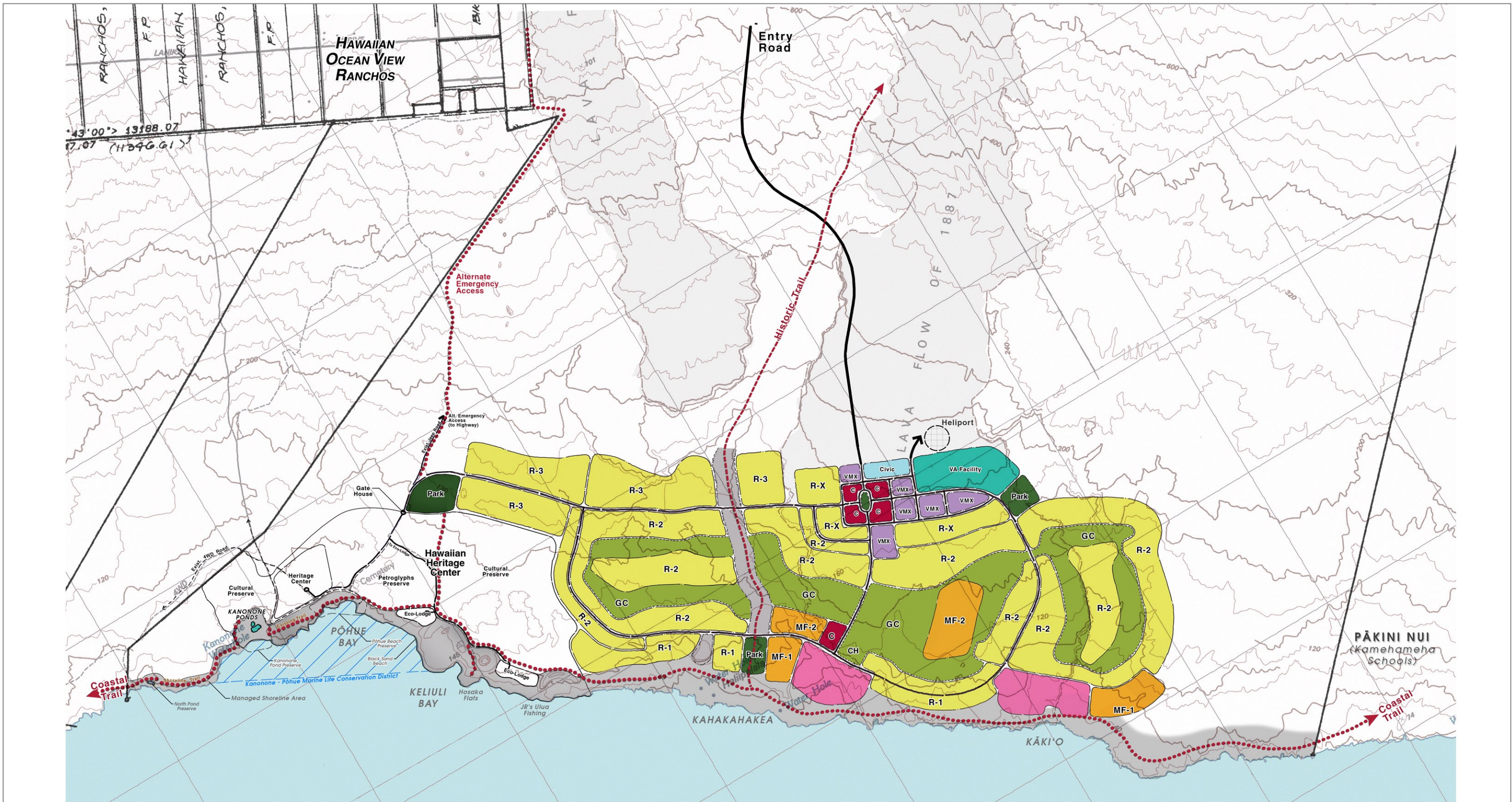
Land uses in the Mixed-Use Village will be linked by a network of roads, paths and bikeways. The core of the Mixed-Use Village will have a pedestrian-friendly compact design with a broad range of neighborhood commercial and civic services, reducing the need to travel outside of the community for everyday goods and services. Also, as discussed in Section 4.7.4, approximately 1,493 long-term jobs are expected to be generated within Kahuku Village, reducing the need for some Kahuku Village and Ka'ū residents to commute long distances to work.

The 18-hole golf course will be located on the periphery of the village core. The golf course will be designed and operated to meet strict environmental standards to ensure minimal impact on near shore waters. Audubon certification is being considered, which requires courses to comply with standards for operation including environmental planning, wildlife and habitat management, outreach and education, chemical use reduction and safety, water conservation, and water quality management.

Lands planned for the Mixed-Use Village core and visitor accommodation sites will be reclassified from the State Land Use Conservation district to the State Land Use Urban district. Lands planned for the residential lots, the golf course, and parks will be reclassified from the State Land Use Conservation district to the State Land Use Rural district.

#### **2.4.2.3 Trails, Parks, Preserves and Open Space**

The vast majority of the Site will be untouched and remain as open space. Of the Site's 16,547-acres, about 15,000-acres or about 90% will remain as Open Space. A network of trails and open



**LEGEND**

R	Rural Residential Lots	VMX	Village Mixed-use	Park	Park		Potential Airport / Heliport
MF	Multi-Family	VA	Veteran Administration Facility	GC	Golf Course (18 Holes)		Existing & Proposed Trails
	Visitor Accommodation Units	Civic	Civic / Medical	CH	Golf Course Clubhouse		
C	Village Commercial		Hawaiian Heritage Center		Shoreline Conservation (Coastal Open Space & Cultural Preserve)		

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**FIGURE 7**  
Mixed-use Village Concept Plan  
**KAHUKU VILLAGE**

Nani Kahuku 'Āina LLC  
Ka'ū, Hawai'i

North  
Lineal Scale (in feet)  
0 1,000 2,000 4,000

**PBR HAWAII & ASSOCIATES, INC.**

Source: PBR Hawaii  
Disclaimer: This graphic has been prepared for general planning purposes only.

space will connect the mauka and makai areas, as well as provide lateral shoreline access through the Site.

Coastal areas of the Site contain significant natural, geological, cultural and archaeological resources. To conserve and protect these resources, a shoreline conservation management area extending 300 feet to more than 1,000 feet inland from the shoreline is proposed, as shown on Figure 7. A management plan specifying measures to protect coastal resources in the shoreline conservation management area will be developed in consultation with appropriate agencies and area stakeholders. Lateral shoreline access will be provided by extending the Ala Kahakai National Historic trail through the property. The Ala Kahakai trail may also connect with historic mauka-makai trails in the Site.

#### **2.4.2.4 Community Facilities Reserve**

Lands in the northwest corner of the Site adjacent to Hawaiian Ocean View Ranchos are proposed to be dedicated to State and County agencies for the development of civic uses including an elementary school, a district park, police substation, fire station, emergency medical facility, and a farmer's market. Figure 8 contains a concept plan illustrating the potential layout of civic uses. It is anticipated that a separate Environmental Assessment or Environmental Impact Statement will need to be prepared by the State and/or County prior to the development of facilities.

#### **2.4.2.5 Infrastructure Improvements**

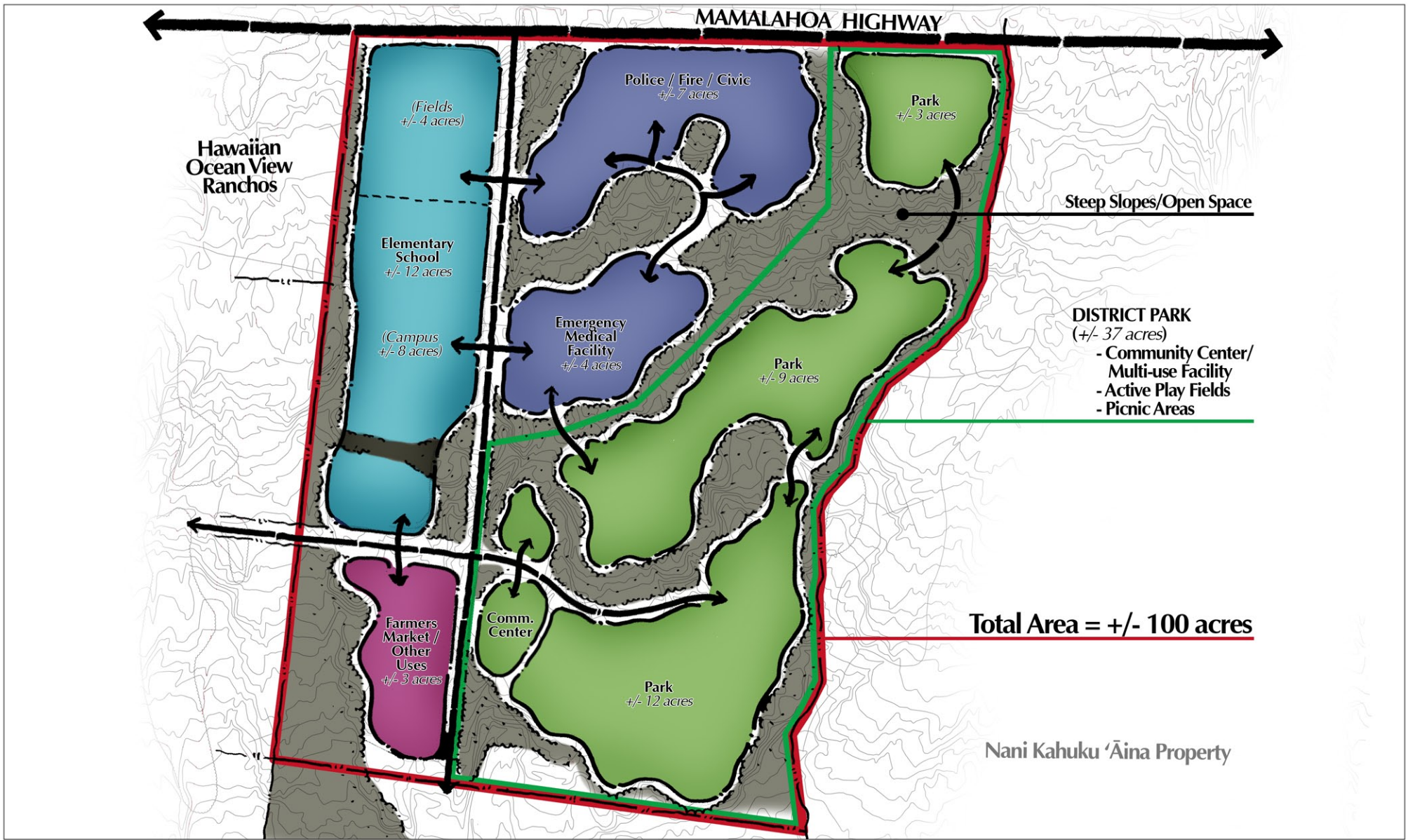
Infrastructure improvements to support Kahuku Village include intersection improvements at Māmalahoa Highway, internal roadways, a water system, drainage system, electrical and communication systems, wastewater system with effluent reuse, and trails/pathways. Renewable energy sources are also being considered to provide electrical power to the project. See section 4.8 for more information in infrastructure improvements.

#### **2.4.2.6 Natural and Cultural Resource Management**

The Site contains many high quality natural and cultural resources, including anchialine ponds, nesting sites for the endangered Hawksbill turtle, prominent geologic features, one of the State's largest petroglyph fields, and unique archaeological features. In order to protect the Site's natural and cultural resources, a konohiki-inspired Integrated Natural and Cultural Resource Management Plan (INCRM) will be prepared to provide a holistic approach to resource management. The INCRM will be prepared in consultation with pertinent agencies and affected stakeholders, including area residents. In addition to identifying significant natural and cultural resources, the INCRM will also specify management actions to provide for each resource's long-term management and protection, as well as permissible uses in sensitive portions of the Site. It is anticipated that the Kahuku Hawaiian Heritage Center will have a significant role in the preparation and implementation of the INCRM.

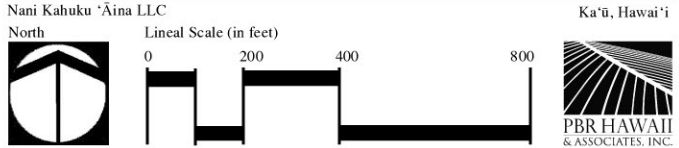
#### **2.4.2.7 Sustainable Site and Building Design**

Sustainable development can be characterized as development that meets the needs of the present without comprising the ability of future generations to meet their own needs. In recent years several guidelines and benchmark systems have been established in an attempt to further define and quantify sustainable design. These benchmarking systems, include, but are not limited to,



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**FIGURE 8**  
Civic Uses Concept Plan  
**KAHUKU VILLAGE**



Source: PBR Hawaii  
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# Kahuku Village

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Smart Growth Principles, the Leadership in Energy and Environmental Design (LEED) rating systems, Energy Star, the National Association of Home Builders Green Built system, and many others.

Nani Kahuku Aina will develop Kahuku Village in an environmentally responsible and sustainable manner. While at this time it is premature to commit to any single sustainability guideline or rating system, the project incorporates a number of sustainability best practices and principles that are the most appropriate in the context of the project's regional and environmental setting. These practices include:

- Establishment of a Hawaiian Heritage Center and a non-profit entity to: 1) protect and manage the Site's natural and cultural resources; and 2) facilitate education, awareness, and appreciation of the resources;
- Establishment of a shoreline conservation management area to protect coastal and marine resources;
- Preparation of a konohiki-inspired Integrated Natural and Cultural Resources Management Plan to actively manage and protect the Site's natural and cultural resources;
- A walkable site design with uses connected by pathways, bikeways, and trails, to reduce automobile dependence and energy use;
- Dedication of lands for regional community services, including an elementary school, district park, police station, fire station, and emergency medical facility;
- Development of commercial uses to provide employment opportunities;
- Provision of a range of housing choices, including workforce housing;
- Design and maintenance of the golf course in compliance with environmental standards, such as Audobon certification standards; and
- Xeriscaping to reduce water consumption and use of non-potable water for landscape irrigation.

In addition, energy conservation measures will be implemented where possible in the design of the proposed Project. Some of the energy-saving technologies being considered for incorporation include:

- Solar energy for water heating;
- Maximum use of day lighting;
- Use of Energy Star appliances;
- Installation of high efficiency compact fluorescent lighting;
- Roof and wall insulation, radiant barriers and energy efficient windows;
- Installation of light colored roofing;
- Utilization of landscaping for shading of buildings; and,
- Use of photovoltaics, fuel cells, and other renewable energy sources, as feasible.

## **2.5 DEVELOPMENT TIMETABLE AND PRELIMINARY COSTS**

Construction of the Mixed-Use Village will begin when all entitlement and permitting approvals have been received. Much of the project's infrastructure, including the entry road, water, wastewater, and drainage systems will be constructed in the initial phase of development.

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Construction could commence as soon as 2015 and the first units could be occupied by 2016. Full build-out is expected to be completed by 2027.

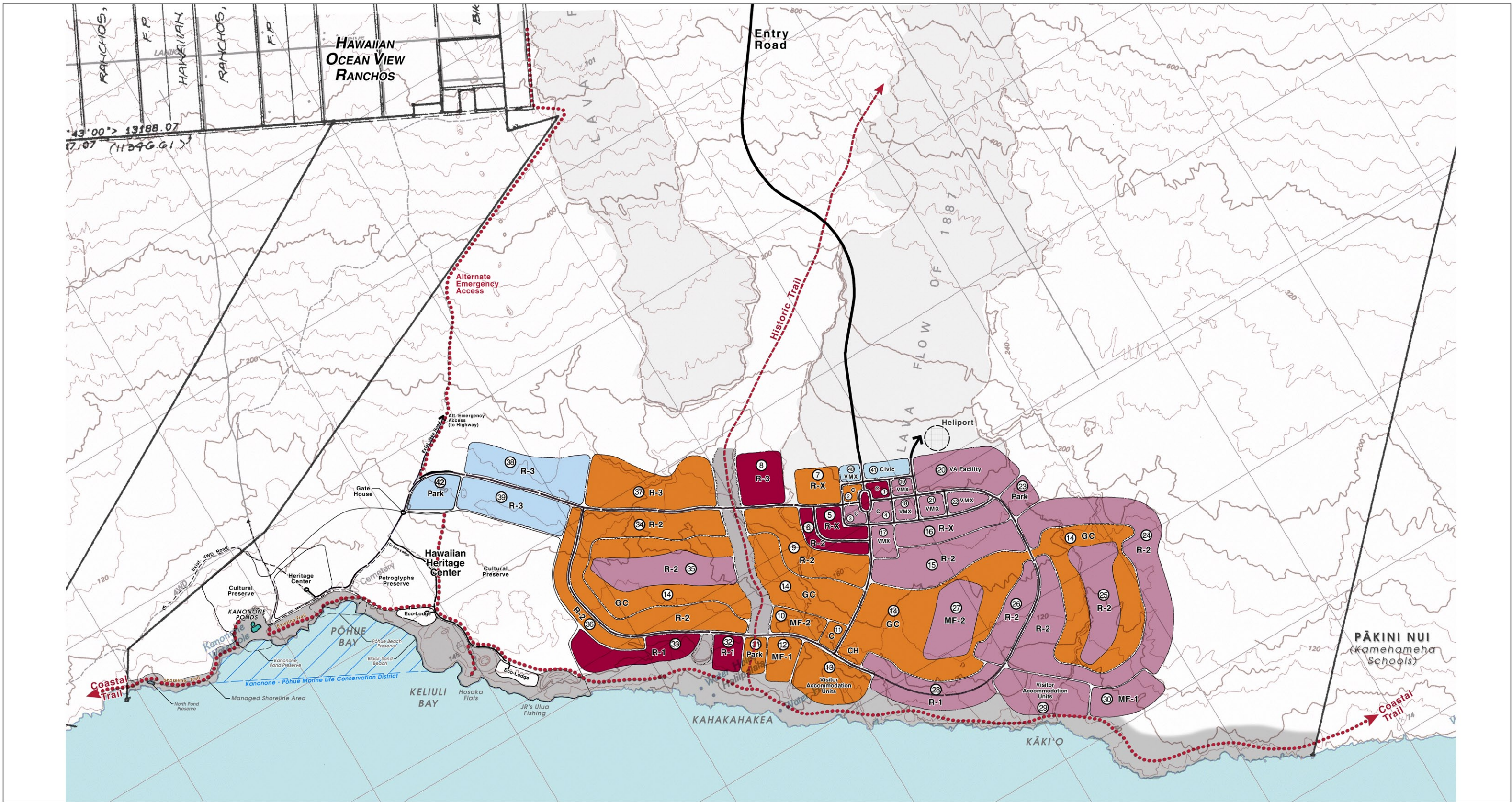
Table 1 summarizes the preliminary development phasing. Figure 9 contains the preliminary phasing plan for Kahuku Village.

**Table 1: Preliminary Development Phasing**

<b>Phase</b>	<b>Residential Units</b>	<b>Commercial Acreage</b>	<b>Other</b>
<b>Years 1 to 3</b>	76	4	Start development of HHC
<b>Years 4 to 6</b>	281	10	Develop first hotel site, golf course, and community park
<b>Years 7 to 9</b>	635	10	Develop second hotel site, second community park, VA Facility
<b>Years 10 to 12</b>	58	0	Develop on-site Civic uses

Development of the Hawaiian Heritage Center, the majority of which will remain in the State Land Use Conservation District, will commence upon approval of a Conservation District Use Permit (CDUP) for facilities in the Conservation District. Approval of the CDUP, which will require the preparation of a separate Environmental Assessment or EIS, is expected by 2013. It is anticipated that access improvements and construction of low-impact facilities such as preserves, interpretive exhibits, and campgrounds may commence shortly after receipt of the CDUP. Full development of the Hawaiian Heritage Center will be contingent upon the development timing of the mixed-use village, as infrastructure will be shared.

Order of magnitude costs for development of Kahuku Village including project infrastructure, residential construction, and hotel, commercial, and other facilities is expected to be \$1.107 billion.



**LEGEND**

- |  |         |   |  |   |                            |
|--|---------|---|--|---|----------------------------|
|  | Phase 1 |  | Phase 4  |  | Heliport                   |
|  | Phase 2 |  | Hawaiian Heritage Center   |  | Existing & Proposed Trails |
|  | Phase 3 |  | Shoreline Conservation<br>(Coastal Open Space & Cultural Preserve) |   |                            |

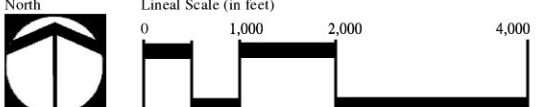

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**Figure 9**  
Preliminary Phasing Plan  
**KAHUKU VILLAGE**

Nani Kahuku 'Āina LLC  
Ka'ū, Hawai'i

North

Lineal Scale (in feet)  
0 1,000 2,000 4,000

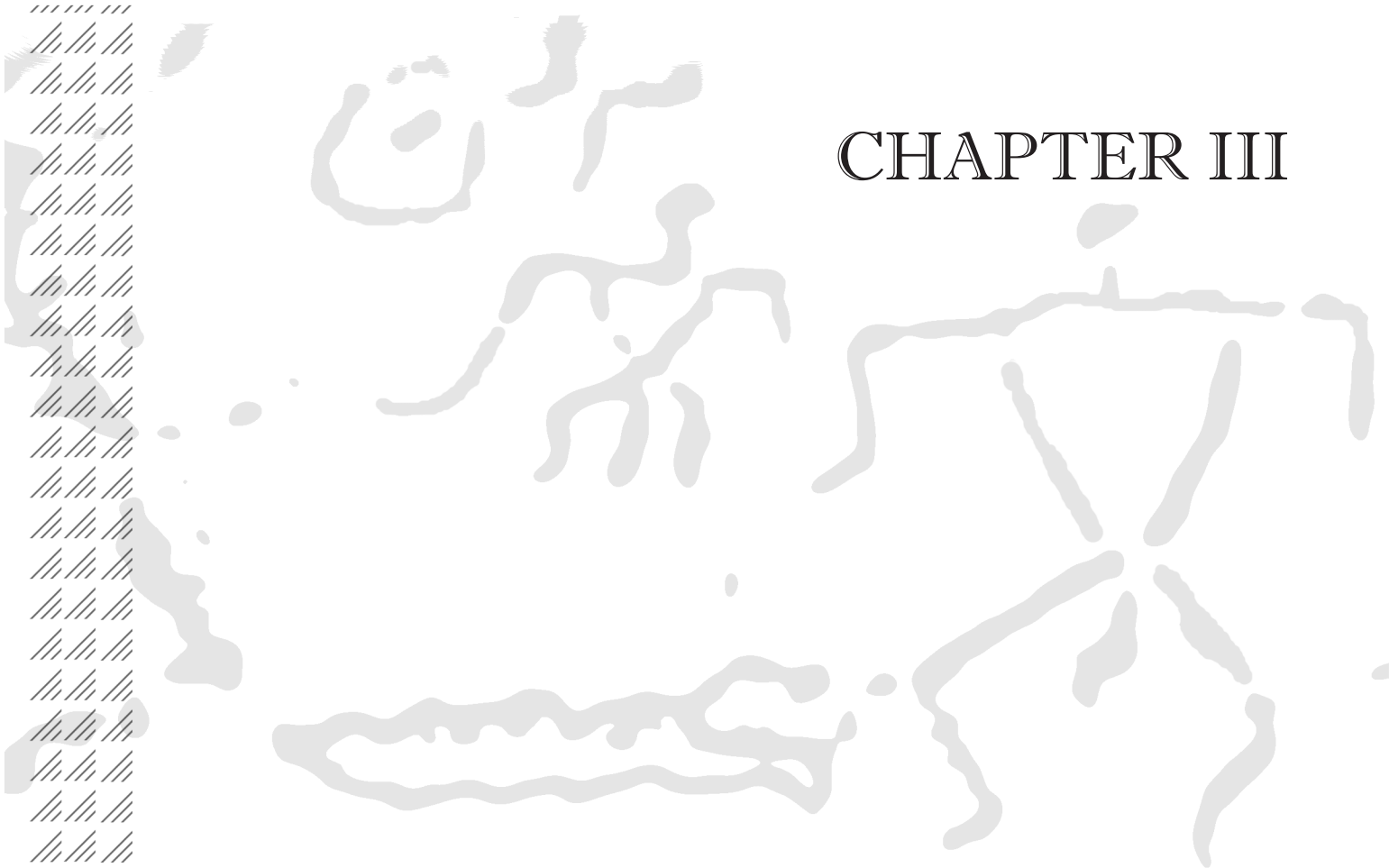



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# CHAPTER III

DESCRIPTION OF THE NATURAL ENVIRONMENT, POTENTIAL IMPACTS,  
AND MITIGATION MEASURES



### **3 DESCRIPTION OF THE NATURAL ENVIRONMENT, POTENTIAL IMPACTS, AND MITIGATION MEASURES**

This section describes the existing conditions of the physical or natural environment, potential impacts of Kahuku Village on the environment, and mitigation measures to minimize any impacts.

#### **3.1 CLIMATE**

The climate of Hawai'i Island is influenced by its geologic features. The towering Mauna Loa (13,653-foot summit elevation) and Mauna Kea (13,796-foot summit elevation) extend above the inversion layer and affect trade winds. Trade winds are typical of the Hawaiian Islands, blowing predominantly in a northeast direction. Winds average approximately seven miles per hour (mph) (NOAA, 2005).

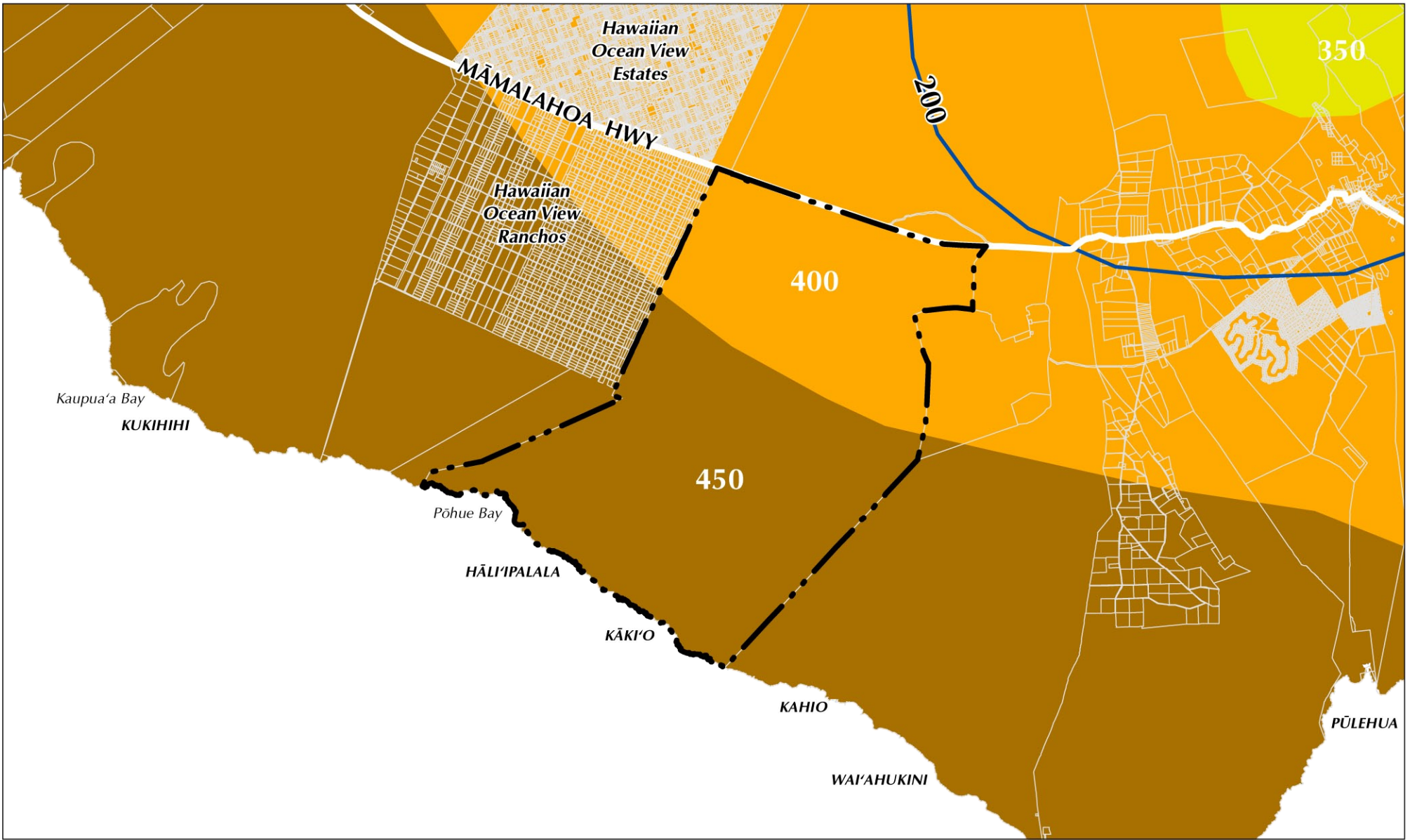
The Site's location in the southern portion of the island on the leeward side of Mauna Loa makes its rainfall pattern relatively dry with slightly higher rainfall in winter, a pattern typical of other leeward areas and unlike Kona, which has a unique pattern of higher rainfall in the summer. The relatively drier climate produces relatively less cloudiness and higher solar radiation values. See Figure 10, Solar Radiation Intensity.

Rainfall and temperature at the Site vary with elevation. The mean annual rainfall ranges from 30 inches in the makai area to 40 inches in the mauka portion of the Site. See Figure 11, Mean Annual Rainfall. The mean temperature decreases at an approximate rate of one degree Fahrenheit (F) for each 300-foot increase in elevation. Regional temperatures range from a record low 50° F to high 93° F (Hawai'i County Data Book, 2008), but average from 66° F to 84° F. Humidity ranges throughout the year between 68 percent in the morning to 80 percent in the afternoon (NOAA, 2003).

Onsite meteorological data collected onsite from May to July 1987 indicate the mauka area of the Site is clearly dominated by east to northeast winds (greater than 71 percent of the time) while the coastal area showed much greater variability. General wind speeds at the Site were lower than those recorded at National Weather Service's (NWS) permanent South Point Wind Station during the sampling period. While the NWS station averaged 17.8 mph, the Site's coastal station averaged 11 mph. See Figure 12, Wind Characteristics. Meteorological data collection also included solar radiation. The results indicate the characteristic midday buildup of a cloud band along the southwest shores of the island, screening out about half of the solar radiation at midday. (Morrow, J.W., 1987).

#### ***POTENTIAL IMPACTS AND MITIGATION MEASURES***

No significant impacts to the region's climate are anticipated. Modification of the Site's specific microclimate may occur from the planting of shade trees and other landscape elements on what are now lava fields. The construction of buildings will also channel airflows in their immediate vicinity.



**LEGEND**

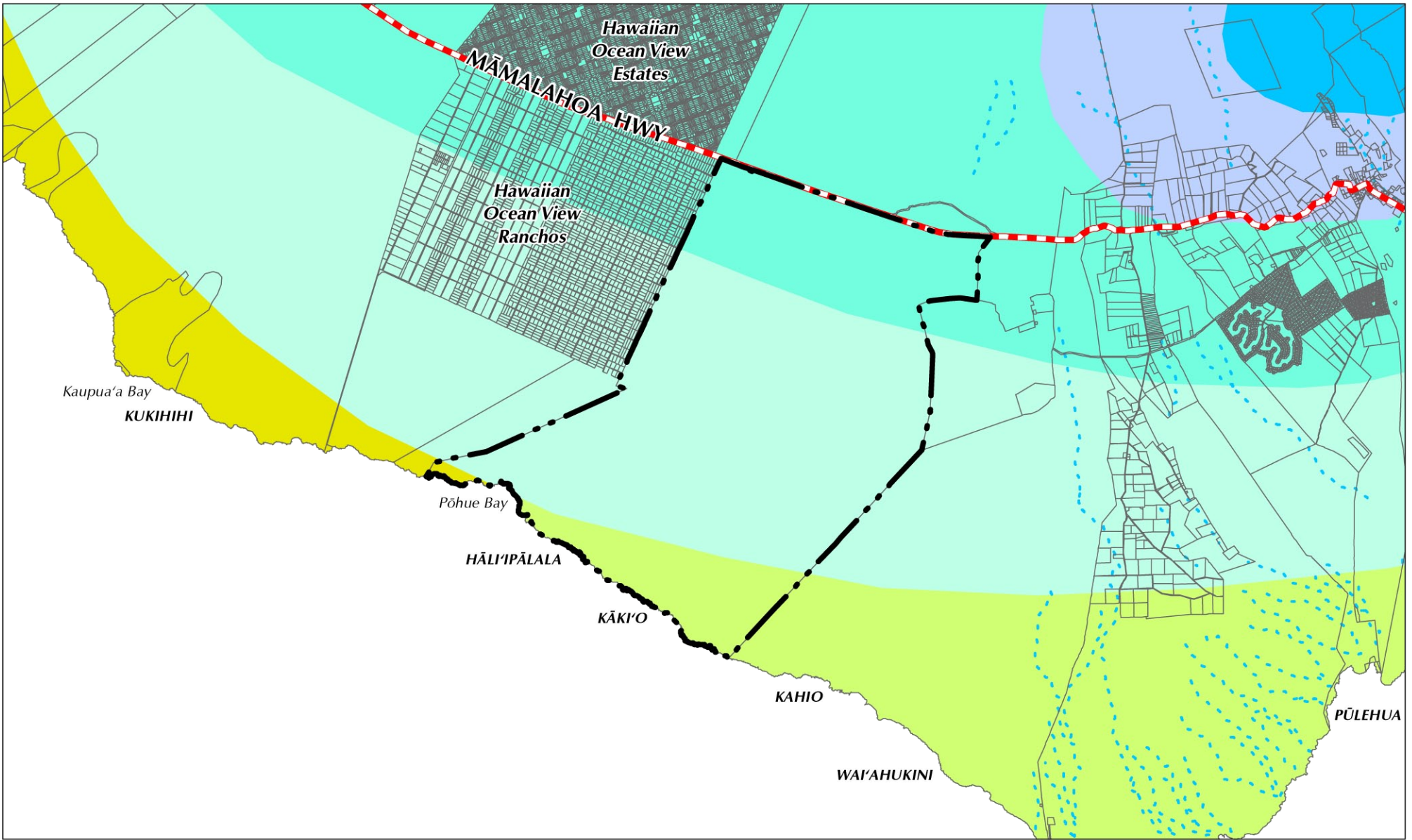
- |  |                            |  |                           |  |                               |
|--|----------------------------|--|---------------------------|--|-------------------------------|
|  | Nani Kahuku 'Āina Property |  | Solar Radiation Intensity |  | Solar Calories (cal/sq m/day) |
|  | 2010 Hawai'i TMK           |  | 150 watts/sq meter        |  | 300                           |
|  | Major Roads                |  | 200 watts/sq meter        |  | 350                           |
|  |                            |  | 250 watts/sq meter        |  | 400                           |
|  |                            |  | 300 watts/sq meter        |  | 450                           |

Source: Hawai'i TMK, 2010 (GIS); DBEDT Energy Division, 2006 (GIS)  
 Disclaimer: This graphic has been prepared for general planning purposes only.





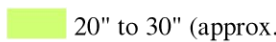
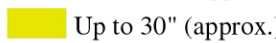
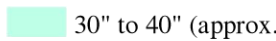
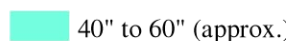
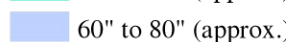
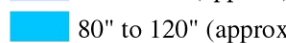
**FIGURE 10**  
 Solar Radiation Intensity  
**KAHUKU VILLAGE**

Nani Kahuku 'Āina LLC  
 North  
 Lineal Scale (in feet)  
 0 5,000 10,000 20,000

Ka'u, Hawai'i  
 PBR HAWAII & ASSOCIATES, INC.



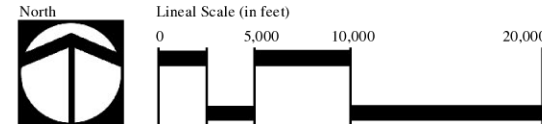

**LEGEND**

-  Nani Kahuku 'Āina Property
-  2010 Hawai'i TMK
-  Major Roads
-  Streams
- Annual Rainfall**
-  20" to 30" (approx.)
-  Up to 30" (approx.)
-  30" to 40" (approx.)
-  40" to 60" (approx.)
-  60" to 80" (approx.)
-  80" to 120" (approx.)

**FIGURE 11**  
 Mean Annual Rainfall  
**KAHUKU VILLAGE**

Nani Kahuku 'Āina LLC Ka'u, Hawai'i

North Lineal Scale (in feet)

Source: Hawai'i TMK, 2010 (GIS); DLNR Division of Aquatic Resources, 2004 (GIS)  
 Disclaimer: This graphic has been prepared for general planning purposes only.

FIGURE 3.  
 Frequency Distribution of Wind Direction in Percent  
 Hawaiian Riviera Airport Site  
 14 May-21 Jul 87

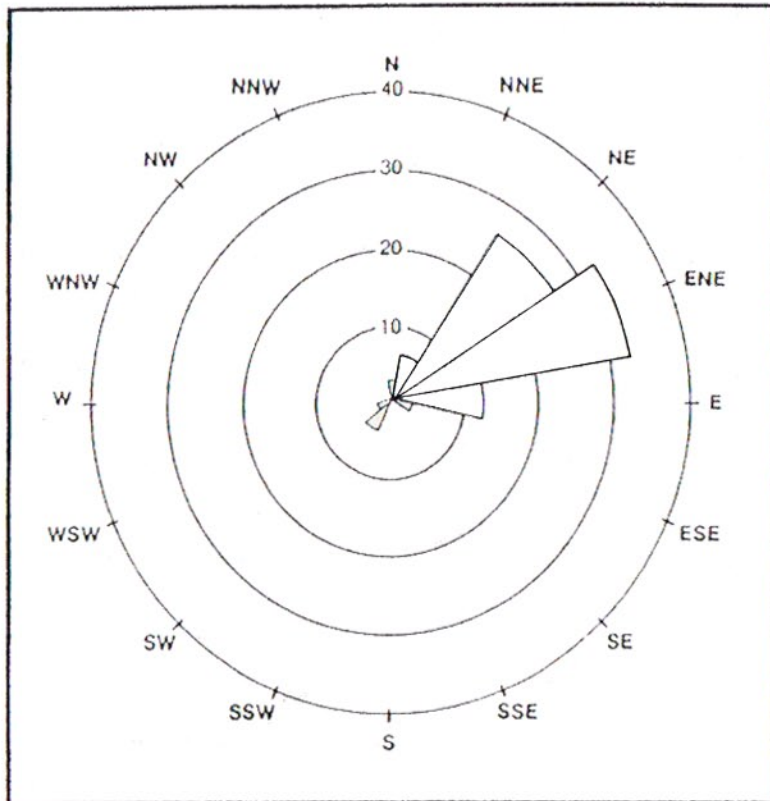


FIGURE 4.  
 Frequency Distribution of Wind Direction in Percent  
 Hawaiian Riviera Resort Beach Site  
 14 May-2 Jul 87

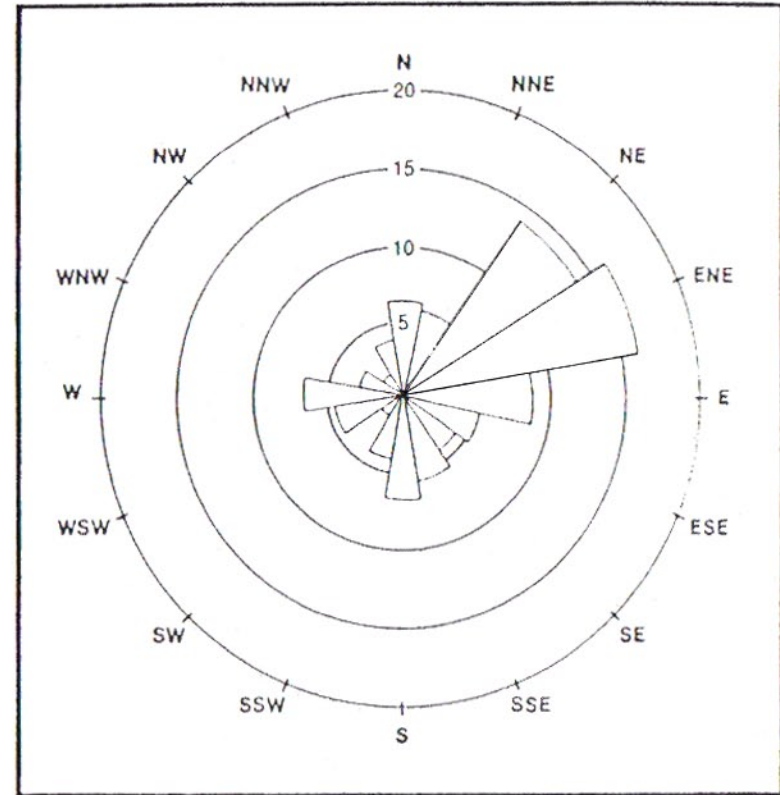


FIGURE 12  
 Wind Characteristics  
**KAHUKU VILLAGE**

Nani Kahuku 'Aina, LLC

KA'Ū, HAWAII



## **3.2 GEOLOGY AND TOPOGRAPHY**

### **3.2.1 Regional Geology**

Of the five volcanoes that formed the Big Island—Kōhala, Hualālai, Mauna Kea, Mauna Loa, and Kīlauea—only Mauna Loa and Kīlauea are presently considered active; the other three are considered dormant. The Site is located on the southwest flank of Mauna Loa below the Southwest Rift Zone. The shield of Mauna Loa has been built by eruptions along this Southwest Rift Zone and a Northeast Rift Zone that radiate out from a summit caldera. The summit is located approximately 30 miles north of the Site.

The Site is in the geologic region bounded by the Kealakekua and Kahuku faults. Inflation and deflation of the magma chamber within the rift zone causes the area between the faults to break into large regional slump blocks. However, the fact that the slump blocks between these two faults have been covered by lava flows suggests that regional block faulting has not been active for decades or centuries. (Dames & Moore, 1987). The Site is in subsidence zone 4, the lowest risk zone (Mullineax, D.R., et al, 1987).

### **3.2.2 Site Geology**

Typically, shield volcanoes in Hawai‘i have a ground slope of approximately 10 percent. However, the ground slope between the Kealakekua and Kahuku faults is approximately 18 percent (Dames & Moore, 1987). The Site slopes in an east to west (mauka to makai) direction, and is flatter than the average for both the geologic region and the typical ground slope. The makai portion of the site has an approximate ground slope of three percent. The mauka portion of the Site has a relatively constant slope of 7.5 percent. The average slope across the site is approximately six percent.

The Site is nearly entirely covered by ‘a‘ā and pāhoehoe lava flows with pockets of developed topsoil. Most of the flows are prehistoric (pre-1789), with estimated ages ranging from 750 to 1,500 years old. There have been seven historic flows recorded along the Southwest Rift Zone, comprising about 20 percent of the 39 recorded flows from Mauna Loa (the other 80 percent flowed from the summit or Northeast Rift Zone). Three of these Southwest Rift Zone flows traverse the Site: 1868, 1887, and 1907. The scaly pāhoehoe lava flow of 1868 cuts across a small mauka section on the eastern perimeter of the Site. This eruption, however, caused the largest earthquake in Hawai‘i, registering as a magnitude 8 as measured by modern methods. The 1887 eruption, which flowed through the center of the Site, lasted 10 days and produced an ‘a‘ā flow that reached the sea within one day. The 1907 eruption lasted for 15 days and covered 8.1 square miles and extends along the western edge of the Site. Historic trends indicate that eruptive vent locations are moving upslope, and therefore further away from the Site. (Lipman, P.W., 1980b).

Besides the lava flows, other geological features within the Site include pu‘u, beaches, ground cracks, lava tubes, tumuli, and brackish water ponds. A characteristic feature of the coastline from South Point to Kauna Point is a series of littoral cones (pu‘u) formed by the debris thrown up in the air as lava from the southwest rift of Mauna Loa flowed into the ocean. These pu‘u are in two distinct rows along the coast, the ones closer inland being geologically older marking the location of a former shoreline. The most prominent cone within the Site is Pu‘u Kī. Black volcanic cinder sand beaches are located at the base of the cones, a product of wave erosion of the cones. Pōhue Bay, however, is a white coralline sand beach. Some of the shoreline areas

have coarse to cobble-sized basaltic and coralline materials strewn up to 200' inland likely the result of storm waves. (Dames & Moore, 1987).

Several anchialine ponds are located along the coast. These ponds provide a protected oasis that allows flora and fauna to thrive in areas with limited topsoil and harsh environmental conditions. There are seventeen known ponds along the Site's coastline.

### **3.2.3 Site Geologic Hazards**

A Geological Investigation for the Site was prepared by Dames and Moore in 1987 for the formerly proposed Hawaiian Riviera Resort project. The Investigation assessed potential geologic hazards and recommended measures to mitigate risks. The Dames & Moore report was reviewed by Geolabs, Inc. in March 2011 to determine if the recommendations should be updated and if any further investigation should be conducted. Geolabs determined that the recommendations contained in the Dames & Moore report are still valid, except that reference to some standards and technologies should be updated. Appendix J contains the Dames & Moore and Geolabs reports.

#### **3.2.3.1 Ground Cracks**

There are several large cracks in the ground surface along the coast. These cracks, averaging 1.5 feet wide and up to 4.5 feet wide, are between 30 and 1,800 feet long. The cracks generally orient parallel with the shoreline. Most of the cracks appear to have a slight vertical offset, although there are some where one side of the crack is up to two feet lower than the other side. The ground cracks extend through both the pāhoehoe and the 'a'ā flows.

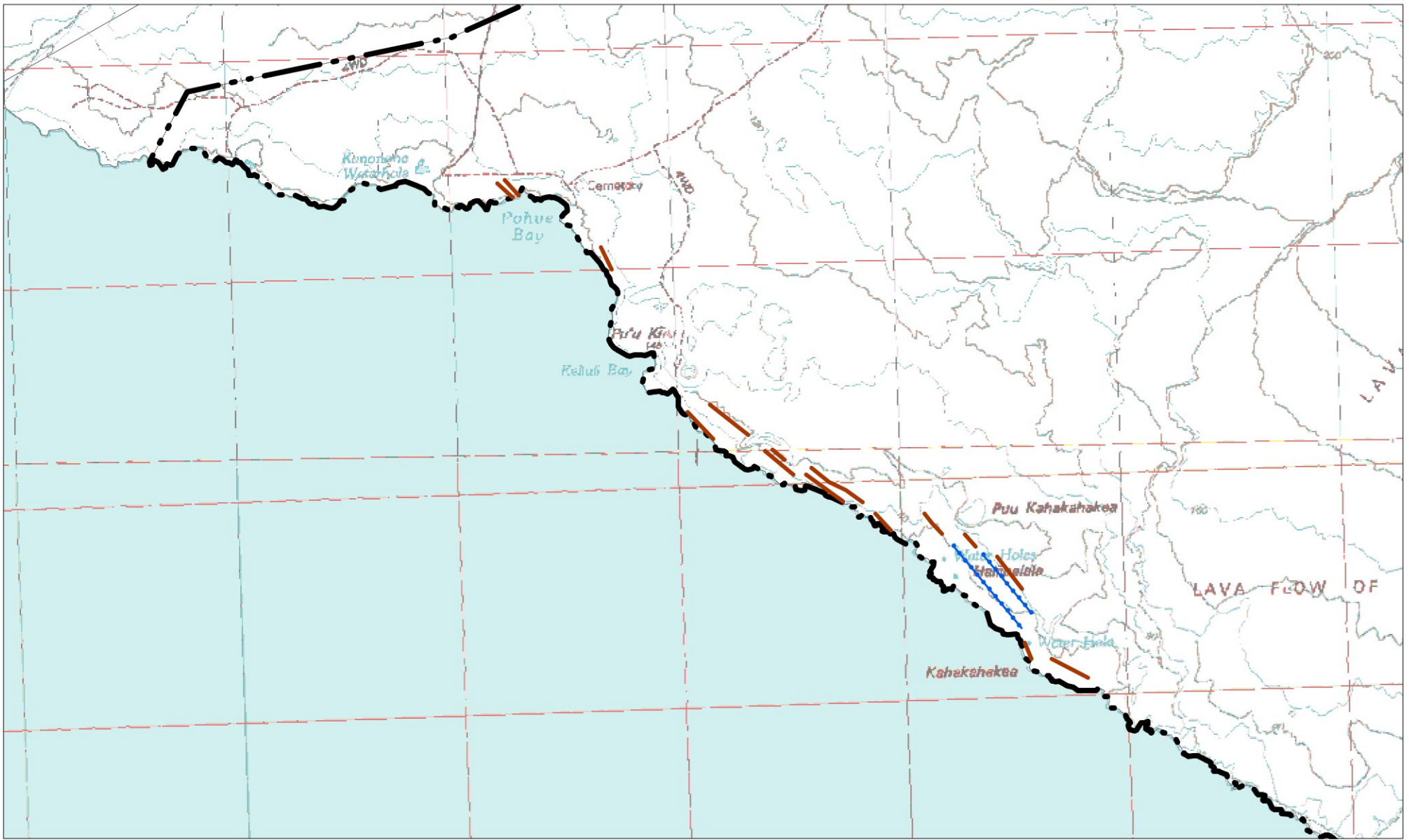
The exact cause of the ground cracks is unknown, but they are believed to be related to offshore regional slump blocks and the inflation and deflation of the volcano flanks. As indicated in 3.2.1, the fact that the slump blocks have been covered by lava flows suggests that regional block faulting has not been active for decades or centuries. The age of the cracks have not been definitively determined, but based on the age of the lava flows on the site, they may be between 300 to 1,000 years old. Figure 13 shows the e location of identified ground cracks . Additional surveys will be undertaken as site planning progresses to determine if any additional ground cracks of concerns may be present.

#### **3.2.3.2 Lava Tubes and Voids**





Lava tubes and voids are common geologic hazards on all of the Hawaiian islands. Lava tubes and voids are more common in pāhoehoe lava flows and collapsed lava tubes are often identified by aligned circular depressions at the ground surface. However, many times there are no visible clues to the presence of lava tubes. Lava tubes and voids present a geologic hazard as they may collapse under the weight of a structure.

#### **3.2.3.3 Tumuli and Lava Blisters**

Tumuli and lava blisters are usually dome-shaped protrusions on the surface of pāhoehoe flows. Some tumuli have a thin crust with a large void inside while others may be filled with solidified lava. The hazards that hollow tumuli and lava blisters present are similar to those of lava tubes and voids.




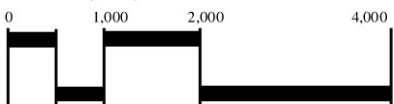
**LEGEND**



-  Nani Kahuku 'Āina Property
-  2010 Hawai'i TMK
-  Ground Crack
-  Ground Crack containing Brackish Water

**FIGURE 13**  
 Ground Cracks  
**KAHUKU VILLAGE**

Nani Kahuku 'Āina LLC Ka'ū, Hawai'i

North Lineal Scale (in feet)

Source: Hawai'i TMK, 2010 (GIS); Belt Collins & Associates (1987, GIS)  
 Disclaimer: This graphic has been prepared for general planning purposes only.



***POTENTIAL IMPACTS AND MITIGATION MEASURES***

The proposed Mixed-Use Village and access road are proposed to be developed over the lava flow of 1887. Earthwork will be required for roadway excavation and embankment, utility installations, construction of access roads and paths, rough grading for the golf course and landscaping, and site grading for residential, commercial, educational, civic, and visitor sites. Earthwork activities will be minimized by following the existing topography, as much as possible. No significant impact to geologic features is anticipated, as significant geologic features such as the anchialine ponds, prominent pu‘u such as Pu‘u Kī, and coastal beaches and sea cliffs will remain within the State Land Use Conservation District and will not be affected by development.

Mitigation measures that may be taken to address geologic hazards on the property include the following:

Ground Cracks

Proposed mitigation in areas where ground cracks are present include avoiding development over cracks and siting buildings at least 500-feet away from the longitudinal extension of a crack. Horizontal setbacks from cracks may also be required based on building size and column loads, with heavier buildings having a greater setback from crack edges. Mat foundations may be necessary for buildings that are near any ground cracks and thick, coarse aggregate cushion fill is recommended under the mat foundations. Utility lines and roadways that cross ground cracks will require special design details to tolerate any potential differential ground movement. Additional studies will be conducted to determine specific horizontal and longitudinal setback requirements.

Lava Tubes

All structures it will be necessary to conduct appropriate foundation investigation and probing to locate lava tubes and voids. Measures that may be implemented should lava tubes or voids be present include grouting the void, placing foundation support structures at the bottom of the void, collapsing the void, or relocating the structure away from the void.

Future Studies

Several studies will be conducted prior to commencing the design phase of the project. These studies include conducting additional geotechnical and geophysical studies to quantify the physical characteristics of the ground cracks. The studies will use cross hole geophysical investigations, or similar alternate methods, to determine specific longitudinal and horizontal setbacks and any special building foundation design requirements that may be required. A refraction survey will be performed on ‘a‘ā lava flows adjacent to cracks to determine if the cracks are continuous beneath the ‘a‘ā flow. Finally, an earthquake engineering study will be prepared to determine if any project specific structural design criteria are necessary.

**3.3 SOILS**

There are three soil suitability studies prepared for lands in Hawai‘i whose principal focus has been to describe the physical attributes of land and the relative productivity of different land types for agricultural production; these are: 1) the U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS) Soil Survey; 2) the University of Hawai‘i Land Study Bureau (LSB) Detailed Land Classification; and 3) the State Department of Agriculture’s Agricultural Lands of Importance to the State of Hawai‘i (ALISH).

### 3.3.1 NRCS Soil Survey

According to the NRCS Soil Survey, the Site contains soil from the lava flows association, which is characterized as gently sloping to excessively drained soils that are coarse-textured and medium-textured formed in volcanic ash, pumice and cinders. The soil is found on nearly barren lava flows and upland areas at elevations ranging from near sea level to approximately 2,000 feet. A majority of the site consists of ‘a‘ā lava flows (rLV). From mauka to makai along the southeast boundary, pāhoehoe flows (rLW) dominate the landscape. The land along the coast, specifically near Pōhue Bay and Hāli‘ipālala, consists of cinder land (rCL) surrounded by pāhoehoe lava. A few small beaches (BH) are located at Pōhue and Kāki‘o. See Figure 14, NRCS Soil Survey. Descriptions of the soil classifications are as follows:

**Lava Flows, pāhoehoe (rLW)** - This soil has a billowy, glassy surface that is relatively smooth. In some areas, the surface is rough and broken and there are hummocks and pressure domes. The soil has no cover and is typically bare of vegetation, except for mosses and lichens. In the areas of higher rainfall, however, scattered ‘ōhi‘a trees, ‘ōhelo berry, and ‘a‘ali‘i have gained a foothold in cracks and crevices. Some flat slabs are used as facings on buildings and fireplaces.

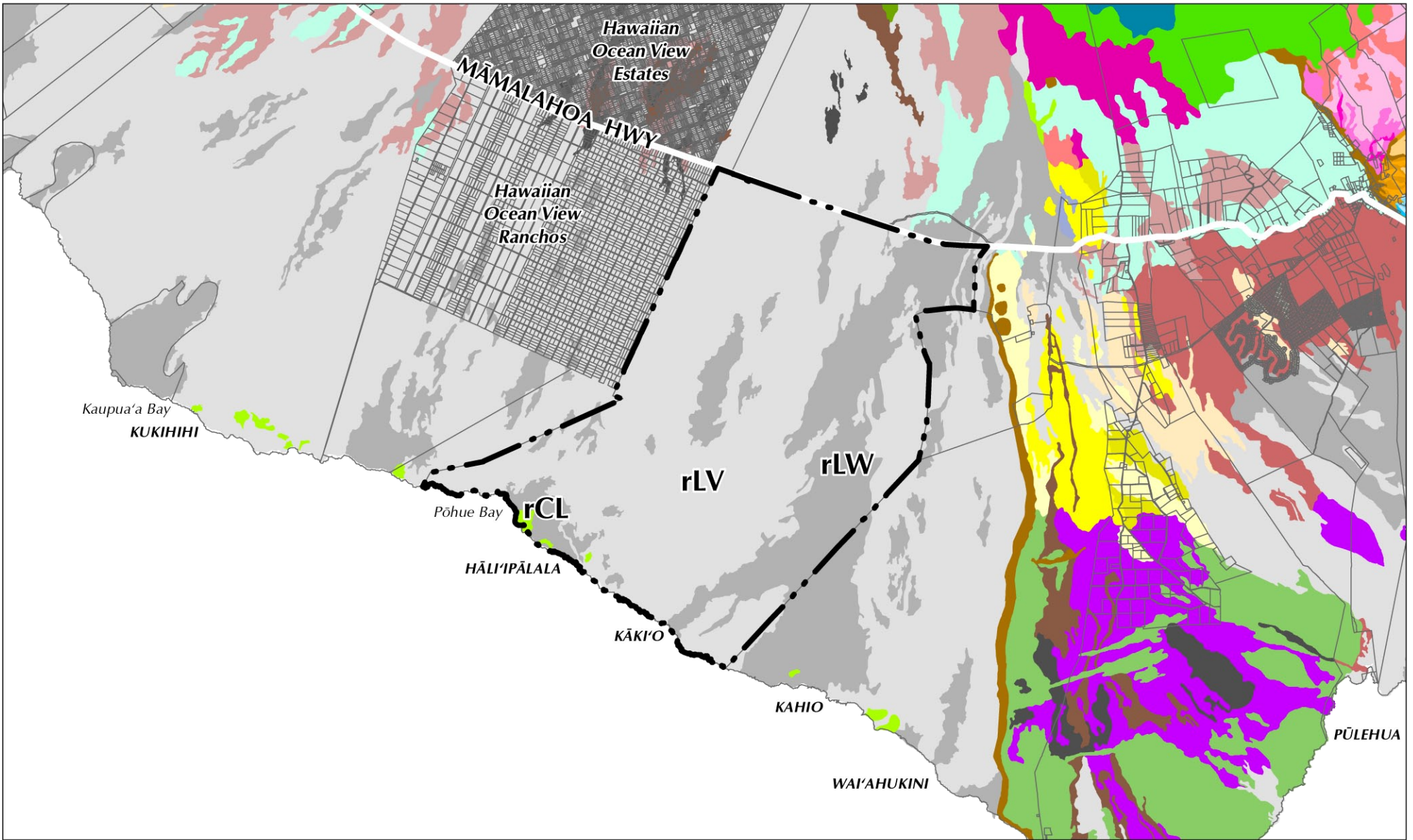
The NRCS Land Capability Grouping, rates soil types according to eight levels, ranging from the highest classification level, I, to the lowest level, VIII. The capability classification, an indicator of suitability of soil for field crop cultivation, for this soil is VIIIs, non-irrigated, meaning the soils and landforms have limitations that preclude their use for commercial plants and restrict their use to recreation, wildlife or water supply or aesthetic purposes. The subclass is “s,” meaning the soil is limited because it is shallow, droughty, or stony.

**Lava Flows, ‘a‘ā (rLV)** – This soil is rough and broken, consisting of a mass of clinkery, hard, glassy, sharp pieces piled in tumbled heaps. There is practically no soil covering and it is typically bare of vegetation, except for mosses, lichens, ferns and a few small ‘ōhi‘a trees. In areas of high rainfall, it contributes substantially to the underground water supply and is used for watershed. The capability classification is VIIIs, non-irrigated. Class VIII soils and landforms have limitations that preclude their use for commercial plants and restrict their use to recreation, wildlife or water supply or aesthetic purposes. The subclass is “s,” meaning the soil is limited because it is shallow, droughty or stony.

**Cinder Land, (rCL)** - Cinder land (rCL) consists of areas of bedded magmatic ejecta associated with cinder cones. It is a mixture of cinders, pumice, and ash. These materials are black, red, yellow, brown, or variegated in color. They have jagged edges and a glassy appearance and show little or no evidence of soil development.

Although Cinder land commonly supports some vegetation, it has no value for grazing, because of its loose nature and poor trafficability. It is used for wildlife habitat and recreational areas. The capability classification is VIIIs, non-irrigated. Class VIII soils and landforms have limitations that preclude their use for commercial plants and restrict their use to recreation, wildlife or water supply or aesthetic purposes. The subclass is “s,” meaning the soil is limited because it is shallow, droughty, or stony.

**Beaches (BH)** – These are long, narrow, sloping areas of sand and gravel along the coastline, typically used for recreation and are sometimes covered by waves during storms or high tide. The sand and gravel vary in color, ranging from yellowish or white sand, formed in coral and sea



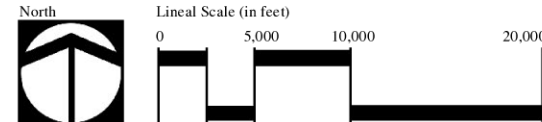

**LEGEND**

-  Nani Kahuku 'Āina Property
-  2010 Hawai'i TMK
-  Major Roads
-  rCL: Cinder Land
-  rLV: Lava Flows, 'A'a
-  rLW: Lava Flows, Pāhoehoe

**FIGURE 14**  
 NRCS Soil Survey  
**KAHUKU VILLAGE**

Nani Kahuku 'Āina LLC Ka'u, Hawai'i

North Lineal Scale (in feet)

Source: Hawai'i TMK, 2010 (GIS); Natural Resource Conservation Service, 2007 (GIS)  
 Disclaimer: This graphic has been prepared for general planning purposes only.

shells, black sand, formed in lava rocks and green sand formed in olivine. The capability classification is VIIIw, non-irrigated. Class VIII soils and landforms have limitations that preclude its use for commercial plants and restrict their use to recreation, wildlife or water supply or aesthetic purposes. The subclass is “w,” meaning that water in or on the soil interferes with plant growth or cultivation and in some instances the wetness can be corrected by artificial drainage.

### **3.3.2 Land Study Bureau Detailed Land Classification**

The University of Hawai‘i LSB *Detailed Land Classification, Island of Hawai‘i* classifies non-urban land by a five-class productivity rating system, using the letters A, B, C, D and E, where “A” represents the highest class of productivity and “E” the lowest. The productivity rating system was based on soil texture, structure, depth, drainage, parent material, stoniness, topography, climate, and rainfall in a given area. The LSB classified the entire site as very poor, “E” (Figure 15).

### **3.3.3 Agricultural Lands of Importance to the State of Hawai‘i**

The ALISH system rates agricultural land as “Prime,” “Unique” or “Other” lands. The remaining land is not classified. See Figure 16.

“Prime” agricultural land is best suited for production of food, feed, forage and fiber crops. The land has the soil quality, growing season and moisture supply necessary economically to sustain high yields of crops when treated and managed including water management, according to modern farming methods.

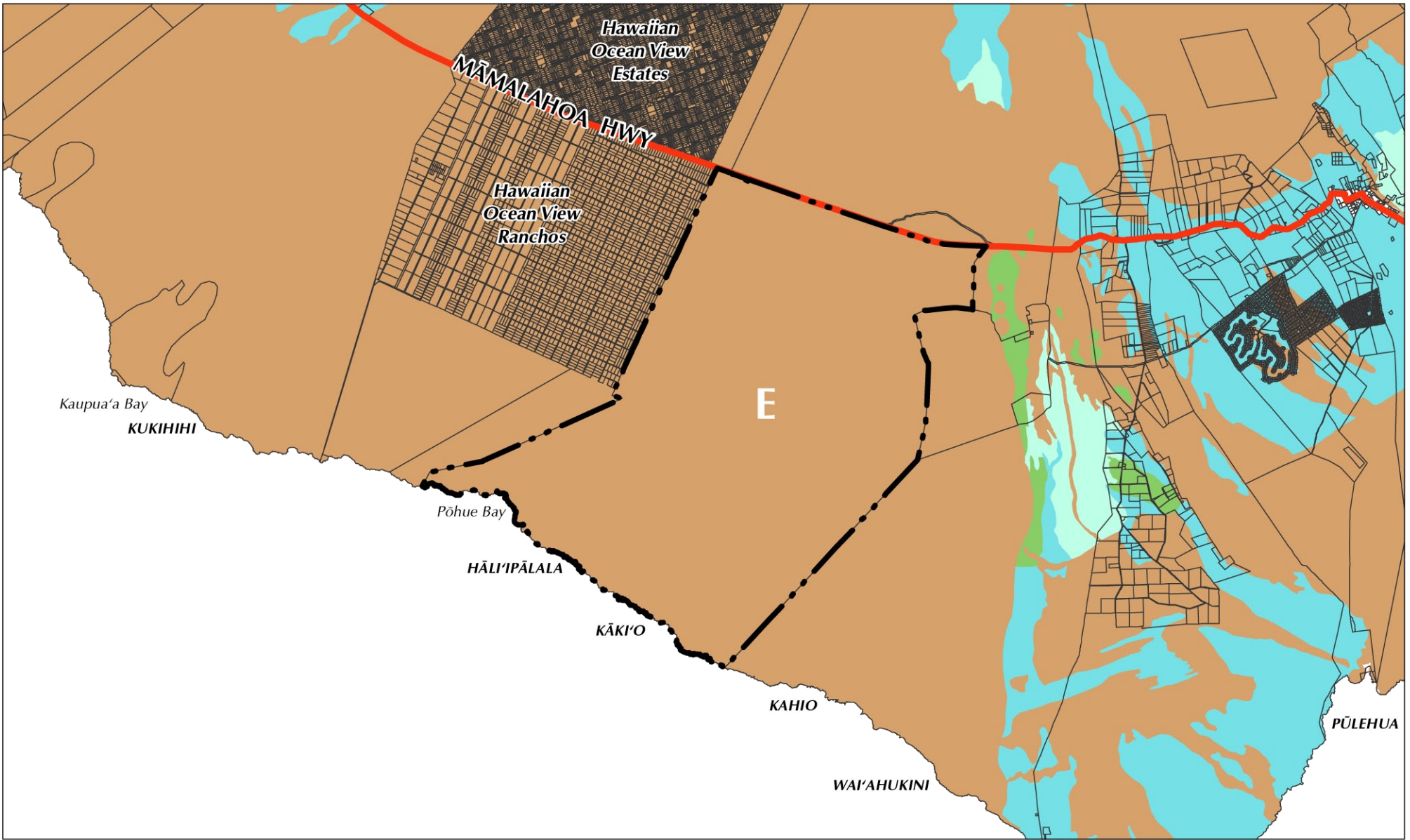
“Unique” agricultural land can be used for specific high-value food crops. The land has a special combination of soil quality, growing season, temperature, humidity, sunlight, air drainage, elevations, aspect, moisture supply, or other conditions that favor the production of a specific crop of high quality and/or high yield when the land is treated and managed according to modern farm methods.

“Other” agricultural land is vital to production of food, feed, fiber and forage crops, yet they exhibit properties, such as seasonal wetness, erosion, and limited rooting zone, slope, flooding, or drought. The land can be farmed satisfactorily through greater fertilization and other soil amendment, drainage improvement, erosion control practices, flood protection and produce fair to good crop yields when properly managed.

According to the ALISH system, the land on Site is not classified and is therefore, not considered important agricultural land.

## ***POTENTIAL IMPACTS AND MITIGATION MEASURES***

Earthwork activities associated with the development of Kahuku Village have the potential to increase soil erosion and dust. Construction and permanent BMPs will be implemented to minimize and control soil erosion and dust. Construction BMPs may include, but are not limited to, providing gravel vehicular entrances, installing silt fencing, diverting stormwater runoff to retention/detention basins, utilizing diversion berms and ditches, installing dust screens, establishing temporary ground cover, and watering loose soils. Specific construction BMPs will be specified in the project’s NPDES permit(s). Permanent BMPs will also be implemented to



**LEGEND**

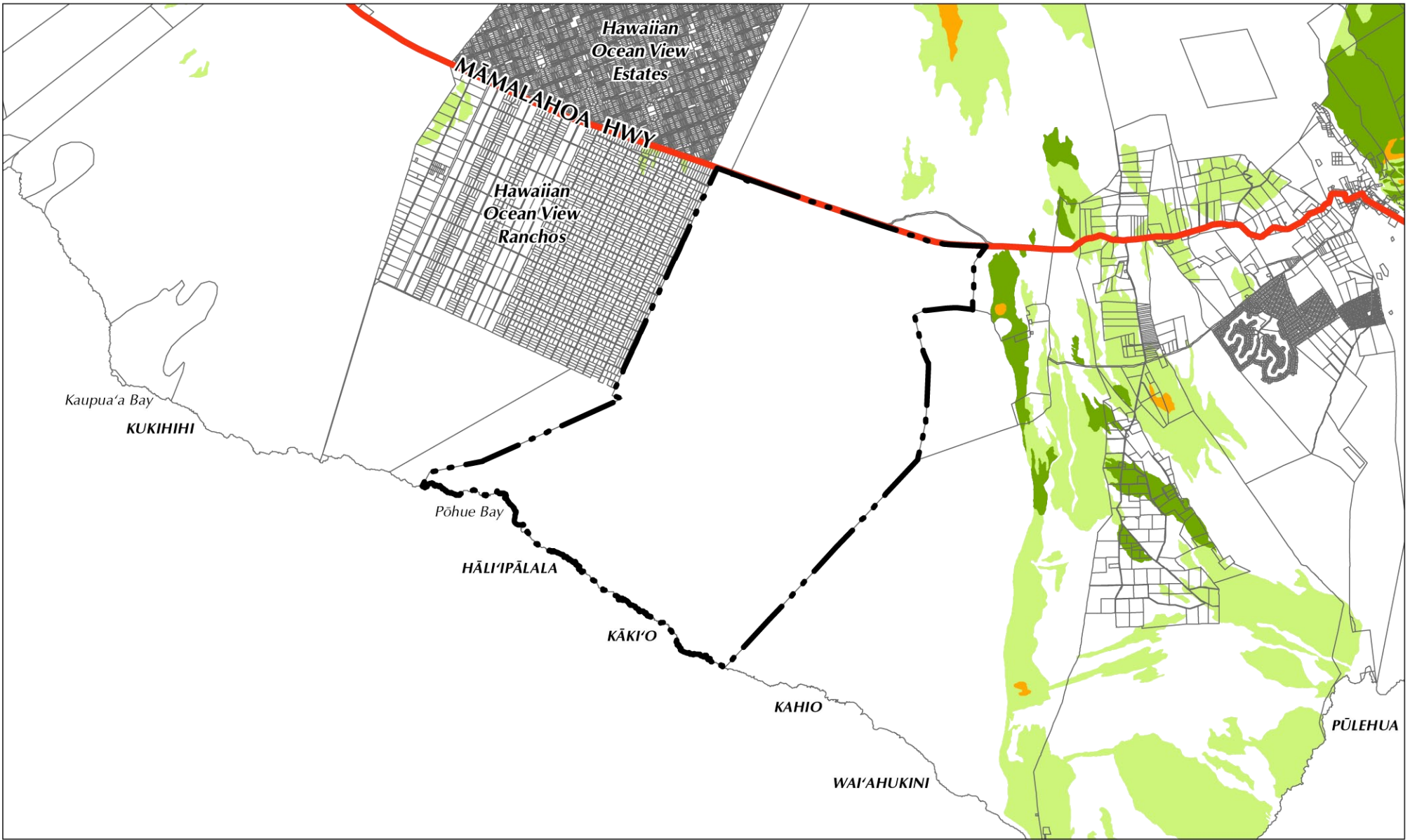
- |  |                            |  |               |  |          |
|--|----------------------------|--|---------------|--|----------|
|  | Nani Kahuku 'Āina Property |  | A - Excellent |  | C - Fair |
|  | 2010 Hawai'i TMK           |  | B - Good      |  | D - Poor |
|  | Major Roads                |  | E - Very Poor |  |          |

**FIGURE 15**  
 Land Study Bureau Land Classification  
**KAHUKU VILLAGE**








Nani Kahuku 'Āina LLC  
 North  
 Lineal Scale (in feet)  
 0 5,000 10,000 20,000

Ka'u, Hawai'i  
 PBR HAWAII & ASSOCIATES, INC.

Source: Hawai'i TMK, 2010 (GIS); Land Study Bureau, 1965 (GIS)  
 Disclaimer: This graphic has been prepared for general planning purposes only.



**LEGEND**

-  Nani Kahuku 'Āina Property
-  2010 Hawai'i TMK
-  Major Roads
-  Prime ALISH
-  Other ALISH
-  Unique ALISH
-  Unclassified

**FIGURE 16**

Agricultural Lands of Importance to the State of Hawai'i  
**KAHUKU VILLAGE**

Nani Kahuku 'Āina LLC

Ka'u, Hawai'i



Source: Hawai'i TMK, 2010 (GIS); State Department of Agriculture, 1977 (GIS)  
 Disclaimer: This graphic has been prepared for general planning purposes only.



**Kahuku Village**  
Draft Environmental Impact Statement

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accommodate storm water runoff typically associated with increasing impervious surfaces. The permanent BMPs may include implementing low-impact development drainage strategies, and directing runoff to the golf course, low areas, retention/detention basins, or injection wells. Stormwater runoff will not be discharged directly into the ocean.

Due to the predominance of lava flows on the Site, the earthwork activities may include blasting and pneumatic hammering to excavate rock, and rock crushing operations to produce aggregate material for use during construction. Import of soil will be required for all areas that will be landscaped, primarily the golf course, due to the lack of existing topsoil. Impacts associated with importing soil will be minimized by covering loads during transport, stockpiling soil in accordance with the project's NPDES permit(s), and establishing permanent groundcover as soon as practicable.

Impacts associated with blasting include potential harm from flyrock, ground vibration, and air blast. Flyrock is a term used to refer to flying rock and debris that may be launched during open blasting by the force of detonating explosives. The projectiles have the potential to cause damage or physical harm to objects or persons in their line of travel. The occurrence of flyrock can be reduced by increasing the depth of explosive charges and by using safety mats.

Ground vibration occurs when stress waves generated by an explosive detonation propagates through rock as elastic waves. The primary hazard of ground vibration is its potential to damage building foundations. This will be an important consideration during later phases of the project if blasting is necessary in the vicinity of structures.

Air blast refers to the compressional air wave caused by an explosive detonation. In addition to its direct effects, air blast can also generate fugitive dust. Impacts can be mitigated by limiting the quantity of explosives used and establishing sufficient buffer zones around blasting areas.

No impact to agricultural productivity is expected from development of Kahuku Village as the Site presently is not well suited for most agricultural pursuits, as reflected by its LSB rating of "E" and its unclassified status by the ALISH system.

### **3.4 NATURAL HAZARDS**

The Hawaiian Islands are susceptible to potential natural hazards, such as flooding, tsunami inundation, hurricanes, volcanic eruptions, wild fires, landslide/sea cliff erosion, and earthquakes. In 2005, the County of Hawai'i assessed these hazards, and developed a *Multi-Hazard Mitigation Plan*. This section provides an analysis of site vulnerability to such hazards.

#### ***Existing Conditions***

##### **3.4.1 Flooding**

Based on the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM), the Site is located in Flood Zone X, an area of undetermined flood hazard.

##### **3.4.2 Tsunami**

Twenty-five of the tsunamis recorded since 1812 had an adverse impact on the island of Hawai'i; seven caused major damage and three were generated locally. According to the *Hawai'i County*

## **Kahuku Village**

### Draft Environmental Impact Statement

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*Multihazard Mitigation Plan*, locally generated tsunamis are most frequent along the south coast, and the probability of impacts to Ka'ū-Puna districts are higher than in other areas. The 1946, 1960, and 1975 tsunamis generated waves that caused localized inundation and damage in the district of Ka'ū, east of Ka Lae, South Point and also in Halape. The most recent tsunami to impact Hawai'i island, which occurred on March 11, 2011, caused property damage at several locations on the Kona coast. There are, however, no records of inundation of developed lands in the Ka'ū district during any of the recorded tsunamis and there was no visible damage to vegetation at the Site from the March 11, 2011 tsunami.

The current tsunami evacuation zone, is in the process of being updated by the Hawai'i County Civil Defense Agency.

#### **3.4.3 Hurricane**

Since 1980, two hurricanes have had a devastating effect on Hawai'i. They were Hurricane 'Iwa in 1982 and Hurricane 'Iniki in 1992. In 2007, Hurricane Flossie threatened to reach Hawai'i, putting Hawai'i on a hurricane watch. The hurricane, however, was downgraded from a hurricane to a tropical storm after passing Hawai'i Island, 95 miles south of South Point (AP 2007). While it is difficult to predict such natural occurrences, it is reasonable to assume that future incidents are likely, given historical events. Several studies sponsored by the NASA Office of Earth Science have developed new models for estimating the probability of hurricanes in the Pacific. While the island of Hawai'i has not been in the direct path of a hurricane since recordation began in 1950, the models indicate that the island has a long-term hurricane hazard higher than any of the other islands.

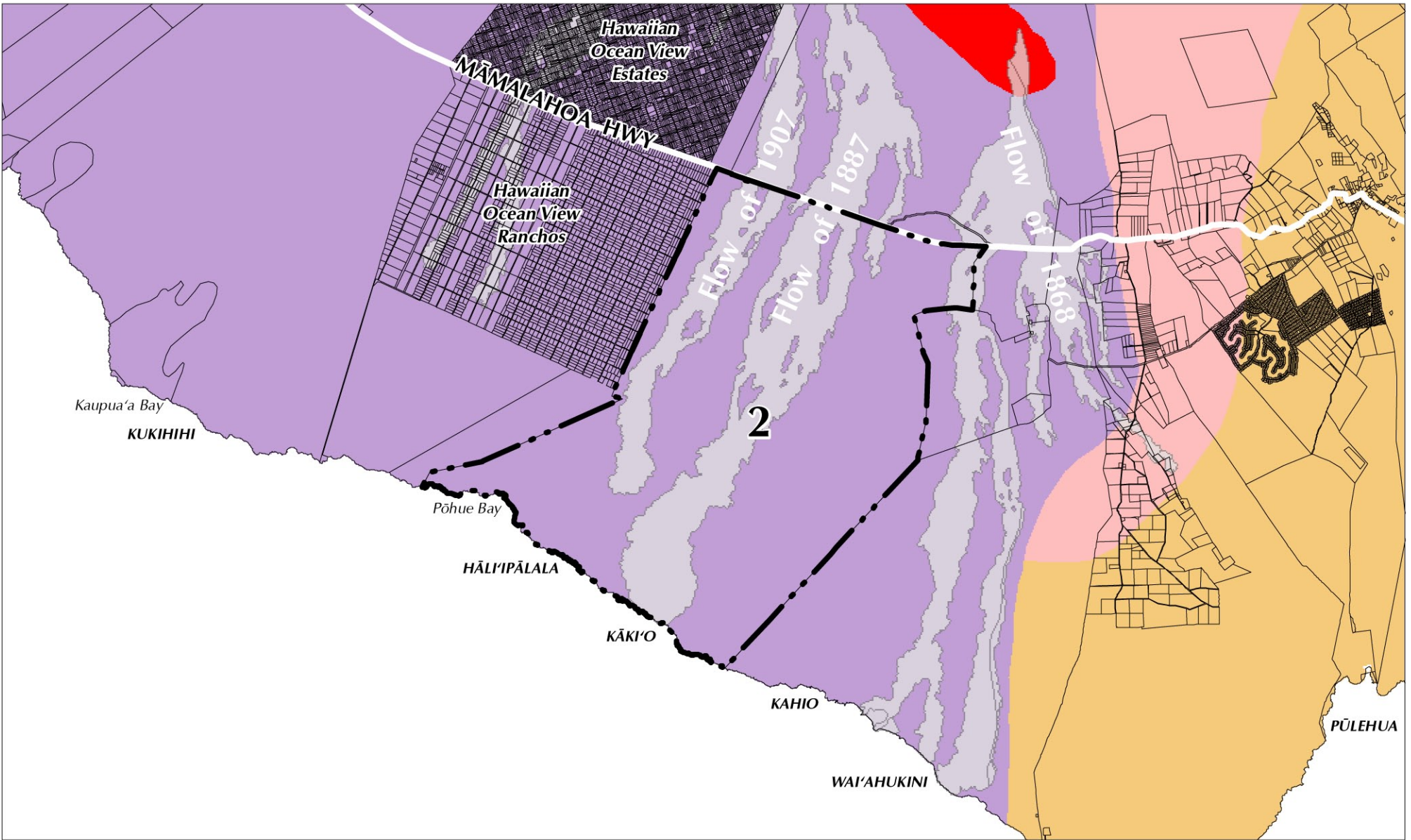
#### **3.4.4 Volcanic Hazards**

Based on probability of coverage by lava flows, the volcanic hazard zone map for Hawai'i Island divides the island into zones ranked from one (1) through nine (9), with one (1) being the area of greatest hazard and nine (9) being the area of least hazard. Other direct volcanic hazards such as tephra fallout, ground cracking and settling were not specifically considered in the development of the volcanic hazard zone map. These hazards, however, tend to be greatest in the highest lava flow hazard areas. The Site is located along the southwest flank of Mauna Loa. Mauna Loa, the nearest active volcano to the Site, has a summit caldera and two radiating rift /fracture zones. According to the volcanic hazard zone map (Figure 17), the Site is within Zone 2. Zone 2 consists of areas on both sides of the northeast and southwest rift zones. Since both of Mauna Loa's rift zones form prominent ridges, all the areas in Zone 2 are downslope of potential eruption sites. About 20 percent of this area has been covered by lava in historical time, five percent since 1950.

Hazard zones from lava flows are based chiefly on the location and frequency of both historic and prehistoric eruptions. Historic eruptions include those for which there are written records, beginning in the early 1800's, and those known from oral traditions. Knowledge of prehistoric eruptions is based on geologic mapping and dating flows of each volcano. The hazard zones also take into account topographic features of the volcanoes that will affect the distribution of lava flows. Finally, the hazard assessment is based on the assumption that future eruptions will be similar to those in the past.

Mauna Loa erupts less frequently than does Kīlauea, but it tends to produce a much greater volume of lava over a shorter period of time. Forty percent of Mauna Loa's surface is covered by





**LEGEND**

- |  |                            |  |                      |  |                 |
|--|----------------------------|--|----------------------|--|-----------------|
|  | Nani Kahuku 'Āina Property |  | Volcano Hazard Zones |  | 5               |
|  | 2010 Hawai'i TMK           |  | 1 - Highest Risk     |  | 6               |
|  | Major Roads                |  | 2                    |  | 7               |
|  | Historic Lava Flow         |  | 3                    |  | 8               |
|  |                            |  | 4                    |  | 9 - Lowest Risk |

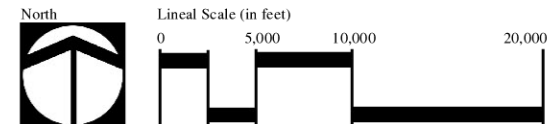
**FIGURE 17**

Volcanic Hazards

**KAHUKU VILLAGE**

Nani Kahuku 'Āina LLC

Ka'u, Hawai'i



Source: Hawai'i TMK, 2010 (GIS); U.S. Department of the Interior (GIS)  
 Disclaimer: This graphic has been prepared for general planning purposes only.

lava flows less than 1,000 years old. Nearly all of the Mauna Loa eruptions observed since the early 1800's began at its summit caldera; half of the eruptions stayed within the summit, roughly 25 percent moved to the northeast rift zone and roughly 25 percent moved into the southwest rift zone.

Between 1868 and 1950, lava flows from the southwest rift zone reached the ocean during five eruptions. Two of these flows entered the ocean in the Kahuku ahupua'a in the district of Ka'u. Flows from four of these eruptions traveled to the sea in three to 48 hours. Since 1900, Mauna Loa has erupted 15 times, with eruptions lasting from a few hours to 145 days. After the 1950 eruption, Mauna Loa was quiet for 25 years. It reawakened with a one-day summit eruption in 1975.

The most recent eruption of Mauna Loa occurred in 1984. This eruption originated at the summit and, within a few hours, migrated to the northeast rift zone. The resulting lava flows advanced to within four miles of Hilo before the three-week-long eruption ended. Similar short-duration eruptions of Mauna Loa's northeast rift zone in 1852 and 1942 produced flows that came within about the same distance of Hilo. In 1855, a much longer-lived eruption fed a flow that stopped half a mile east of the upper Kaumana area on the western outskirts of modern Hilo.

Lava flows present potential threats to homes, infrastructure, natural and historic resources, and entire communities. The areas exposed to the highest risk from lava flows are those situated down slope and in close proximity to the active rift zones. Steep slopes may allow lava flows to move quickly from the summit to the ocean in a matter of hours. Besides the direct threat of inundation, lava flows may also cut across a community's single roadway escape route limiting the amount of time available for evacuation. Between 1868 and 1950, five eruptions from Mauna Loa's southwest rift zone have reached the ocean. These flows traveled quickly and in at least one instance reached the ocean in three hours.

### **3.4.5 Earthquake**

In Hawai'i, most earthquakes are linked to volcanic activity, unlike other areas where a shift in tectonic plates is the cause of an earthquake. Earthquakes can also produce other ground failure hazards including liquefaction, landslide, subsidence and surface rupture. Earthquakes can also generate local tsunamis. Each year, thousands of earthquakes occur in Hawai'i, the vast majority of which are so small they are detectable only with highly sensitive instruments. However, moderate and disastrous earthquakes have occurred in the islands.

Since 1868, nine disastrous earthquakes have occurred in Hawai'i County. While several earthquakes occurred in Ka'u, none were centered within Kahuku Ahupua'a. The largest earthquake series occurred between March 27 and April 2, 1868 with an epicenter a few miles north of Pāhala in the district of Ka'u. It is estimated that the magnitude of these earthquakes were 7.1 and 7.9. These earthquakes resulted in 77 deaths (46 from tsunami and 31 from landslides triggered by the earthquake). In 1929, an earthquake with an epicenter in Hualālai and a magnitude of 6.5 resulted in extensive damage. Another earthquake in 1951, with its epicenter in Kona area and a magnitude of 6.9 also resulted in extensive damage. A recent series of earthquakes, with magnitudes of 6.7 and 6.0, occurred at Kīholo Bay on October 15, 2006. These earthquakes resulted in more than \$100 million in damages to the northwest area of the island (USGS, 2006). Within the District of Ka'u, the last major earthquake occurred in 1975. While the earthquake resulted in minimal property damage, it was the second largest recorded

earthquake in Hawai'i (magnitude 7.2). Two deaths occurred at Halape Beach from tsunami inundation, a result of the quake.

The Uniform Building Code (UBC) (Chapter 5 of the Hawai'i County Code), designates Hawai'i County into six seismic zones, ranging from 0 (no chance of severe ground shaking) to 4 (10 percent chance of severe shaking in a 50-year interval). The Site is located in Seismic Zone 4.

### **3.4.6 Wildland Fires and Drought**

Approximately 70 to 80 wildfires occur annually in Hawaii County. Droughts increase the vulnerability to wildfires. Due to the sparse vegetation on the Site, the potential fuel load to cause a wildfire is relatively low. Prevailing winds in the area, however, can exacerbate a wildfire should one start.

### **3.4.7 Sea Cliff Erosion**

The Site's five miles of coastline consist predominately of low sea cliffs. Sea cliffs are vulnerable to erosion from wave action and earthquakes.

### **3.4.8 Sea Level Rise**

Sea level rise due to climate change could pose a hazard to low-lying coastal developments. According to the University of Hawai'i Coastal Geology Group, the occurrence of global sea level rise is dependent on two factors: 1) melting ice on Antarctica, Greenland, and alpine glaciers, and, 2) thermal expansion of warming seawater. The Intergovernmental Panel on Climate Change has predicted that sea level could rise by 18 to 58 centimeters (7 to 23 inches) by the year 2100. Other published studies estimate that sea level could rise by 75 to 190 centimeters (30 to 75 inches) by the year 2100.<sup>1</sup>

### **3.4.9 Warning Sirens and Shelters**

The State of Hawai'i Department of Defense, Office of Civil Defense operates a system of civil defense sirens to alert the public of emergencies and natural hazards, particularly tsunamis and hurricanes. The County of Hawai'i currently has 68 sirens and 12 simulators in operation. There are two sirens located in the vicinity of Māmalahoa Highway in HOVE. Due to the limited range of these sirens (approximately one half-mile), the audible alarms will not reach all portions of the Site, and specifically will not reach any development along the coast. Should evacuation of the Site be necessary due to natural hazard conditions, the nearest evacuation center is located at the Nā'ālehu Community Center. Two additional emergency shelters located at the Ka'ū High/Pāhala Elementary School, and in HOVE are also available for non-hurricane disasters.

## ***POTENTIAL IMPACTS AND MITIGATION MEASURES***

Risks associated with natural hazards will be addressed as follows:

**Flooding.** Flooding does not presently occur at the Site due to the high permeability of the lava flows that dominate the Site's groundcover. The construction of impervious surfaces, such as

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<sup>1</sup> School of Ocean and Earth Science and Technology website. [www.soest.hawaii.edu/coasts/sealevel/](http://www.soest.hawaii.edu/coasts/sealevel/)

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roads and structures, will increase the quantity of stormwater runoff and create the potential for localized flooding. During the project's design phase, a Drainage Master Plan will be developed to specify design criteria and stormwater management strategies that are to be implemented. The Drainage Master Plan will be based on a detailed topographic survey and proposed mass grading of the Site and will consider Low Impact Development techniques, infiltration and stormwater system sizing criteria, detention/retention analysis, flood analysis, and drainage system schematics and plans.

**Tsunami.** Establishment of the proposed shoreline conservation area, extending at least 300 feet inland from the shoreline, will help to reduce the risk of property damage in the event of a tsunami. The County Civil Defense will be a consulted party for the Draft EIS. Warning or response measures deemed necessary by the Civil Defense will be incorporated into the project's design.

**Hurricane.** The potential threat to structures or public safety from hurricane events will be mitigated through compliance with the Hawai'i County Code, which incorporates hurricane protection measures.

**Lava Flow.** The occurrence of a lava flow that could threaten the Site is not predictable. Given the unpredictable nature of lava flows, the most appropriate mitigation measure is to provide warning as early as possible in the event of an impending flow. Factors affecting the warning time include the location of the erupting vent, rate of lava production, duration of the eruption, and local topography. The Hawaiian Volcano Observatory, in conjunction with Hawai'i County Civil Defense and other county agencies, are on standby to provide warning and evacuation notice when an eruption occurs. Civil defense warning sirens will be installed at Kahuku Village to notify residents as early as possible of impending hazards. Appropriate disclosure statements will be provided to buyers at Kahuku Village informing them of the potential risk. Kahuku Village's TIAR evaluated the time that would be required to evacuate Kahuku Village in the event of an evacuation notice. The analysis determined that about 4 to 5 hours would be required to evacuate Kahuku Village. This assumes that other communities in Ka'ū (Oceanview, Nā'ālehu, Pāhala) are also evacuating and that emergency measures, such as enabling one-way flow on Māmalahoa Highway, are implemented.

**Earthquake.** Prior to the project's design phase, an earthquake engineering study will be prepared to determine if any project specific structural design criteria are necessary. The potential threat to structures from earthquakes will be minimized through recommendations of the study as well as compliance with requirements of the Uniform Building Code (UBC), appropriate to the Zone 4 Seismic Probability Rating and other County, State, and Federal standards.

**Wildfire.** The threat of wildfire to the Mixed-Use Village or Hawaiian Heritage Center is considered to be relatively low due to the sparse vegetation on the majority of the Site. However, where the threat of wildfire exists, firebreaks will be maintained along roadways and developed sites. The County of Hawai'i Fire Department will be consulted during the design phase of the project to determine measures that should be implemented to reduce the threat of wildfire.

**Sea Cliff Erosion.** The risk to structures and public safety from sea cliff erosion will be minimized through establishment of a shoreline conservation area and establishing a building setback of at least 300-feet inland from the shoreline.

**Sea Level Rise.** Rising sea levels could pose a risk to all coastal developments. Risks at Kahuku Village will be minimized due to the presence of coastal cliffs and rapidly rising coastal topography along much of the shoreline. In addition, habitable structures at Kahuku Village would be set back at least 300-feet from the shoreline, and at this distance most structures would be located at least 20-feet above sea level.

### **3.5 GROUNDWATER RESOURCES**

In West Hawai'i groundwater resources and the nearshore marine environment are inextricably connected because groundwater enters the ocean from numerous points along the coast. This is a result of many subsurface pathways through porous lava for groundwater to reach the ocean.

The Site consists of unweathered 'a'ā and pāhoehoe lava flows which are devoid of any significant ash, soil, or vegetative cover, and are therefore of extremely high permeability. Surface runoff as a continuous flow does not occur even in the most extreme rainfall events. Rainfall either evaporates or becomes groundwater recharge.

The nearshore waters off the Property are classified as "AA" by the State DOH. According to DOH Water Quality Standards, "It is the objective of class AA waters that these waters remain in their natural pristine state as nearly as possible with an absolute minimum of pollution or alteration of water quality from any human-caused source or actions" (HAR §11-54-03(c)(1)).

Tom Nance Water Resource Engineering (TNWRE) prepared an assessment on the potential impact of Kahuku Village on groundwater resources in April 2011. Appendix A contains the entire report. The assessment determined that based on data from wells drilled in the region and on geophysical studies conducted for Kahuku Village, groundwater beneath the Site and extending inland above Māmalahoa Highway occurs as a basal lens in hydraulic contact with saline water at depth and seawater at the shoreline. At inland locations in the vicinity of Māmalahoa Highway, the groundwater is fresh (50-100 MG/L). Salinity increases toward the ocean and is about 300 MG/L at the 1,000-foot elevation and about 750 MG/L at 600-foot elevation.

Based on what is known, or can plausibly be presumed, Mauna Loa's southwest rift zone and the coincident Pali O Māmalu fault create a hydrologic boundary for the east end of the basal groundwater occurrence in and above the Site. As such, it delineates the upper end of the watershed which contributes rainfall-recharge to basal groundwater that would be utilized and impacted by Kahuku Village. The groundwater assessment determined that rainfall-recharge is approximately 3.2 mgd per mile of width at the 1,000-foot elevation, and 3.7 mgd per mile of width discharges into the ocean along the shoreline.

Water quality sampling from wells in the vicinity of the Site was performed to determine the existing concentration of dissolved nutrients (nitrogen and phosphorus) as they can be indicators of human inputs, and can be pollutants of concern. A basic assumption is that groundwater in the inland portion of the watershed moves toward and ultimately discharges at the shoreline. As water moves toward the shoreline, dissolved nutrients may be supplemented by natural or human introduced inputs, or consumed (depleted) by natural processes. Mixing line analyses was performed for five sites along the shoreline. Water samples from wells, anchialine ponds, and the shoreline will measure above the mixing line if their nitrogen or phosphorus levels have been

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supplemented as the groundwater traveled toward the coast, or will measure below the mixing line if nitrogen and phosphorus have been depleted.

The analyses found that at the anchialine ponds at Kanonone, the site most likely to be influenced by inputs from Hawaiian Ocean View Ranchos, both nitrogen and phosphorus are slightly depleted. Further south in the vicinity of Kahakahakea, nitrogen is depleted but phosphorous is generally supplemented. At three intervening sampling sites at the shoreline between Kanonone and Kahakahakea, nitrogen is generally unchanged or slightly depleted and phosphorus is either unchanged or slightly supplemented. Anomalous water quality samples were taken at two wells located in Hawaiian Ocean View Ranchos, indicating the complexity of the groundwater occurrences in the vicinity of the Site. At one well, located at about 1,000-foot elevation, water was almost devoid of nitrogen, slightly enriched with phosphorus, and had a silica level that was less than half the concentrations of other well samples. At a down-gradient well at about the 600-foot elevation, nitrogen and phosphorus were somewhat depleted but silica levels were normal.

### ***POTENTIAL IMPACTS AND MITIGATION MEASURES***

#### **Proposed Potable and Non-Potable Water Systems**

Since the water underlying the Site is brackish, potable water for Kahuku Village is proposed to be supplied by desalinated salt water and irrigation water is proposed to be supplied by brackish-water irrigation wells. The preferred method of desalination for Kahuku Village is reverse osmosis, which involves the use of a semi-permeable membrane to remove dissolved solids, including salt, in brackish and salt water. The reverse osmosis process results in the production of several by-products that require disposal. The largest by-product by volume is concentrated brine, which for salt water desalination is approximately 60% of the feed water supply. In addition to brine, there are also by-products resulting from the pre-treatment of feed water and from backwash and cleaning of the membranes. Disposal of brine and other by-products will be through an injection well.

To protect underground drinking water sources, the State DOH regulates the location, construction, and operation of injection wells through its Underground Injection Control (UIC) regulations. The injection wells will be located makai of the UIC line, where injection wells are permitted, and will be constructed and operated in accordance with DOH's UIC regulations.

Separate potable and non-potable water systems will be constructed. The potable water system will be supplied by three salt water wells and one backup well located near the main access road at the 330-foot elevation level. The wells will be about 600-feet deep and spaced 200-feet apart and will pump water at a maximum rate of 1,000 gallons per minute (gpm) each. Water from the wells will be pumped to a reverse osmosis treatment plant and potable water from the plant will be pumped to a reservoir to be located at the 340-foot elevation level.

The non-potable water system will be supplied by six brackish water wells located near the main access road at the 1,000-foot elevation level. The wells will be about 1,000-feet deep and spaced 1,500 feet apart and will pump water at a maximum rate of 330 gpm each.

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### Basal Groundwater Flowrate

Development of Kahuku Village will use and change the basal lens underlying the Site. The reverse osmosis feedwater supply wells and disposal and brine disposal wells will also use and change the body of saline groundwater that exists beneath the basal lens.

In assessing groundwater impacts, the groundwater assessment used the following assumptions:

- The pre-development quantity of basal groundwater discharging along the 4.25-mile wide shoreline encompassing the Mixed-Use Village is 3.7 MGD per coastal mile, or 15.7 MGD total.
- The withdrawal of basal groundwater from the irrigation wells at the 1,000-foot elevation level will range from 0.166 MGD in Phase 1 of Kahuku Village to 1.289 MGD at full build-out.
- An allowance of 12 percent for leakage and unmetered use has been incorporated into the potable and irrigation system supply amounts. It is assumed that all 12 percent of this allowance returns to groundwater.
- Irrigation return flow will be 10 percent.

Based on the above assumptions, the reduction in basal flowrate along the Site's shoreline would be about 0.7 percent in Phase I and about 5.2 percent at full build-out. With regard to consumption of saline groundwater, when considering withdrawals of saline groundwater for desalinization and return of hypersaline brine, the net consumptive use of saline groundwater is estimated to be 0.178 MGD in Phase 1 and 1.093 MGD at full build-out. However, unlike the limited supply of basal groundwater, the supply of saline groundwater is essentially unlimited and, with proper well design, its consumption should have no impact on the overlying basal groundwater.

### Water Quality

The State DOH, Safe Drinking Water Branch, regulates new public water systems, such as the water system proposed to serve Kahuku Village. All new public water systems must undergo a source water assessment that delineates a source water protection area. Any potentially contaminating activity (PCA) proposed in a source water protection area must implement measures to reduce or eliminate contamination of the drinking water source. As PCA's include a wide range of urban land uses such as gas stations, utility stations, sewer lines, car washes, and golf courses it is probable that PCAs will be located within Kahuku Village. Impacts to groundwater from PCAs will be mitigated by complying with Federal and State environmental regulations related to groundwater quality. This will include the preparation of an engineering report to be approved by the DOH identifying all potential sources of contamination and evaluating alternative control measures that could reduce or eliminate the potential for groundwater contamination.

In addition to complying with regulatory requirements, Nani Kahuku Aina is considering other methods that can prevent impacts to basal and coastal water quality. Measures that may be implemented include the following:

- Use of a Low Impact Development (LID) drainage system to accommodate Kahuku Village's stormwater runoff. LID drainage systems promote stormwater percolation,

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rather than discharging stormwater into surface waters. More information regarding LID techniques that may be implemented is provided in section 4.8.3.

- Require that the proposed golf course be operated in compliance with Audubon International standards. Audubon International programs establish standards to prevent and minimize the potentially harmful environmental effect of golf course operations.
- Educate residents and businesses about the proper application of pesticides and herbicides and the potential environmental impacts that can occur from the misuse of pesticides and herbicides.
- Require the use of products such as Termi-mesh, Basaltic Termite Barrier and the Sentricon “bait” system to provide long term protection from termite damage and prevent potential environmental effect from the improper application of termite pesticides;
- Require for termite protection the use of non-toxic alternatives to pesticides and herbicides, such as Borate treated lumber, Basaltic Termite Barrier, stainless steel termite barrier mesh, and termite resistant materials;
- Educate residents and businesses about the proper disposal of household hazardous waste and of County programs to collect and dispose of hazardous waste.
- Establish buffer zones around anchialine ponds and coastal waters in development and site disturbance will be restricted.

With regard to dissolved nutrients, the groundwater assessment report considered water withdrawal and groundwater recharge rates, existing nitrogen and phosphorus levels, the application of fertilizer at landscaped areas and the golf course, nutrients that may be Kahuku Village’s treated wastewater, and removal of nitrogen and phosphorus by natural processes. The assessment concluded that the amount of nitrogen and phosphorous in groundwater withdrawn by the brackish wells will be greater than the amounts returned by irrigation return water, leakage, and surface runoff that becomes groundwater recharge. Thus, development of Kahuku Village will result in a reduction, rather than an addition of nutrients to groundwater, and hence also to basal groundwater that discharges near the shoreline.

### **3.6 NEARSHORE MARINE ENVIRONMENT**

Marine Research Consultants prepared an assessment of the nearshore marine and anchialine pond environments adjacent to Kahuku Village in May 2011. The assessment found that the marine environment is of high quality and has been largely unaffected by most human activity. The report is summarized below. Appendix B contains the entire report.

#### **3.6.1 Nearshore Marine Waters**

##### **3.6.1.1 Physical Setting**

The physical setting of the offshore region varies throughout the length of the Site. The shoreline consists of either vertical sea cliffs formed when lava flows reached the sea, or sloping sand and cobble beaches. Several black sand and coral cobble beaches occur on the Site,



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although Pōhue Bay is the only well-defined white sand beach. Keliuli Bay is the only other well defined shoreline feature consisting of a narrow steep-sided bay at the base of a cinder cone.

Underwater topography is characterized by a narrow basaltic shelf terminating in a shelf break that descends as a sharp sandy slope devoid of most biota that extends to abyssal depths. A characteristic of the offshore area is the relative scarcity of reef flats or intertidal shallows, as waters drop to depths of 10 to 15 feet at the base of the shoreline cliffs. A relatively unique feature in the vicinity of the Site is the narrowness of the nearshore reef terrace and proximity of the reef slope drop-off to the shoreline. In many areas, the nearshore platform is only 50 to 70 feet wide and within 100 feet of the shoreline the offshore slope reaches depths greater than 200 feet.

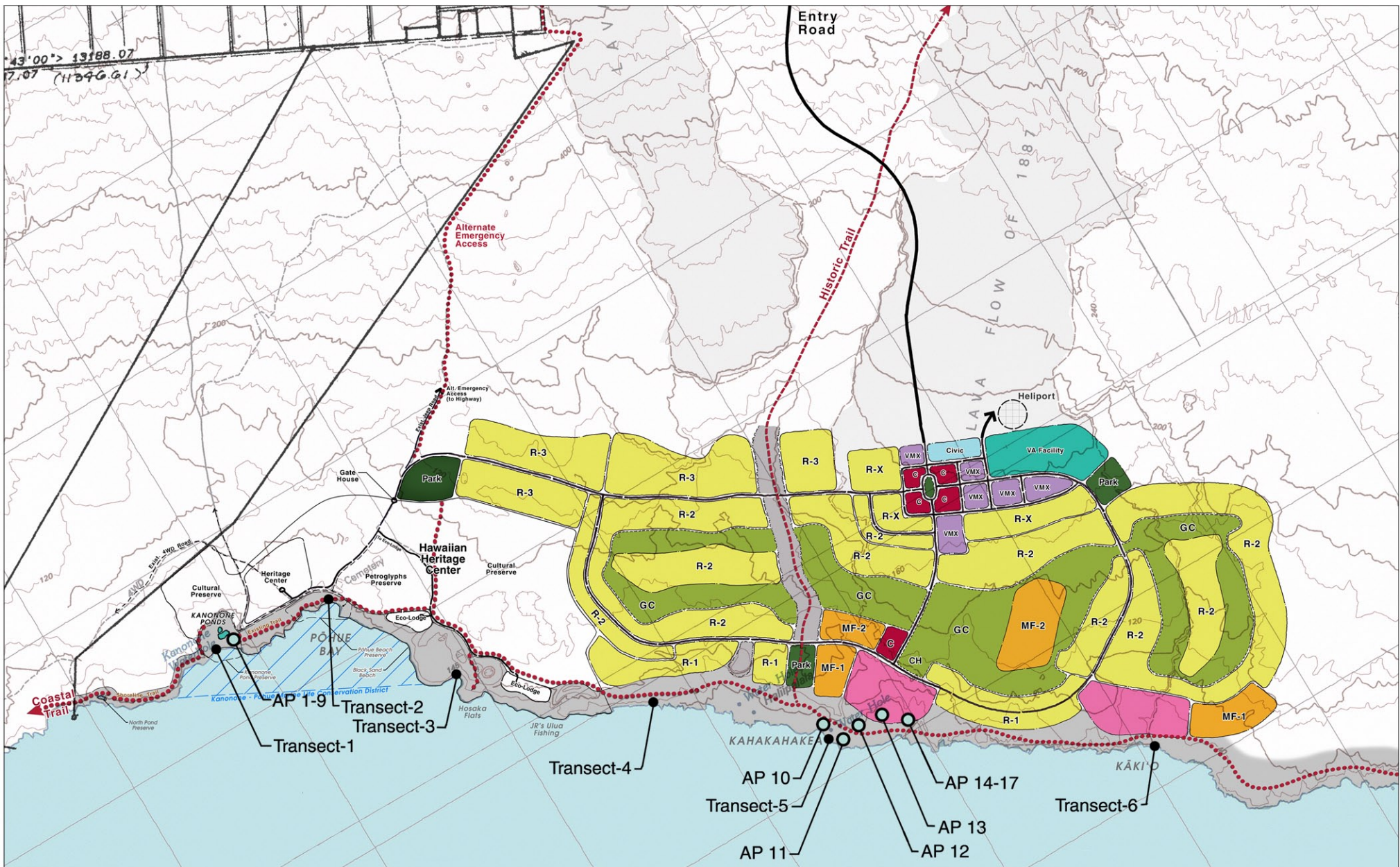
The nearshore reef terrace provides the settling surfaces for reef corals, which comprise the dominant benthic biota. Near the shoreline, topographic features such as caves and arches are common. The seaward edge of the nearshore reef terrace is generally composed of steep vertical basalt cliffs.

#### **3.6.1.2 Marine Water Quality**

Field investigations of the nearshore marine environment and anchialine ponds in the vicinity of Kahuku Village were conducted in April 2009 and March 2011. Water quality samples were collected along six transects perpendicular to the shoreline, extending from the shoreline to approximately 100-200 meters offshore (see Figure 18). The samples were analyzed for all specific constituents of DOH water quality standards. Relative to the DOH specific criteria for Open Coastal Waters, waters off Kanonone Pond and Pōhue Bay exceed standards, particularly for nitrate+nitrite nitrogen ( $\text{NO}_3$ ). However, the exceedances appear to be due to naturally occurring groundwater as groundwater typically contains elevated nutrient concentrations (particularly  $\text{NO}_3$  and total nitrogen) relative to open coastal water, and the DOH standards presently do not include considerations for such natural factors. The DOH does have a special set of standards applicable to West Hawai‘i that accounts for the effect of naturally occurring groundwater, however, the applicable boundary for the West Hawai‘i standards does not extend to Kahuku Village. If the West Hawai‘i standards were applicable, there would be no exceedances for nitrate nitrogen, which is the chemical constituent that is most commonly affected by land use activities. Thus, while there may be exceedances of DOH water quality standards, this does not necessarily indicate that nearshore marine waters are impaired.

#### **3.6.1.3 Benthic Marine Structure**

Coral communities offshore of the Site are typical of the assemblages found throughout West Hawaii, with the reef bench populated predominately by two major species (*Pocillopora meandrina* and *Porites lobata*). Overall, coral cover in the area is about 50% of bottom cover, with all areas of hard bottom beyond the surf zone occupied with healthy coral. A distinguishing feature of the reef is the occurrence of several exceptionally large colonies of *P. lobata*, estimated to be several centuries old. The assessment found that as a whole, the benthic communities offshore of the Site represent a pristine assemblage of typical Hawaiian reef organisms. Although with the exception of the occurrence of the large colonies of *P. lobata* on the reef bench, none of the communities represent what could be considered rare or unique ecosystem components.



**LEGEND**

- Anachialine Pond (AP #)
- Ocean Transect (Transect-#)
- R** Rural Residential Lots
- MF** Multi-Family
- VMX** Village Mixed-use
- VA** Veteran Administration Facility
- Park** Park
- GC** Golf Course (18 Holes)
- CH** Golf Course Clubhouse
- Civic** Civic / Medical
- Hawaiian Heritage Center**
- Shoreline Conservation (Coastal Open Space & Cultural Preserve)**
- Potential Airport / Heliport**
- Existing & Proposed Trails**

**FIGURE 18**  
 Marine Survey Transects and Anachialine Pond Locations  
**KAHUKU VILLAGE**

Nani Kahuku 'Aina LLC  
 Ka'u, Hawai'i

North

Linear Scale (in feet)  
 0 1,250 2,500 5,000

**PBR HAWAII & ASSOCIATES, INC.**

Source: PBR Hawaii; Marine Research Consultants, Inc.  
 Disclaimer: This graphic has been prepared for general planning purposes only.

### **3.6.1.4 Reef Fish Community Structure**

A rich and diverse fish community typical of West Hawai‘i was found in all reef areas offshore of the Site. The highest concentration of fish occurred at or near areas containing areas of greater bathymetric relief, especially along drop-offs, ledges and large coral colonies. A total of 66 species of fish were observed. Inshore areas tended to have greater number of species but fewer individuals than deeper areas, which may be due to the relative less complex habitat compared to the outer reef area.

Several representative groups of reef fish were especially abundant. Algal-feeding Acanthurids were the most numerous single group of fishes observed (284 individuals). At depths greater than 30 feet, the species *Zebrasoma flavescens* (yellow tangs), and *Ctenochaetus strigosus* (orange-eye) were particularly abundant. At shallower sites, *Acanthurus nigrofuscus* (brown surgeonfish) were the most common species.

Planktivorous damselfishes, principally of the genus *Chromis*, were also abundant (484 individuals). The species *Chromis hanui* and *C. verator* predominated at the outer edge of the reef shelf and into deeper water over the reef slope, whereas *C. vanderbilti* was the dominant species in shallow water. The triggerfishes *Melanichthys* spp. were commonly seen congregating in the water column. Juvenile reef fishes were most abundant at the deeper reef habitats within the matrix created by branching stands of *Porites compressa*. The lattice structure formed by this coral provides a sheltered refuge for small fish. Juveniles belonged mostly to the family Acanthuridae (surgeonfishes), with representatives from the families Labridae (wrasses), Mullidae (goat fishes), and Chaetodontidae (butterfly fishes). In areas where coral rubble was abundant, common fishes included the angelfish (*Centropyge potteri*), and several wrasses, notably *Pseudochilium tetrataenia* and *P. octotaenia*. A few large kahala (*Seriola dumerillii*) were also noted in the deeper regions of the reef.

The marine assessment found that although the coastline along the project area harbors an abundant and diverse fish fauna, it is also apparent that the area is subjected to fairly high fishing pressure considering the remote location of the site. Although individuals of the introduced blue-spotted grouper (*Cephalopholis argus*) were seen, size and abundances of fishes considered good "food fish" clearly indicated heavy fishing pressure. Relatively few carangids (i.e. jacks, pāpio) were sighted, although several small ‘ōmilu (*Caranx melamphygus*) were sighted in inshore areas where water turbulence was high. Similarly, the scarcity of larger goatfishes and parrotfishes suggests that these species are impacted by fishing pressure. Inspection of rocky ledges and coral heads revealed fair numbers of squirrelfish, but less than would be expected in an unfished area. Few spiny lobsters were observed. Although limpets were large and abundant along particularly rugged parts of the coastline, substantial harvesting of this commercially valuable species had clearly occurred in areas which were accessible by land. Significant spearfishing activity almost certainly occurs at reef sites easily accessible from the shoreline, such as Pōhue Bay, and the beach fronting Kanonone. Parrotfishes and larger surgeonfishes in these areas were especially wary of divers. Commercial fishermen are also known to work this area of coastline by setting gill nets in shallow areas and traps in deeper areas. Small boat fishermen are also reported to work the area at night during periods of calm weather using small feather lures to catch squirrelfish (menpachi). It also appears that the development area has been subjected to collection of reef fishes for sale to aquarium hobbyists, as several groups of target species were relatively rare (e.g., yellow tangs [*Zebrasoma flavescens*], and long-nosed butterflyfish [*Forcipiger longirostris*]).

### **3.6.1.5 Threatened and Endangered Species**

Threatened or endangered marine animals that may occupy nearshore marine waters in the vicinity of the Site include the threatened green sea turtle (*Chelonia mydas*), the endangered Hawksbill turtle (*Eretmochelys imbricate*), and the endangered Hawaiian monk seals (*Monachus schauinslandi*). The green sea turtle occurs commonly throughout Hawaiian waters, although surprisingly they were not observed during fieldwork for the marine assessment. The Hawksbill turtle is found infrequently in West Hawai'i waters. Pōhue Bay, however, is one of the most productive nesting sites in the State for the Hawksbill turtle and according to the *Hawai'i Island Hawksbill Nesting Habitat Management Final Report, December 2010*, during the 2009 nesting season about 1,260 hatchlings reached the ocean at Pōhue Bay. Hawksbill turtle activity has also been documented at Kahakahakea and at the black sand beach north of Keliuli Bay. Peak nesting season for the Hawksbill turtle primarily occurs between June and December, although nesting as soon as March can occur.

The Hawaiian monk seal was not observed during fieldwork for the marine assessment but is known to inhabit waters in the Ka'ū area. The Hawaiian monk seal has been observed hauling out at Kahakahakea, Hāli'ipālala, Pōhue Bay, and the rocky beach at Kanonone.

In addition to the above nearshore species, the endangered humpback whale (*Megaptera novaeangliae*) spends the winter months in Hawai'i and may occupy deeper waters offshore of the Site.

### **3.6.2 Anchialine Ponds**

Anchialine ponds are shoreline depressions without a surface connection to the ocean that contain water of measurable salinity. Salinity within anchialine ponds fluctuate with the rise and fall of the tides. There are 17 anchialine ponds along the coast fronting Kahuku Village (see Figure 18). Ponds 1 to 9 represent the most substantial pond ecosystem on the Site. Ponds 10 to 17, located further south, constitute a complex of relatively young ponds in relatively recent lava flows.

#### **3.6.2.1 Anchialine Pond Water Quality**

Anchialine Pond water quality was sampled for nutrients, pH, salinity, and turbidity. The sampling indicates that the water quality of the Kahuku Village anchialine ponds are within the average range of west Hawai'i anchialine ponds. The ponds are exceptionally clear, indicating that they are largely devoid of suspended sediment and planktonic organisms. Similar to other anchialine ponds, nutrient concentrations of all inorganic nutrients ( $\text{NO}_3$ , silica (si), and orthophosphate ( $\text{PO}_4^{3-}$ )) are substantially elevated compared to open coastal waters. This is due to the overwhelming contribution of groundwater compared to ocean water. However, although nutrient concentrations are high, water column plankton concentrations are low indicating that phytoplankton growth is restricted by the rapid turnover of water in the ponds relative to plankton growth rates. State DOH water quality standards exempt anchialine ponds from meeting specific water quality criteria as it is recognized that nutrient concentrations vary substantially due to groundwater input.

### **3.6.2.2 Anchialine Pond Biota**

Anchialine ponds are characterized by a unique assemblage of organisms of relatively low species diversity. There are nine representative species including four shrimp (*Halocaridina rubra* or ‘ōpae ‘ula, *Metabetaeus Iohena*, *Palaemon debilis* or ‘ōpae huna, and *Macrobrachium grandimanus* or ‘ōpae ‘oeha‘a), three snails (*Assiminea nitida*, *Melanoides* sp., *Theodolus cariosa*), and two native fish (*Eleotris sandwicensis* and *Kuhlia sandwicensis*). Two of the shrimp species, *Halocaridina rubra* and *Metabetaeus Iohena* are considered rare and found only in anchialine ponds. *Metabetaeus Iohena* is a candidate for listing as endangered or threatened.

All three of the snail species were present in the Kahuku Village ponds and at least one of the four species of shrimp were present in each pond. *Halocaridina rubra* occurred either commonly or abundantly in all but two of the ponds and *Metabetaeus Iohena* was observed in twelve of the pools, but at lower numbers than *Halocaridina rubra*. Fish inhabiting the anchialine ponds were sparse, with the exception Kanonone Pond, the largest of the anchialine ponds. Fish in Kanonone Pond included a goby *Eleotris sandwicensis*, “āholehole” *Kuhlia sandwicensis*, several damselfish, and a surgeonfish. Notably, exotic fish species such as topminnows, tilapia and guppies were not observed in any of the Kahuku Village ponds.

### **POTENTIAL IMPACTS AND MITIGATION ISSUES**

As discussed in Section 3.5 (Groundwater Resources), engineering analysis indicates that there will only be small reductions in both groundwater discharge and nutrient discharge to the nearshore ocean with development of Kahuku Village. The marine and anchialine pond assessment determined that the changes will have no significant adverse impact to marine or anchialine pond communities.

Direct discharges of stormwater runoff into marine waters or anchialine ponds are not expected to occur due to the high permeability of lavas at the Site. In addition, establishment of a shoreline conservation management area extending at least 300-feet inland from the shoreline in which no development will occur will help to prevent impacts to marine waters.

During construction, BMPs will be implemented to prevent impacts to coastal waters. Construction BMPs will be specified in Kahuku Village’s National Pollutant Discharge Elimination System Permit(s) and may include installation of silt fences, directing runoff to sedimentation basins, establishing temporary ground cover, and minimizing and phasing grading. Permanent BMPs will also be implemented to accommodate storm water runoff typically associated with increasing impervious surfaces. The permanent BMPs may include implementing low-impact development drainage strategies, and directing runoff to the golf course, low areas, retention/detention basins, or injection wells. Stormwater runoff will not be discharged directly into the ocean.

The Applicant will continue to partner with the U.S. Fish and Wildlife on the Hawai‘i Island Hawksbill Turtle Recovery project. Visitors accessing the shoreline area either through the Hawaiian Heritage Center or resort sites will be educated about rare, threatened, and endangered marine species and activities that may affect species and their habitat. While public access to the shoreline will be made available, shoreline access will be managed by the Hawaiian Heritage Center or community association to prevent overuse of marine resources and degradation of the coastal environment. Foot traffic and activities near Hawksbill turtle nesting grounds will be especially monitored and regulated during the turtle nesting season. Activities that may impair

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the marine environment such as campfires, trampling of vegetation, compacting sand near turtle nesting sites, allowing pets to run off-leash, feeding feral animals, or use of off-road vehicles will not be allowed. A regular schedule of trash-pick up and litter control will be implemented. A konohiki-inspired Integrated Natural and Cultural Resources Management Plan will be prepared and implemented by the Hawaiian Heritage Center to protect marine resources and the anchialine ponds along the length of the Site's coast.

As shoreline lighting can disorient sea turtles, lighting near the shoreline will be shielded and the lowest light output necessary will be used near the shoreline. Lights shining directly into the ocean will be prohibited. Residents and workers at Kahuku Village will also be educated about the potential adverse impact of lighting on migratory seabirds and turtles.

### 3.7 FLORA

LeGrande Biological Surveys Inc. prepared a botanical resource assessment in March 2011. Field surveys were conducted in December 2010 and January 2011 for lands proposed for the Mixed-Use Village, Hawaiian Heritage Center, and the Community Facilities Reserve. Appendix C contains the complete report.

The survey found that the entire area is characterized by barren 'a'ā and pāhoehoe lava composed of prehistoric lava flows. Pockets of thin topsoil or ash and cinder and some sandy beach areas support most of the plant life. A total of 83 plant species were observed within the surveyed area; 48 alien species, 22 indigenous species and 13 endemic species. A description of the vegetation communities is as follows.

#### **Makai Area (Proposed Mixed-Use Village and Hawaiian Heritage Center)**

##### Coastal Vegetation

The coastal vegetation was clustered around the anchialine and tidal pools and at the few sandy beaches along the mostly rocky coastal cliffs that dominate the five miles of oceanfront within the survey area. Vegetation scattered along the rocky coastal areas was scant and included plants such as pigweed (*Portulaca oleracea*), 'ākulikuli (*P. pilosa*), fountain grass (*Pennisetum setaceum*), and 'uhaloa (*Waltheria indica*). The highest densities of vegetation by far were found at an unnamed northern pond, Kanonone pool complex, Hāli'ipālala ponds, and Pōhue Bay. Tree species at these areas included, coconut (*Cocos nucifera*), milo (*Thespesia populnea*), kou (*Cordia subcordata*), and hala (*Pandanus tectorius*). One tropical almond (*Terminalia catappa*) tree was located at the Hāli'ipālala pond. Several shrubs including Christmas Berry (*Schinus terebinthifolius*) and sourbush (*Pluchea carolinensis*) formed thick masses around sections of some of the ponds.

An introduced morning glory (*Ipomoea violacea*) was found growing over much of the low growing shrubs at both the northern and Kanonone ponds. Other Weedy species mixed in amongst the pond and beach vegetation included natal redbud (*Melinis repens*), love-in-a-mist (*Passiflora foetida*), buffelgrass (*Cenchrus ciliaris*), common sandbur (*C. echinatus*), and *Boerhavia coccinea*.

Several native sedges, mau'u 'aki'aki (*Fimbristylis cymosa* subsp. *umbellato-capitata*), makaloa (*Cyperus laevigatus*), and 'uki (*Cladium jamaicense*) were dominant along with the hala at the edges of the brackish ponds. The mau'u 'aki'aki were also found scattered along the rocks between the ponds. Several of the ponds have submerged masses of the native widgeon grass

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(*Ruppia maritima*), a native aquatic flowering plant. A native morning glory, Pōhuehue (*Ipomoea pes-caprae* subsp. *brasiliensis*) was the dominant groundcover at the ponds as well as the sandy beaches of Pōhue Bay, Hāli‘ipālala, Kahakahakea, and Kahiola. A few pua kala or native poppies (*Argemone glauca*) were located at Pōhue Bay.

#### Cinderland Vegetation

Sections of the coastline are characterized by cinderland; formed when hot lava reached the sea and the explosive reaction threw debris up into the air and formed littoral cones composed of fine ash and cinder material (Macdonald & Abbott, 1970). Plant densities rise in the cinderland areas compared with the ‘a‘ā and pāhoehoe dominated regions as the plants have better substrate for growing. The areas around Pu‘u Kī and Pu‘u Kahakahakea are composed of cinderland. The dominant species observed within these areas included introduced grass species such as lovegrass (*Eragrostis amabilis*), fountain grass, natal redtop, and barbwire grass (*Cymbopogon refractus*). The native ‘uhaloa was by far the most abundant plant observed in this vegetation type. Other native plants observed in the cinderland, but rarely seen, include pua kala and kākonakona grass (*Panicum torridum*).

A large depression just inland of Pu‘u Ki greened after the December 2010 rains, sprouting with an introduced sedge *Bulbostylis capillaries*. The sedge was observed throughout the property during the follow-up January 2011 survey in areas that pooled water and had sufficient ash.

#### Lava

Large portions of the makai survey area are covered with pāhoehoe and ‘a‘ā lava fields. Much of this substrate type was devoid of vegetation, but several hardy plant species such as sourbush, natal redtop, and ‘uhaloa were scattered sparsely throughout. Several large ground cracks were found during the survey in the lava fields most with water in the bottoms. Individuals of the introduced sword fern (*Nephrolepis brownii*) were scattered along the internal walls of the cracks along with lovegrass.

A depression of pāhoehoe and ‘a‘ā at an interface between the 1887 lava flow and Kahakahakea was dominated by sourbush. During the January survey a population of nohu (*Tribulus cistoides*) was discovered to have sprouted after the rains. Other plant species observed growing in the lava fields include tobacco (*Nicotiana tabacum*) and silverfern (*Pityrogramma calomelanos*).

#### **Mauka Area (Community Facilities Reserve)**

##### Pioneer ‘Ōhi‘a Forest

A prehistoric lava flow of ‘a‘ā dominates the area planned for the Community Facilities Reserve. The dominant tree, ‘ōhi‘a lehua (*Metrosideros polymorpha* var. *incana*) was sparsely scattered throughout the mauka survey area. Two other native tree species were encountered in the open lava. One mature maua (*Xylosma hawaiiense*) and one mature kōlea (*Mysine lanaiensis*) with several smaller trees clustered around it were growing together at the southeastern corner of the survey area. Both trees were about 25 to 30 feet tall and multibranched. Plants associated with the maua and kōlea included Christmas berry, broomsedge (*Andropogon virginicus*), buffelgrass, ‘ōhi‘a lehua, and ‘a‘ali‘i (*Dodonaea viscosa*).

Other plants encountered in the open lava included molasses grass (*Melinis minutiflora*), sourbush, lantana (*Lantana camara*), huehue (*Cocculus orbiculatus*), pukiawe (*Leptecophylla tameiameiae*), ‘ala‘alawainuiwahine (*Plectranthus parviflorus*), and ‘ena‘ena

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(*Pseudognaphalium sandwicense* var. *sandwicense*). Native ferns and fern allies observed were *Nephrolepis cordifolia*, kalamoho (*Pallaea ternifolia*), kumuniu (*Doryopteris decipiens*), and moa (*Psilotum nudum*).

Along Māmalahoa Highway several additional weedy species were prevalent including flora's paintbrush (*Emilia sonchifolia* var. *sonchifolia*), *Sida rhombifolia*, smutgrass (*Sporobolus indicus*), and knotweed (*Persicaria latifolia*). Native plant species along the highway included 'ilima (*Sida fallax*), 'a'ali'i and pāwale (*Rumex skottsbergii*).

#### Lama Forest

The richest area in terms of native plant species and density was at the northwestern corner of the mauka survey area. In a relatively small area, roughly 30 by 50 feet, is a small natural ravine that has been isolated by roadway building. Māmalahoa Highway borders the ravine to the north, the gravel road to the coast borders it to the west, and areas of flattened 'a'ā are to the south and east. The pocket of vegetation is dominated by natives such as lama (*Diospyros sandwicensis*), 'ōhi'a lehua, māmane (*Sophora chrysophylla*), 'ulei (*Osteomeles anthyllidifolia*), kolomona (*Senna gaudichaudii*), and kulu'i (*Nototrichium sandwicense*). A dozen or so lama trees up to 15 feet in height are scattered around the edges of the forest. Nearly every lama tree has a kulu'i shrub growing at the base or very near the base of the tree. Kolomona, an increasingly uncommon native, is relatively abundant and healthy in the area. The kolomona were in flower and fruit and the seed appeared to be viable.

One mature individual of halapepe (*Pleomele hawaiiensis*) was found in the Lama forest. The tree was about 25 feet tall and has multiple branches about half way up the trunk. The base of the trunk is split and appears that only half of it is alive. The individual appeared to be in fairly good health and had recently flowered and fruited. *Pleomele hawaiiensis* is listed as endangered by the U.S. Fish and Wildlife Service (USFWS, 2008).

A large number of feral goats were observed during the survey throughout the surveyed areas. The feral goats have an adverse effect on plants as the goats eat just about any type of greenery and can eat plants down to the roots.

In summary, the only rare, threatened, or endangered species identified by the survey was one individual halapepe tree in the mauka, northwest portion of the Site. The survey found that the makai portion of the property has significant natural resources at the coastal ponds, tidal pools and sandy beaches. Although no rare or endangered plant species were located in the makai portion of the property, the habitats are essential to the animals and invertebrates that utilize them. Pōhue Bay is an important turtle nesting site and the vegetation helps to stabilize the sandy strand which the turtles bury their eggs in. The anchialine and tidal ponds found at northern pond, Kanonone, Hāli'ipālala, and Kahakahakea are exceptional ponds that deserve protection from impacts such as increased use by humans, further invasive plant introductions, runoff into pools that could affect the current state that supports native biota such as the 'ōpae 'ula, damselflies, and sedges. These ponds have been rated by Maciolek and Brock (1974) as having exceptional natural value based on physical structure, diversity, representative aquatic communities, and unusual endemic species.

#### **POTENTIAL IMPACTS AND MITIGATION MEASURES**

The plant communities that may be impacted by a development in the makai and mauka portions of the property include the coastal pond vegetation, the cinderland vegetation, portions of the



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Pioneer ‘ōhi‘a forest and the Lama Forest. As recommended by the survey mitigation measures to be implemented include the following:

- Creation of a buffer or conservation zone around the coastal ponds and sandy beaches and limited access from the resort areas. The anchialine ponds and the sandy beaches of Pōhue Bay and Hāli‘ipālala where turtles nest may be impacted depending on the amount and intensity of human disturbance. To maintain the current natural resources of the project area, the least amount of human disturbance would be desirable. The buffer zones around these areas should include the ponds and beaches with visitors able to view these areas from designated walkways.
- Invasive species management. Several invasive plant species have become established in and around the anchialine ponds and beach areas. Active management to eradicate these species should be undertaken. The plant species to be targeted for eradication include; sourbush (*Pluchea carolinensis*), love-in-a-mist (*Passiflora foetida*), and fountain grass (*Pennisetum setaceum*).
- Landscaping around the Mixed-Use Village should include, or be limited to, native plant species including species that are already present and common native coastal species such as naupaka (*Scaevola sericea*), ‘ilima (*Sida fallax*), and maiapilo (*Capparis sandwichiana*).
- The Lama Forest in the mauka Portion should be excluded from development to protect the native elements found there. The density of native plants within this small area would make it worthwhile and manageable to implement a management plan. At a minimum, the removal of weedy plant species including the large sisal plants, lantana, fountain grass, and Christmas berry should be carried out. Care should be taken while plant removal is ongoing as many of the native plant species in the area are small and mixed in with the tangle of weeds. Fencing the area would keep the goats from grazing and trampling smaller plants and seedlings. The endangered halapepe individual would benefit from management of the Lama Forest. Interested state and federal parties could participate in collecting propagules of the rare plant elements to be used in outplantings either on site or at appropriate satellite areas.
- Implementation of an ongoing hunting program for extant feral goats, which are abundant on the property. Eradication efforts should be focused at the coastal sites where plant grazing was most evident.

In addition, a konohiki-inspired Integrated Natural and Cultural Resources Management Plan specifying appropriate measures to protect significant natural and cultural resources will be developed in consultation with the project partners, knowledgeable kūpuna, and other stakeholders. It is anticipated that the Hawaiian Heritage Center will be empowered to steward all of the Site’s natural and cultural resources. Some of the recommended measures are presently being implemented. For example, removal of invasive plant species such as fountain grass in coastal areas is conducted by the U.S. Fish and Wildlife Service for the Hawksbill Turtle Recovery Project. In addition, hunters are allowed access to the site to hunt feral goats.

### 3.8 TERRESTRIAL FAUNA

Steven Lee Montgomery, Ph.D. conducted a survey of terrestrial wildlife resources at the Site. Areas for the proposed Mixed-Use Village, Hawaiian Heritage Center, and Mauka Community Facilities Reserve were surveyed for terrestrial invertebrates and vertebrates in December 2010 and January 2011. Appendix D contains the complete report.

No federal or state listed endangered or threatened terrestrial species were identified during the survey. Invertebrates were surveyed by using baiting, searching host plants, light surveys at night, and visual observation. Vertebrates were surveyed by using avian station counts, auditory observation, and visual observation. Native species identified are listed in Table 2. A full listing of identified species is provided in Tables 1 and 2 of Appendix D.

A total of 21 individual native birds representing six species from six different families and 56 individual non-native birds representing nine species from seven separate families were recorded during the survey. The anchialine ponds and sea shore were favored habitat. None of the non-native bird species were exceptional and have wide ranges throughout the island chain. Avian diversity was extremely low, with Doves being the most common. A low level of food resources is the most likely reason for the low numbers of birds.

**Table 2: Native Terrestrial Species**

<b>Scientific Name</b>	<b>Common Name</b>
<b>Invertebrates</b>	
<i>Succinea</i> sp.	
<i>Lycosa hawaiiensis</i>	Wolf spider
<i>Nysius</i> sp.	
<i>Orthotylus daphne</i>	
<i>Hylaeus flavipes</i>	Yellow-faced bee
<i>Hyposmocoma</i> sp.	
<i>Eudonia</i> sp.	Moss moth
<i>Tamsica hyacinthina</i>	
<i>Philodoria basalis</i>	
<i>Caloptilia mabaella</i>	
<i>Caloptilia azaleella</i>	
<i>Agrotis</i> sp. nr. <i>microreas</i>	
<i>Hyles calida hawaiiensis</i>	
<i>Megalagrion xanthomelas</i>	Orangeback damselfly
<i>Pantala flavescens</i>	Globe skimmer
<i>Caconemobius anahulu</i>	Lava cricket
<i>Caconemobius sandwichensis</i>	Beach cricket
<b>Vertebrates - Aves</b>	
<i>Pluvialis fulva</i>	Kōlea or Pacific Golden Plover
<i>Anous stolidus</i>	Noio kōhā or Brown Noddy
<i>Heteroscelus incanus</i>	‘Ūlili or Wandering Tattler
<i>Nycticorax nycticorax</i>	‘Auku’u or Black-crowned Night-Heron
<i>Fregata minor palmerstoni</i>	Great Frigatebirds or ‘Iwa
<i>Phaethon lepturus</i>	Koa’e kea or White-tailed Tropicbird

Mammals observed or likely to be present at the Site include feral goats, feral house cats, rats and mice. Feral goats were observed browsing on plant resources in several locations in the property. Abundant droppings were noted around the littoral cones at the coast, at and mauka of Pu‘u Kī, and surrounding areas. Browsing by goats is the most likely cause of the low diversity in strand plants. Feral house cats were not directly observed, but scat, containing bones, was collected along the footpath trail from Kanonone Ponds to the ‘western pond’. The scat was too large to be from mongoose. Analysis of the contents showed a diet of insects (cockroaches, praying mantis), mice and rats (fur, teeth), as most plentiful. Rats were evidenced by gnawed hala (*Pandanus* sp.) seeds at Kanonone Ponds. Both *Rattus norvegicus* (Norway rat) and *Rattus rattus* (Roof rat) are present on Hawai‘i Island and either or both are present in low numbers on the property. Mice were evidenced by small teeth and fur in the Kanonone Ponds cat scat. They are ubiquitous in Hawai‘i and are likely in the mauka portion of the property as well.

Formal one-hour searches for the Hawaiian Hoary Bat were conducted at dusk and at dawn, however, the bat was not sighted. Although the native bat may overfly the property or occasionally feed there, the portions of the site being considered for development do not provide appropriate habitat for roosting. In addition, the strong winds which are a normal occurrence at the Site may make foraging for prey impractical for bats. However, the high number of insects blown onto the property (e.g., black witch moths) do provide a large potential bat food supply.

A sampling of lava tubes at the Site were surveyed for cave-adapted invertebrate species, however, none were seen. The survey notes that native lava tube specialist species require a cave long enough to have a dark zone, moisture, and a food source. The lava tubes surveyed at the Site had low moisture, very short dark zones or none at all, and no overhead plants/roots that support a food source.

### ***POTENTIAL IMPACTS AND MITIGATION MEASURES***

No impact to Federal or State listed endangered or threatened terrestrial species is anticipated as none are known to inhabit the Site.

As recommended by the terrestrial wildlife survey, mitigation measures to be implemented are summarized below:

- Remove selected alien plants, especially fountain grass, in around the anchialine ponds and beach areas.
- Install fencing to exclude goats from the Lama forest in the mauka portion of the property.
- Implement a goat hunting program to reduce the number of goats on property, especially in the vicinity of the anchialine ponds.
- Prepare a construction BMP Plan to prevent or minimize runoff, spills, and impact on the makai coastal habitats and anchialine ponds and archaeological sites.
- Implement practices to prevent the establishment of alien species such as inspecting construction materials, cleaning construction equipment, removing trash regularly, and restricting the feeding of feral animals.
- Shield external lighting to prevent impact to sea birds and turtles.
- Use native dryland species for landscaping public and common areas. Also, provide guidance to home owners on xeriscaping and inform home owners of any restrictions.

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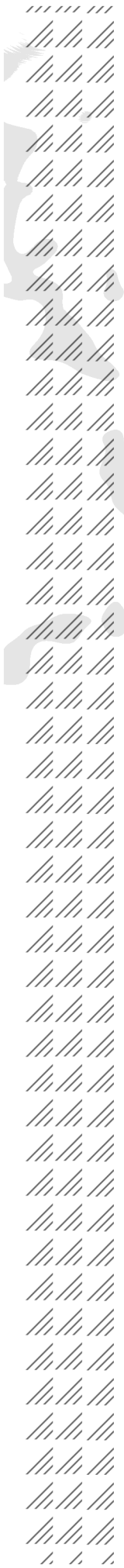
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- In sensitive environments, provide defined pathways to reduce trampling of plants and disturbance of wildlife. Provide signage and partner with community environmental groups to provide information and guidance about the archaeological and natural features.

In addition, a konohiki-inspired Integrated Natural and Cultural Resources Management Plan specifying appropriate measures to protect significant natural and cultural resources will be developed in consultation with the project partners, knowledgeable kūpuna, and other stakeholders. It is anticipated that the Hawaiian Heritage Center will be empowered to steward all of the Site's natural and cultural resources. As previously stated in Section 3.6, some of the recommended measures such as removal of fountain grass in coastal areas is presently being conducted and hunters are allowed access to the site to hunt the feral goats to control their population.

# CHAPTER IV

DESCRIPTION OF THE HUMAN ENVIRONMENT, POTENTIAL IMPACTS,  
AND MITIGATION MEASURES



## **4 DESCRIPTION OF THE HUMAN ENVIRONMENT, POTENTIAL IMPACTS, AND MITIGATION MEASURES**

This section describes the existing human environment, potential impacts of the proposed Kahuku Village, and mitigation measures to minimize any impacts.

### **4.1 ARCHAEOLOGICAL AND HISTORIC RESOURCES**

The district of Ka‘ū has historically been a relatively independent district, isolated from the rest of the island. Polynesian voyagers probably settled Ka‘ū very early. The natural setting of Ka‘ū when first colonized looked much different from today. Early settlers found the region habitable, although it is now a desolation of recent and older lava. Large sections of this area, including Kahuku, are known to have been cultivated garden spots before their devastation by lava flows. Forested areas reached down to the coast fed by dewfall from the cold mist-laden breeze (kehau) that blows down from the wet or snow-clad heights of Mauna Loa. With more forests and dew condensation, there was probably more percolation and underground flow of water feeding springs and waterholes. In addition to a reduction of forested areas, earthquakes have also been known to diminish the groundwater flow. In short, the early colonists found a much more favorable habitat, climate, and water supply (Handy and Handy 1972:545). As population increased, the rest of the island was inhabited. Most of the early settlement in Ka‘ū consisted of small fishing villages.

By the time Captain Cook arrived in 1779, the Ka‘ū they saw was a lava-covered landscape. Around the time of western contact, the ruler of Ka‘ū was Keoua. With his death during the dedication of Heiau Pu‘ukoholā, Kamehameha I became the ruler of the entire island. Within the Kahuku ahupua‘a, at this time, the interior was populated and the shoreline was relatively devoid of permanent residents as documented in the claims for lands at the time of the Great Mahele. As a result of the Great Mahele, Kahuku ahupua‘a was awarded to W. P. Leleiōhoku, the husband of Nāhi‘ena‘ena who was the sister of Liholiho (King Kamehameha IV) (LCAw. 9971), but later surrendered the lands due to nonpayment of commutation fees. The government subsequently designated Kahuku as School Lands—i.e., lands to be used for educational purposes as dictated by the Department of Public Instruction. The next record of transaction was to C.C. Harris, who purchased 184,298 acres of Kahuku lands under Patent 279. Although there were several kuleana claims in Kahuku, few were actually awarded. (Silva 1987).

The Pōhue shoreline is known to some local residents as Glover’s Beach, for James W. Glover, a former owner of Kahuku Ranch, who founded the general construction firm, James W. Glover, Ltd. After Glover’s death, the Glover’s executor sold the ranch under court order to pay estate debts to the Samuel Damon Estate, the successful bidders in 1958 for the 158,000-acre ranch (Clark 1985).

T.S. Dye and Colleagues, Archaeologists, Inc. prepared an archaeological inventory survey of approximately 8,400 acres of the seaward portion of the Nani Kahuku Aina property. Appendix M contains the complete survey report. A total of 60 sites were identified and recorded to standards consistent with HAR Chapter 13--276, (Rules Governing Standards for Archaeological Inventory Surveys and Reports). The 60 sites range in size from 587 square meters to 137.7 hectares and comprise between one and 280 recorded features. Together the sites document use of the area from traditional Hawaiian times through the ranching period of the nineteenth

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century, with relatively little disturbance from modern activities. The location of the 60 sites is shown in Figures 19, 20, and 21.

The traditional Hawaiian settlement pattern of the seaward portion of the Nani Kahuku Aina property were anchored by villages established at Pōhue Bay and at Kahakahakea, two areas with beaches that provide good canoe landings. Smaller settlements, also along the coast, were also found at “Blue Pond”, Kanonone, and Kāki’o Bay. Each of these smaller settlements are located near one or more sources of brackish water.

The village at Pōhue Bay was built over the edge of an old abrader quarry that extends around the back and to the other side of Pu’u ‘Ula’ula. This quarry was used to manufacture bar-soap-sized abraders from the lava, rich in olivine phenocrysts, of a thin surface pāhoehoe flow. The quarry is marked by large areas of lava that have been fractured with waterworn cobble bashers and by numerous abrader grinding basins used to shape the raw material into its final form. This site is the largest traditional Hawaiian abrader quarry recorded in Hawai`i.

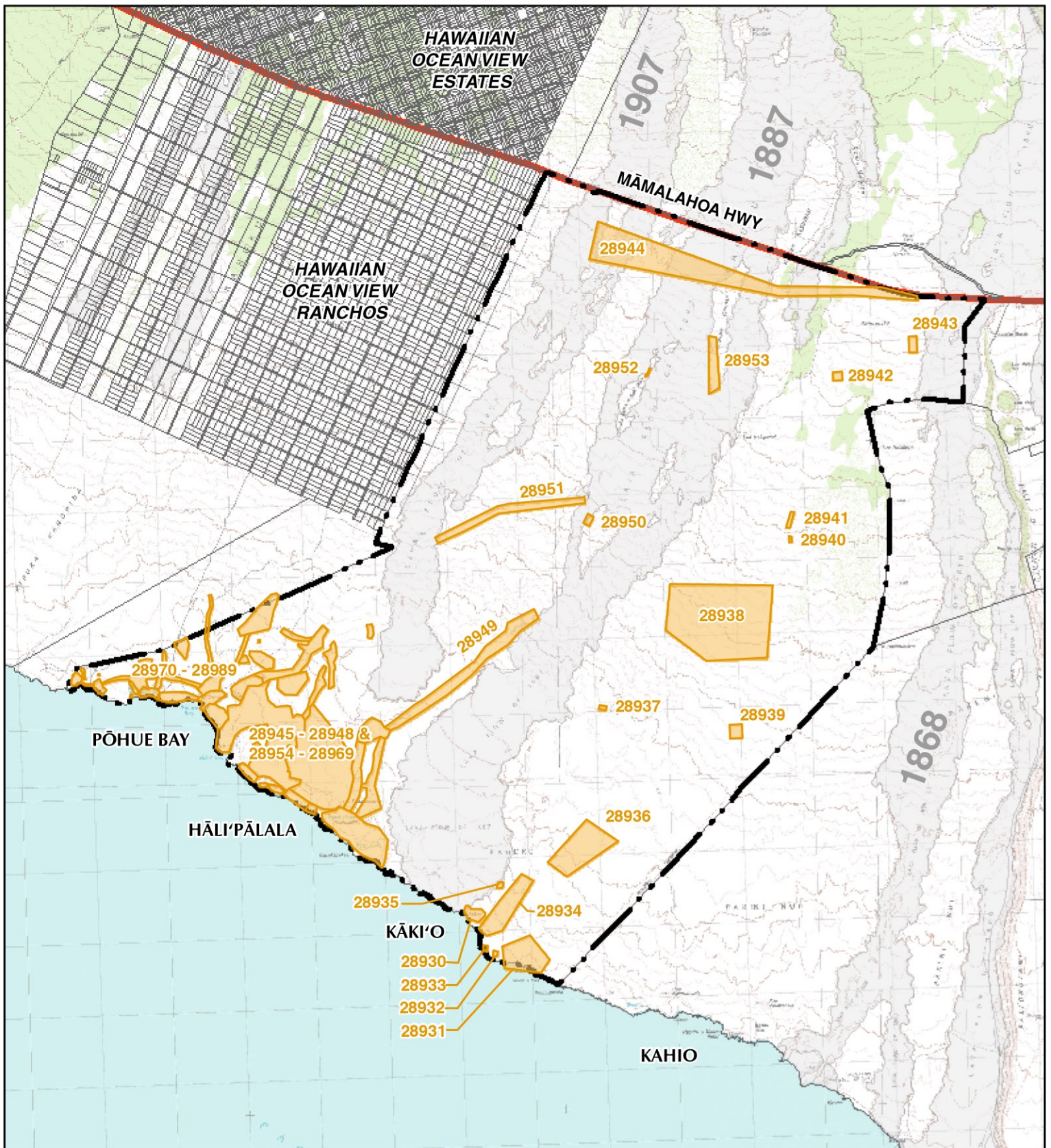
Inland of the two villages on pāhoehoe flows are numerous extraction pits made by breaking through the surface flow with a waterworn cobble basher. More than 1,600 of these extraction pit features were recorded. In most cases, the lava broken when the pit was made is either left within the pit or discarded immediately outside the pit. In a few instances, the broken lava pieces were used to construct mounds or short walls used as shelters. In the Kona District, pumice pieces found in similar extraction pits indicate that they were used as seabird nests, however no pumice pieces were found in the Kahuku extraction pits.

Access to the coastal settlements during traditional Hawaiian times appears to frequently have been from the sea. Remnants of a coastal trail that once linked the Kahuku settlements with one another and with settlements outside the ahupua‘a were recorded. Travel inland from the coast was primarily along two major mauka-makai trails that were used well into the ranching period. Large numbers of petroglyphs are found alongside trails on pāhoehoe lava flows. Petroglyph motifs include traditional anthropomorphic and geometric figures, and a wide variety of words, names, letters and other historic-era motifs, including dates in the nineteenth century.

Six burial features were recorded in four of the sites. Two lava tubes each contain concentrations of human remains. Burial platforms in ‘a‘ā flows appear constructed to protect single individuals, but were not excavated to inventory the remains.

Section 13-284-6, HAR, establishes criteria to evaluate the significance of historic sites. For resources to be significant, they 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



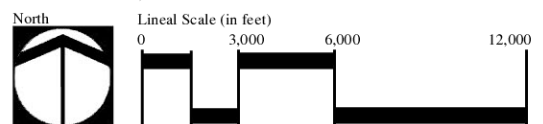
**LEGEND**

- Nani Kahuku 'Āina Property
- 2010 Hawai'i TMK
- Major Road
- Archaeological Sites
- Lava Flows

**FIGURE 19**  
 Archaeological Sites  
**KAHUKU VILLAGE**

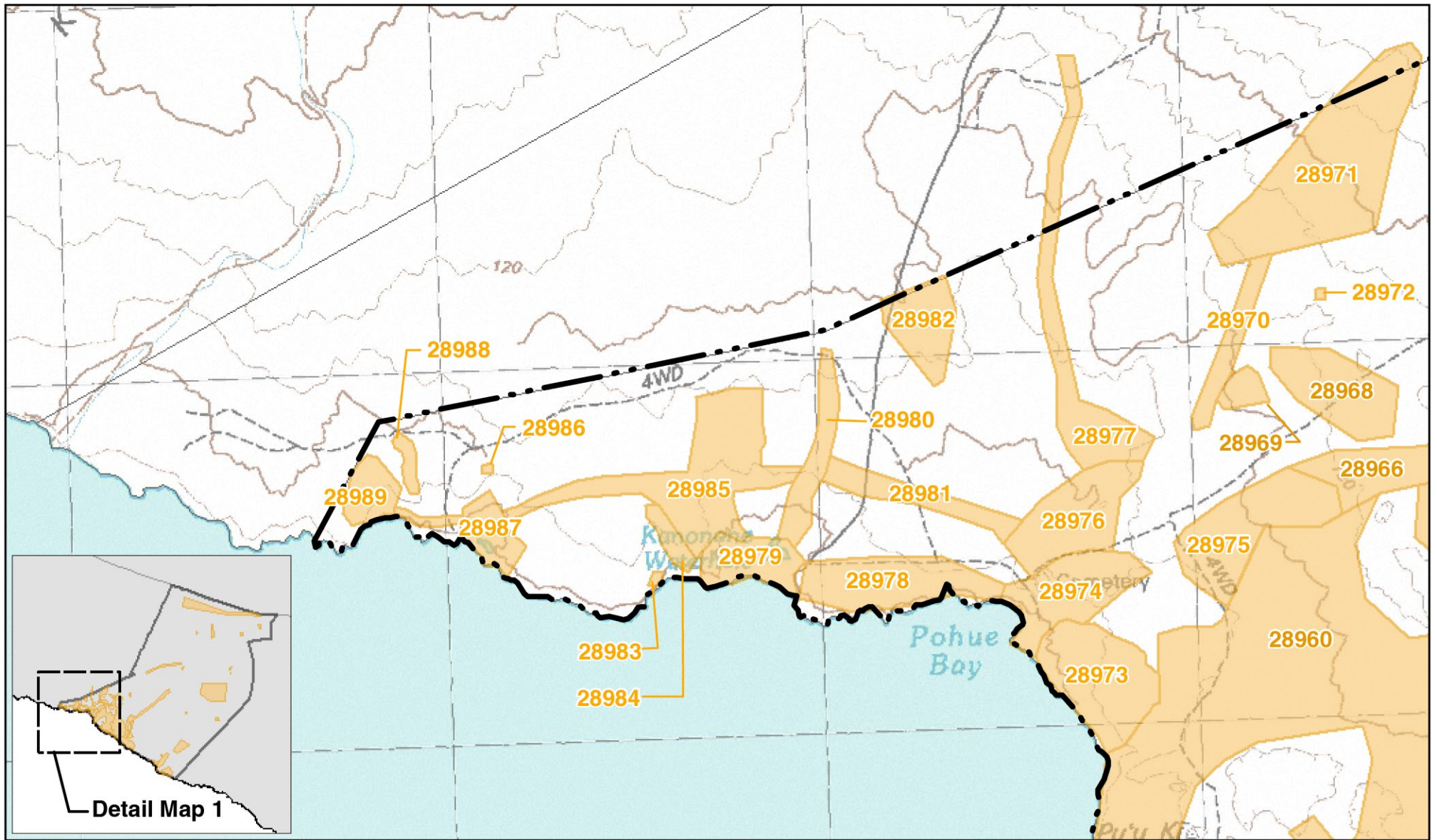
Nani Kahuku 'Āina, LLC

Ka'u, Hawai'i







Source: T.S. Dye & Colleagues, Archaeologists, Inc. 2011  
 Disclaimer: This graphic has been prepared for general planning purposes only.




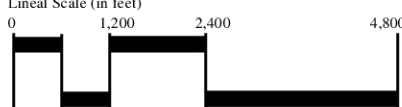



**FIGURE 20**  
 Archaeological Sites Detail Map 1 of 2  
**KAHUKU VILLAGE**

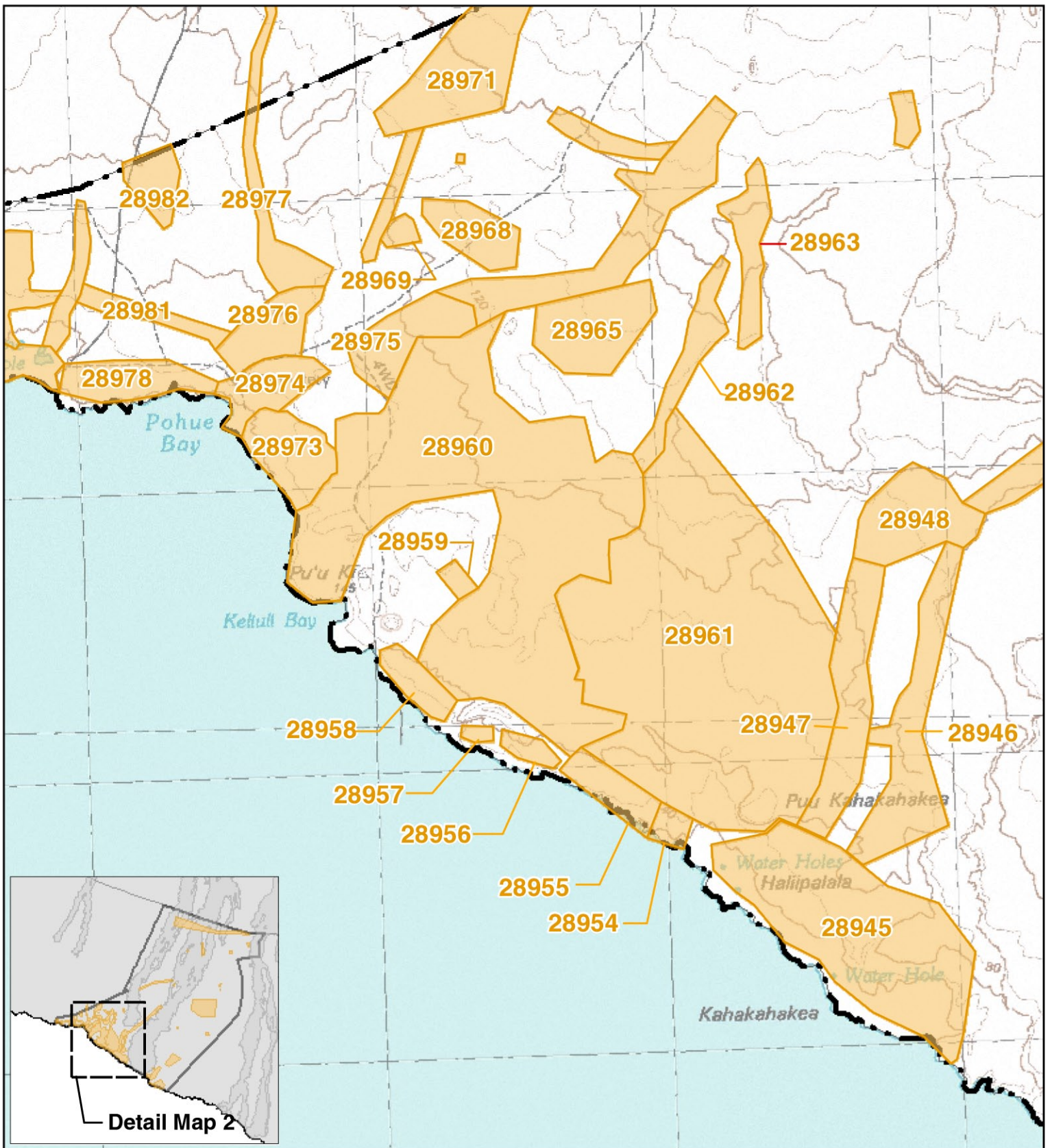
-  Nani Kahuku 'Āina Property
-  2010 Hawai'i TMK
-  Major Road
-  Archaeological Sites

Nani Kahuku 'Āina, LLC Ka'ū, Hawai'i





North  Lineal Scale (in feet)

0  1,200 2,400 4,800

 PBR HAWAII & ASSOCIATES, INC.



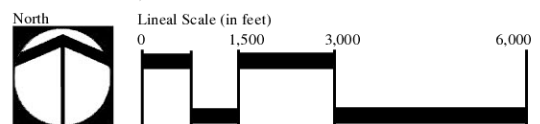
**LEGEND**

-  Nani Kahuku 'Aina Property
-  2010 Hawai'i TMK
-  Major Road
-  Archaeological Sites

**FIGURE 21**  
Archaeological Sites Detail Map 2 of 2  
**KAHUKU VILLAGE**

Nani Kahuku 'Aina, LLC

Ka'u, Hawai'i



Source: T.S. Dye & Colleagues, Archaeologists, Inc. 2011  
Disclaimer: This graphic has been prepared for general planning purposes only.

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Property or due to associations with traditional beliefs, events or oral accounts—these associations being important to the group’s history and cultural identity.

All 60 sites are evaluated as significant because they have yielded information important to Hawaiian history and prehistory, criterion D. Eight of the 60 sites are also significant for their cultural value to the Hawaiian people, criterion E. These include the four sites with burials and the actively used fishing shrine at the Kāki‘o settlement, and three mauka-makai trails. Four of the sites are significant because they are good examples of a particular type, criterion C. These include the traditional Hawaiian village at Pōhue Bay along with its coastal extension toward Pu‘u ‘Ula‘ula, the traditional Hawaiian village at Kahakahakea, and the abrader quarry.

Archaeological data recovery work is recommended for 29 sites. Typically, in Hawai‘i, data recovery work involves controlled excavation of site deposits. However, there are very few opportunities for archaeological excavation in the coastal section of Kahuku Ahupua`a due to the lack of soil formation and the fact that cultural deposits in lava tube shelters near the coast were thoroughly excavated by looters in the late twentieth century. Instead, the recommended data recovery work includes making detailed maps and descriptions of complex coastal sites prior to development to mitigate the adverse effects of development and to prepare for preservation with interpretive display, and detailed recording of the petroglyphs that are found in 17 sites.

Twenty sites or portions of sites are recommended for preservation. These include all burial features and heiau, major trail and trail segments, and portions of the traditional Hawaiian coastal settlement west of Pu‘u ‘Ula‘ula.

A summary of the function of each site, their significance, and recommendations for further work and treatment is provided in Table 3.

### ***POTENTIAL IMPACTS AND MITIGATION MEASURES***

No significant adverse impact to archaeological resources is anticipated as all of the recommendations of the archaeological inventory survey necessary to mitigate impacts will be implemented. Kahuku Village’s concept plan avoids all features recommended for preservation. Should any historic remains such as artifacts, burials, concentrations of shell or charcoal be encountered during construction, work in the vicinity will immediately cease and the SHPD will be contacted.

Further archaeological work will be conducted for the Sites recommended by the AIS. The data recovery plans and preservation plans will be prepared in accordance with SHPD criteria. Where necessary, the preservation plans will specify design criteria to mitigate impacts, such as using pavers or other markers for the crossing of the mauka-makai trail with the main access road. Burial treatment plans for the six burial sites will also be prepared and submitted to the SHPD for review and approval. Treatment of the burial features will consider recommendations of lineal descendants, the SHPD, and the Hawai‘i Island Burial Council.

Creation of the proposed Hawaiian Heritage Center will have a beneficial effect on archaeological resources by providing opportunities to educate visitors about traditional Hawaiian culture and the significance of the existing archaeological sites. Centered at Pōhue Bay, the Hawaiian Heritage Center will interpret the remains of the traditional Hawaiian villages, the abrader quarry, petroglyph sites, historic trails, and other significant historic features.

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**Table 3: Summary of Archaeological Sites, Significance, and Recommended Treatment**

Site*	Function	Significance					Further work	Treatment
		A	B	C	D	E		
75-28930	Habitation/religion	no	no	no	yes	yes	None	Preserve the shrine feature and the brackish pond
75-28931	Transportation and transient habitation	no	no	no	yes	no	None	None
75-28932	Temporary habitation	no	no	no	yes	no	None	None
75-28933	Transportation	no	no	no	yes	no	None	None
75-28934	Transportation and transient habitation	no	no	no	yes	no	None	None
75-28935	Transient habitation	no	no	no	yes	no	None	None
75-28936	Resource extraction and transient habitation	no	no	no	yes	no	None	None
73-28937	Resource extraction and transient habitation	no	no	no	yes	no	None	None
73-28938	Resource extraction	no	no	no	yes	no	None	None
73-28939	Marker	no	no	no	yes	no	None	None
73-28940	Burial and transient habitation	no	no	no	yes	yes	Burial treatment plan	Preserve burials in place
73-28941	Resource extraction	no	no	no	yes	no	None	None
73-28942	Resource extraction	no	no	no	yes	no	None	None
73-28943	Burial and transient habitation	no	no	no	yes	yes	Burial treatment plan	Preserve burials in place
73-28944	Transportation and transient habitation	no	no	no	yes	no	None	None
75-28945	Habitation	no	no	yes	yes	no	Detailed mapping and description of village, record petroglyphs	None
75-28946	Transportation and transient habitation	no	no	no	yes	no	Record petroglyphs	Preserve trail
75-28947	Transportation and transient habitation	no	no	no	yes	no	Record petroglyph	None
72-28948	Transportation, resource extraction, and transient habitation	no	no	no	yes	yes	Record petroglyphs	Preserve trail
73-28949	Transportation and transient habitation	no	no	no	yes	yes	Record petroglyphs	Preserve trail
73-28950	Resource extraction	no	no	no	yes	no	None	None
72-28951	Transportation, habitation, and possible burial	no	no	no	yes	yes	Detailed mapping and description of heiau, burial treatment plan	Preserve trail, heiau, and possible burial platforms
73-28952	Transportation and marker	no	no	no	yes	no	None	None
73-28953	Resource extraction	no	no	no	yes	no	None	None
75-28954	Temporary habitation	no	no	no	yes	no	None	None
75-28955	Petroglyphs	no	no	no	yes	no	Record petroglyphs	None

\*State Inventory of Historic Places Numbers (Preceded by 50-10-)

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**Table 3: (continued)**

Site*	Function	Significance					Further work	Treatment
		A	B	C	D	E		
75-28956	Temporary habitation	no	no	no	yes	no	Detailed feature location maps within the feature 7 and 8 complexes	None
75-28957	Resource extraction	no	no	no	yes	no	None	None
72-28958	Temporary habitation	no	no	no	yes	no	Record petroglyphs	None
72-28959	Petroglyphs	no	no	no	yes	no	Record petroglyphs	None
72-28960	Resource extraction	no	no	yes	yes	no	Detailed mapping, establish reduction and manufacturing sequence, record petroglyphs	Preserve and interpret a portion of the site, preferably the area of most extensive use between the village at Pōhue bay and pu'u 'ula'ula
72-28961	Resource extraction and transient habitation	no	no	no	yes	no	None	None
72-28962	Transportation and resource extraction	no	no	no	yes	no	None	None
72-28963	Resource extraction and transient habitation	no	no	no	yes	no	None	None
72-28964	Resource extraction	no	no	no	yes	no	None	None
72-28965	Resource extraction	no	no	no	yes	no	None	None
72-28966	Transportation and resource extraction	no	no	no	yes	no	None	Preserve trail
72-28967	Resource extraction and transient habitation	no	no	no	yes	no	None	None
72-28968	Resource extraction and transient habitation	no	no	no	yes	no	Record petroglyphs	None
72-28969	Resource extraction	no	no	no	yes	no	None	None
72-28970	Resource extraction and transient habitation	no	no	no	yes	no	None	None
72-28971	Resource extraction and habitation	no	no	no	yes	no	Detailed map and description of platform and terrace feature cluster, record petroglyphs	Preserve the platform and terrace feature cluster
72-28972	Temporary habitation	no	no	no	yes	no	None	None
72-28973	Habitation	no	no	yes	yes	no	Detailed mapping of architectural and non-architectural remains, especially at the end near Pōhue bay, record petroglyphs	Preserve and interpret

\*State Inventory of Historic Places Numbers (Preceded by 50-10-)

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**Table 3: (continued)**

Site*	Function	Significance					Further work	Treatment
		A	B	C	D	E		
72-28974	Habitation/religion	no	no	yes	yes	yes	Detailed mapping and description, record petroglyphs, burial treatment plan	Preserve and interpret
72-28975	Temporary habitation	no	no	no	yes	no	Record petroglyph	None
72-28976	Temporary habitation	no	no	no	yes	no	Record petroglyphs	None
72-28977	Transportation and transient habitation	no	no	no	yes	yes	Record petroglyphs	Preserve trail
72-28978	Transportation and transient habitation	no	no	no	yes	no	None	Preserve trail
72-28979	Habitation	no	no	no	yes	no	Detailed map and description of settlement, record petroglyphs	Preserve and interpret
72--28980	Transportation and transient habitation	no	no	no	yes	no	Locational map of site features	None
72-28981	Transportation	no	no	no	yes	no	None	None
72-28982	Resource extraction and transient habitation	no	no	no	yes	no	None	None
72-28983	Temporary habitation	no	no	no	yes	no	None	None
72-28984	Temporary habitation	no	no	no	yes	no	None	None
72-28985	Temporary habitation	no	no	no	yes	no	Data recovery	None
72-28986	Temporary habitation	no	no	no	yes	no	None	None
72-28987	Habitation	no	no	no	yes	no	Detailed site map and description	Preserve and interpret
72-28988	Transportation and transient habitation	no	no	no	yes	no	Detailed map and description of extraction pits	Preserve trail
72-28989	Temporary habitation	no	no	no	yes	no	Detailed map and description of extraction pits and mounds	None

\*State Inventory of Historic Places Numbers (Preceded by 50-10-)

## 4.2 CULTURAL RESOURCES

A Cultural Impact Assessment (CIA) for Kahuku Village was prepared in February 2011. Appendix E contains the CIA. The CIA considered the regional context of the project and examined the entire ahupua'a of Kahuku and the Site's relationship to neighboring lands. The assessment found that ethnographic and historic documents clearly indicate that mauka portions of the Kahuku ahupua'a (mauka of the Site) supported a permanent native Hawaiian population. Crops that were grown included banana, dryland taro, sweet potato, and sugar cane. The far upland areas of the Kahuku ahupua'a while not inhabited, provided resources for bird hunting, harvesting sandalwood, koa, and pulu, and goat hunting. Coastal areas in the Kahuku ahupua'a were noted fishing grounds attracting even Kamehameha I, although habitation by fishermen was most likely temporary. Native informants testifying before the Boundary Commission in the 19<sup>th</sup> century cited roads and trails, one of which was used for hauling tree trunks to the coast to

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construct canoes. Within the Kahuku ahupua‘a, 25 separate Kuleana claims were filed, 14 of which were awarded. Claims appear to be inland from the Site in areas favorable for gardens. None of the claims appear to fall within the Site, although five are described as “unlocated”.

Archaeological research at the Site have identified historic sites at Pōhue Bay including walled house sites, possible burial platforms, cave shelters (some with burials), trails, anchialine ponds, and petroglyphs. In 1965 Lloyd Soehren excavated two cave shelters southeast of Pōhue at Kahakahakea, one of which produced a radiocarbon date ranging from the 1300’s to the 1400’s. Archaeological inventory surveys of the Site have confirmed the relative intensive use of the coastal region as evidenced by the presence of walls, enclosures, platforms, terraces, cairns, petroglyphs, lava tubes and blisters, excavations, and other modified areas. The majority of the sites were likely for temporary habitation and of pre-contact origin, possibly dating between the 5<sup>th</sup> and 14<sup>th</sup> centuries, suggesting a long period of occupation within the Kahuku ahupua‘a.

The CIA concluded that the Site is associated with significant cultural sites and historic cultural practices, but limited contemporary or continuing cultural practices. Privatization of the Site and its use for cattle ranching following the Mahele in 1848 limited the continuation of traditional cultural practices at the Site, as occurred elsewhere throughout the State. Today, although Nani Kahuku Aina grants access to the site to cultural practitioners, contemporary practices are limited but include fishing, camping, gathering and spiritual practices.

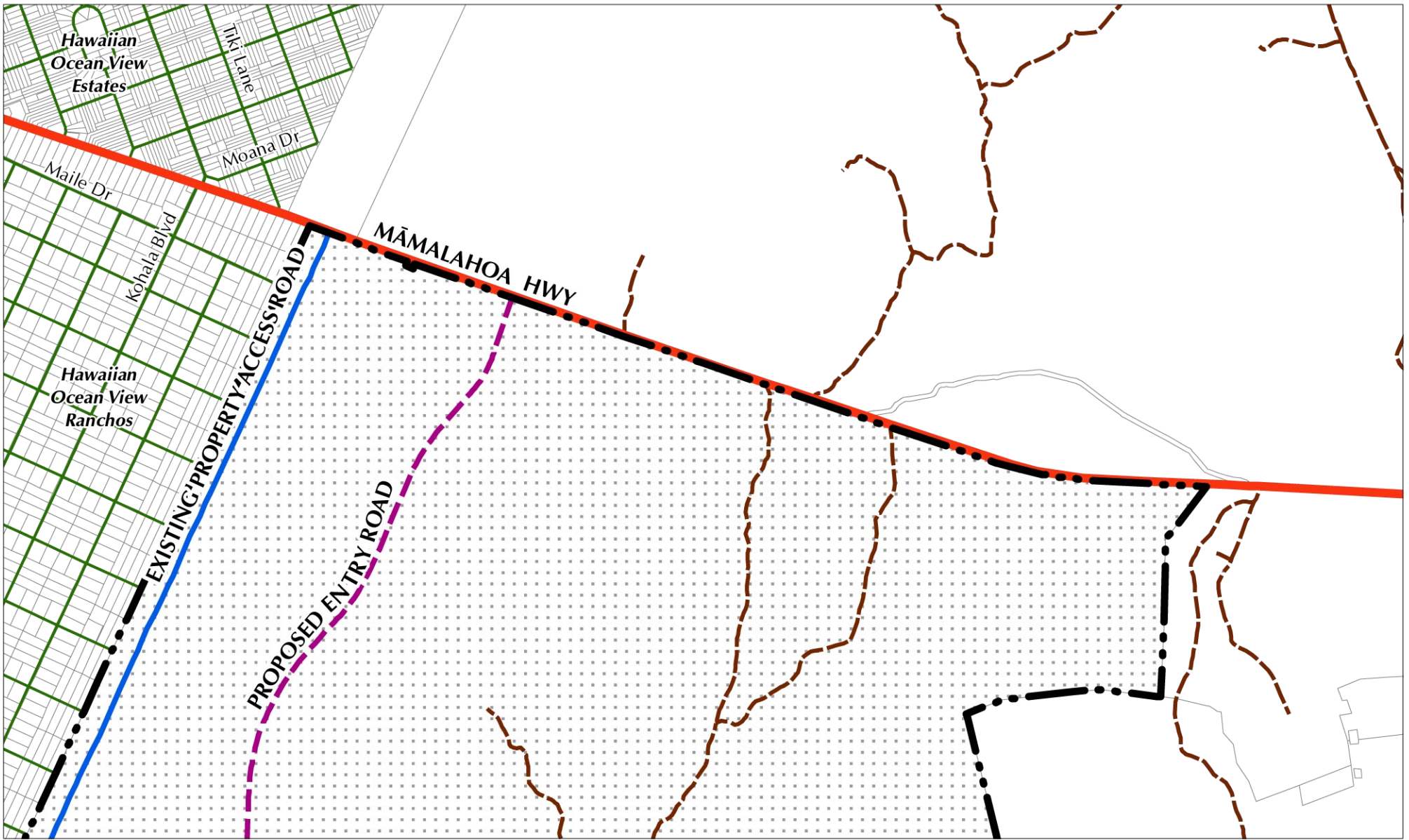
***POTENTIAL IMPACTS AND MITIGATION MEASURES***

Development of Kahuku Village is expected to have an overall beneficial effect on ongoing cultural practices such as fishing, camping, hiking, gathering, and cultural ceremonies. Presently, access to the Site’s shoreline is limited by the six-mile distance to the shoreline from Māmalahoa Highway accessible only by a rough, unimproved road. With Kahuku Village, managed public access along the length of the Site’s coast will be provided. As recommended by the CIA, any proposed restrictions on fishing, camping, hiking, or other cultural practices will be based upon consultation with area Kūpuna and cultural practitioners.

The CIA determined that the Hawaiian Heritage Center will assist in the preservation of Hawaiian cultural resources, beliefs and practices representing the larger project area, while improving awareness and access to the resources. The CIA recommends that care be taken in the vicinity of Kahakahakea and the 1887 lava flow as ancient foot trails and other cultural sites may be present, some preceding the lava flow. Impacts to historic cultural and archaeological sites in the vicinity of Kahakahakea and other coastal areas will be mitigated by designation of a shoreline conservation buffer. In addition, should any historic cultural sites be identified during construction, work in the immediate area will be halted and the SHPD will be contacted immediately.

**4.3 ROADWAYS AND TRAFFIC**

Māmalahoa Highway (also known as Hawai‘i Belt Road) is a two-way, two-lane, high quality arterial highway between Keaau and Kailua-Kona and is the primary arterial highway in the Ka‘ū District. The posted speed on Māmalahoa Highway in the vicinity of the Site is 55 miles per hour. An unimproved access road off Māmalahoa Highway near the Site’s western boundary provides access through the Site to the coast. Existing roadways in the vicinity of the Site are shown in Figure 22.



**LEGEND**

-  Nani Kahuku 'Āina Property
-  Private Roads
-  Proposed Entry Road
-  Unimproved 4wd Roads
-  Existing Property Access Road
-  2010 Hawai'i TMK
-  State Roads

Source: Hawai'i TMK, 2010 (GIS); Hawai'i County State Roads, State of Hawai'i Office of Elections, 2002 (GIS); Hawai'i County Private Roads, State of Hawai'i Office of Elections, 2002 (GIS); Other Roads, USGS Line Graphs, 1983 (GIS); Disclaimer: This graphic has been prepared for general planning purposes only.

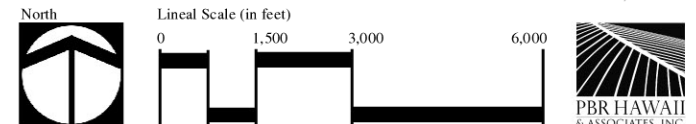
**FIGURE 22**

Existing Roads

**KAHUKU VILLAGE**

Nani Kahuku 'Āina LLC

Ka'u, Hawai'i





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The Traffic Management Consultant prepared a TIAR in April 2011. Appendix F contains the complete TIAR.

The TIAR evaluated existing roadway and traffic conditions, developed trip generation characteristics for the proposed land uses at Kahuku Village, evaluated future traffic conditions with and without Kahuku Village, and recommended traffic improvements necessary to mitigate traffic impacts. The concept of Level of Service (LOS) was used to evaluate traffic conditions. LOS is defined as “a quality measure describing operational conditions within a traffic stream.” Factors that are included in determining LOS include speed, travel time, freedom to maneuver, traffic interruptions, driver comfort, and convenience. LOS values range from “A” to “F”. LOS “A”, “B”, and “C” are considered satisfactory Levels of Service. The County of Hawai‘i considers LOS “D” to be the minimum desirable operating Level of Service. LOS “E” is an undesirable condition, and LOS “F” is an unacceptable condition.

Field investigations were conducted on September 16-17, 2009 on Māmalahoa at the scenic lookout near the 75 Mile Marker (MM) during the morning and afternoon peak periods of traffic. The counts were updated with State Department of Transportation (DOT) data that was collected at the 70.22 MM on April 27-28, 2010. Regional traffic data was also collected from DOT for Ho‘okena and Pāhala.

The study found that the AM peak hour of traffic on Māmalahoa Highway in the vicinity of the Site occurs between 8:00 a.m. and 9:00 a.m. The PM peak hour of traffic occurs between 4:00 p.m. and 5:00 p.m. Existing LOS in the vicinity of Kahuku Village (70 MM), north of the Site at Ho‘okena and south of the Site at Pāhala are summarized in Table 4.

To establish a baseline of future traffic conditions without the development of Kahuku Village, the TIAR projected traffic conditions in the vicinity of the Site, at Ho‘okena, and at Pāhala by applying background growth factors. The TIAR determined that without the development of Kahuku Village, Māmalahoa Highway in the vicinity of the Site is expected to operate at LOS B during the AM peak hour of traffic through the Year 2030. During the PM peak hour, traffic conditions on Māmalahoa near the Site will remain at LOS B until 2015, but decline to LOS C by 2021 and remain at LOS C through 2030. At Ho‘okena, traffic conditions will remain at LOS D during the AM and PM peak hours and at Pāhala, traffic conditions will remain at LOS C during the AM and PM peak hours. Projected traffic conditions on Māmalahoa Highway without and with development of Kahuku Village are summarized in Table 5.

**Table 4: Māmalahoa Highway Existing LOS**

	LOS	
	AM	PM
Project Vicinity (70MM)	B	B
Ho‘okena	D	D
Pāhala	C	C

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**Table 5: Māmalahoa Highway Projected LOS Without and With Kahuku Village**

	Without Project		With Project	
	AM	PM	AM	PM
Year 2015				
Project Vicinity	B	B	B	C
Ho'okena	D	D	D	D
Pāhala	C	C	C	C
Year 2021				
Project Vicinity	B	C	C	C
Ho'okena	D	D	D	D
Pāhala	C	C	C	C
Year 2024				
Project Vicinity	B	C	C	D
Ho'okena	D	D	E	E
Pāhala	C	C	D	D
Year 2030				
Project Vicinity	B	C	C	D
Ho'okena	D	D	E	E
Pāhala	C	C	D	D

***POTENTIAL IMPACTS AND MITIGATION MEASURES***

Trip generation characteristics for each of the planned land uses at Kahuku Village were developed using generally accepted techniques developed by the Institute of Transportation Engineers. Peak hour traffic conditions with Kahuku Village were forecast for the years 2015, 2021, 2024, and 2030.

Year 2015 Traffic With Project

Although residential units and commercial spaces are not anticipated to be occupied until 2016, the Hawaiian Heritage Center may commence limited operations by 2015. Facilities at the Hawaiian Heritage Center that may be operational by 2015 include campgrounds, lodging for staff and research, and dormitories for students. Primary access to the site in 2015 will continue to be from the existing unimproved road.

During the AM peak hour of traffic, the traffic movements at the intersection of Māmalahoa Highway and the existing access road leading to the Hawaiian Heritage Center are expected to operate at LOS B. Māmalahoa Highway in the vicinity of the Site is expected to operate at LOS B in the vicinity of the Site, at LOS D in Ho'okena, and at LOS C in the vicinity of Pāhala.

During the PM peak hour of traffic, the traffic movements at the intersection of Māmalahoa Highway and the access road to the Hawaiian Heritage Center are expected to operate at LOS B. Māmalahoa Highway in expected to operate at LOS C in the vicinity of the Site, at LOS D in Ho'okena, and at LOS C in Pāhala.

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Year 2021 Traffic With Project

By the Year 2021, the main access road leading to the Makai Village and Hawaiian Heritage Center will have been constructed and the unimproved access road will be used only as an emergency secondary route. The intersection of the main access road with Māmalahoa Highway should be a stop-controlled, channelized T-intersection with separate left- and right-turn lanes. Māmalahoa Highway should also be widened to provide an exclusive left-turn deceleration lane in the westbound direction, and right-turn deceleration and acceleration lanes in the eastbound direction. Projected traffic operating conditions at the intersection of Kahuku Village’s main access road with Māmalahoa Highway are summarized in Table 6.

**Table 6: Main Access Road and Māmalahoa Highway Intersection Projected LOS**

Year	Peak Period	Eastbound		Westbound		Northbound	
		Through	Right-Turn	Left-Turn	Through	Left-Turn	Right-Turn
2015	AM	A	A	A	A	A	A
	PM	A	A	A	A	B	B
2021	AM	A	A	A	A	B	B
	PM	A	A	A	A	C	C
2024	AM	C	A	C	A	C	A
	PM	C	A	D	A	D	A
2030	AM	C	A	C	A	C	A
	PM	C	B	D	A	D	A

During the 2021 AM peak hour of traffic, the left-turn and right-turn movements from the main access road onto Māmalahoa Highway are expected to operate at LOS B and all other traffic movements at the intersection are expected to operate at LOS A. The projected LOS for the intersection of the main access road with Māmalahoa Highway is summarized in Table 6. Māmalahoa Highway is expected to operate at LOS C in the vicinity of the Site, at LOS D in Ho’okena, and at LOS C in Pāhala.

During the 2021 PM peak hour of traffic, the main access road is expected to operate at LOS C at Māmalahoa Highway. All other traffic movements at the intersection are expected to operate at LOS A. Māmaloha Highway is expected to operate at LOS D in the vicinity of the Site, at LOS E in Ho’okena, and at LOS D in Pāhala.

Year 2024 Traffic With Project

By the Year 2024, the main access road should be signalized at Māmalahoa Highway. The storage lengths of the exclusive left-turn lane on Māmalahoa Highway and the exclusive right-turn lane on the main access road should be extended, as necessary, to accommodate the increase in traffic demands.

During the 2024 AM peak hour of traffic, the intersection of Māmalahoa Highway and the main access road is expected to operate at an overall LOS B. The left turn movements to and from the main access road are expected to operate at LOS C and the through movement on eastbound Māmalahoa Highway is expected to operate at LOS C. The other traffic movements at the

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intersection of Māmalahoa Highway and the main access road are expected to operate at LOS A. Māmalahoa Highway is expected to operate at LOS C in the vicinity of the Site, at LOS E in Ho‘okena, and at LOS D in Pāhala.

During the 2024 PM peak hour of traffic, the intersection of Māmalahoa Highway and the main access road is expected to operate an overall LOS of C. The left-turn movement from the main access road onto Māmalahoa Highway is expected to operate at LOS D. All of the other movements at the intersection are expected to operate at LOS C or better. Māmalahoa Highway is expected to operate at LOS D in the vicinity of the Site, at LOS E in Ho‘okena, and at LOS D in Pāhala.

Year 2030 Traffic With Project

During the 2030 AM peak hour of traffic, the intersection of Māmalahoa Highway and the main access road is expected to operate at an overall LOS of B. All of the traffic movements at the intersection are expected to operate at satisfactory Levels of Service. Māmalahoa Highway is expected to operate at LOS C in the vicinity of the Site, at LOS E in Ho‘okena, and at LOS D in Pāhala.

During the 2030 PM peak hour of traffic, the intersection of Māmalahoa Highway and the main access road is expected to operate at an overall LOS of C. The left-turn movements to and from the main access road are expected to operate at LOS D. All other traffic movements at the intersection are expected to operate at satisfactory Levels of Service. Māmalahoa Highway is expected to operate at LOS D in the vicinity of the Site, at LOS E in Ho‘okena, and at LOS D in Pāhala.

Onsite Roadways and Paths

The proposed main access road and all roadways within the Mixed-Use Village will be privately owned and maintained and designed to conform to American Association of State Highway and Transportation Officials (AASHTO) standards. All roadways will typically be two-lane, two-way asphalt concrete paved roads. Roadways in the core of the Mixed-Use Village will have curb and sidewalks to encourage pedestrian activity in the area. All other roadways will have gravel shoulders and roadside swales.

A system of pedestrian and bicycle paths will provide connectivity throughout the Mixed-Use Village. Paths will generally parallel roadways. Additional paths may also be developed to link residential areas, commercial spaces, the hotels, golf courses, and parks.

Conclusions and Required Roadway Improvements

Primary access to Kahuku Village will be provided by a new access road that will provide ingress and egress from Māmalahoa Highway. The access road is proposed to be stop-controlled through the first two phases of development, or up to Year 2023. Traffic signalization may be required by third phase of development, or Year 2024. A traffic signal warrant analysis should be conducted prior to the design and construction of the signalized intersection.

The following traffic improvements will be implemented to maintain a minimum desirable Level of Service of “D” or better conditions at the intersection of Māmalahoa Highway and the main access road with the full build out and occupancy of Kahuku Village.

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Prior to Year 2016

No highway improvements are required prior to the Year 2016 as the existing unimproved access road will provide access to the Hawaiian Heritage Center, and roadways are expected to operate at LOS B or better during peak hours of traffic.

Years 2016 to 2021

The following traffic improvements will be implemented during Phases 1 and 2 of Kahuku Village:

1. Construct the two-lane, two-way main access road between Māmalahoa Highway and the Mixed-Use Village.
2. Develop a stop-controlled, channelized intersection for the main access road at Māmalahoa Highway.
3. Construct separate left- and right-turn mauka-bound lanes for the main access road at its intersection with Māmalahoa Highway. The exclusive right-turn lane should be at least 100 feet in length.
4. Construct an exclusive left-turn westbound lane for Māmalahoa Highway at its intersection with the main access road. The left-turn lane should have at least 50 feet of storage length and the appropriate deceleration length should be added to the lane.
5. Construct an exclusive right-turn east-bound deceleration lane for Māmalahoa Highway at its intersection with Māmalahoa Highway.
6. Construct a right-turn eastbound acceleration lane from the main access road onto Māmalahoa Highway.

Years 2022 to 2024

The following additional improvements will be implemented during Phase 3 of Kahuku Village. No other improvements are expected to be required for full build-out of Kahuku Village.

1. The main access road should be signalized at its intersection with Māmalahoa Highway, with an exclusive left-turn phase from westbound Māmalahoa Highway.
2. The exclusive left-turn lane on westbound Māmalahoa Highway should be extended, as necessary, to provide 325-feet of storage length. The appropriate deceleration length should be added to the left-turn lane.
3. The exclusive right turn lane on the mauka bound access road should be extended, as necessary, to provide 350 feet of storage length.

#### **4.4 NOISE**

Because the Site is so large, sources of noise vary by location. In the vicinity of Māmalahoa Highway, traffic noise is the predominant noise source. Further inland, distant traffic noise and natural sounds of birds and winds in foliage are the dominant noise sources. At locations near the shoreline, surf becomes the dominant background source.

Y. Ebisu & Associates prepared a Traffic Noise Study w in April 2011 to assess the impact of noise from the additional vehicular traffic that Kahuku Village is expected to generate. Appendix G contains the complete study. The study assessed both impacts within the Site as

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well as impacts to residences in the Oceanview community. The study used the Day-Night Average Sound Level (DNL or Ldn) noise descriptor to measure noise levels. The DNL values represent the average noise during a typical day of the year. DNL exposure levels of 55 or less are typical of a quiet rural or suburban area; exposure levels of 55 to 65 are typical of urbanized areas with medium to high levels of street traffic; and exposure levels above 65 are representative of densely developed urban areas fronting high volume roadways. There is a general consensus among federal agencies that noise for residential use is considered acceptable if the exterior noise does not exceed 65 DNL. The value of 65 DNL is used as a federal regulatory threshold for determining the necessity for special noise abatement measures when applications for federal funding assistance are made.

The noise study found that existing traffic noise levels in the vicinity of the Site vary from approximately 66 DNL along the Māmalahoa right-of-way, to less than 40 DNL at the interior locations of the Site which are removed from the highway and coastline. Traffic noise levels along Māmalahoa Highway are about 66 DNL at a 50-foot setback from the highway centerline; 60 DNL at a 100-foot setback; and approximately 55 DNL at a 186-foot setback. Traffic noise levels for residences at Oceanview fronting Māmalahoa Highway are typically less than 60 DNL as they are typically set back at least 100 feet from the highway centerline.

In the interior portions of the Site where there is only distant traffic noise, noise levels can drop to 15 to 20 dBA and near the shoreline where surf is the dominant background noise, noise levels are about 50 to 60 dBA.

***POTENTIAL IMPACTS AND MITIGATION MEASURES***

Predictions of future noise levels from increased traffic volumes at the Site and in the Oceanview community were made using forecast traffic volumes. The study found that without the development of Kahuku Village, by 2030 traffic noise levels near Māmalahoa Highway would increase by 1.5 DNL due to increasing non-project traffic. With the development of Kahuku Village, noise levels are projected to increase by an additional 5.1 DNL during the AM peak hour of traffic and by 4.9 DNL during the PM peak hour of traffic. Not accounting for the beneficial effects of noise shielding from terrain features and topography, or the detrimental effects of additive noise contributions from intersecting streets, the setback distance to the 65 DNL contour is predicted to be 118 feet from the centerline of Māmalahoa Highway. The Site and lands immediately across Māmalahoa Highway from the Site are vacant. The lands in the Oceanview community within 118 feet of the highway centerline are generally vacant except for commercial structures. Existing residences in HOVE and Hawaiian Ocean View Ranchos are located beyond 118 feet from the highway centerline. Therefore, the noise study concluded that development of Kahuku Village should not exceed the FHA/HUD acceptability threshold of 65 DNL at existing residences in the vicinity of the Site.

With regard to noise within the Site, the noise study recommends that the maximum practical setback distances be provided between the project's entry road and interior roadways and noise sensitive uses such as residences, learning centers, and hotel units. Based on vehicle speeds of 45 mph, the setback from the centerline of the entry road to the 65 DNL contour would be 98 feet. If adequate setbacks near high volume roads cannot be provided, minimum 6-foot high sound attenuation walls and/or berms should be provided for noise sensitive uses. The exact height and length of the sound attenuation wall would need to consider noise levels, building setbacks, and topography. If both adequate setback distances and sound attenuating walls/berms are infeasible, then closure and air conditioning for noise sensitive structures can mitigate noise.

Construction noise will be unavoidable during the development of Kahuku Village. Existing residences are not expected to be affected by construction since the nearest residences at Hawaiian Ocean View Ranchos are about 4,000 feet from the proposed entrance road and 6,000-feet from the Mixed-Use Village. For future residences and noise sensitive land uses within Kahuku Village, noise impacts will be mitigated by using properly muffled construction equipment and complying with the State DOH construction noise limits and curfew times.

#### **4.5 AIR QUALITY**

B.D. Neal & Associates prepared an air quality study to: 1) describe existing air quality in the area; 2) assess the potential short- and long-term direct and indirect air quality impacts that could result from Kahuku Village; and 3) recommend measures to mitigate potential air quality impacts where possible and appropriate. Key findings and recommendations of air quality study are summarized below. Appendix H contains the full study.

Regional and local climate, together with the amount and type of activity generally dictate the air quality of a given location. In the vicinity of the Site, winds are predominantly trade winds. During winter, storms may generate strong winds from the south (Kona winds) for brief periods. When the trade winds or Kona winds are weak or absent, landbreeze-seabreeze circulations may develop.

Air pollutants that exist may be attributable to a variety of sources including volcanic emissions (vog) from Kīlauea volcano and traffic traversing Māmalahoa Highway. Emissions from man-made sources are intermittent and minimal and are quickly dispersed by prevailing tradewinds. There are no industrial sources of air pollution in the vicinity of the Site.

The Island of Hawai‘i is unique from the other islands in the State in terms of the natural volcanic air pollution emissions that occur. The impact of vog on air quality in Ka‘ū is highly variable, and primarily dependent upon activity of Kīlauea Volcano, whose vents are about 40 miles northeast of the Site. Air pollution emissions from the Hawaiian volcanoes consist primarily of sulfur dioxide. After entering the atmosphere, sulfur dioxide emissions are carried away by the wind and either washed out as acid rain or gradually transformed into particulate sulfates or acid aerosols. Prevailing wind patterns tend to carry emissions to the southwest, in the direction of the Site. Temporary spikes in emissions of sulfur dioxide (SO<sub>2</sub>) and fine particles 2.5 microns (PM<sub>2.5</sub>) along with changes in wind and weather patterns occasionally cause a reduction in air quality at the Site.

The State DOH operates a network of air quality monitoring stations at various locations around the State. On the island of Hawaii, specialized monitoring stations related to vog have been established in Hilo, Kona, Mountain View, Pāhala and Puna. A monitoring station was also established at HOVE in 2010, but data from this station is not yet available in summary format.

In general, volcanic-related sulfur dioxide concentrations decrease with distance from the source as the gas disperses and undergoes chemical conversion processes in the atmosphere. At longer distances from the source, such as at Kona, the sulfur dioxide will be substantially dispersed and transformed into fine particulate matter that is ever present and results in long-term concentrations. The data reported from the Hawai‘i Island vog monitoring stations indicate that concentrations of sulfur dioxide at Pāhala (near the source) tend to be higher than those measured in Kona, while concentrations of fine particulates are higher in Kona than at Pāhala.

Table 7 summarizes the exceedances of ambient air quality standards for monitoring stations on Hawai‘i island. As the Site is at an intermediate location between Pāhala and Kona, it can be expected that vog-related sulfur dioxide concentrations at the Site are lower than Pāhala, but higher than Kona. Conversely, fine particulate concentrations are likely higher at the Site than Pāhala, but lower than Kona. Based on the information available, it appears probable that air quality at the Site meets current State standards for sulfur dioxide. However, the federal government adopted a new one-hour averaging standard in 2010 that could be considered more stringent than the State’s standard, and although summary data for the new standard is not yet available, it appears that occasional exceedances of the federal standard could occur at the Site. Occasional exceedances of the standard for fine particulates may also occur during vog episodes, as they do elsewhere on Hawai‘i island.

**Table 7: Ambient Air Quality Standard Exceedances in 2009**

	<b>Sulfur Dioxide (SO<sub>2</sub>) 3- and 24-hour averaging periods</b>	<b>Fine Particulates (PM<sub>2.5</sub>) 24-hour averaging period</b>
<b>Hilo</b>	0	1
<b>Kona</b>	0	8
<b>Mountain View</b>	3	9
<b>Pahala</b>	25	4
<b>Puna</b>	0	na

The Hawai‘i County Civil Defense Agency has a system in place to issue advisories for vulnerable populations based on these natural conditions. The DOH maintains a toll-free help line that provides daily updates on vog levels and also maintains a website in conjunction with the Environmental Protection Agency (EPA) that provides vog advisory levels based on current sulfur dioxide levels.

### ***POTENTIAL IMPACTS AND MITIGATION MEASURES***

Short term and indirect impacts on air quality could occur during construction of Kahuku Village. Construction related air pollution sources include fugitive dust from vehicle movement and earthwork activity, and exhaust emissions from construction vehicles and equipment. Indirect construction impacts may also result from slow-moving construction equipment moving to and from the Site, temporary increases in local traffic due to commuting construction workers, and traffic disruptions caused by roadway lane closures.

All construction activities will comply with the provisions of Chapter 11-60.1-33, HAR relating to fugitive dust. Fugitive dust will be controlled by establishing a frequent watering program in areas where earth moving activity is occurring, using wind screens, keeping adjacent paved roads cleaned, and covering open-bodied trucks. Other measures that may be implemented include mulching loose soils, washing tires of construction vehicles to prevent tracking of sediment, and paving or establishing landscaping on disturbed sites as soon as is practicable. Emissions from on-site mobile and stationary construction equipment will be minimized through proper maintenance of equipment and vehicles. Exhaust emissions are anticipated to dissipate quickly due to the presence of fairly constant tradewinds.



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In the long term, motor vehicle traffic has the potential to cause long-term impacts on ambient air quality in the vicinity. Motor vehicles with gasoline-powered engines are significant sources of carbon monoxide that emit nitrogen oxides and other contaminants. However, federal restrictions regulating the emissions from new vehicles will lower average emissions each year as older vehicles are replaced with newer, cleaner operating, vehicles. It is estimated that carbon monoxide emissions will decline by an average of 25 to 30 percent per vehicle during the next 20 years due to replacement of older vehicles with newer models. Nitrogen oxide emissions are expected to drop even more.

The potential long-term effect on ambient air quality from vehicular traffic generated by development by Kahuku Village was evaluated by the air quality study. Computerized emission and atmospheric dispersion models were used to estimate ambient carbon monoxide and nitrogen dioxide concentrations along roadways with and without the development of Kahuku Village. The results of the analysis are provided in Table 8. As shown in Table 8, while ambient concentrations of carbon monoxide and nitrogen dioxide will increase along Māmalahoa Highway in the vicinity of the Site, the concentrations will remain well within National and State standards.

**Table 8: Existing and Projected Peak Hour Carbon Monoxide and Nitrogen Dioxide Concentrations on Māmalahoa Highway**

	Ambient Standard		2011 (Present)		2030/Without Project		2030/With Project	
	National	State	AM	PM	AM	PM	AM	PM
Carbon Monoxide <sup>1</sup>	35	9	0.9	0.7	0.9	0.7	2.8	2.2
Nitrogen Dioxide <sup>1</sup>	0.1	na	0.006	0.005	0.003	0.003	0.009	0.007

1. Measured in parts per million

As vog levels at the Site are influenced by volcanic activity and weather conditions, development of Kahuku Village will have no effect on the prevalence of vog. Potential buyers at Kahuku Village will be informed of vog conditions in sales disclosure documents. The Applicant is also considering the provision of climate-controlled community buildings that could serve as “safe rooms” for those susceptible to vog.

#### 4.6 VISUAL AND AESTHETIC RESOURCES

Mauna Loa is the dominant scenic vista looking mauka from the Site. From Māmalahoa Highway, the ocean can be seen intermittently since it is over six miles away. Along the coastline, scenic landmarks are the littoral cones, the ponds, Pōhue Bay, and the barren openness along the desolate coastline. The General Plan identifies the following areas as natural beauty sites: Pōhue Bay, the Volcano National Park area mauka of the Site, and the lava flows of 1868, 1887, and 1907 that traverse through the Site. The general location of the lava flows is shown on Figure 17.

#### **POTENTIAL IMPACTS AND MITIGATION MEASURES**

Scenic views from Māmalahoa Highway are not expected to be significantly affected as the majority of development will occur near the coast, which is over six-miles distant from the highway. The only uses and facilities proposed to be built near the highway are the project’s entry road, a rodeo grounds, and civic uses such as an elementary school, district park, police

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sub-station, and fire station. The civic uses will be located adjacent to the Hawaiian Ocean View Ranchos subdivision and occupy less than one-half mile of the Site's approximately 4-miles of highway frontage. The remainder of lands along Māmalahoa Highway will be undeveloped, maintaining the site's rural qualities and preserving scenic views for travelers on the highway.

The rodeo grounds may be created near the northeast corner of the Site and may be built on a portion of the lava flow of 1868. No significant impact to the aesthetic qualities of the lava flow of 1868 is anticipated as the rodeo grounds, which will be under 20 acres in size, will be built on only a small portion of the expansive lava flow.

As much as possible the project's entry road avoids the lava flows of 1887 and 1907. The proposed intersection of the entry road with Mamalahoa Highway, however, is located on a portion of the lava flow of 1907. The location of the intersection was selected after considering sight-distance and topography constraints of alternative sites. The entry road also crosses through the lava flow of 1887 near the Mixed-Use Village.

The aesthetic qualities at the Mixed-Use Village, a portion of which will be built on the makai- extent of the lava flow of 1887, will change from its present undeveloped state to a rural community setting with homes, neighborhood commercial and civic uses, low-rise multi-family and hotel structures, parks, and a golf course. Height limits and urban design standards will be implemented and enforced to promote a rural community atmosphere in the Mixed-Use Village.

Significant natural geologic features such as Pōhue Bay and littoral cones will be protected by keeping them within the existing Conservation District. A shoreline conservation zone extending at least 300-feet inland will maintain the Site's natural coastal setting and preserve scenic coastal views. While the visual and aesthetic qualities along the Site's coast may be affected by inland development, it must be recognized that presently there is no public shoreline access to the site's coastal frontage. With the development of Kahuku Village, managed public shoreline access will be provided, thereby enhancing the public's ability to access and enjoy the Site's visual and aesthetic coastal qualities.

## **4.7 SOCIO-ECONOMIC CHARACTERISTICS**

### **4.7.1 Population**

According to the 2005-2009 American Community Survey (ACS) 5-Year Estimate, the population for the Hawaiian Ocean View Census Designated Place was 2,699 persons and the population for Hawai'i County was 172,370. The ACS 5-year estimate is compiled by the U.S. Census Bureau and represents the average characteristics of population housing between January 2005 and December 2009, rather than a single point in time. Table 9 presents a comparison of the population of Hawai'i County as a whole to the Hawaiian Ocean View Census Designated Place based on the ACS 5-year estimate.

Because some Ocean View residents are concerned that the census under-reports actual population in Ocean View, the Ocean View Community Development Corporation, with the help of a volunteer staff, has surveyed dwellings and residents in Ocean View since 2006. Their surveys indicate that the resident population in the Ocean View community has been increasing

**Table 9: Demographic Characteristics**

Subject	Hawaiian Ocean View Census Designated Place		Hawai'i County	
	Number	Percent	Number	Percent
TOTAL POPULATION	2,699	100%	172,370	100%
AGE				
Under 5 years	133	4.9%	11,003	6.4%
18 years and over	2,021	74.9%	131,864	76.5%
65 years and over	335	12.4%	23,584	13.7%
Median Age (years)	45	--	39.4	--
SOCIO-ECONOMIC CHARACTERISTICS				
Total households	1,194	100%	63,196	100%
Average household size	2.26	--	2.67	--
Mean travel time to work (minutes)	61.7	--	26.1	--
Median household income	43,060	--	55,645	--
HOUSING OCCUPANCY AND TENURE				
Total housing units	1,529	100%	76,893	100%
Occupied units	1,196	78.2%	63,209	82.2%
By owner	957	80.0%	41,550	65.7%
By renter	239	20.0%	21,659	34.3%
Vacant units	333	21.8%	13,684	17.8%

Source: U.S. Census Bureau.

much faster than the County average, increasing from 4,780 persons in 2006, to 5,765 persons in 2008 (21% increase from 2006), and to 6,873 persons in 2010 (19% increase from 2008).

According to the State of Hawai'i Data Book, the Hawai'i County population was 177,835 in 2009, a 19.6 percent increase from 2000. Forecasts prepared by the State Department of Business, Economic Development and Tourism (DBEDT) project that the resident population for Hawai'i County is anticipated to increase to 221,862 by 2020 and 261,758 by 2030.

***POTENTIAL IMPACTS AND MITIGATION MEASURES***

Development of Kahuku Village will increase the population in the area. The increase in population will come from new residents, employees of new commercial establishments, overnight visitors, and sight-seers and other visitors to Kahuku Village.

The increase in average daily population was forecast in Kahuku Village's market study and is summarized in Table 10. As shown in Table 10, Kahuku Village is expected to have a resident population 2,378 persons. The total average daily population census at Kahuku Village, including residents, workers, sight-seers, and visitors, is anticipated to be 9,080 persons.

**Table 10: Kahuku Village Projected Average Daily Population**

<b>Type</b>	<b>Persons</b>
Sight-seers and Non-Overnight Visitors	4,670
Workers	910
Overnight Visitors	1,122
Kahuku Village Residents	2,378
Total	9,080

#### **4.7.2 Housing**

Many of the communities in the Ka‘ū district were an outgrowth of the sugar industry, which was the primary employer in the region until 1996 when Ka‘ū Agribusiness closed its sugar operations. Prior to closing its sugar operations, Ka‘ū Agribusiness, in cooperation with the Housing and Community Development Corporation of Hawaii, also facilitated the construction of housing for its employees. These efforts led to a marked rise in home ownership, increasing from 42 percent of single-family units in 1970 to 94 percent in 1997.

Two large subdivisions are located in close proximity to the Site, Hawaiian Ocean View Ranchos and HOVE. Hawaiian Ocean View Ranchos, sometimes referred to as Hawaiian Ranchos, consists of 1,229 one-to three-acre lots makai of Māmalahoa Highway between mile markers 76 and 78. Although subdivided in the 1950s, most of the lots have not been developed. The terrain varies from rugged lava fields to some lots containing ‘ōhi‘a trees and other vegetation. Water is provided by catchment systems only with electrical power available to some, but not all, of the lots. The Hawaiian Ranchos development is roughly between the 500 to 1,500-foot elevation with vacant lands below.

Directly mauka of Hawaiian Ocean View Ranchos is the Hawaiian Ocean Views Estates development. HOVE consists of 10,697 one-acre lots mauka of Māmalahoa Highway. Similar to Hawaiian Ocean View Ranchos, the terrain varies from rugged lava fields to lots containing ‘ōhi‘a trees and other vegetation. Water is by catchment only with power to some, but not all, lots. The development begins at the 1,500 foot level at Māmalahoa Highway and extends to the 5,000-foot level. HOVE was once part of Kahuku Ranch. Initial sales began in the late 1950s and early 1960s. The original developer of HOVE was the Crawford Oil Company. In the early 1980s a service station and a rental building, where the first hardware store began its business, were built. In 1989, the Ocean View Town Center was developed and the Ocean View Road Maintenance Corporation began an extensive rebuilding program of the roads in HOVE and the surrounding area. Shortly thereafter, the Ocean View Development Corporation started a new market, which included a laundromat and restaurant. HOVE now has two shopping centers, a volunteer fire department, post office, and a park.

#### ***POTENTIAL IMPACTS AND MITIGATION MEASURES***

A diverse range of residential units, from affordable workforce housing units to estate lots will be located in the Mixed-Use Village. A total of approximately 1,050 residential units are proposed, including single-family units, multi-family units, live-work units, senior housing, and estate lots. The concept for the Mixed-Use Village is to create a “complete” community, with everyday retail, civic, recreational, and employment needs available within the community.

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A market study for Kahuku Village has been prepared to assess the potential absorption rate, pricing, and buyer profile for residential units. Findings of the market study are summarized below and the complete report is attached as Appendix K. Assuming the timely receipt of land use and development approvals, the first units at Kahuku Village could be constructed and occupied by 2016. Sales are projected to start slowly at about 25 units per year, but are projected to exceed 200 units per year once the community becomes established.

Sales prices at Kahuku Village are anticipated to range from less than \$200,000 for a multi-family unit to \$1.5 million or more for an estate single-family lot near the ocean. Affordable housing will be provided in compliance with Chapter 11, Article 1, of the Hawai'i County Code, which requires affordable housing credits to equal at least 20 percent of the units or lots developed. In addition, for the proposed hotel, one affordable housing credit will be provided for every four full-time equivalent jobs created.

Given the range of residential products that may be offered, demand for units may come from a number of target markets. The multi-family units, many of which will be affordably priced, may appeal to first-time buyers seeking to live in a planned community within the Ka'ū region. Local families may also be attracted to the multi-acre lots and homes, many of which will be within walking distance to the ocean. Empty nesters and retirees may be attracted to the Site's community amenities, natural setting, and emphasis on cultural and natural resource preservation. Veterans wishing to live near the planned Veterans Administration facility may also find Kahuku Village an attractive option. Finally, the units at Kahuku Village are likely to appeal to second-home buyers seeking a weekend or winter home and investors seeking properties with the potential for appreciation.

The impact that vog and lava hazard may have on the marketability of residential units was assessed in the market study. While the long-term health effects of vog are unknown, some individuals, particularly those with pre-existing respiratory conditions can experience adverse effects from vog including headaches, increased susceptibility to respiratory ailments, watery eyes, and sore throat. With regard to vog, the market study could find no clear evidence that land values at communities in south and west Hawaii, areas typically affected by vog, experienced a disproportionate decline since 2008, when vog emissions from Kilauea markedly increased. The decline in land values since 2008 is similar to that experienced elsewhere on Hawaii Island and Statewide. Realtors on Hawaii island, however, have indicated that vog is a major consideration for some potential buyers, as is pricing, potential appreciation, livability, and convenience. Vog, therefore, could have an impact on absorption rates at Kahuku Village by diminishing its appeal to potential buyers, particularly those with existing respiratory conditions.

Hawaii island Realtors were also informally polled about the effect lava hazard may have on marketability of Kahuku Village. While respondents were aware of the potential threat that lava hazard presents, most indicated that lava flow hazard has not affected the west Hawaii real estate market as no flows on the western side of the island have occurred in recent years. Nani Kahuku Aina will inform buyers and investors of the risk that a lava flow may present in disclosure statements.

With regard Kahuku Village's effect on surrounding communities, the market study determined that creation of Kahuku Village will have no adverse impact, and potentially a beneficial effect, on the adjacent HOVE and Hawaiian Ocean View Ranchos subdivisions. Typically, new residential projects tend to lower prices at existing subdivisions since the supply of housing is

increased. However, Kahuku Village's community concept and amenities will attract a different buyer type than those attracted to HOVE and Hawaiian Ocean View Ranchos. Factors differentiating Kahuku Village from HOVE and Hawaiian Ocean View Ranchos include a wider range of neighborhood commercial uses, a walkable community design, community amenities such as shoreline access, parks, hiking trails, and preserves, provision of all basic infrastructure, and emphasis on natural and cultural resource stewardship. These factors, which ultimately affect pricing, will broaden the potential range of buyers that will be attracted to Kahuku Village as compared to the current market. Kahuku Village could have a beneficial effect on land values at nearby communities by increasing the flow of visitors to the area, some of whom may be potential buyers. The additional flow of visitors will also have a beneficial effect on commercial establishments, particularly those near Māmalahoa Highway.

#### **4.7.3 Neighborhood Commercial Uses and Hotel**

There are no commercial uses on the Site as it is undeveloped. The nearest neighborhood commercial uses are at HOVE, which has two neighborhood shopping centers. According to census estimates, there are 17 businesses within a 10-mile radius of the proposed Mixed-Use Village that employ 98 persons.

Presently, the Punalu'u Resort and Seamountain Golf Course complex is the center of tourism activity within the Ka'u District. Overnight accommodations are available at the 56-unit Colony One at Sea Mountain and the 12-unit Shirakawa Motel in Wai'ōhinu. Various bed and breakfast operations also provide visitor accommodations in the district.

### ***POTENTIAL IMPACTS AND MITIGATION MEASURES***

New commercial establishments are proposed to be created within the Mixed-Use Village. The commercial establishments may include a grocery store, retail and dining establishments, offices, and other neighborhood commercial establishments. A commercial market assessment for Kahuku Village was prepared by Colliers Monroe Friedlander in February 2011. The study is attached to the Market Study in Appendix K. According to the study, demand for the commercial uses will include the following:

Transient Market. Consumers that spend less than 24 hours at the Site. Individuals may include recreational activity participants, contract workers, or researchers. Typically, these individuals would spend the fewest amount of dollars for retail goods and services as many are residents and have a broader choice of outlets from which to purchase.

Resident Household Market. Residents of Kahuku Village, who would spend on a broad array of goods and services.

Hotel Visitor Segment. Overnight visitors at the proposed hotels or the overnight accommodations at the Hawaiian Heritage Center. Because visitors are typically adverse to traveling far distances for goods and services, they have a strong tendency to purchase from concessions and retailers in close proximity to their accommodations.

Based on projected resident and visitor populations at Kahuku Village, demand for commercial retail space is anticipated to gradually increase from about 10,000 sq. ft. during the initial phase in 2016-2018, to roughly 90,000 sq. ft. by 2027.

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Two hotel sites are planned in the Mixed-Use Village. The market study forecasts that the first hotel site could be sold between 2019-2021 and the second between 2022-2024. Competitive advantages for the hotels at Kahuku Village include the community's unique location, the many natural and cultural resources in the vicinity, and the lack of competition from new master-planned resorts.

Development of the hotel sites and the Hawaiian Heritage Center is anticipated to have a beneficial impact on the hospitality industry in the Ka'ū region. Presently, access to the site's coastal hiking trails and natural and cultural resources, which may be of interest to visitors, is limited by the six-mile distance from Māmalahoa Highway to the coast that is accessible only by the existing unimproved access road. As a result, very few visitors are able to enjoy the Site's scenic landscape or appreciate the value of the Site's resources. With development of Kahuku Village, coastal access will be greatly improved and interpretive exhibits explaining the value of the Site's natural and cultural resources will be provided. In addition, it is anticipated that the Hawaiian Heritage Center will host a number of educational and scientific programs that will appeal to visitors interested in learning about traditional Hawaiian history and culture and natural resource management.

#### **4.7.4 Economic and Fiscal**

While Ka'ū is the largest district on the island, it is the second smallest in population. The local economy is agrarian in nature. Coffee, orchids, vegetables, flowers, cattle, and macadamia nuts are grown in this district. According to the *Hawai'i County General Plan*, approximately five million dollars have been invested in Ka'ū to establish a forestry industry. The macadamia nut industry remains the primary industry in the district. Tourism currently plays a very limited role in the local economy as there are only 68 transient units located at two facilities within Ka'ū.

With relatively few nearby employment opportunities, Ka'ū is an impoverished area. In 1999, nearly 17 percent of families surveyed had an annual income below the national poverty level. Hawaiian Ocean View Census Designated Place fared slightly better than the district did in 1999; 13 percent of the families surveyed had an annual income below the national poverty level. Additionally, over 30 percent of the children in the Hawaiian Ocean View Census Designated Place live below the national poverty level.

As of November 2008, Hawai'i County's unemployment rate was 7.0 percent, compared to 3.3 percent in 2007 (State of Hawai'i Department of Labor and Industrial Relations, 2008). In the Hawaiian Ocean View Census Designated Place, approximately 866 persons ages 16 years and older were listed as employed. Approximately 24 percent of the population was employed in the management, professional or related occupations, 21 percent in service occupations, 23 percent in sales and office occupations and 20 percent in construction. The remaining 11 percent were employed in the farming, fishing and forestry occupations, or production, transportation and material moving occupations.

#### ***POTENTIAL IMPACTS AND MITIGATION MEASURES***

The Hallstrom Group prepared an Economic Impact and Public Cost/Benefits Assessment for Kahuku Village in June 2011. Appendix L contains the complete report. Kahuku Village's cumulative economic impact is estimated to total \$2.457 during the 13-year construction period and \$220.2 million annually after build-out and stabilization of the community. Kahuku Village

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will contribute to increased State and County revenues in the form of increased property taxes, general excise taxes, and increased income taxes from employment.

Some of the specific economic benefits associated with creation of Kahuku Village include:

- \$1.107 billion in direct real property capital investment;
- 5,104 “worker years” of employment over the initial build out period, averaging 393 full-time equivalent (FTE) positions annually (a “worker year” is the amount of time one full-time worker can work in one year);
- 1,509 FTE employment positions on-site following build-out;
- Off-site and secondary employment will total 33,871 years of FTE positions during the 13-year construction period and 387 permanent annual jobs following build-out.
- A total of \$295.3 million in wages is projected to be paid to construction workers during the construction period.
- Off-site employee wages will total \$135.9 million during the 13-year construction period and \$13.6 million annually following build-out.

Primary public fiscal impacts associated with the creation of Kahuku Village include the following:

- The County of Hawaii will receive some \$112.6 million in real property tax revenues during the 13-year construction period and \$15.9 million annually at build-out.
- The County will also receive 8.33 percent of the Transient Accommodation Tax (TAT) collected on the visitor units. These taxes, divided between the State and Counties, will total \$68.5 million during the construction period and \$9.3 million annually at build-out.
- Total primary County tax receipts will cumulatively total \$118.3 million during the 13-year construction period and \$16.7 million at build-out.
- The State of Hawai‘i will receive circa \$223.01 million in income, gross excise tax, and TAT revenues during the 13-year construction period, stabilizing at \$22.5 million per year at build-out.
- The additional government operations associated with Kahuku Village will total about \$45.1 million per year for the County of Hawaii and \$148.5 million for the State during the 13-year build-out period. Once the community is built-out, the County of Hawaii will expend \$6.8 million annually and the State \$22.5 million annually.
- The County of Hawaii will generate a net fiscal “profit” (tax receipts exceeding per capita expenditures) of \$73.2 million during the construction period, and a profit of \$9.8 million annually at build-out.
- The State will show a net profit of \$74.6 million during the construction period, and a profit of about \$250,000 annually at build-out.

#### **4.8 INFRASTRUCTURE AND UTILITIES**

Gray Hong Nojima & Associates prepare a Civil and Electrical Infrastructure Assessment to determine infrastructure requirements for Kahuku Village. Findings and recommendations of the report are summarized below. Appendix I contains the complete report.

##### **4.8.1 Water System**

Currently, the Hawai‘i County Department of Water Supply’s (DWS) system ends 25 miles away to the west at Ho‘okena in South Kona, and 10 miles away to the east at Wai‘ōhinu. The nearby residential communities of HOVE and Hawaiian Ocean View Ranchos primarily rely on roof catchment systems. During drought periods, residents pay truckers to haul water to fill their



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**Table 11: Kahuku Village Estimated Daily Average Potable Water Demand (mgd)**

<b>Land Use</b>	<b>Phase 1 2016-2018</b>	<b>Phase 2 2019-2021</b>	<b>Phase 3 2022-2024</b>	<b>Phase 4 2025-2027</b>
Resort	0	0.075	0.15	0.15
Residential	0.078	0.232	0.482	0.524
Commercial	0.004	0.014	0.18	0.198
Amenities/Support	0.006	0.028	0.034	0.034
Hawaiian Heritage	0.07	0.07	0.07	0.07
<b>Total</b>	<b>0.158</b>	<b>0.419</b>	<b>0.916</b>	<b>0.976</b>

**Table 12: Kahuku Village Estimated Daily Average Non-Potable Water Demand (mgd)**

<b>Land Use</b>	<b>Phase 1 2016-2018</b>	<b>Phase 2 2019-2021</b>	<b>Phase 3 2022-2024</b>	<b>Phase 4 2025-2027</b>
Resort	0	0.125	0.25	0.25
Residential	0.005	0.135	0.352	0.388
Commercial	0.004	0.014	0.104	0.118
Amenities/Support	0.045	0.673	0.693	0.693
Hawaiian Heritage	0.094	0.094	0.094	0.094
<b>Total</b>	<b>0.148</b>	<b>1.041</b>	<b>1.493</b>	<b>1.543</b>

water tanks. To reduce the hauling cost, the DWS will soon place into service a spigot with water from a well located in HOVE.

The Site is located over the Manukā Aquifer System of the southwest Maunaloa Aquifer Sector. A water resource assessment report prepared by Tom Nance Water Resources Engineering analyzed the availability of groundwater and the potential impact of water withdrawals on the underlying aquifer. Based on an assessment of geologic conditions and ground water quality testing, it was determined that a brackish basal lens underlying the Site exists.

***POTENTIAL IMPACTS AND MITIGATION MEASURES***

Water demand for both potable and non-potable uses were estimated using domestic and irrigation usage rates characteristic of similar developments on the Kona coast. The water demand is summarized in Tables 11 and 12. The estimates assume that potable water will be used primarily for domestic use with limited irrigation use in areas not served with a non-potable irrigation system. Non-potable water will be supplied by brackish wells and supplemented by recycled R-1 water from the project’s wastewater treatment plant (WWTP).

A privately operated water system will be developed to provide potable and non-potable water for Kahuku Village. Since the groundwater underlying the Site is brackish, desalination processes will be used to produce potable water, and possibly irrigation water depending on the

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salinity of the groundwater. The preferred method of desalination for Kahuku Village is reverse osmosis, which involves the use of a semi-permeable membrane to remove dissolved solids, including salt, in brackish and salt water.

The reverse osmosis process results in the production of several waste by-products that require disposal. The largest waste product by volume is concentrated brine, which for salt water desalination is approximately 60 percent of the feed water supply. In addition to brine, there are also waste by-products resulting from the pre-treatment of feed water and from backwash and cleaning of the membranes. Disposal of brine and other by-products will be through an injection well. The injection well will be designed to discharge deeper in the underlying aquifer than the source wells to eliminate the possibility of recirculating the brine. The injection wells will also be subject to the DOH Underground Injection Control (UIC) permitting requirements, which regulate the location, construction, and operation of injection wells to protect underground drinking water sources.

Separate potable and non-potable water systems will be constructed. The potable water system will be supplied by three salt water wells and one backup well located near the main access road at the 330-foot elevation level. The wells will be about 600-feet deep and spaced 200-feet apart and will pump water at a maximum rate of 1,000 gallons per minute (gpm) each. Water from the wells will be pumped to a reverse osmosis treatment plant and potable water from the plant will be pumped to a reservoir to be located at the 340-foot elevation level. The Mixed-Use Village and Hawaiian Heritage Center will be served by gravity flow through a looped system of distribution mains that will generally follow the Project's roadways. The distribution mains will be sized to provide water for both domestic and fire protection, and will include water meters, backflow preventers, and fire standards. The system will be designed to meet County DWS standards.

The non-potable water system will be supplied by six brackish water wells located near the main access road at the 1,000-foot elevation level. The wells will be about 1,000-feet deep and spaced 1,500 feet apart and will pump water at a maximum rate of 300 gpm each. Non-potable water will be stored in two reservoirs located at the 360-foot elevation level. A 2.0 MG reservoir will store brackish water for irrigation of the entire project, except for the golf course. A second 3.0 MG reservoir will provide storage of brackish water and recycled R-1 wastewater for irrigation of the golf course. Separate transmission mains will deliver non-potable water from each reservoir. The 2.0 MG reservoir will connect to a looped system of distribution mains following the main roadways within the project and provide irrigation water for all areas except some of the residential lots and golf course. The 3.0 MG reservoir will connect directly to the golf course to provide irrigation water. A map showing the location of water wells, reservoirs, and major distribution lines is provided in the Civil and Electrical Infrastructure Assessment (Appendix I).

#### **4.8.2 Wastewater System**

There is no County wastewater system in the vicinity of the Site. Wastewater from existing communities in the vicinity of the Site is treated and disposed of by individual wastewater systems or private treatment facilities. Many of the single-family residential lots and public parks in the region are still connected to septic and cesspool systems. For most homes and smaller facilities, systems consist of a septic tank and corresponding leach field.

The DOH Critical Wastewater Disposal Map designates the makai portion of the Site up to approximately the 400 foot elevation as a Critical Wastewater Disposal Area (CWDA). The

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balance of the Site is in the non-CWDA zone. Within the CWDA, cesspools are severely restricted or prohibited, and the DOH director may impose more stringent requirements such as: 1) meeting higher effluent standards; 2) limiting the method of effluent disposal; and 3) requiring flow restriction devices on water fixtures (Section 11-62-05, HAR). Cesspools could be permitted in the non-CWDA zone with the approval of the DOH Director; however, it is DOH's general policy to disallow the disposal of untreated sewage into the environment (HAR section 11-62-36 (cesspools), -01 (general policies)).

**POTENTIAL IMPACTS AND MITIGATION MEASURES**

The DOH regulates wastewater treatment systems and allows two options of wastewater treatment works that may be used at the Site: 1) a centralized WWTP; or 2) individual wastewater systems (IWS). An IWS is defined by DOH regulations as an onsite wastewater treatment system that receives and disposes of no more than 1,000 GPD of wastewater. A centralized WWTP is a system that collects, treats and disposes of wastewater from multiple sources with design flows greater than 1,000 GPD. Due to the size of Kahuku Village, a centralized WWTPs is required. However, for remote areas within the project area, such as the Hawaiian Heritage Center and Eco-Lodges, IWSs will be evaluated as an alternative during the design phase of the Project, after consultation with the DOH.

Wastewater flows were projected based on proposed land uses, unit counts and estimated population using demand rates from the State HAR Chapter 11-62, Appendix F and the County Division of Wastewater Management, *Design Standards of the Department of Wastewater Management*, Volume 1. The estimates are summarized in Table 13. The estimates factor in both wet and dry inflow and infiltration and peak flow factors and include a peak flow factor of five.

The wastewater collection system will consist of gravity sewer mains located within roadways where grade allows. Due to the proposed location of the WWTP and site topography, the gravity mains will flow to pump stations and from there, force mains will convey wastewater to the WWTP.

**Table 13: Kahuku Village Projected Wastewater Flows (mgd)**

Land Use	Phase 1			Phase 2			Phase 3			Phase 4		
	2016-2018			2019-2021			2022-2024			2025-2027		
	Ave	Max	Peak	Ave	Max	Peak	Ave	Max	Peak	Ave	Max	Peak
Resort	0	0	0	0.054	0.254	0.3	0.108	0.508	0.602	0.108	0.508	0.602
Residential	0.026	0.123	0.233	0.114	0.546	1.004	0.268	1.281	2.310	0.282	1.344	2.510
Commercial	0.014	0.065	0.07	0.048	0.227	0.244	0.245	1.183	1.313	0.282	1.359	1.506
Amenities/Support	0.0002	0.001	0.014	0.015	0.063	0.08	0.015	0.065	0.093	0.015	0.065	0.093
Hawaiian Heritage	0.054	0.233	0.413	0.054	0.233	0.413	0.054	0.233	0.413	0.054	0.233	0.413
<b>Total</b>	0.094	0.422	0.730	0.285	1.323	2.041	0.690	3.270	4.731	0.741	3.509	5.124

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To provide the highest level of treatment, and so that treated effluent can be used for irrigation, the treatment facility will be designed to treat effluent to R-1 standards, which includes disinfection of wastewater to eliminate pathogens. Initially, however, effluent will be treated to R2 standards until wastewater flows are consistent enough to allow for treatment to R-1 standards. Package modular plants utilizing enhanced activated sludge processes have been utilized for similar projects in West Hawai'i and are the preferred method of wastewater treatment for Kahuku Village.

The WWTP will include an on-site sludge handling facility including a holding tank and dewatering facility. Approximately 4,650 gallons per day (gpd) of sludge is projected to be produced at full build-out. Dewatered sludge will be disposed of at a County landfill, or through an alternative means such as feedstock for a biomass facility.

At no time will direct discharge of treated effluent to the ocean occur. Treated effluent will be disposed of initially through injection wells until R-1 treatment is in place, at which time effluent will be stored in a non-potable reservoir which will supply R-1 water for non-potable use at the golf course. Until the effluent can be recycled, it will be conveyed to the reverse osmosis brine concentrate disposal system and disposed of through injection wells. A total of four injection wells are proposed, each about 600 feet deep and spaced 100 feet apart. The injection wells are makai of the DOH UIC line and will be constructed and operated in accordance with DOH UIC regulations. As previously stated, the DOH UIC program regulates the location, construction, and operation of injection wells to protect underground drinking water sources. A map showing the location of the wastewater treatment plant, sewage pump stations, disposal wells, and major sewer lines is provided in the Civil and Electrical Infrastructure Assessment (Appendix I).

#### **4.8.3 Drainage System**

There are no flood control structures within the vicinity. Runoff from Mauna Loa sheet flows and is conveyed via gullies that run east to west (mauka to makai) near the Site. Similarly, runoff from the undeveloped Site sheet flows east to west (mauka to makai) and is conveyed by gullies, discharging into the low lands near the shoreline.

### ***POTENTIAL IMPACTS AND MITIGATION MEASURES***

During construction, BMPs will be implemented to minimize and control storm water runoff. Construction BMPs may include providing gravel entrances, installing silt fencing, diverting stormwater runoff to retention/detention basins, utilizing diversion berms and ditches, installing dust screens, establishing temporary ground cover, and watering loose soils. Specific construction BMPs will be specified in the project's NPDES permit(s).

Development of Kahuku Village will increase the rate of stormwater runoff due to the replacement of porous lava with top soil and impervious surfaces. The Project's infrastructure assessment report calculates that runoff from developed portions of the Site could increase from 63 cubic feet per second (cfs) to 253 cfs at build-out. No discharges of stormwater runoff into coastal waters are expected to occur as stormwater runoff will be directed to swales, detention/retention basins, and injection wells where it will infiltrate into the ground.

Due to the porous nature of lava groundcover and the design of the community, Kahuku Village is well suited to implementation of Low Impact Development (LID) strategies. LID is a stormwater management strategy that promotes conservation of existing natural features and use

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of localized small-scale stormwater systems in an effort to mimic the natural hydrologic patterns, while minimizing stormwater infrastructure. LID practices and stormwater systems that can be incorporated into the project include:

- Minimize impervious area, use permeable surfaces where possible including permeable sidewalk and roadway/driveway paving;
- Plan development around existing site features – retain and incorporate natural topography;
- Minimize grading and disturbed area – maximize existing undisturbed lava fields;
- Narrow roads and minimize driveway lengths/widths, use wheel strips and shared driveways;
- Provide connected bike and pedestrian pathways;
- Provide sidewalks on one side of the street;
- Plant trees – especially large canopy trees;
- Use source control for stormwater pollutant control and groundwater recharge;
- Minimize conventional infrastructure including: curb and gutter, piping and drain inlets; and,
- Utilize the lava rock onsite – lava sumps, lava swales, lava trenches, shallow drywells, drainage injection wells, detention and retention basins.

In areas with high density (commercial, industrial, civic, and multi-family residential) within the Mixed-Use Village core, conventional stormwater infrastructure will be implemented including curb, gutter, drain inlets and drain pipes. The piped drainage system will be conveyed into a drainage injection well, retention/detention basin or another type of detention/infiltration system. The piped drainage systems will be limited to the core of the Mixed-Use Village. Outside of the core of the Mixed-Use Village in areas of lower density, the stormwater runoff will be conveyed using natural lava swales or grasses swales and conveyed through localized infiltration practices such as lava sumps and lava trenches. Other infiltration practices using shallow drywells, drainage injection wells and detention/retention basins will be utilized where necessary. If injection wells are used, they will be subject to the State DOH UIC permitting requirements, which regulate the location, construction, and operation of injection wells to protect underground drinking water sources.

Overflow routes for excess runoff from developed areas will be directed to low points in either the golf course or other undeveloped areas within the project limits. These low lying areas will act as detention/retention areas and will serve as the ultimate disposal point of stormwater runoff.

During the design phase of Kahuku Village, a Drainage Masterplan will be developed that incorporates the stormwater management strategies listed. The Drainage Masterplan will be based on the Site's topography, grading plan, LID stormwater strategies, infiltration and stormwater system sizing criteria, detention/retention analysis, flood analysis, and drainage system schematics and plans. The implementation of LID stormwater strategies, will allow management of runoff at the source and sizing of stormwater facilities will be site specific. The infiltration/retention/detention facilities will be sized so that 100 percent of post developed runoff from a 50-year return period storm will be infiltrated onsite, so point source discharge to the ocean will not occur.

#### **4.8.4 Electrical and Communications Systems**

On Hawaii island electrical, telephone, and cable service is provided by HELCO, Hawaiian Telcom, and Oceanic/Time-Warner Cable, respectively. However, many homes and businesses in Kahuku, including those in HOVE and Hawaiian Ocean View Ranchos are not connected to the electrical, telephone, or cable networks. These services are often individually developed utilizing a variety of off-grid options. Solar options, such as the use of photovoltaic cells and thermal collectors are very successful in the area due to the high solar radiation intensity in the area.

An existing wind energy facility, Kamaoa Wind Farm, is located about two-miles east of the Site. Some of the electricity generated by this facility is fed into HELCO’s system through a 69 kV transmission line that is connected to HELCO’s transmission line on Māmalahoa Highway.

#### ***POTENTIAL IMPACTS AND MITIGATION MEASURES***

Distributed power will be required for the residential, commercial and resort facilities as well as utility infrastructure such as the desalination plant, wastewater treatment facilities, water and

sewer pumping stations. Because of their importance for health and safety, the latter require firm power sources, and in most cases, emergency power generation as a back-up power source. Electrical demand for Kahuku Village at each phase of development was estimated using demand rates used by HELCO planning personnel for system capacity planning and by using per-acre electrical demand multipliers characteristic of land uses. Electrical demand by development phase is summarized in Table 14.

There are two alternative sources of electrical power available to Kahuku Village: 1) the Kamaoa wind farm in conjunction with back-up generation, or 2) HELCO utility power. Each alternate is discussed below.

Presently the Kamaoa Wind Farm feeds only a portion of the energy it produces into HELCO’s system and under normal conditions, has excess power available to serve Kahuku Village. The wind farm, however, is an intermittent source of power and would require a back-up power storage or power generation facility. If this alternative is implemented, a bio-mass or bio-diesel facility would likely be developed to provide back-up power generation. Because of their limited running time, emergency generator facilities for critical infrastructure are normally exempted from Clean Air Act permitting requirements. A bio-mass or bio-diesel facility would probably need to run constantly as a “soft” or “spinning” back-up to the wind farm, and be required to comply with Clean Air Act permitting requirements. The bio-mass or bio-diesel

**Table 14: Kahuku Village Projected Electrical Demand (kVA)**

	Residential	Hotel	Commercial	Civic	HHC	Other	Total
Phase 1 (2016-2018)	604	0	1,243	0	2,410	485	4,742
Phase 1 & 2 (2016 - 2021)	2,877	1,300	4,346	671	2,410	1,100	12,704
Phase 1 through 3 (2016 - 2024)	10,717	2,625	7,470	2,932	2,410	1,400	27,554
Phases 1 through 4 (2016-2027)	11,552	2,625	7,547	5,560	2,410	1,700	31,394

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facility could be developed off-site near the Kamaoa Wind Farm or on the Nani Kahuku Aina property. Since the specific location, size, and operational nature of the bio-mass or bio-diesel facility is presently unknown, a separate Environmental Assessment or Environmental Impact Statement will need to be prepared if this alternative is pursued. In addition, easements from Kamehameha Schools to install transmission lines from Kahuku Village to the Kamaoa Wind Farm would be required.

HELCO has indicated that their South Point Substation has capacity to serve the initial phases of Kahuku Village, however the off-site 12.47 kV distribution lines will need to be reconductored in order to provide service. These off-site 12.47 kV distribution lines are jointly routed along with HELCO's 69 kV transmission line on Māmalahoa Highway. An overhead or underground line extension will need to be constructed within the Site along an accessible route to connect Kahuku Village with HELCO's off-site facilities along Māmalahoa Highway. A possible alternate routing for the 69 kV transmission line would be to extend a 69 kV line from the radial feed to the existing transmission line at the Kamaoa Wind Farm. This alternate routing would require access easements from Kamehameha Schools and HELCO approval. An interconnection study may also be required to determine if the intermittent nature of the power input from the wind farm would have an impact on the proposed substation.

In January 2008, the State of Hawai'i and the U.S. Department of Energy signed a long-term Memorandum of Understanding (MOU) aimed at having 70 percent of State's energy needs generated by renewable sources. As a result of this MOU, the development of all new projects should consider both energy demands and the type of energy that will be developed to meet the demand.

In compliance with Chapter 344 (State Environmental Policy) and Chapter 226 (Hawai'i State Planning Act), HRS, all Kahuku Village buildings, activities, and grounds will be designed with energy-saving considerations. Energy-efficient design practices and technologies will be specifically addressed in the design phase of Kahuku Village. Buildings will also comply with the County of Hawai'i Energy Code (Hawai'i County Code, Section 5, Article 2). In addition, solar water heaters will be used as required under Section 196-6.5, HRS.

Energy conservation measures will be implemented wherever possible in the design of the proposed Project. Some of the energy-saving technologies being considered for incorporation include:

- Maximum use of day lighting;
- Use of Energy Star appliances;
- Installation of high efficiency compact fluorescent lighting;
- Roof and wall insulation, radiant barriers and energy efficient windows;
- Installation of light colored roofing;
- Utilization of landscaping for shading of buildings; and,
- Use of photovoltaics, fuel cells, and other renewable energy sources, as feasible.

#### **4.8.5 Solid Waste**

The County of Hawai'i currently maintains two active landfills: South Hilo Landfill and the Pu'uānāhulu Landfill. The County of Hawai'i Integrated Resources and Solid Waste

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Management Plan Update (IRSWMP), which was prepared in December 2009, estimated that the Pu‘uanahulu landfill had an anticipated remaining life of 38 years (through 2047) based on recycling rates occurring at the time. The South Hilo Landfill was expected to have an operational life of 4 years, or through 2013.

Island residents collect their solid waste trash and transport it to any one of the 21 solid waste transfer stations located around the island. In some areas of the island, residents may hire a private collection company to pick-up their solid waste for disposal. The nearest transfer station to the Site is the Wai‘ōhinu Transfer Station, located approximately nine miles to the east of the Site. The IRSWMP proposes the development of a new transfer station at Ocean View by 2014, which would be less than one mile away from the Site.

Currently, solid waste is not being generated on the Site.

### ***POTENTIAL IMPACTS AND MITIGATION MEASURES***

During construction, waste generated by site preparation will primarily consist of debris associated with the removal of lava rock and shrub vegetation onsite. Where possible, green waste will either be chipped into mulch for use onsite or recycled, thereby minimizing the amount of solid waste that needs to be transferred offsite. Project contractors will be encouraged to develop job-site recycling plans. Construction waste that cannot be recycled will be disposed of in the County’s landfill.

The IRSWMP includes a waste stream assessment and historic waste generation rates for the County on a per capita basis. The IRSWMP estimated that in fiscal year 2007-08, the per capita waste generation rate was 9.4 pounds/capita/day using resident population, or 8.3 pounds/capita/day using the de facto population (persons actually present). Both of the County rates are substantially higher than the 2009 EPA waste generation rate of 4.34 pounds/capita/day which does not include construction and demolition debris in its multiplier. Based on the de facto population rate of 8.3 pounds/capita/day, residents and visitors to Kahuku Village are expected to generate 5,302 tons of solid waste per year at full build-out.

Permanent waste diversion and recycling measures, such as on-site green waste composting and community recycling programs, may be implemented. Kahuku Village will most likely be serviced by a private refuse collection agency, possibly contracted by a homeowner’s association(s). Waste that cannot be recycled will be disposed of at the County landfill.

## **4.9 PUBLIC SERVICES AND FACILITIES**

### **4.9.1 Schools**

Presently, DOE operates three public schools in the District of Ka‘ū. They are the combined campus of Ka‘ū High School/ Pāhala Elementary School (grades K-12) and Nā‘ālehu Elementary School (grades K-7). There are no public charter or private schools in the district of Ka‘ū. Table 15 presents current and projected school enrollment information. According to the 2005 *County of Hawai‘i General Plan* the population of the District of Ka‘ū increased by 31 percent between 1990 and 2000.



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**Table 15: Capacity and Enrollment for Public Schools**

<b>School</b>	<b>Capacity for 2008-2009 School Year</b>	<b>Enrollment in 2009-2010 School Year</b>	<b>Projected Enrollment 2011-2012</b>
Ka‘ū High School/Pāhala Elementary School (Grades K-12)	624	576	590
Nā‘ālehu Elementary School (Grades K-7)	342	356	395

Source: State of Hawai‘i Department of Education, 2009

The only educational options available then and now to families in west Ka‘ū were/are Nā‘ālehu Elementary (10 miles away), the combined campus of Ka‘ū High School/Pāhala Elementary School (20 miles away) or home schooling. Families from HOVE/Hawaiian Ocean View Ranchos sent 406 of the 448 school aged children to one of these public schools rather than homeschooling. Presently, less than one-quarter of the nearly 12,000 lots have been developed.

***POTENTIAL IMPACTS AND MITIGATION MEASURES***

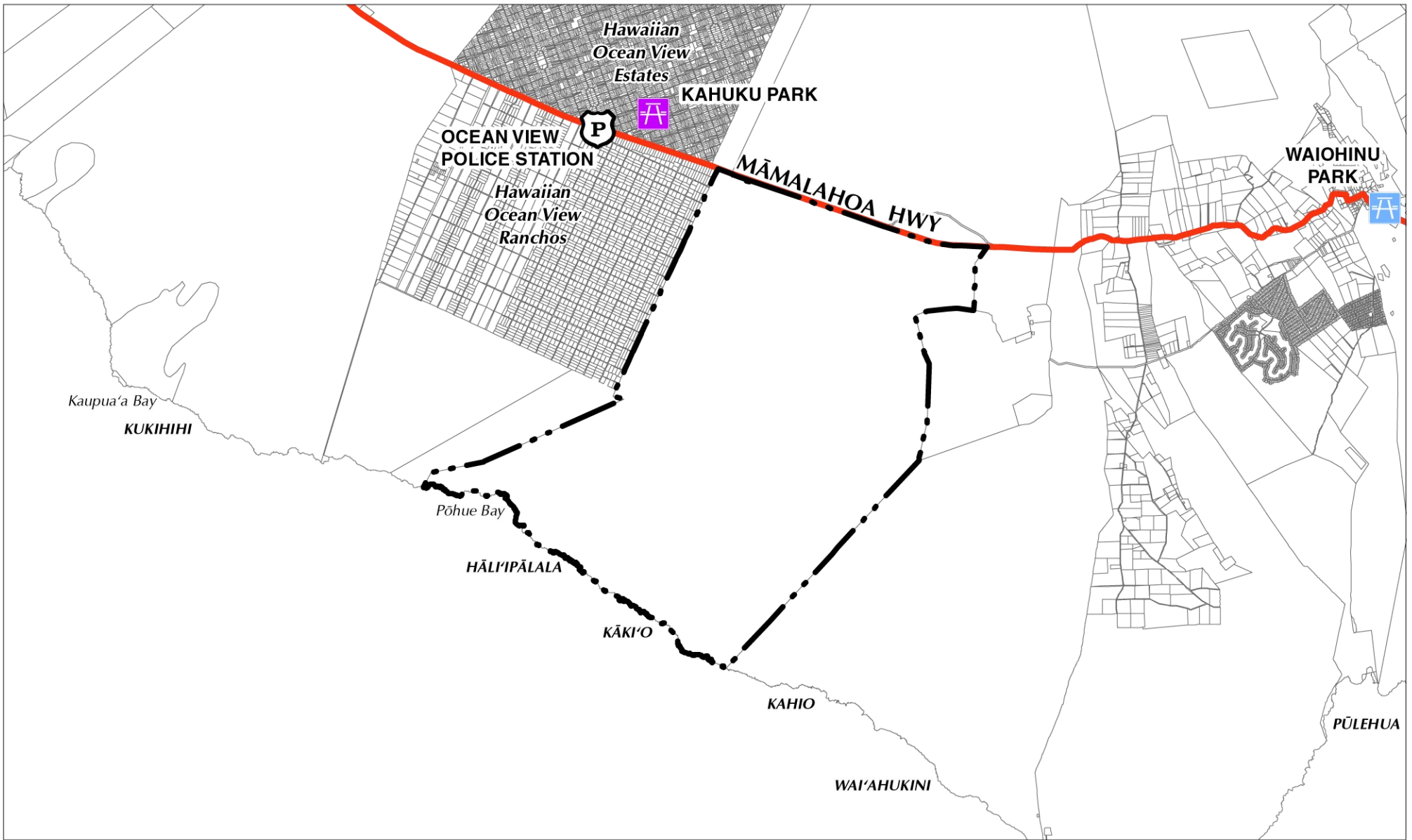
Students residing at Kahuku Village would likely attend Nā‘ālehu Elementary School and Ka‘ū High School. In the long-term, as resident population at Kahuku Village and HOVE and Hawaiian Ocean View Ranchos increases, new school facilities may be needed. Twelve-acres of land has been set aside for an elementary school in the Mauka Community Facilities Reserve. Development of an elementary school would be consistent of the County General Plan which encourages the development of a new K-8 school at Ocean View.

**4.9.2 Police, Fire and Medical**







The District of Ka‘ū is served by the County of Hawai‘i Police Department through the Ka‘ū District Station located in Nā‘ālehu and a police substation located at Pōhue Plaza in HOVE. While the nearest facility to the Site is the substation located approximately one mile away in Pōhue Plaza, it is not a manned station. The nearest manned station is the Ka‘ū District Station approximately 10 miles away in Nā‘ālehu.

Fire prevention, suppression, and protection services for Kahuku are provided by a fire station located on Orchid Circle in HOVE. The station is manned 24 hours a day, seven days a week by a combined volunteer and professional force. Another fire station is located approximately 10 miles away in Nā‘ālehu. Existing public facilities in the Ka‘ū region are shown in Figure 23.

The nearest critical access health care facility to the Site is the Ka‘ū Hospital, located on Kamani Street in Pāhala, approximately 17 miles east of the Site. The 21-bed facility provides acute and long-term care services (Hawai‘i Health Systems Corporation, 2009). The Ka‘ū Family Health Center operated by the Bay Clinic is a Federally Qualified Health Center providing non-emergency medical, dental and behavioral health care during regular business hours. The Ka‘ū Family Health Center is located approximately 10 miles away on Māmalahoa Highway in Nā‘ālehu.



**LEGEND**

-  Nani Kahuku 'Āina Property
-  2010 Hawai'i TMK
-  Major Roads
-  County Park - Other
-  Police Station
-  County Park - Community


**FIGURE 23**  
Public Facilities


**KAHUKU VILLAGE**

Nani Kahuku 'Āina LLC Ka'ū, Hawai'i

North Lineal Scale (in feet)

0 5,000 10,000 20,000



  
PBR HAWAII  
& ASSOCIATES, INC.

Source: Hawai'i TMK, 2010 (GIS)  
Disclaimer: This graphic has been prepared for general planning purposes only.

***POTENTIAL IMPACTS AND MITIGATION MEASURES***

It is anticipated that residents and businesses of Kahuku Village will occasionally require police, fire suppression, and emergency medical services. Approximately 100-acres of land near Māmalahoa Highway adjacent to the Hawaiian Ocean View Ranchos development is proposed to be dedicated to the State and County of Hawai‘i for regional civic facilities. The land could be used by the County for construction of a police substation, fire station, and emergency medical center.

The County of Hawai‘i General Plan indicates that the Kahuku region is currently underserved by existing emergency services, particularly emergency transportation to Hilo or Kona hospitals for cases that exceed the capabilities of Ka‘ū Hospital. The proposed heliport facility will facilitate emergency transport for patients of the proposed Veterans Administration Facility or accident victims to Ka‘ū Hospital, Kona, Hilo, or even Honolulu.

**4.9.3 Recreational Facilities**

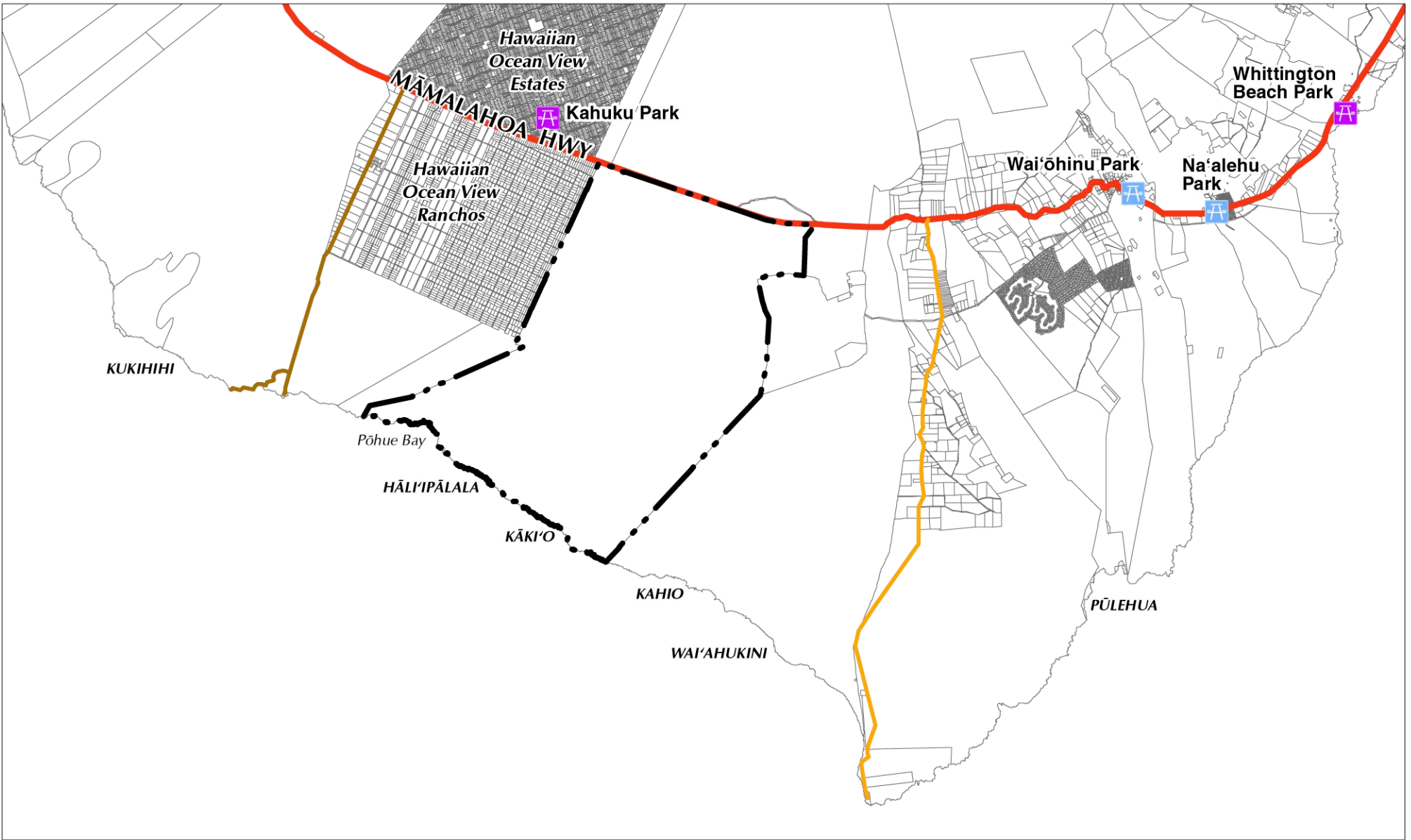
Recreational parks and facilities located in close proximity to the Site are extremely limited. The nearest County parks for active recreational activities include: Kahuku Park (located approximately one mile away in HOVE), Wai‘ōhinu Park (located approximately ten miles to the east in Wai‘ōhinu), and Nā‘ālehu Park (located approximately 12 miles away in Nā‘ālehu). Manukā State Wayside Park, located approximately five miles west of the Site, is a State park for passive recreational activities. The nearest public shoreline access is about two miles west of the Site at Humuhumu Point and is accessible only through a nine-mile four-wheel drive jeep trail. Existing County parks and public shoreline access points are shown in Figure 24.

On-shore pole fishing and camping is possible along the Site’s coast with a permit from the landowner. Along the shoreline, there are existing trails situated on private lands, with no public facilities. The nearest boating facilities are located approximately 15 miles (by road) at Ka Lae (South Point).









The National Park Service is developing a trail system called the Ala Kahakai National Historic trail. Upon completion, this trail (which includes portions of the traditional trails *Ala Loa* and *Alanui Aupuni*) will include approximately 175 miles of linked trails along the western coast of the island of Hawai‘i from ‘Ūpolu Point down to Ka Lae (South Point). Portions of the traditional trails (*Ala Loa* and *Alanui Aupuni*) can be seen parallel to the coastline at various locations across the Site.

***POTENTIAL IMPACTS AND MITIGATION MEASURES***

Kahuku Village will enhance recreational resources in the area by providing shoreline access, 20-acres of park space in the Mixed-Use Village, dedicating lands to the County for a District Park, and creation of a golf course. Presently, access to the Site’s coastline for recreational purposes is only available by a six-mile long unimproved trail. With the development of Kahuku Village, managed public access will be made available for shoreline fishing, hiking, camping, swimming, and other recreational activities. A konohiki system of resource management will be established and enforced by the Hawaiian Heritage Center to ensure that coastal recreational activities do not adversely affect coastal resources, such as the anchialine ponds and Hawksbill turtle nesting grounds.



**LEGEND**

-  Nani Kahuku 'Āina Property
-  2010 Hawai'i TMK
-  Major Roads
-  Public Shoreline Access
- Trail Type**
-  2-Wheel
-  4-Wheel
-  County Park - Community\*
-  County Park - Other

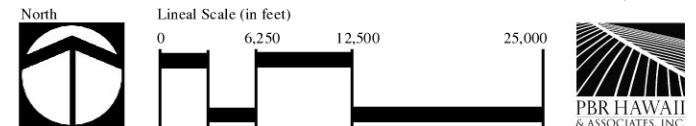
**FIGURE 24**

County Parks and Public Shoreline Access

**KAHUKU VILLAGE**

Nani Kahuku 'Āina LLC

Ka'u, Hawai'i



Source: Hawai'i TMK, 2010 (GIS); County of Hawai'i (GIS)  
 Disclaimer: This graphic has been prepared for general planning purposes only.



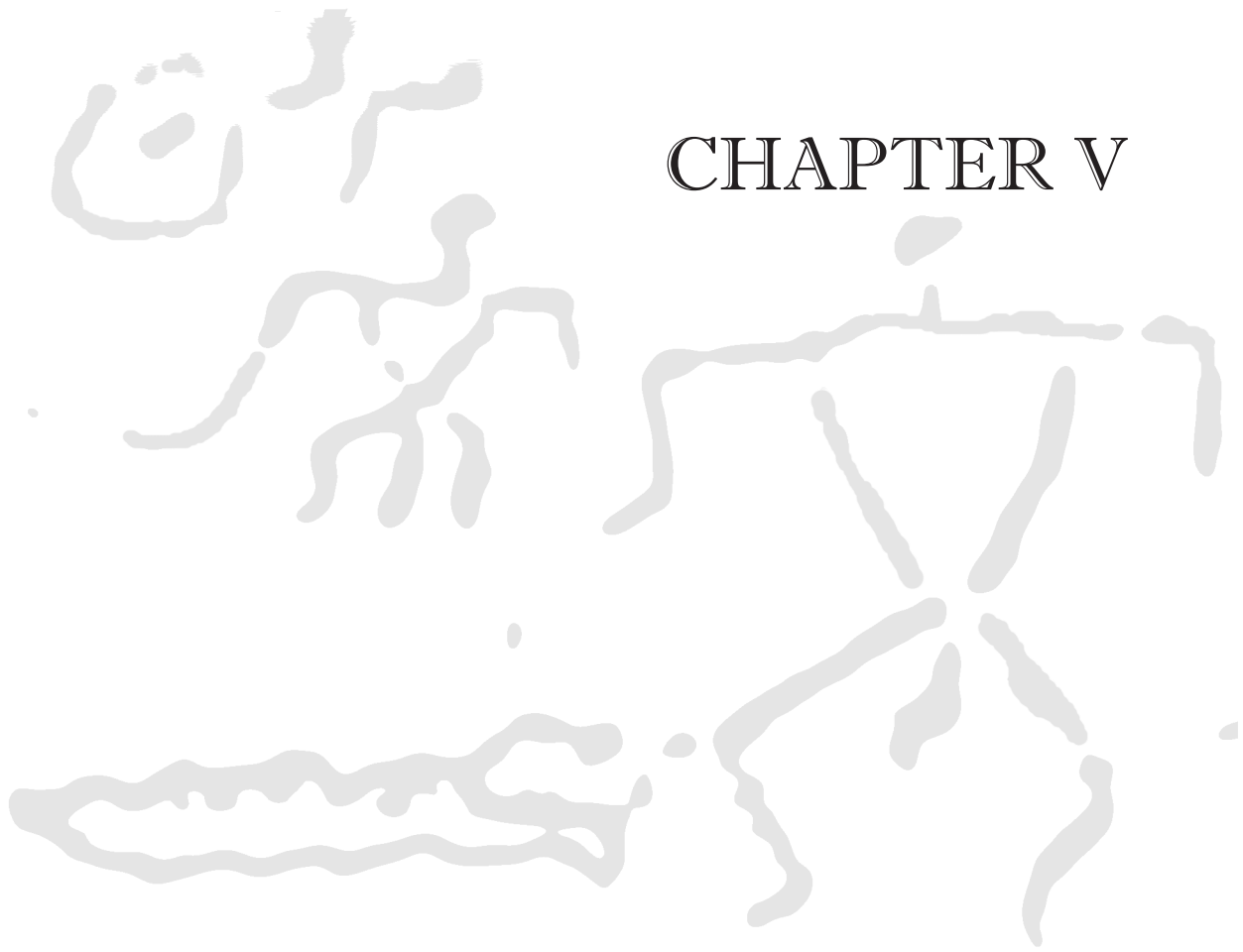
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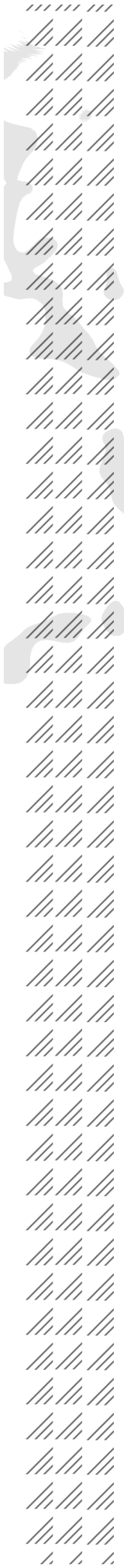
Community parks in the Mixed Use Village will be sited to be within convenient walking distance of homes and connected to residences and adjacent uses with a system of trails, bikeways, and roads. In addition, approximately 37 acres of land adjacent to Hawaiian Ocean View Ranchos is proposed to be dedicated to the County for the development of a district park. The golf course to be created will allow for public play and will be an additional recreational amenity for residents and visitors. The Applicant will coordinate with the County Department of Parks and Recreation to ensure that community park requirements are satisfied.

An extensive network of trails and open space are planned to provide connectivity within the Mixed Use Village and between the Mixed Use Village and the shoreline. As part of the proposed development, the Applicant will work with the National Park Service to assist in the development of the Ala Kahakai National Historic trail along the five miles of coastline on the Site. This partnership could include the creation mauka-makai trails that were a traditional part of Kahuku ahupua'a. The Applicant or Applicant's archaeologist will also consult with the Nā Ala Hele program to assess the presence/absence of historical trails on the Site prior to construction.

# CHAPTER V



LAND USE CONFORMANCE



## 5 LAND USE CONFORMANCE

State of Hawai‘i and Hawai‘i County land use plans, policies, and ordinances relevant to Kahuku Village are described below.

### 5.1 STATE OF HAWAI‘I

#### 5.1.1 Chapter 343, Hawai‘i Revised Statutes

Compliance with Chapter 343, HRS is required as described in Section 1.5 of this EIS.

#### 5.1.2 State Land Use Law, Chapter 205, Hawai‘i Revised Statutes

The State Land Use Law (Chapter 205, HRS), establishes the State LUC and authorizes this body to designate all lands in the State into one of four Districts: Urban, Rural, Agricultural, or Conservation. Presently, approximately 8,400 acres of the Site is within the State Land Use Agriculture District and 8,057 acres is within the State Land Use Conservation District. See Figure 25, Existing State Land Use Classification and Figure 26, Conservation District Subzones.

As discussed in Section 2.3.2 (Project Description), a State Land Use District Boundary Amendment (SLUDBA) will be sought to reclassify approximately 1,600 acres of the Nani Kahuku Aina property from the State Land Use Conservation District to the State Land Use Urban and Rural Districts (see Figure 27).

Decision-making criteria to be used in the LUC’s review of petitions for reclassification of district boundaries is found in Section 205-17, HRS, and Section 15-15-77, HAR. Standards for determining the Urban district are contained in Section 15-15-18, HAR and standards for timing of development are Section 15-15-50(c)(19) and 15-5-78, HAR. The following is an analysis of how Kahuku Village conforms to these criteria and standards.

***HRS §205-17 Land use commission decision making criteria. In its review of any petition for reclassification of district boundaries pursuant to this chapter, the commission shall specifically consider the following:***

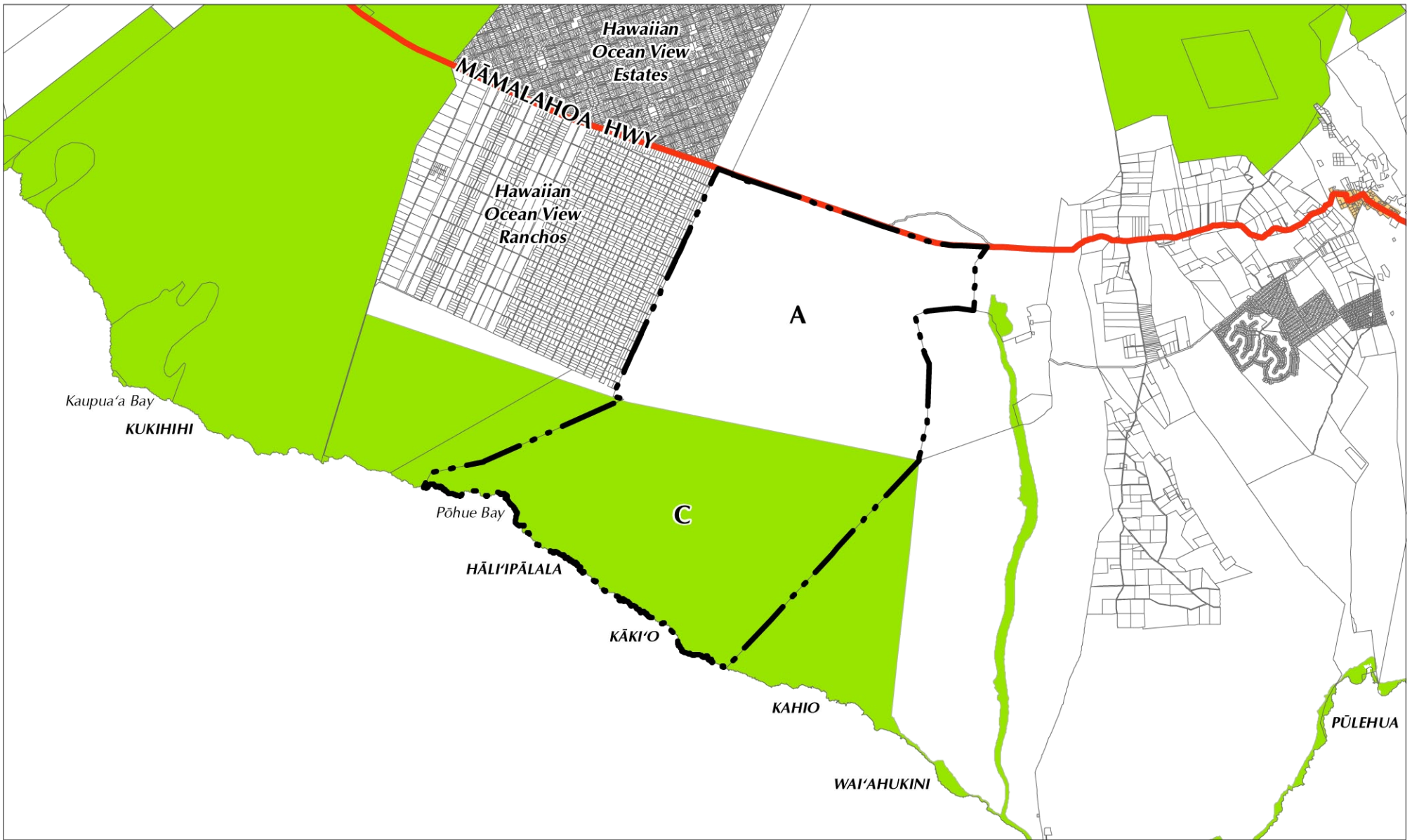
- (1) *The extent to which the proposed reclassification conforms to the applicable goals, objectives, and policies of the Hawai‘i state plan and relates to the applicable priority guidelines of the Hawai‘i state plan and the adopted functional plans;*

**Discussion:** Kahuku Village conforms to the applicable goals, objectives, and policies of the Hawai‘i State Plan and functional plans, as discussed in Sections 5.1.4 and 5.1.5 of this EIS.

- (2) *The extent to which the proposed reclassification conforms to the applicable district standards;*

**Discussion:** Kahuku Village conforms to the Urban District standards as discussed below in “§15-15-18 Standards for determining ‘U’ urban district boundaries.”

- (3) *The impact of the proposed reclassification on the following areas of state concern:*
  - (A) *Preservation or maintenance of important natural systems of habitats;*
  - (B) *Maintenance of valued cultural, historical, or natural resources;*
  - (C) *Maintenance of other natural resources relevant to Hawaii’s economy, including, but not limited to, agricultural resources;*



**LEGEND**

- |  |                            |  |                        |
|--|----------------------------|--|------------------------|
|  | Nani Kahuku 'Āina Property |  | Land Use District Code |
|  | 2010 Hawai'i TMK           |  | A - Agricultural       |
|  | Major Roads                |  | C - Conservation       |
|  |                            |  | R - Rural              |
|  |                            |  | U - Urban              |

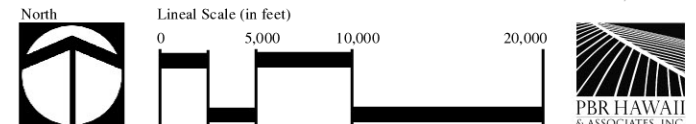
**FIGURE 25**

Existing State Land Use District

**KAHUKU VILLAGE**

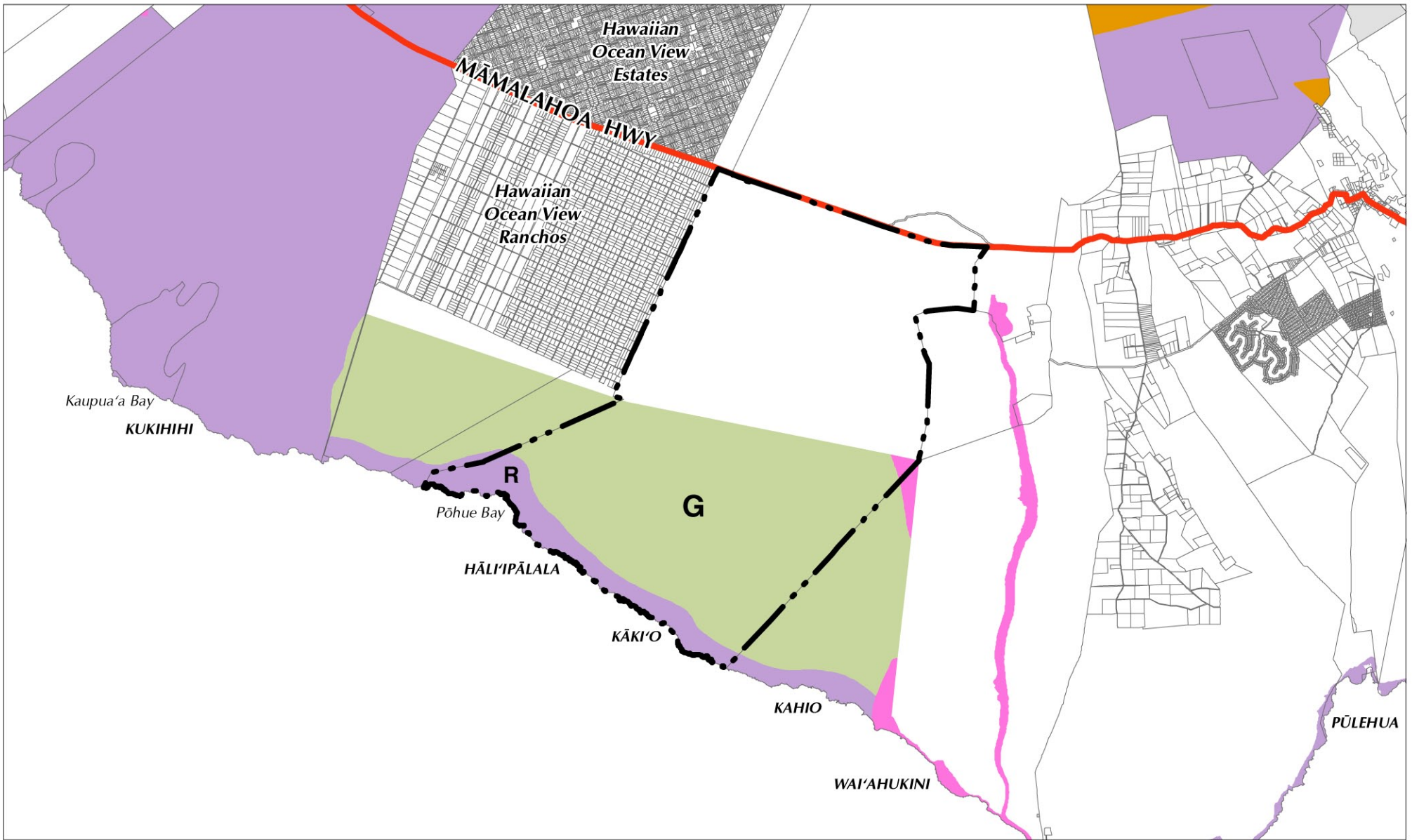
Nani Kahuku 'Āina LLC

Ka'ū, Hawai'i



Source: Hawai'i TMK, 2010 (GIS); State Land Use Commission, 2010 (GIS)  
 Disclaimer: This graphic has been prepared for general planning purposes only.





**LEGEND**

- |  |                            |  |                               |  |                |
|--|----------------------------|--|-------------------------------|--|----------------|
|  | Nani Kahuku 'Āina Property |  | Conservation District Subzone |  | P - Protective |
|  | 2010 Hawai'i TMK           |  | C - Undesignated              |  | R - Resource   |
|  | Major Roads                |  | G - General                   |  | SS - Special   |
|  |                            |  | L - Limited                   |  |                |

**FIGURE 26**  
 Conservation District Subzones  
**KAHUKU VILLAGE**

Nani Kahuku 'Āina LLC Ka'ū, Hawai'i

North Lineal Scale (in feet)

Source: Hawai'i TMK, 2010 (GIS); Department of Land and Natural Resources, 2008 (GIS)  
 Disclaimer: This graphic has been prepared for general planning purposes only.



**LEGEND**

- |  |                            |  |                        |
|--|----------------------------|--|------------------------|
|  | Nani Kahuku 'Āina Property |  | Land Use District Code |
|  | 2010 Hawai'i TMK           |  | A - Agricultural       |
|  | Major Roads                |  | C - Conservation       |
|  |                            |  | R - Rural              |
|  |                            |  | U - Urban              |

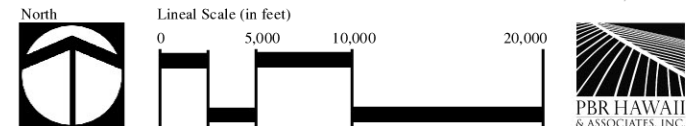
**FIGURE 27**

Proposed State Land Use District

**KAHUKU VILLAGE**

Nani Kahuku 'Āina LLC

Ka'ū, Hawai'i



Source: Hawai'i TMK, 2010 (GIS); State Land Use Commission, 2010 (GIS)  
 Disclaimer: This graphic has been prepared for general planning purposes only.

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**Discussion:** The majority of the Kahuku Village Site will be undeveloped and remain as open space. Of the Site's 16,457 acres, about 90% will remain as open space. Many of the Site's significant resources are found in the coastal areas, particularly near Pōhue Bay. To protect these resources, lands at Pōhue Bay are being set aside for the proposed Hawaiian Heritage Center and a shoreline management area extending at least 300-feet inland from the shoreline running the length of the Site will be created. The KHHC will actively manage the Site's natural and cultural resources. Archaeological sites recommended for preservation by Kahuku Village's archaeological inventory survey will not be affected by development.

The Site consists largely of lava flows with pockets of soil and is largely unsuitable for agricultural use; therefore, the project will not impact agricultural resources.

(D) *Commitment of state funds and resources;*

**Discussion:** Except for a roadway connection to Māmalahoa Highway, the project does not require a commitment of state funds or resources.

(E) *Provision for employment opportunities and economic development; and*

**Discussion:** Kahuku Village will stimulate the local economy as discussed in Section 4.7.4 of this EIS.

(F) *Provision for housing opportunities for all income groups, particularly the low, low-moderate, and gap groups;*

**Discussion:** Kahuku Village will provide housing opportunities for a range of income groups as discussed in Section 4.7.2 of this EIS.

(4) *The standards and criteria for the reclassification or rezoning of important agricultural lands in section 205-50;*

**Discussion:** Kahuku Village does not involve the reclassification or rezoning of important agricultural lands.

(5) *The county general plan and all community, development, or community development plans adopted pursuant to the county general plan, as they relate to the land that is the subject of the reclassification petition; and*

**Discussion:** A county general plan amendment recognizing Kahuku Village will be sought prior to filing the petition for the district boundary amendment. The Applicant has been a key stakeholder and an active participant in the Ka'ū CDP planning process and it is anticipated that the Ka'ū CDP will recognize Kahuku Village as a desirable project.

(6) *The representations and commitments made by the petitioner in securing a boundary change.*

**Discussion:** Nani Kahuku Aina is committed to following through with the representations and commitments it makes to the LUC during the district boundary amendment process. Financial statements will be filed with the LUC upon submittal of a petition for the district boundary amendment.

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**HAR §15-15-77 Decision-making criteria for boundary amendments.** (a) *The commission shall not approve an amendment of a land use district boundary unless the commission finds upon the clear preponderance of the evidence that the proposed boundary amendment is reasonable, not violative of section 205-2, HRS, and consistent with the policies and criteria established pursuant to sections 205-16, 205-17, and 205A-2, HRS.*

(b) *In its review of any petition for reclassification of district boundaries pursuant to this chapter, the commission shall specifically consider the following:*

(1) *The extent to which the proposed reclassification conforms to the applicable goals, objectives, and policies of the Hawai‘i state plan and relates to the applicable priority guidelines of the Hawai‘i state plan and the adopted functional plans;*

**Discussion:** Kahuku Village’s conformance with the applicable goals, objectives, and policies of the Hawai‘i State Plan and Functional Plans are discussed in Sections 5.1.4 and 5.1.5 of this EIS.

(2) *The extent to which the proposed reclassification conforms to the applicable district standards;*

**Discussion:** The extent to which the proposed reclassification conforms to the applicable district standards is discussed below.

(3) *The impact of the proposed reclassification on the following areas of state concern;*

(A) *Preservation or maintenance of important natural systems or habitats;*

(B) *Maintenance of valued cultural, historical, or natural resources;*

(C) *Maintenance or other natural resources relevant to Hawaii’s economy including, but not limited to agricultural resources;*

(D) *Commitment of state funds and resources;*

(E) *Provision for employment opportunities and economic development; and*

(F) *Provision for housing opportunities for all income groups, particularly the low, low-moderate, and gap groups;*

**Discussion:** The impact of the proposed reclassification on areas of state concern is discussed in the preceding section regarding Section 205-17, HRS, *Land Use Commission Decision Making Criteria*.

(4) *In establishing the boundaries of the districts in each county, the commission shall give consideration to the general plan of the county in which the land is located;*

**Discussion:** A county general plan amendment recognizing Kahuku Village will be sought prior to filing the petition for the district boundary amendment. The Applicant has been an active participant in the Ka‘ū CDP planning process and it is anticipated that the Ka‘ū CDP will recognize Kahuku Village as a desirable project.

(5) *The representations and commitments made by the petitioner in securing a boundary change, including a finding that the petitioner has the necessary economic ability to carry out the representations and commitments relating to the proposed use or development; and*

**Discussion:** Nani Kahuku Aina is committed to following through with the representations and commitments it makes to the LUC during the district boundary amendment process. Financial statements demonstrating the Applicant’s ability to follow through on representations and commitments will be submitted to the LUC upon submittal of the petition for district boundary amendment.

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- (6) *Lands in intensive agricultural use for two years prior to date of filing of a petition or lands with a high capacity for intensive agricultural use shall not be taken out of the agricultural district unless the commission finds either that the action:*
- (A) *Will not substantially impair actual or potential agricultural production in the vicinity of the subject property or in the county or State; or*

**Discussion:** The lands at the Site have not been used for intensive agricultural use, nor do they have a high capacity for intensive agricultural use as indicated by their productivity rating of “E” by the LSB rating system.

- (B) *Is reasonably necessary for urban growth.*

**Discussion:** As discussed in section 4.7 (Socio-Economic Characteristics) Kahuku Village will be an economic driver and provide much needed jobs in the Ka‘ū region. Since the closure of Ka‘ū Sugar Company, no industry has been able to provide a significant number of replacement jobs in the region. Consequently, many residents need to commute to Hilo or Kona for employment. The urban uses are also necessary to supplement the funding of the Hawaiian Heritage Center, which will actively manage many of the Site’s many natural and cultural resources.

- (c) *Amendments of a land use district boundary in conservation districts involving land areas fifteen acres or less shall be determined by the commission pursuant to this subsection and section 205-3.1, HRS.*
- (d) *Amendments of land use district boundary in other than conservation districts involving land areas fifteen acres or less shall be determined by the appropriate county land use decision-making authority for the district.*
- (e) *Amendments of a land use district boundary involving land areas greater than fifteen acres shall be determined by the commission, pursuant to this subsection and section 205-3.1, HRS.*

**Discussion:** The Kahuku Village petition area will be larger than 15 acres; therefore, the LUC will be the appropriate authority to consider the reclassification sought under the SLUDBA. The LUC shall be the decision-making authority for the SLUDBA.

**Standards for Determining Urban District Boundaries**

**HAR §15-15-18 Standards for determining “U” urban district boundaries.** *Except as otherwise provided in this chapter, in determining the boundaries for the “U” urban district, the following standards shall be used:*

- (1) *It shall include lands characterized by “city-like” concentrations of people, structures, streets, urban level of services and other related land uses;*
- (2) *It shall take into consideration the following specific factors:*
- (A) *Proximity to centers of trading and employment except where the development would generate new centers of trading and employment;*
- (B) *Availability of basic services such as schools, parks, wastewater systems, solid waste disposal, drainage, water, transportation systems, public utilities, and police protection; and*
- (C) *Sufficient reserve areas for foreseeable urban growth;*
- (3) *It shall include lands with satisfactory topography, drainage, and reasonably free from the danger of any flood, tsunami, unstable soil condition, and other adverse environmental effects;*
- (4) *Land contiguous with existing urban areas shall be given more consideration than non-contiguous land, and particularly when indicated for future urban use on state or county general plans;*
- (5) *It shall include lands in appropriate locations for new urban concentrations and shall give consideration to areas of urban growth as shown on the state and county general plans;*

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- (6) *It may include lands which do not conform to the standards in paragraphs (1) to (5):*
  - (A) *When surrounded by or adjacent to existing urban development; and*
  - (B) *Only when those lands represent a minor portion of this district;*
- (7) *It shall not include lands, the urbanization of which will contribute toward scattered spot urban development, necessitating unreasonable investment in public infrastructure or support services; and*
- (8) *It may include lands with a general slope of twenty per cent or more if the commission finds that those lands are desirable and suitable for urban purposes and that the design and construction controls, as adopted by any federal, state, or county agency, are adequate to protect the public health, welfare and safety, and the public's interests in the aesthetic quality of the landscape.*

**Discussion:** Approximately 300 acres of the Site for the proposed Mixed-Use Village will be reclassified to the Urban district. The proposed Urban areas include the “core” of the mixed use villages and the two sites for visitor accommodations. Consistent with the standards for the Urban district, the Village core will have city like concentrations of housing, commercial establishments, and civic facilities. As discussed in Section 4.7 (Socio-Economic Characteristics) the Mixed-Use Village and visitor accommodations will also be significant employment centers, generating not only construction-related jobs, but also long-term employment opportunities for Ka‘ū residents. The lands proposed for urbanization are reasonably free of natural hazards, and where hazards exist, appropriate mitigation will be implemented. A county general plan amendment recognizing Kahuku Village will be sought prior to submittal of a petition for the district boundary amendment and it is also anticipated that the Ka‘ū CDP, which is presently being updated, will recognize Kahuku Village as a necessary and desirable development.

**Standards for Determining Rural District Boundaries**

**HAR §15-15-21 Standards for determining “R” rural district boundaries.** *Except as otherwise provided in this chapter, in determining the boundaries for the “R” rural district, the following standards shall apply:*

- (1) *Areas consisting of small farms; provided that the areas need not be included in this district if their inclusion will alter the general characteristics of the areas;*
- (2) *Activities or uses as characterized by low-density residential lots of not less than one-half acre and a density of not more than one single-family dwelling per one-half acre in areas where “city-like” concentration of people, structures, streets, and urban level of services are absent, and where small farms are intermixed with low-density residential lots; and*
- (3) *It may also include parcels of land which are surrounded by, or contiguous to this district, and are not suited to low-density residential uses for small farm or agricultural uses.*

Approximately 1,300 acres of Kahuku Village is proposed to be reclassified from the State Land Use Conservation District to the Rural District. Areas to be designated Rural include the approximately 100-acres of mauka lands to be dedicated for civic uses, low-density residential lots, community park, golf course, and campgrounds and user sites in the Hawaiian Heritage Center. Consistent with the Rural designation, residential lots will be larger than one-half acre and the residential density shall not be greater one single-family dwelling per one-half acre.

**Standards for Timing of Development**

**HAR §15-15-50(c)(19)** *Petitioners submitting applications for reclassification to the urban district shall also represent that development of the subject property is in accordance with the demonstrated need therefore will be accomplished before ten years after the date of commission approval. In the event full urban development cannot substantially be completed within such period, the petitioner shall also submit a schedule for development of the total of such project in increments together with a map identifying the location of each increment, each such increment to be completed within no more than a ten-year period.*

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**HAR §15-15-78** (a) *If it appears to the commission that full development of the subject property cannot substantially be completed within ten years after the date of the commission’s approval and that the incremental development plan submitted by the petitioner can be substantially completed, and if the commission is satisfied that all other pertinent criteria for redistricting the premises or part thereof are present, then the commission may:*

- (1) *Grant the petitioner’s request to reclassify the entire property; or*
- (2) *Redistrict only that portion of the premises which the petitioner plans to develop first and upon which it appears that substantial development can be completed within ten years after the date of the commission’s approval...*

**Discussion:** The anticipated development timetable for Kahuku Village is provided in Section 2.5. Full build-out of Kahuku Village is expected to extend beyond 10 years after the date of the commission’s approval. As required by HAR §15-15-50(c)(19), a schedule for development for Kahuku Village indicating ten-year development increments will be submitted with the Project’s SLUDBA petition.

### 5.1.3 Coastal Zone Management Act, Chapter 205A, Hawai’i Revised Statutes

The National Coastal Zone Management Program was created through passage of the Coastal Zone Management Act of 1972. Hawaii’s Coastal Zone Management Program, adopted as Chapter 205A, HRS, provides a basis for protecting, restoring and responsibly developing coastal communities and resources. The objectives and policies of the CZM Program encompass broad concerns such as impact on recreational resources, historic and archaeological resources, coastal scenic resources and open space, coastal ecosystems, coastal hazards, and the management of development. The Coastal Zone Management Area as defined in Chapter 205A, HRS, includes all the lands of the State. As such, the proposed Kahuku Village lies within the Coastal Zone Management Area.

The relevant objectives and policies of the Hawai’i Coastal Zone Management (CZM) Program along with a detailed discussion of how Kahuku Village will coincide with these objectives and policies, is discussed below.

<b>COASTAL ZONE MANAGEMENT ACT, CHAPTER 205A, HRS</b> (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	S	N/S	N/A
<b>RECREATIONAL RESOURCES</b>			
<b>Objective:</b> Provide coastal recreational opportunities accessible to the public.			
<b>Policies:</b>			
(A) <i>Improve coordination and funding of coastal recreational planning and management; and</i>	X		
(B) <i>Provide adequate, accessible, and diverse recreational opportunities in the coastal zone management area by:</i>	X		
(i) <i>Protecting coastal resources uniquely suited for recreational activities that cannot be provided in other areas;</i>	X		
(ii) <i>Requiring replacement of coastal resources having significant recreational value including, but not limited to, surfing sites, fishponds, and sand beaches, when such resources will be unavoidably damaged by development; or requiring reasonable monetary compensation to the State for recreation when replacement is not feasible or desirable;</i>			X
(iii) <i>Providing and managing adequate public access, consistent with conservation of natural resources, to and along shorelines with recreational value;</i>	X		
(iv) <i>Providing an adequate supply of shoreline parks and other recreational facilities suitable for public recreation;</i>	X		
(v) <i>Ensuring public recreational uses of county, state, and federally owned or controlled shoreline lands and waters having recreational value consistent with public safety</i>	X		

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<b>COASTAL ZONE MANAGEMENT ACT, CHAPTER 205A, HRS</b> (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	S	N/S	N/A
<i>standards and conservation of natural resources;</i>			
(vi) <i>Adopting water quality standards and regulating point and nonpoint sources of pollution to protect, and where feasible, restore the recreational value of coastal waters;</i>	X		
(vii) <i>Developing new shoreline recreational opportunities, where appropriate, such as artificial lagoons, artificial beaches, and artificial reefs for surfing and fishing; and</i>			X
(viii) <i>Encouraging reasonable dedication of shoreline areas with recreational value for public use as part of discretionary approvals or permits by the land use commission, board of land and natural resources, and county authorities; and crediting such dedication against the requirements of section 46-6.</i>	X		
<p><b>Discussion:</b> Shoreline access in the vicinity of the Site is presently unavailable. The coast is approximately 6-miles from Māmalahoa Highway and accessible only by an unimproved road. The nearest public shoreline access is about 2-miles west of the Site at Humuhumu Point and is accessible only through a 9-mile 4-wheel drive jeep trail. Development of Kahuku Village will provide greater accessibility for public enjoyment of the Site’s coastal resources as well as provide greater accessibility for educational and research activities.</p>			
<b>HISTORIC RESOURCES</b>			
<i>Objective: Protect, preserve, and, where desirable, restore those natural and manmade historic and prehistoric resources in the coastal zone management area that are significant in Hawaiian and American history and culture.</i>			
<b>Policies:</b>			
(A) <i>Identify and analyze significant archaeological resources;</i>	X		
(B) <i>Maximize information retention through preservation of remains and artifacts or salvage operations; and</i>	X		
(C) <i>Support state goals for protection, restoration, interpretation, and display of historic resources.</i>	X		
<p><b>Discussion:</b> Kahuku Village will have a beneficial impact on historic and archaeological resources through establishment of the Hawaiian Heritage Center which will interpret and preserve the significant archaeological sites on the Property. Sites recommended for preservation by the Project’s archaeological inventory survey (AIS) will not be disturbed by development. All recommendations of the AIS will be implemented, as indicated in Section 4.1.</p>			
<b>SCENIC AND OPEN SPACE RESOURCES</b>			
<i>Objective: Protect, preserve, and, where desirable, restore or improve the quality of coastal scenic and open space resources.</i>			
<b>Policies:</b>			
(A) <i>Identify valued scenic resources in the coastal zone management area;</i>	X		
(B) <i>Ensure that new developments are compatible with their visual environment by designing and locating such developments to minimize the alteration of natural landforms and existing public views to and along the shoreline;</i>	X		
(C) <i>Preserve, maintain, and, where desirable, improve and restore shoreline open space and scenic resources; and</i>	X		
(D) <i>Encourage those developments that are not coastal dependent to locate in inland areas.</i>	X		
<p><b>Discussion:</b> Coastal scenic views from public vantage points will be largely unaffected since no development is planned along Māmalahoa Highway, except for the possible civic facilities adjacent to the Hawaiian Ocean View Ranchos subdivision. The nearest structures from Māmalahoa Highway will be about 5-miles distant.</p>			



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COASTAL ZONE MANAGEMENT ACT, CHAPTER 205A, HRS (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	S	N/S	N/A
<b>COASTAL ECOSYSTEMS</b>			
<i>Objective: Protect valuable coastal ecosystems, including reefs, from disruption and minimize adverse impacts on all coastal ecosystems.</i>			
<b>Policies:</b>			
(A) Exercise an overall conservation ethic, and practice stewardship in the protection, use, and development of marine and coastal resources;	X		
(B) Improve the technical basis for natural resource management;	X		
(C) Preserve valuable coastal ecosystems, including reefs, of significant biological or economic importance;	X		
(D) Minimize disruption or degradation of coastal water ecosystems by effective regulation of stream diversions, channelization, and similar land and water uses, recognizing competing water needs; and			X
(E) Promote water quantity and quality planning and management practices that reflect the tolerance of fresh water and marine ecosystems and maintain and enhance water quality through the development and implementation of point and nonpoint source water pollution control measures.	X		
<p><b>Discussion:</b> Kahuku Village will have a beneficial impact on coastal ecosystems by providing the opportunity and funding to actively manage the Site's coastal resources, which will include implementation of an Integrated Natural and Cultural Resources Management Plan. In addition, as discussed in Section 3.6.1, an assessment of the nearshore marine and anchialine pond communities determined that development of Kahuku Village will have no impact on marine and anchialine ponds as long as BMPs are implemented. BMPs are discussed in Section 3.6.1.</p>			
<b>ECONOMIC USES</b>			
<i>Objective: Provide public or private facilities and improvements important to the State's economy in suitable locations.</i>			
<b>Policies:</b>			
(A) Concentrate coastal dependent development in appropriate areas;	X		
(B) Ensure that coastal dependent development such as harbors and ports, and coastal related development such as visitor industry facilities and energy generating facilities, are located, designed, and constructed to minimize adverse social, visual, and environmental impacts in the coastal zone management area; and	X		
(C) Direct the location and expansion of coastal dependent developments to areas presently designated and used for such developments and permit reasonable long-term growth at such areas, and permit coastal dependent development outside of presently designated areas when:		X	
(i) Use of presently designated locations is not feasible;			X
(ii) Adverse environmental effects are minimized; and	X		
(iii) The development is important to the State's economy.	X		
<p><b>Discussion:</b> Kahuku Village's concept plan avoids development in resource rich areas and where significant archaeological or cultural sites exist. Lands in the vicinity of Pōhue Bay, where many natural and cultural resources are located, will be preserved and dedicated to the Hawaiian Heritage Center. The proposed visitor accommodations will be low-key and designed to blend into the natural setting. A shoreline conservation area extending at least 300-feet inland from the shoreline will prevent impact to coastal resources.</p>			
<b>COASTAL HAZARDS</b>			
<i>Objective: Reduce hazard to life and property from tsunamis, storm waves, stream flooding, erosion, subsidence, and pollution.</i>			

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<b>COASTAL ZONE MANAGEMENT ACT, CHAPTER 205A, HRS</b> (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	S	N/S	N/A
<b>Policies:</b>			
(A) Develop and communicate adequate information about storm wave, tsunami, flood, erosion, subsidence, and point and nonpoint source pollution hazards;	X		
(B) Control development in areas subject to storm wave, tsunami, flood, erosion, hurricane, wind, subsidence, and point and nonpoint source pollution hazards;	X		
(C) Ensure that developments comply with requirements of the Federal Flood Insurance Program; and			X
(D) Prevent coastal flooding from inland projects.	X		
<p><b>Discussion:</b> Section 3.4 (Natural Hazards) of this EIS provides discussion of potential natural hazards such as flooding, tsunami inundation, hurricanes, volcanic eruptions, and earthquakes. Mitigation measures will be implemented to reduce the risks associated with natural hazards.</p> <p>Flood hazards for the Site have not been designated by the Federal Flood Insurance Program, however, appropriate drainage infrastructure will be developed as discussed in Section 4.8.4 and as required by project specific infrastructure plans. The risk of damage by tsunami hazard will be mitigated by setting back structures at least 300-feet inland from the coast and all structures will be constructed in compliance with requirements of the UBC, appropriate to the Zone 4 Seismic Probability Rating, as well as applicable County, State, or Federal standards.</p>			
<b>MANAGING DEVELOPMENT</b>			
<b>Objective:</b> Improve the development review process, communication, and public participation in the management of coastal resources and hazards.			
<b>Policies:</b>			
(A) Use, implement, and enforce existing law effectively to the maximum extent possible in managing present and future coastal zone development;			X
(B) Facilitate timely processing of applications for development permits and resolve overlapping or conflicting permit requirements; and			X
(C) Communicate the potential short and long-term impacts of proposed significant coastal developments early in their life cycle and in terms understandable to the public to facilitate public participation in the planning and review process.	X		
<p><b>Discussion:</b> Agencies and the public will be given the opportunity to review plans for Kahuku Village through the environmental review process, County General Plan amendment process, State Land Use redistricting process, and rezoning.</p>			
<b>PUBLIC PARTICIPATION</b>			
<b>Objective:</b> Stimulate public awareness, education, and participation in coastal management.			
<b>Policies:</b>			
(A) Promote public involvement in coastal zone management processes;	X		
(B) Disseminate information on coastal management issues by means of educational materials, published reports, staff contact, and public workshops for persons and organizations concerned with coastal issues, developments, and government activities; and	X		
(C) Organize workshops, policy dialogues, and site-specific mediations to respond to coastal issues and conflicts.	X		
<p><b>Discussion:</b> As discussed in Chapter 8.0 (Consultation), information regarding Kahuku Village has been disseminated to the public through community meetings and presentations, community consultation, printed handouts, and this EIS.</p> <p>Through this EIS, the County General Plan amendment process, the County CDP process,</p>			

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<b>COASTAL ZONE MANAGEMENT ACT, CHAPTER 205A, HRS</b> (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	S	N/S	N/A
SLUDBA process, and the County permitting process, the public has additional opportunities to be involved in the public review process for Kahuku Village.			
<b>BEACH PROTECTION</b>			
<i>Objective: Protect beaches for public use and recreation.</i>			
<i>Policies:</i>			
(A) <i>Locate new structures inland from the shoreline setback to conserve open space, minimize interference with natural shoreline processes, and minimize loss of improvements due to erosion;</i>	X		
(B) <i>Prohibit construction of private erosion-protection structures seaward of the shoreline, except when they result in improved aesthetic and engineering solutions to erosion at the sites and do not interfere with existing recreational and waterline activities; and</i>			X
(C) <i>Minimize the construction of public erosion-protection structures seaward of the shoreline.</i>	X		
<b>Discussion:</b> Any structures part of Kahuku Village will be set back at least 300-feet from the shoreline. No erosion protection structures will be constructed along the Site’s shoreline.			
<b>MARINE RESOURCES</b>			
<i>Objective: Promote the protection, use, and development of marine and coastal resources to assure their sustainability.</i>			
<i>Policies:</i>			
(A) <i>Ensure that the use and development of marine and coastal resources are ecologically and environmentally sound and economically beneficial;</i>	X		
(B) <i>Coordinate the management of marine and coastal resources and activities to improve effectiveness and efficiency;</i>	X		
(C) <i>Assert and articulate the interests of the State as a partner with federal agencies in the sound management of ocean resources within the United States exclusive economic zone;</i>	X		
(D) <i>Promote research, study, and understanding of ocean processes, marine life, and other ocean resources in order to acquire and inventory information necessary to understand how ocean development activities relate to and impact upon ocean and coastal resources; and</i>	X		
(E) <i>Encourage research and development of new, innovative technologies for exploring, using, or protecting marine and coastal resources.</i>	X		
<b>Discussion:</b> Kahuku Village will have a beneficial impact on coastal ecosystems by providing the opportunity and funding to actively manage the Site’s coastal resources, which will include implementation of an Integrated Natural and Cultural Resources Management Plan. Nani Kahuku Aina has partnered with the U.S. Fish and Wildlife Service on the Hawai‘i Island Hawksbill Turtle Recovery Project for the past several years and is committed to continuing this partnership. It is anticipated that establishment of the Hawaiian Heritage Center will create new opportunities to partner with agencies, educational institutions, and organizations interested in resource protection and conservation.			

**5.1.4 Hawai‘i State Plan, Chapter 226, Hawai‘i Revised Statutes**

The Hawai‘i State Plan (Chapter 226, HRS), establishes a set of goals, objectives and policies that serve as long-range guidelines for the growth and development of the State. The Plan is divided into three parts: Part I (Overall Theme, Goals, Objectives and Policies); Part II (Planning, Coordination and Implementation); and Part III (Priority Guidelines). Part II elements

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of the State Plan pertain primarily to the administrative structure and implementation process of the Plan. As such, comments regarding the applicability of Part II to Kahuku Village are not appropriate. The sections of the Hawai'i State Plan directly applicable to Kahuku Village, along with a discussion of how the Project conforms to the State Plan are included below.

HAWAI'I STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	S	N/S	N/A
<b>HRS § 226-1: Findings and Purpose</b>			
<b>HRS § 226-2: Definitions</b>			
<b>HRS § 226-3: Overall Theme</b>			
<p><b>HRS § 226-4: State Goals.</b> <i>In order to guarantee, for the present and future generations, those elements of choice and mobility that insure that individuals and groups may approach their desired levels of self-reliance and self-determination, it shall be the goal of the State to achieve:</i></p> <ol style="list-style-type: none"> <li>(1) <i>A strong, viable economy, characterized by stability, diversity and growth that enables fulfillment of the needs and expectations of Hawaii's present and future generations.</i></li> <li>(2) <i>A desired physical environment, characterized by beauty, cleanliness, quiet, stable natural systems, and uniqueness, that enhances the mental and physical well-being of the people.</i></li> <li>(3) <i>Physical, social and economic well-being, for individuals and families in Hawaii, that nourishes a sense of community responsibility, of caring and of participation in community life.</i></li> </ol>			
<p><b>Discussion:</b> Kahuku Village contributes to attaining these three goals by 1) providing direct employment opportunities for present and future residents of the area; 2) generating increased State and County tax revenues; 3) contributing to the stability, diversity, and growth of local and regional economies; and 4) establishment of the Hawaiian Heritage Center to formalize protection of the archaeological, historic, and natural features of the Site.</p>			
<b>HRS § 226-5: Objectives and policies for population.</b>			
<b>Objective:</b> <i>It shall be the objective in planning for the State's population to guide population growth to be consistent with the achievement of physical, economic and social objectives contained in this chapter.</i>			
<b>Policies:</b>			
(1) <i>Manage population growth statewide in a manner that provides increased opportunities for Hawaii's people to pursue their physical, social and economic aspirations while recognizing the unique needs of each County.</i>	<b>X</b>		
(2) <i>Encourage an increase in economic activities and employment opportunities on the neighbor islands consistent with community needs and desires.</i>	<b>X</b>		
(3) <i>Promote increased opportunities for Hawaii's people to pursue their socio-economic aspirations throughout the islands.</i>			<b>X</b>
(4) <i>Encourage research activities and public awareness programs to foster an understanding of Hawaii's limited capacity to accommodate population needs and to address concerns resulting from an increase in Hawaii's population.</i>			<b>X</b>
(5) <i>Encourage federal actions and coordination among major governmental agencies to promote a more balanced distribution of immigrants among the states, provided that such actions do not prevent the reunion of immediate family members.</i>			<b>X</b>
(6) <i>Pursue an increase in federal assistance for states with a greater proportion of foreign immigrants relative to their state's population.</i>			<b>X</b>
(7) <i>Plan the development and availability of land and water resources in a coordinated manner so as to provide for the desired levels of growth in each geographic area.</i>	<b>X</b>		
<p><b>Discussion:</b> Kahuku Village will promote increased opportunities for Hawai'i's people to pursue their physical, social, and economic aspirations by:</p> <ul style="list-style-type: none"> <li>• Creating a mixed-use village with a diversity of housing choices, neighborhood-serving commercial establishments, visitor accommodations, recreation areas, and open space.</li> <li>• Providing employment opportunities for residents of the Ka'ū region, thereby reducing the need for workers to commute elsewhere.</li> </ul>			

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<b>HAWAII STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES</b> (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	S	N/S	N/A
<ul style="list-style-type: none"> <li>• Providing housing for working families of Hawai‘i.</li> <li>• Providing a mix of uses and housing types to accommodate a diversity of household types and incomes.</li> <li>• Contributing to the social infrastructure by providing land for a school site, parks, fire station, police station, and other civic uses.</li> </ul>			
<b>HRS § 226-6: Objectives and policies for the economy in general.</b>			
<i>Objectives: Planning for the State's economy in general shall be directed toward achievement of the following objectives:</i>			
(1) <i>Increased and diversified employment opportunities to achieve full employment, increased income and job choice, and improved living standards for Hawaii's people.</i>	<b>X</b>		
(2) <i>A steadily growing and diversified economic base that is not overly dependent on a few industries, and includes the development and expansion of industries on the neighbor islands.</i>	<b>X</b>		
<b>Policies:</b>			
(1) <i>Expand Hawaii's national and international marketing, communication, and organizational ties, to increase the State's capacity to adjust to and capitalize upon economic changes and opportunities occurring outside the State.</i>			<b>X</b>
(2) <i>Promote Hawai‘i as an attractive market for environmentally and socially sound investment activities that benefit Hawaii's people.</i>			<b>X</b>
(3) <i>Seek broader outlets for new or expanded Hawai‘i business investments.</i>			<b>X</b>
(4) <i>Expand existing markets and penetrate new markets for Hawaii's products and services.</i>			<b>X</b>
(5) <i>Assure that the basic economic needs of Hawaii's people are maintained in the event of disruptions in overseas transportation.</i>			<b>X</b>
(6) <i>Strive to achieve a level of construction activity responsive to, and consistent with, state growth objectives.</i>	<b>X</b>		
(7) <i>Encourage the formation of cooperatives and other favorable marketing arrangements at the local or regional level to assist Hawaii's small scale producers, manufacturers, and distributors.</i>			<b>X</b>
(8) <i>Encourage labor-intensive activities that are economically satisfying and which offer opportunities for upward mobility.</i>			<b>X</b>
(9) <i>Foster greater cooperation and coordination between the government and private sectors in developing Hawaii's employment and economic growth opportunities.</i>	<b>X</b>		
(10) <i>Stimulate the development and expansion of economic activities which will benefit areas with substantial or expected employment problems.</i>			<b>X</b>
(11) <i>Maintain acceptable working conditions and standards for Hawaii's workers.</i>	<b>X</b>		
(12) <i>Provide equal employment opportunities for all segments of Hawaii's population through affirmative action and nondiscrimination measures.</i>			<b>X</b>
(13) <i>Encourage businesses that have favorable financial multiplier effects within Hawaii's economy.</i>			<b>X</b>
(14) <i>Promote and protect intangible resources in Hawaii, such as scenic beauty and the aloha spirit, which are vital to a healthy economy.</i>	<b>X</b>		
(15) <i>Increase effective communication between the educational community and the private sector to develop relevant curricula and training programs to meet future employment needs in general, and requirements of new, potential growth industries in particular.</i>	<b>X</b>		
(16) <i>Foster a business climate in Hawaii--including attitudes, tax and regulatory policies, and financial and technical assistance programs--that is conducive to the expansion of existing enterprises and the creation and attraction of new business and industry.</i>			<b>X</b>
<b>Discussion:</b> In addition to construction-related jobs, development of Kahuku Village will provide long-term employment opportunities at the project’s commercial establishments, hospitality establishments, and the research and educational programs at the Hawaiian Heritage Center. It is anticipated that partnership will be created between the Hawaiian Heritage Center			

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HAWAII STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	S	N/S	N/A
and agencies, educational institutions, and organizations interested in resource protection and conservation, boosting funding and resources in the local economy.			
<b>HRS § 226-7: Objectives and policies for the economy - agriculture</b>			
<i>Objectives: Planning for the State's economy with regard to agriculture shall be directed towards achievement of the following objectives:</i>			
(1) <i>Viability of Hawaii's sugar and pineapple industries.</i>			<b>X</b>
(2) <i>Growth and development of diversified agriculture throughout the State.</i>			<b>X</b>
(3) <i>An agriculture industry that continues to constitute a dynamic and essential component of Hawaii's strategic, economic, and social well-being.</i>			<b>X</b>
<b>Policies:</b>			
(1) <i>Establish a clear direction for Hawaii's agriculture through stakeholder commitment and advocacy.</i>			<b>X</b>
(2) <i>Encourage agriculture by making best use of natural resources.</i>			<b>X</b>
(3) <i>Provide the governor and the legislature with information and options needed for prudent decision making for the development of agriculture.</i>			<b>X</b>
(4) <i>Establish strong relationships between the agricultural and visitor industries for mutual marketing benefits.</i>			<b>X</b>
(5) <i>Foster increased public awareness and understanding of the contributions and benefits of agriculture as a major sector of Hawaii's economy.</i>			<b>X</b>
(6) <i>Seek the enactment and retention of federal and state legislation that benefits Hawaii's agricultural industries.</i>			<b>X</b>
(7) <i>Strengthen diversified agriculture by developing an effective promotion, marketing, and distribution system between Hawaii's producers and consumer markets locally, on the continental United States, and internationally.</i>			<b>X</b>
(8) <i>Support research and development activities that provide greater efficiency and economic productivity in agriculture.</i>			<b>X</b>
(9) <i>Enhance agricultural growth by providing public incentives and encouraging private initiatives.</i>			<b>X</b>
(10) <i>Assure the availability of agriculturally suitable lands with adequate water to accommodate present and future needs.</i>			<b>X</b>
(11) <i>Increase the attractiveness and opportunities for an agricultural education and livelihood.</i>			<b>X</b>
(12) <i>Expand Hawaii's agricultural base by promoting growth and development of flowers, tropical fruits and plants, livestock, feed grains, forestry, food crops, aquaculture, and other potential enterprises.</i>			<b>X</b>
(13) <i>Promote economically competitive activities that increase Hawaii's agricultural self-sufficiency.</i>			<b>X</b>
(14) <i>Promote and assist in the establishment of sound financial programs for diversified agriculture.</i>			<b>X</b>
(15) <i>Institute and support programs and activities to assist the entry of displaced agricultural workers into alternative agricultural or other employment.</i>			<b>X</b>
(16) <i>Facilitate the transition of agricultural lands in economically nonfeasible agricultural production to economically viable agricultural uses.</i>			<b>X</b>
<p><b>Discussion:</b> Kahuku Village will not impact agricultural activities since none currently occur on the Property. As discussed in Section 3.3 (Soils), the Property is rated “E” and unclassified on the LSB classification, and not classified for the ALISH, indicating that the Property is not agriculturally significant. Therefore, the proposed project will not reduce the inventory of agriculturally significant lands.</p>			

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<b>HRS § 226-8: Objectives and policies for the economy – visitor industry</b>			
<i>Objectives: Planning for the State's economy with regard to the visitor industry shall be directed towards the achievement of the objective of a visitor industry that constitutes a major component of steady growth for Hawaii's economy.</i>			
<b>Policies:</b>			
(1) <i>Support and assist in the promotion of Hawaii's visitor attractions and facilities.</i>	<b>X</b>		
(2) <i>Ensure that visitor industry activities are in keeping with the social, economic, and physical needs and aspirations of Hawaii's people.</i>	<b>X</b>		
(3) <i>Improve the quality of existing visitor destination areas.</i>	<b>X</b>		
(4) <i>Encourage cooperation and coordination between the government and private sectors in developing and maintaining well-designed, adequately serviced visitor industry and related developments which are sensitive to neighboring communities and activities.</i>	<b>X</b>		
(5) <i>Develop the industry in a manner that will continue to provide new job opportunities and steady employment for Hawaii's people.</i>	<b>X</b>		
(6) <i>Provide opportunities for Hawaii's people to obtain job training and education that will allow for upward mobility within the visitor industry.</i>	<b>X</b>		
(7) <i>Foster a recognition of the contribution of the visitor industry to Hawaii's economy and the need to perpetuate the aloha spirit.</i>	<b>X</b>		
(8) <i>Foster an understanding by visitors of the aloha spirit and of the unique and sensitive character of Hawaii's cultures and values.</i>	<b>X</b>		
<b>Discussion:</b> Consistent with the Ka'ū region's rural setting, visitor accommodations will be low-key and designed to blend into the natural setting of the Site. It is anticipated that visitors will be drawn to the Site's rich natural and cultural resources and have a desire to enjoy them in a rural and remote setting.			
<b>HRS § 226-9: Objective and policies for the economy – federal expenditures</b>			
<i>Objective: Planning for the State's economy with regard to federal expenditures shall be directed towards achievement of the objective of a stable federal investment base as an integral component of Hawaii's economy.</i>			
<b>Policies:</b>			
(1) <i>Encourage the sustained flow of federal expenditures in Hawai'i that generates long-term government civilian employment.</i>			<b>X</b>
(2) <i>Promote Hawaii's supportive role in national defense.</i>			<b>X</b>
(3) <i>Promote the development of federally supported activities in Hawai'i that respect state-wide economic concerns, are sensitive to community needs, and minimize adverse impacts on Hawaii's environment.</i>	<b>X</b>		
(4) <i>Increase opportunities for entry and advancement of Hawaii's people into federal government service.</i>			<b>X</b>
(5) <i>Promote federal use of local commodities, services, and facilities available in Hawaii.</i>			<b>X</b>
(6) <i>Strengthen federal-state-county communication and coordination in all federal activities that affect Hawaii.</i>			<b>X</b>
(7) <i>Pursue the return of federally controlled lands in Hawai'i that are not required for either the defense of the nation or for other purposes of national importance, and promote the mutually beneficial exchanges of land between federal agencies, the State, and the counties.</i>			<b>X</b>
<b>Discussion:</b> While the Project is not dependent on federal funding, the Hawaiian Heritage Center may apply for grant funds from federal programs that support the Center's mission of stewarding the Site's natural and cultural resources.			
<b>HRS § 226-10: Objectives and policies for the economy – potential growth activities.</b>			
<i>Objective: Planning for the State's economy with regard to potential growth activities shall be directed towards achievement of the objective of development and expansion of potential growth activities that serve to increase and diversify Hawaii's economic base.</i>			

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<b>HAWAII STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES</b> (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	S	N/S	N/A
<b>Policies:</b>			
(1) <i>Facilitate investment and employment in economic activities that have the potential for growth such as diversified agriculture, aquaculture, apparel and textile manufacturing, film and television production, and energy and marine-related industries.</i>			<b>X</b>
(2) <i>Expand Hawaii's capacity to attract and service international programs and activities that generate employment for Hawaii's people.</i>			<b>X</b>
(3) <i>Enhance and promote Hawaii's role as a center for international relations, trade, finance, services, technology, education, culture, and the arts.</i>			<b>X</b>
(4) <i>Accelerate research and development of new energy- related industries based on wind, solar, ocean, and underground resources and solid waste.</i>			<b>X</b>
(5) <i>Promote Hawaii's geographic, environmental, social, and technological advantages to attract new economic activities into the State.</i>			<b>X</b>
(6) <i>Provide public incentives and encourage private initiative to attract new industries that best support Hawaii's social, economic, physical, and environmental objectives.</i>			<b>X</b>
(7) <i>Increase research and the development of ocean-related economic activities such as mining, food production, and scientific research.</i>	<b>X</b>		
(8) <i>Develop, promote, and support research and educational and training programs that will enhance Hawaii's ability to attract and develop economic activities of benefit to Hawaii.</i>			<b>X</b>
(9) <i>Foster a broader public recognition and understanding of the potential benefits of new, growth-oriented industry in Hawaii.</i>			<b>X</b>
(10) <i>Encourage the development and implementation of joint federal and state initiatives to attract federal programs and projects that will support Hawaii's social, economic, physical, and environmental objectives.</i>	<b>X</b>		
(11) <i>Increase research and development of businesses and services in the telecommunications and information industries.</i>			<b>X</b>
<p><b>Discussion:</b> In addition to stewarding the Site's natural and cultural resources, the Hawaiian Heritage Center will also serve as a catalyst to expand the research and scientific programs presently conducted at the Site.</p>			
<b>HRS § 226-10.5: Objectives and policies for the economy – information industry</b>			
<b>Objective:</b> <i>Planning for the State's economy with regard to the information industry shall be directed toward the achievement of the objective of positioning Hawai'i as the leading dealer in information businesses and services in the Pacific Rim.</i>			
<b>Policies:</b>			
(1) <i>Encourage the continued development and expansion of the telecommunications infrastructure serving Hawai'i to accommodate future growth in the information industry;</i>			<b>X</b>
(2) <i>Facilitate the development of new business and service ventures in the information industry which will provide employment opportunities for the people of Hawaii;</i>			<b>X</b>
(3) <i>Encourage greater cooperation between the public and private sectors in developing and maintaining a well- designed information industry;</i>			<b>X</b>
(4) <i>Ensure that the development of new businesses and services in the industry are in keeping with the social, economic, and physical needs and aspirations of Hawaii's people;</i>			<b>X</b>
(5) <i>Provide opportunities for Hawaii's people to obtain job training and education that will allow for upward mobility within the information industry;</i>			<b>X</b>
(6) <i>Foster a recognition of the contribution of the information industry to Hawaii's economy; and</i>			<b>X</b>
(7) <i>Assist in the promotion of Hawai'i as a broker, creator, and processor of information in the Pacific.</i>			<b>X</b>
<p><b>Discussion:</b> Kahuku Village is not related to the information industry; therefore, these objectives and policies are not applicable.</p>			



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<b>HRS § 226-11: Objectives and policies for the physical environment – land-based, shoreline, and marine resources.</b>			
<i>Objectives: Planning for the State's physical environment shall be directed towards achievement of the objective of enhancement of Hawaii's scenic assets, natural beauty, and multi-cultural/historical resources.</i>			
(1) Prudent use of Hawaii's land-based, shoreline, and marine resources.	X		
(2) Effective protection of Hawaii's unique and fragile environmental resources.	X		
<b>Policies:</b>			
(1) Exercise an overall conservation ethic in the use of Hawaii's natural resources.	X		
(2) Ensure compatibility between land-based and water-based activities and natural resources and ecological systems.	X		
(3) Take into account the physical attributes of areas when planning and designing activities and facilities.	X		
(4) Manage natural resources and environs to encourage their beneficial and multiple use without generating costly or irreparable environmental damage.	X		
(5) Consider multiple uses in watershed areas, provided such uses do not detrimentally affect water quality and recharge functions.	X		
(6) Encourage the protection of rare or endangered plant and animal species and habitats native to Hawaii.	X		
(7) Provide public incentives that encourage private actions to protect significant natural resources from degradation or unnecessary depletion.	X		
(8) Pursue compatible relationships among activities, facilities, and natural resources.	X		
(9) Promote increased accessibility and prudent use of inland and shoreline areas for public recreational, educational, and scientific purposes.	X		
<p><b>Discussion:</b> Kahuku Village's concept plan avoids development in resource rich areas and where significant archaeological or cultural sites exist. Lands in the vicinity of Pōhue Bay, where many natural and cultural resources are located, will be preserved and dedicated to the Hawaiian Heritage Center. A shoreline conservation area extending at least 300-feet inland from the shoreline will prevent impact to coastal resources. As discussed in Section 3.6.1, no impact to nearshore marine or anchialine pond communities is expected to occur with development of Kahuku Village.</p>			
<b>HRS § 226-12: Objectives and policies for the physical environment – scenic, natural beauty, and historic resources.</b>			
<i>Objective: Planning for the State's physical environment shall be directed towards achievement of the objective of enhancement of Hawaii's scenic assets, natural beauty, and multi-cultural/historical resources.</i>			
<b>Policies:</b>			
(1) Promote the preservation and restoration of significant natural and historic resources.	X		
(2) Provide incentives to maintain and enhance historic, cultural, and scenic amenities.	X		
(3) Promote the preservation of views and vistas to enhance the visual and aesthetic enjoyment of mountains, ocean, scenic landscapes, and other natural features.	X		
(4) Protect those special areas, structures, and elements that are an integral and functional part of Hawaii's ethnic and cultural heritage.	X		
(5) Encourage the design of developments and activities that complement the natural beauty of the islands.	X		
<p><b>Discussion:</b> Coastal scenic views from public vantage points will be largely unaffected since no development is planned along Māmalahoa Highway, except for the possible civic facilities adjacent to the Hawaiian Ocean View Ranchos subdivision. The nearest development will be about 5-miles distant from the highway. While the visual and aesthetic qualities along the Site's coast may be affected by development adjacent to the coast, it must be recognized that presently there is no public shoreline access to the site's coastal frontage. With the</p>			

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<p>development of Kahuku Village, managed public shoreline access will be provided, thereby enhancing the public’s ability to access and enjoy the Site’s visual and aesthetic coastal qualities.</p> <p>Establishment of the Hawaiian Heritage Center will have a beneficial effect on historic resources by providing the resources and opportunity to interpret and preserve significant archaeological and cultural sites. As discussed in Section 4.1, no significant adverse impact to archaeological resources is anticipated as all of the recommendations of the archaeological inventory survey necessary to mitigate impacts will be implemented.</p>			
<b>HRS § 226-13: Objectives and policies for the physical environment – land, air, and water quality.</b>			
<i>Objectives: Planning for the State’s physical environment with regard to land, air, and water quality shall be directed towards achievement of the following objectives:</i>			
(1) Maintenance and pursuit of improved quality in Hawaii’s land, air, and water resources.	X		
(2) Greater public awareness and appreciation of Hawaii’s environmental resources.	X		
<i>Policies:</i>			
(1) Foster educational activities that promote a better understanding of Hawaii’s limited environmental resources.	X		
(2) Promote the proper management of Hawaii’s land and water resources.	X		
(3) Promote effective measures to achieve desired quality in Hawaii’s surface, ground, and coastal waters.	X		
(4) Encourage actions to maintain or improve aural and air quality levels to enhance the health and well-being of Hawaii’s people.	X		
(5) Reduce the threat to life and property from erosion, flooding, tsunamis, hurricanes, earthquakes, volcanic eruptions, and other natural or man-induced hazards and disasters.	X		
(6) Encourage design and construction practices that enhance the physical qualities of Hawaii’s communities.	X		
(7) Encourage urban developments in close proximity to existing services and facilities.	X		
(8) Foster recognition of the importance and value of the land, air, and water resources to Hawaii’s people, their cultures and visitors.	X		
<p><b>Discussion:</b> As discussed in Section 2.2.1, an objective of Kahuku Village is to steward the natural and cultural resources on the Site. This will be accomplished through formation of the Hawaiian Heritage Center which will be empowered and responsible for managing the Site’s resources. It is anticipated that the Hawaiian Heritage Center will build partnerships with agencies and organizations that share its mission of resource stewardship and serve as a catalyst to expand educational and research programs at the Site.</p> <p>Kahuku Village will promote greater public awareness and appreciation of the Site’s environmental resources by enhancing public access. Presently, public access to the coast is accessible only by a rough, unimproved road.</p> <p>Section 3.4 (Natural Hazards) of this EIS provides discussion of potential natural hazards, such as flooding, tsunami inundation, hurricanes, volcanic eruptions, and earthquakes. The development of Kahuku Village, however, will not exacerbate any natural hazard conditions.</p>			
<b>HRS § 226-14: Objective and policies for facility systems – in general</b>			
<i>Objective: Planning for the State’s facility systems in general shall be directed towards achievement of the objective of water, transportation, waste disposal, and energy and telecommunication systems that support statewide social, economic, and physical objectives.</i>			

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<b>Policies:</b>			
(1) Accommodate the needs of Hawaii's people through coordination of facility systems and capital improvement priorities in consonance with state and county plans.			X
(2) Encourage flexibility in the design and development of facility systems to promote prudent use of resources and accommodate changing public demands and priorities.			X
(3) Ensure that required facility systems can be supported within resource capacities and at reasonable cost to the user.			X
(4) Pursue alternative methods of financing programs and projects and cost-saving techniques in the planning, construction, and maintenance of facility systems.			X
<p><b>Discussion:</b> Development of Kahuku Village will require improvements to water, transportation, wastewater, and energy and telecommunications systems. Improvements will be coordinated with respective agencies and designed in accordance with applicable codes and regulations.</p>			
<b>HRS § 226-15: Objectives and policies for facility systems – solid and liquid wastes.</b>			
<b>Objectives:</b> Planning for the State's facility systems with regard to solid and liquid wastes shall be directed towards the achievement of the following objectives:			
(1) Maintenance of basic public health and sanitation standards relating to treatment and disposal of solid and liquid wastes.	X		
(2) Provision of adequate sewerage facilities for physical and economic activities that alleviate problems in housing, employment, mobility, and other areas.	X		
<b>Policies:</b>			
(1) Encourage the adequate development of sewerage facilities that complement planned growth.	X		
(2) Promote re-use and recycling to reduce solid and liquid wastes and employ a conservation ethic.	X		
(3) Promote research to develop more efficient and economical treatment and disposal of solid and liquid wastes.	X		
<p><b>Discussion:</b> A private WWTP will be developed to serve Kahuku Village. The WWTP will be designed to produce an R-1 quality effluent for non-potable reuse throughout the community. Design and construction will be in accordance with DOH and County of Hawai'i standards and treated water will be reused for irrigation.</p>			
<b>HRS § 226-16: Objectives and policies for facility systems – water.</b>			
<b>Objective:</b> Planning for the State's facility systems with regard to water shall be directed towards achievement of the objective of the provision of water to adequately accommodate domestic, agricultural, commercial, industrial, recreational, and other needs within resource capacities.			
<b>Policies:</b>			
(1) Coordinate development of land use activities with existing and potential water supply.	X		
(2) Support research and development of alternative methods to meet future water requirements well in advance of anticipated needs.	X		
(3) Reclaim and encourage the productive use of runoff water and wastewater discharges.	X		
(4) Assist in improving the quality, efficiency, service, and storage capabilities of water systems for domestic and agricultural use.	X		
(5) Support water supply services to areas experiencing critical water problems.	X		
(6) Promote water conservation programs and practices in government, private industry, and the general public to help ensure adequate water to meet long-term needs.	X		
<p><b>Discussion:</b> An on-site desalination plant will be constructed to provide potable water for Kahuku Village's residential and commercial uses.</p>			

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<p>Non-potable water will be used for golf course irrigation and irrigation of landscaping features within common areas. Potable water demand will be limited to that used for consumption, general household/commercial use, and irrigation of landscaping within private residential areas.</p>			
<b>HRS § 226-17: Objectives and policies for facility systems – transportation.</b>			
<i>Objective: Planning for the State's facility systems with regard to energy shall be directed toward the achievement of the following objectives, giving due consideration to all:</i>			
(1) An integrated multi-modal transportation system that services statewide needs and promotes the efficient, economical, safe, and convenient movement of people and goods.	X		
(2) A statewide transportation system that is consistent with and will accommodate planned growth objectives throughout the State.			X
<b>Policies:</b>			
(1) Design, program, and develop a multi-modal system in conformance with desired growth and physical development as stated in this chapter;	X		
(2) Coordinate state, county, federal, and private transportation activities and programs toward the achievement of statewide objectives;			X
(3) Encourage a reasonable distribution of financial responsibilities for transportation among participating governmental and private parties;	X		
(4) Provide for improved accessibility to shipping, docking, and storage facilities;			X
(5) Promote a reasonable level and variety of mass transportation services that adequately meet statewide and community needs;			X
(6) Encourage transportation systems that serve to accommodate present and future development needs of communities;	X		
(7) Encourage a variety of carriers to offer increased opportunities and advantages to interisland movement of people and goods;			X
(8) Increase the capacities of airport and harbor systems and support facilities to effectively accommodate transshipment and storage needs;			X
(9) Encourage the development of transportation systems and programs which would assist statewide economic growth and diversification;			X
(10) Encourage the design and development of transportation systems sensitive to the needs of affected communities and the quality of Hawaii's natural environment;	X		
(11) Encourage safe and convenient use of low-cost, energy-efficient, non-polluting means of transportation;	X		
(12) Coordinate intergovernmental land use and transportation planning activities to ensure the timely delivery of supporting transportation infrastructure in order to accommodate planned growth objectives; and			X
(13) Encourage diversification of transportation modes and infrastructure to promote alternate fuels and energy efficiency.			X
<p><b>Discussion:</b> An objective of developing Kahuku Village is to provide an economic engine and sources of employment for the Ka'ū region. This will allow Ka'ū residents to find employment nearer to home and reduce the need for residents to commute to Kona or Hilo. The mixed-use nature of Kahuku Village will provide a range of commercial services and recreational amenities within close proximity to residents. Sidewalks, trails, and bikepaths will connect uses within Kahuku Village, providing an alternative to private automobiles.</p>			
<b>HRS § 226-18: Objectives and policies for facility systems – energy.</b>			
<i>Objectives: Planning for the State's facility systems with regard to energy shall be directed toward the achievement of the following objectives, giving due consideration to all:</i>			
(1) Dependable, efficient, and economical statewide energy systems capable of supporting the			X

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<i>needs of the people;</i>			
(2) <i>Increased energy self-sufficiency where the ratio of indigenous to imported energy use is increased;</i>	<b>X</b>		
(3) <i>Greater energy security in the face of threats to Hawaii's energy supplies and systems; and</i>			<b>X</b>
(4) <i>Reduction, avoidance, or sequestration of greenhouse gas emissions from energy supply and use.</i>	<b>X</b>		
<b>Policies:</b>			
(1) <i>Support research and development as well as promote the use of renewable energy sources;</i>			<b>X</b>
(2) <i>Ensure that the combination of energy supplies and energy-saving systems is sufficient to support the demands of growth;</i>			<b>X</b>
(3) <i>Base decisions of least-cost supply-side and demand-side energy resource options on a comparison of their total costs and benefits when a least-cost is determined by a reasonably comprehensive, quantitative, and qualitative accounting of their long-term, direct and indirect economic, environmental, social, cultural, and public health costs and benefits;</i>			<b>X</b>
(4) <i>Promote all cost-effective conservation of power and fuel supplies through measures including:</i>			<b>X</b>
(A) <i>Development of cost-effective demand-side management programs;</i>			<b>X</b>
(B) <i>Education; and</i>			<b>X</b>
(C) <i>Adoption of energy-efficient practices and technologies;</i>	<b>X</b>		
(5) <i>Ensure to the extent that new supply-side resources are needed, the development or expansion of energy systems utilizes the least-cost energy supply option and maximizes efficient technologies;</i>			<b>X</b>
(6) <i>Support research, development, and demonstration of energy efficiency, load management, and other demand-side management programs, practices, and technologies;</i>	<b>X</b>		
(7) <i>Promote alternate fuels and energy efficiency by encouraging diversification of transportation modes and infrastructure;</i>	<b>X</b>		
(8) <i>Support actions that reduce, avoid, or sequester greenhouse gases in utility, transportation, and industrial sector applications; and</i>	<b>X</b>		
(9) <i>Support actions that reduce, avoid, or sequester Hawaii's greenhouse gas emissions through agriculture and forestry initiatives.</i>			<b>X</b>
<b>Discussion:</b> Energy conservation measures will be implemented where possible in the design of Kahuku Village, as discussed in Section 4.8.5 (Electrical System).			
<b>HRS § 226-18.5: Objectives and policies for facility systems—telecommunications.</b>			
<b>Objective:</b> <i>Planning for the State's telecommunications facility systems shall be directed towards the achievement of dependable, efficient, and economical statewide telecommunications systems capable of supporting the needs of the people.</i>			
<b>Policies:</b>			
(1) <i>Facilitate research and development of telecommunications systems and resources;</i>			<b>X</b>
(2) <i>Encourage public and private sector efforts to develop means for adequate, ongoing telecommunications planning;</i>			<b>X</b>
(3) <i>Promote efficient management and use of existing telecommunications systems and services; and</i>			<b>X</b>
(4) <i>Facilitate the development of education and training of telecommunications personnel.</i>			<b>X</b>
<b>Discussion:</b> Coordination with the various communication companies will be undertaken during design of Kahuku Village. Kahuku Village, however, is not involved with the planning of the State's telecommunications facility systems. Therefore, these objectives and policies are not applicable.			

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<b>HRS § 226-19: Objectives and policies for socio-cultural advancement – housing.</b>			
<i>Objectives: Planning for the State's socio-cultural advancement with regard to housing shall be directed toward the achievement of the following objectives:</i>			
(1) <i>Greater opportunities for Hawaii's people to secure reasonably priced, safe, sanitary, and livable homes, located in suitable environments that satisfactorily accommodate the needs and desires of families and individuals, through collaboration and cooperation between government and nonprofit and for-profit developers to ensure that more affordable housing is made available to very low-, low- and moderate-income segments of Hawaii's population.</i>	<b>X</b>		
(2) <i>The orderly development of residential areas sensitive to community needs and other land uses.</i>	<b>X</b>		
(3) <i>The development and provision of affordable rental housing by the State to meet the housing needs of Hawaii's people.</i>	<b>X</b>		
<b>Policies:</b>			
(1) <i>Effectively accommodate the housing needs of Hawaii's people.</i>	<b>X</b>		
(2) <i>Stimulate and promote feasible approaches that increase housing choices for low-income, moderate-income, and gap-group households.</i>	<b>X</b>		
(3) <i>Increase homeownership and rental opportunities and choices in terms of quality, location, cost, densities, style, and size of housing.</i>	<b>X</b>		
(4) <i>Promote appropriate improvement, rehabilitation, and maintenance of existing housing units and residential areas.</i>			<b>X</b>
(5) <i>Promote design and location of housing developments taking into account the physical setting, accessibility to public facilities and services, and other concerns of existing communities and surrounding areas.</i>	<b>X</b>		
(6) <i>Facilitate the use of available vacant, developable, and underutilized urban lands for housing.</i>	<b>X</b>		
(7) <i>Foster a variety of lifestyles traditional to Hawai'i through the design and maintenance of neighborhoods that reflect the culture and values of the community.</i>	<b>X</b>		
(8) <i>Promote research and development of methods to reduce the cost of housing construction in Hawaii.</i>	<b>X</b>		
<b>Discussion:</b> As discussed in Section 4.7 (Socio-Economic Characteristics), Kahuku Village will implement objectives and policies for socio-cultural advancement in housing by: <ul style="list-style-type: none"> <li>• Creating a community that fosters a sense of place, respects the land, and is sustainable.</li> <li>• Providing affordable and moderately-priced housing for sale and rent to the working families of Hawai'i, specifically those that work in Ka'u.</li> <li>• Providing homes near employment centers, thereby increasing quality of life through decreased commute time.</li> <li>• Providing a variety of housing options (mixed-income) integrated in a complete community rather than an affordable housing "project."</li> </ul>			
<b>HRS § 226-20: Objectives and policies for socio-cultural advancement – health</b>			
<i>Objectives: Planning for the State's socio-cultural advancement with regard to health shall be directed towards achievement of the following objectives:</i>			
(1) <i>Fulfillment of basic individual health needs of the general public.</i>	<b>X</b>		
(2) <i>Maintenance of sanitary and environmentally healthful conditions in Hawaii's communities.</i>			<b>X</b>
<b>Policies:</b>			
(1) <i>Provide adequate and accessible services and facilities for prevention and treatment of physical and mental health problems, including substance abuse.</i>	<b>X</b>		
(2) <i>Encourage improved cooperation among public and private sectors in the provision of health care to accommodate the total health needs of individuals throughout the State.</i>	<b>X</b>		
(3) <i>Encourage public and private efforts to develop and promote statewide and local strategies to reduce health care and related insurance costs.</i>			<b>X</b>
(4) <i>Foster an awareness of the need for personal health maintenance and preventive health</i>			<b>X</b>

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<i>care through education and other measures.</i>			
(5) <i>Provide programs, services, and activities that ensure environmentally healthful and sanitary conditions.</i>	<b>X</b>		
(6) <i>Improve the State's capabilities in preventing contamination by pesticides and other potentially hazardous substances through increased coordination, education, monitoring, and enforcement.</i>			<b>X</b>
<p><b>Discussion:</b> Provision of the Veterans Administration facility and Emergency Medical Services facility will assist in meeting the objectives and policies relating to Health. Educational programs sponsored by the Hawaiian Heritage Center will also increase awareness about environmental health.</p>			
<b>HRS § 226-21: Objectives and policies for socio-cultural advancement – education.</b>			
<i>Objectives: Planning for the State's socio-cultural advancement with regard to education shall be directed towards achievement of the objective of the provision of a variety of educational opportunities to enable individuals to fulfill their needs, responsibilities, and aspirations.</i>			
<b>Policies:</b>			
(1) <i>Support educational programs and activities that enhance personal development, physical fitness, recreation, and cultural pursuits of all groups.</i>	<b>X</b>		
(2) <i>Ensure the provision of adequate and accessible educational services and facilities that are designed to meet individual and community needs.</i>	<b>X</b>		
(3) <i>Provide appropriate educational opportunities for groups with special needs.</i>			<b>X</b>
(4) <i>Promote educational programs which enhance understanding of Hawaii's cultural heritage.</i>	<b>X</b>		
(5) <i>Provide higher educational opportunities that enable Hawaii's people to adapt to changing employment demands.</i>	<b>X</b>		
(6) <i>Assist individuals, especially those experiencing critical employment problems or barriers, or undergoing employment transitions, by providing appropriate employment training programs and other related educational opportunities.</i>			<b>X</b>
(7) <i>Promote programs and activities that facilitate the acquisition of basic skills, such as reading, writing, computing, listening, speaking, and reasoning.</i>			<b>X</b>
(8) <i>Emphasize quality educational programs in Hawaii's institutions to promote academic excellence.</i>			<b>X</b>
(9) <i>Support research programs and activities that enhance the education programs of the State.</i>	<b>X</b>		
<p><b>Discussion:</b> A 12-acre site is proposed to be dedicated to the DOE for an elementary school. As discussed in 4.9.1 (Schools) students living in HOVE and Hawaiian Ocean View Ranchos must travel 10 miles to Nā'ālehu elementary school. Partnerships are being explored with Universities and other organizations that share the Applicant's goal of stewarding natural and cultural resources and educating the public of the significance of the Site's resources.</p>			
<b>HRS § 226-22: Objective and policies for socio-cultural advancement – social services</b>			
<i>Objective: Planning for the State's socio-cultural advancement with regard to social services shall be directed towards the achievement of the objective of improved public and private social services and activities that enable individuals, families, and groups to become more self-reliant and confident to improve their well-being.</i>			
<b>Policies:</b>			
(1) <i>Assist individuals, especially those in need of attaining a minimally adequate standard of living and those confronted by social and economic hardship conditions, through social services and activities within the State's fiscal capacities.</i>			<b>X</b>
(2) <i>Promote coordination and integrative approaches among public and private agencies and programs to jointly address social problems that will enable individuals, families, and groups to deal effectively with social problems and to enhance their participation in society.</i>			<b>X</b>

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(3) <i>Facilitate the adjustment of new residents, especially recently arrived immigrants, into Hawaii's communities.</i>			<b>X</b>
(4) <i>Promote alternatives to institutional care in the provision of long-term care for elder and disabled populations.</i>			<b>X</b>
(5) <i>Support public and private efforts to prevent domestic abuse and child molestation, and assist victims of abuse and neglect.</i>			<b>X</b>
(6) <i>Promote programs which assist people in need of family planning services to enable them to meet their needs.</i>			<b>X</b>
<b>Discussion:</b> Kahuku Village does not plan for the State's socio-cultural advancement with regard to social services; therefore, these objectives and policies are not applicable.			
<b>HRS § 226-23: Objectives and policies for socio-cultural advancement – leisure.</b>			
<i>Objective: Planning for the State's socio-cultural advancement with regard to leisure shall be directed towards the achievement of the objective of the adequate provision of resources to accommodate diverse cultural, artistic, and recreational needs for present and future generations.</i>			
<b>Policies:</b>			
(1) <i>Foster and preserve Hawaii's multi-cultural heritage through supportive cultural, artistic, recreational, and humanities-oriented programs and activities.</i>	<b>X</b>		
(2) <i>Provide a wide range of activities and facilities to fulfill the cultural, artistic, and recreational needs of all diverse and special groups effectively and efficiently.</i>	<b>X</b>		
(3) <i>Enhance the enjoyment of recreational experiences through safety and security measures, educational opportunities, and improved facility design and maintenance.</i>	<b>X</b>		
(4) <i>Promote the recreational and educational potential of natural resources having scenic, open space, cultural, historical, geological, or biological values while ensuring that their inherent values are preserved.</i>	<b>X</b>		
(5) <i>Ensure opportunities for everyone to use and enjoy Hawaii's recreational resources.</i>	<b>X</b>		
(6) <i>Assure the availability of sufficient resources to provide for future cultural, artistic, and recreational needs.</i>	<b>X</b>		
(7) <i>Provide adequate and accessible physical fitness programs to promote the physical and mental well-being of Hawaii's people.</i>			<b>X</b>
(8) <i>Increase opportunities for appreciation and participation in the creative arts, including the literary, theatrical, visual, musical, folk, and traditional art forms.</i>			<b>X</b>
(9) <i>Encourage the development of creative expression in the artistic disciplines to enable all segments of Hawaii's population to participate in the creative arts.</i>			<b>X</b>
(10) <i>Assure adequate access to significant natural and cultural resources in public ownership.</i>			<b>X</b>
<b>Discussion:</b> Kahuku Village will enhance recreational resources in the area by providing shoreline access, 20-acres of park space in the Mixed-Use Village, dedicating lands to the County for a District Park, and creation of a golf course. The Applicant will also consult with the National Park Service regarding extending the Ala Kahakai Trail through the Property. It is anticipated that the Hawaiian Heritage Center will host programs with an emphasis on natural and cultural resource education.			
<b>HRS § 226-24: Objective and policies for socio-cultural advancement – individual rights and personal well-being.</b>			
<i>Objective: Planning for the State's socio-cultural advancement with regard to individual rights and personal well-being shall be directed towards achievement of the objective of increased opportunities and protection of individual rights to enable individuals to fulfill their socio-economic needs and aspirations.</i>			
<b>Policies:</b>			
(1) <i>Provide effective services and activities that protect individuals from criminal acts and unfair practices and that alleviate the consequences of criminal acts in order to foster a safe and secure environment.</i>			<b>X</b>



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(2) Uphold and protect the national and state constitutional rights of every individual.			X
(3) Assure access to, and availability of, legal assistance, consumer protection, and other public services which strive to attain social justice.			X
(4) Ensure equal opportunities for individual participation in society.			X
<b>Discussion:</b> Kahuku Village does not have plans that specifically address the State’s socio-cultural advancement with regard to individual rights and personal well-being; therefore, these objectives and policies are not applicable.			
<b>HRS § 226-25: Objectives and policies for socio-cultural advancement – culture.</b>			
<b>Objective:</b> Planning for the State’s socio-cultural advancement with regard to culture shall be directed toward the achievement of the objective of enhancement of cultural identities, traditions, values, customs, and arts of Hawaii’s people.			
<b>Policies:</b>			
(1) Foster increased knowledge and understanding of Hawaii’s ethnic and cultural heritages and the history of Hawaii.	X		
(2) Support activities and conditions that promote cultural values, customs, and arts that enrich the lifestyles of Hawaii’s people and which are sensitive and responsive to family and community needs.	X		
(3) Encourage increased awareness of the effects of proposed public and private actions on the integrity and quality of cultural and community lifestyles in Hawaii.			X
(4) Encourage the essence of the aloha spirit in people’s daily activities to promote harmonious relationships among Hawaii’s people and visitors.	X		
<b>Discussion:</b> Development of Kahuku Village is expected to have an overall beneficial effect on ongoing cultural practices such as fishing, camping, hiking, gathering, and cultural ceremonies. Presently, access to the Site’s shoreline is limited by the 6-mile distance to the shoreline from Māmalahoa Highway accessible only by a rough, unimproved road. With Kahuku Village, managed public access along the length of the Site’s coast will be provided. In addition, creation of the Hawaiian Heritage Center will assist in the preservation of Hawaiian cultural resources, beliefs and practices representing the larger Project area, while improving awareness and access to the resources.			
<b>HRS § 226-26: Objectives and policies for socio-cultural advancement – public safety.</b>			
<b>Objectives:</b> Planning for the State’s socio-cultural advancement with regard to public safety shall be directed towards the achievement of the following objectives:			
(1) Assurance of public safety and adequate protection of life and property for all people.			X
(2) Optimum organizational readiness and capability in all phases of emergency management to maintain the strength, resources, and social and economic well-being of the community in the event of civil disruptions, wars, natural disasters, and other major disturbances.			X
(3) Promotion of a sense of community responsibility for the welfare and safety of Hawaii’s people.			X
<b>Policies related to public safety:</b>			
(1) Ensure that public safety programs are effective and responsive to community needs.			X
(2) Encourage increased community awareness and participation in public safety programs.			X
<b>Policies related to criminal justice:</b>			
(1) Support criminal justice programs aimed at preventing and curtailing criminal activities.			X
(2) Develop a coordinated, systematic approach to criminal justice administration among all criminal justice agencies.			X
(3) Provide a range of correctional resources which may include facilities and alternatives to traditional incarceration in order to address the varied security needs of the community and successfully reintegrate offenders into the community.			X
<b>Policies related to emergency management:</b>			
(1) Ensure that responsible organizations are in a proper state of readiness to respond to			X

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<i>major war-related, natural, or technological disasters and civil disturbances at all times.</i>			
(2) <i>Enhance the coordination between emergency management programs throughout the State.</i>			<b>X</b>
<b>Discussion:</b> Public safety programs are beyond the scope of Kahuku Village’s development concept, however, lands are proposed to be dedicated to the County for a police substation and for an emergency medical facility.			
<b>HRS § 226-27: Objectives and policies for socio-cultural advancement – government.</b>			
<i>Objectives: Planning the State's socio-cultural advancement with regard to government shall be directed towards the achievement of the following objectives:</i>			
(1) <i>Efficient, effective, and responsive government services at all levels in the State.</i>			<b>X</b>
(2) <i>Fiscal integrity, responsibility, and efficiency in the state government and county governments.</i>			<b>X</b>
<b>Policies:</b>			
(1) <i>Provide for necessary public goods and services not assumed by the private sector.</i>			<b>X</b>
(2) <i>Pursue an openness and responsiveness in government that permits the flow of public information, interaction, and response.</i>			<b>X</b>
(3) <i>Minimize the size of government to that necessary to be effective.</i>			<b>X</b>
(4) <i>Stimulate the responsibility in citizens to productively participate in government for a better Hawaii.</i>			<b>X</b>
(5) <i>Assure that government attitudes, actions, and services are sensitive to community needs and concerns.</i>			<b>X</b>
(6) <i>Provide for a balanced fiscal budget.</i>			<b>X</b>
(7) <i>Improve the fiscal budgeting and management system of the State.</i>			<b>X</b>
(8) <i>Promote the consolidation of state and county governmental functions to increase the effective and efficient delivery of government programs and services and to eliminate duplicative services wherever feasible.</i>			<b>X</b>
<b>Discussion:</b> Planning the State's socio-cultural advancement with regard to government is not relevant to Kahuku Village; therefore, these objectives and policies are not applicable.			

**PART III. PRIORITY GUIDELINES**

The purpose of this part of the Hawai'i State Plan is to establish overall priority guidelines to address areas of statewide concern. The Hawai'i State Plan notes that the State shall strive to improve the quality of life for Hawai'i's present and future population through the pursuit of desirable courses of action in five major areas of statewide concern which merit priority attention: 1) economic development; 2) population growth and land resource management; 3) affordable housing; 4) crime and criminal justice; and 5) quality education (§226-102). The priority guidelines applicable to Kahuku Village are discussed below:

<b>HAWAI'I STATE PLAN, CHAPTER 226, HRS – PART III. PRIORITY GUIDELINES</b> (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	S	N/S	N/A
<b>HRS § 226-101: Purpose.</b> <i>The purpose of this part is to establish overall priority guidelines to address areas of statewide concern.</i>			
<b>HRS § 226-102: Overall direction.</b> <i>The State shall strive to improve the quality of life for Hawaii's present and future present and future population through the pursuit of desirable courses of action in five major areas of statewide concern which merit priority attention: economic development, population growth and land resource management, affordable housing, crime and criminal justice, and quality education.</i>			
<b>HRS § 226-103: Economic priority guidelines.</b>			

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<i>(a) Priority guidelines to stimulate economic growth and encourage business expansion and development to provide needed jobs for Hawaii's people and achieve a stable and diversified economy:</i>			
<i>(1) Seek a variety of means to increase the availability of investment capital for new and expanding enterprises.</i>			<b>X</b>
<i>(A) Encourage investments which:</i>			
<i>(i) Reflect long term commitments to the State;</i>	<b>X</b>		
<i>(ii) Rely on economic linkages within the local economy;</i>	<b>X</b>		
<i>(iii) Diversify the economy;</i>	<b>X</b>		
<i>(iv) Reinvest in the local economy;</i>	<b>X</b>		
<i>(v) Are sensitive to community needs and priorities; and</i>	<b>X</b>		
<i>(vi) Demonstrate a commitment to provide management opportunities to Hawai'i residents.</i>			<b>X</b>
<i>(2) Encourage the expansion of technological research to assist industry development and support the development and commercialization of technological advancements.</i>			<b>X</b>
<i>(3) Improve the quality, accessibility, and range of services provided by government to business, including data and reference services and assistance in complying with governmental regulations.</i>			<b>X</b>
<i>(4) Seek to ensure that state business tax and labor laws and administrative policies are equitable, rational, and predictable.</i>			<b>X</b>
<i>(5) Streamline the building and development permit and review process, and eliminate or consolidate other burdensome or duplicative governmental requirements imposed on business, where public health, safety and welfare would not be adversely affected.</i>			<b>X</b>
<i>(6) Encourage the formation of cooperatives and other favorable marketing or distribution arrangements at the regional or local level to assist Hawaii's small-scale producers, manufacturers, and distributors.</i>			<b>X</b>
<i>(7) Continue to seek legislation to protect Hawai'i from transportation interruptions between Hawai'i and the continental United States.</i>			<b>X</b>
<i>(8) Provide public incentives and encourage private initiative to develop and attract industries which promise long-term growth potentials and which have the following characteristics:</i>			<b>X</b>
<i>(A) An industry that can take advantage of Hawaii's unique location and available physical and human resources.</i>			<b>X</b>
<i>(B) A clean industry that would have minimal adverse effects on Hawaii's environment.</i>			<b>X</b>
<i>(C) An industry that is willing to hire and train Hawaii's people to meet the industry's labor needs at all levels of employment.</i>			<b>X</b>
<i>(D) An industry that would provide reasonable income and steady employment.</i>			<b>X</b>
<i>(9) Support and encourage, through educational and technical assistance programs and other means, expanded opportunities for employee ownership and participation in Hawai'i business.</i>			<b>X</b>
<i>(10) Enhance the quality of Hawaii's labor force and develop and maintain career opportunities for Hawaii's people through the following actions:</i>			
<i>(A) Expand vocational training in diversified agriculture, aquaculture, information industry, and other areas where growth is desired and feasible.</i>	<b>X</b>		
<i>(B) Encourage more effective career counseling and guidance in high schools and post-secondary institutions to inform students of present and future career opportunities.</i>			<b>X</b>
<i>(C) Allocate educational resources to career areas where high employment is expected and where growth of new industries is desired.</i>			<b>X</b>
<i>(D) Promote career opportunities in all industries for Hawaii's people by encouraging firms doing business in the State to hire residents.</i>			<b>X</b>
<i>(E) Promote greater public and private sector cooperation in determining industrial training needs and in developing relevant curricula and on- the-job training opportunities.</i>			<b>X</b>
<i>(F) Provide retraining programs and other support services to assist entry of displaced workers into alternative employment.</i>			<b>X</b>
<i>(b) Priority guidelines to promote the economic health and quality of the visitor industry:</i>			
<i>(1) Promote visitor satisfaction by fostering an environment which enhances the Aloha Spirit and minimizes inconveniences to Hawaii's residents and visitors.</i>	<b>X</b>		

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(2) <i>Encourage the development and maintenance of well-designed, adequately serviced hotels and resort destination areas which are sensitive to neighboring communities and activities and which provide for adequate shoreline setbacks and beach access.</i>	X		
(3) <i>Support appropriate capital improvements to enhance the quality of existing resort destination areas and provide incentives to encourage investment in upgrading, repair, and maintenance of visitor facilities.</i>			X
(4) <i>Encourage visitor industry practices and activities which respect, preserve, and enhance Hawaii's significant natural, scenic, historic, and cultural resources.</i>	X		
(5) <i>Develop and maintain career opportunities in the visitor industry for Hawaii's people, with emphasis on managerial positions.</i>	X		
(6) <i>Support and coordinate tourism promotion abroad to enhance Hawaii's share of existing and potential visitor markets.</i>			X
(7) <i>Maintain and encourage a more favorable resort investment climate consistent with the objectives of this chapter.</i>			X
(8) <i>Support law enforcement activities that provide a safer environment for both visitors and residents alike.</i>			X
(9) <i>Coordinate visitor industry activities and promotions to business visitors through the state network of advanced data communication techniques.</i>			X
<i>(c) Priority guidelines to promote the continued viability of the sugar and pineapple industries:</i>			
(1) <i>Provide adequate agricultural lands to support the economic viability of the sugar and pineapple industries.</i>			X
(2) <i>Continue efforts to maintain federal support to provide stable sugar prices high enough to allow profitable operations in Hawaii.</i>			X
(3) <i>Support research and development, as appropriate, to improve the quality and production of sugar and pineapple crops.</i>			X
<i>(d) Priority guidelines to promote the growth and development of diversified agriculture and aquaculture:</i>			
(1) <i>Identify, conserve, and protect agricultural and aquacultural lands of importance and initiate affirmative and comprehensive programs to promote economically productive agricultural and aquacultural uses of such lands.</i>			X
(2) <i>Assist in providing adequate, reasonably priced water for agricultural activities.</i>			X
(3) <i>Encourage public and private investment to increase water supply and to improve transmission, storage, and irrigation facilities in support of diversified agriculture and aquaculture.</i>			X
(4) <i>Assist in the formation and operation of production and marketing associations and cooperatives to reduce production and marketing costs.</i>			X
(5) <i>Encourage and assist with the development of a waterborne and airborne freight and cargo system capable of meeting the needs of Hawaii's agricultural community.</i>			X
(6) <i>Seek favorable freight rates for Hawaii's agricultural products from interisland and overseas transportation operators.</i>			X
(7) <i>Encourage the development and expansion of agricultural and aquacultural activities which offer long-term economic growth potential and employment opportunities.</i>			X
(8) <i>Continue the development of agricultural parks and other programs to assist small independent farmers in securing agricultural lands and loans.</i>			X
(9) <i>Require agricultural uses in agricultural subdivisions and closely monitor the uses in these subdivisions.</i>			X
(10) <i>Support the continuation of land currently in use for diversified agriculture.</i>			X
<i>(e) Priority guidelines for water use and development:</i>			
(1) <i>Maintain and improve water conservation programs to reduce the overall water consumption rate.</i>	X		
(2) <i>Encourage the improvement of irrigation technology and promote the use of nonpotable water for agricultural and landscaping purposes.</i>	X		
(3) <i>Increase the support for research and development of economically feasible alternative water sources.</i>	X		
(4) <i>Explore alternative funding sources and approaches to support future water development programs and water system improvements.</i>	X		
<i>(f) Priority guidelines for energy use and development:</i>			
(1) <i>Encourage the development, demonstration, and commercialization of renewable energy</i>	X		

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<i>sources.</i>			
(2) <i>Initiate, maintain, and improve energy conservation programs aimed at reducing energy waste and increasing public awareness of the need to conserve energy.</i>	<b>X</b>		
(3) <i>Provide incentives to encourage the use of energy conserving technology in residential, industrial, and other buildings.</i>			<b>X</b>
(4) <i>Encourage the development and use of energy conserving and cost-efficient transportation systems.</i>			<b>X</b>
<i>(g) Priority guidelines to promote the development of the information industry:</i>			
(1) <i>Establish an information network that will serve as the catalyst for establishing a viable information industry in Hawaii.</i>			<b>X</b>
(2) <i>Encourage the development of services such as financial data processing, a products and services exchange, foreign language translations, telemarketing, teleconferencing, a twenty-four-hour international stock exchange, international banking, and a Pacific Rim management center.</i>			<b>X</b>
(3) <i>Encourage the development of small businesses in the information field such as software development, the development of new information systems and peripherals, data conversion and data entry services, and home or cottage services such as computer programming, secretarial, and accounting services.</i>			<b>X</b>
(4) <i>Encourage the development or expansion of educational and training opportunities for residents in the information and telecommunications fields.</i>			<b>X</b>
(5) <i>Encourage research activities, including legal research in the information and telecommunications fields.</i>			<b>X</b>
(6) <i>Support promotional activities to market Hawaii's information industry services.</i>			<b>X</b>
<p><b>Discussion:</b> Kahuku Village will impact the State and County economies by: 1) generating development activity, which supports expenditures for goods and services; 2) creating and supporting jobs and business enterprises in its ongoing operations; and 3) attracting new and returning Island residents who would make new expenditures. Kahuku Village is expected to have favorable long-term economic impacts, including inducing additional consumer expenditures, creating employment opportunities, increasing personal income and government revenue enhancement. Further discussion is provided in Section 4.7 (Socio-Economic Characteristics).</p> <p>Visitor facilities created at Kahuku Village will be sensitive to the region's rural setting and community values. Facilities will be low-key in nature and designed to blend into the area's natural setting.</p> <p>Kahuku Village's preferred alternative for providing both potable and non-potable water is an on-site desalination plant, as discussed in Section 4.2.2 (Water System).</p> <p>Due to the availability of R-1 effluent from the private WWTP to be installed with Kahuku Village as described in Section 4.8.2 (Wastewater), non-potable recycled water will be used for general irrigation of the landscaping features within the community. Potable water demand will be limited to that used for consumption, general household/commercial use, and irrigation of landscaping within residential areas.</p>			
<b>HRS § 226-104: Population growth and land resources priority guidelines.</b>			
<i>(a) Priority guidelines to effect desired statewide growth and distribution:</i>			
(1) <i>Encourage planning and resource management to insure that population growth rates throughout the State are consistent with available and planned resource capacities and reflect the needs and desires of Hawaii's people.</i>	<b>X</b>		
(2) <i>Manage a growth rate for Hawaii's economy that will parallel future employment needs for Hawaii's people.</i>	<b>X</b>		

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(3) <i>Ensure that adequate support services and facilities are provided to accommodate the desired distribution of future growth throughout the State.</i>	X		
(4) <i>Encourage major state and federal investments and services to promote economic development and private investment to the neighbor islands, as appropriate.</i>			X
(5) <i>Explore the possibility of making available urban land, low-interest loans, and housing subsidies to encourage the provision of housing to support selective economic and population growth on the neighbor islands.</i>			X
(6) <i>Seek federal funds and other funding sources outside the State for research, program development, and training to provide future employment opportunities on the neighbor islands.</i>			X
(7) <i>Support the development of high technology parks on the neighbor islands.</i>			X
<b>(b) Priority guidelines for regional growth distribution and land resource utilization:</b>			
(1) <i>Encourage urban growth primarily to existing urban areas where adequate public facilities are already available or can be provided with reasonable public expenditures, and away from areas where other important benefits are present, such as protection of important agricultural land or preservation of lifestyles.</i>			X
(2) <i>Make available marginal or nonessential agricultural lands for appropriate urban uses while maintaining agricultural lands of importance in the agricultural district.</i>			X
(3) <i>Restrict development when drafting of water would result in exceeding the sustainable yield or in significantly diminishing the recharge capacity of any groundwater area.</i>			X
(4) <i>Encourage restriction of new urban development in areas where water is insufficient from any source for both agricultural and domestic use.</i>			X
(5) <i>In order to preserve green belts, give priority to state capital-improvement funds which encourage location of urban development within existing urban areas except where compelling public interest dictates development of a noncontiguous new urban core.</i>			X
(6) <i>Seek participation from the private sector for the cost of building infrastructure and utilities, and maintaining open spaces.</i>			X
(7) <i>Pursue rehabilitation of appropriate urban areas.</i>			X
(8) <i>Support the redevelopment of Kakaako into a viable residential, industrial, and commercial community.</i>			X
(9) <i>Direct future urban development away from critical environmental areas or impose mitigating measures so that negative impacts on the environment would be minimized.</i>			X
(10) <i>Identify critical environmental areas in Hawaii'i to include but not be limited to the following: watershed and recharge areas; wildlife habitats (on land and in the ocean); areas with endangered species of plants and wildlife; natural streams and water bodies; scenic and recreational shoreline resources; open space and natural areas; historic and cultural sites; areas particularly sensitive to reduction in water and air quality; and scenic resources.</i>			X
(11) <i>Identify all areas where priority should be given to preserving rural character and lifestyle.</i>			X
(12) <i>Utilize Hawaii's limited land resources wisely, providing adequate land to accommodate projected population and economic growth needs while ensuring the protection of the environment and the availability of the shoreline, conservation lands, and other limited resources for future generations.</i>			X
(13) <i>Protect and enhance Hawaii's shoreline, open spaces, and scenic resources.</i>			X
<p><b>Discussion:</b> As indicated in Section 4.7 (Socio-Economic Characteristics) population growth in the Ka'ū region has been growing more quickly than the island's overall average. Kahuku Village provides an opportunity to provide an economic engine to the region and employment opportunities for area residents. The applicant also proposes to dedicate land for regional civic facilities, including an elementary school site, police substation, fire station, emergency medical facility, and district park to serve the regional population.</p>			
<b>HRS § 226-105: Crime and criminal justice.</b>			
<i>Priority guidelines in the area of crime and criminal justice:</i>			
(1) <i>Support law enforcement activities and other criminal justice efforts that are directed to</i>			X

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<i>provide a safer environment.</i>			
(2) <i>Target state and local resources on efforts to reduce the incidence of violent crime and on programs relating to the apprehension and prosecution of repeat offenders.</i>			<b>X</b>
(3) <i>Support community and neighborhood program initiatives that enable residents to assist law enforcement agencies in preventing criminal activities.</i>			<b>X</b>
(4) <i>Reduce overcrowding or substandard conditions in correctional facilities through a comprehensive approach among all criminal justice agencies which may include sentencing law revisions and use of alternative sanctions other than incarceration for persons who pose no danger to their community.</i>			<b>X</b>
(5) <i>Provide a range of appropriate sanctions for juvenile offenders, including community-based programs and other alternative sanctions.</i>			<b>X</b>
(6) <i>Increase public and private efforts to assist witnesses and victims of crimes and to minimize the costs of victimization.</i>			<b>X</b>
<b>Discussion:</b> The priority guidelines for crime and criminal justice are not applicable to Kahuku Village.			
<b>HRS § 226-106: Affordable housing.</b>			
<i>Priority guidelines for the provision of affordable housing:</i>			
(1) <i>Seek to use marginal or nonessential agricultural land and public land to meet housing needs of low- and moderate-income and gap-group households.</i>			<b>X</b>
(2) <i>Encourage the use of alternative construction and development methods as a means of reducing production costs.</i>	<b>X</b>		
(3) <i>Improve information and analysis relative to land availability and suitability for housing.</i>			<b>X</b>
(4) <i>Create incentives for development which would increase home ownership and rental opportunities for Hawaii's low- and moderate-income households, gap-group households, and residents with special needs.</i>	<b>X</b>		
(5) <i>Encourage continued support for government or private housing programs that provide low interest mortgages to Hawaii's people for the purchase of initial owner-occupied housing.</i>			<b>X</b>
(6) <i>Encourage public and private sector cooperation in the development of rental housing alternatives.</i>	<b>X</b>		
(7) <i>Encourage improved coordination between various agencies and levels of government to deal with housing policies and regulations.</i>			<b>X</b>
(8) <i>Give higher priority to the provision of quality housing that is affordable for Hawaii's residents and less priority to development of housing intended primarily for individuals outside of Hawaii.</i>	<b>X</b>		
<b>Discussion:</b> As discussed in Section 4.7 (Socio-Economic Characteristics), Kahuku Village will implement objectives and policies for socio-cultural advancement in housing by: <ul style="list-style-type: none"> <li>• Creating a community that fosters a sense of place, respects the site's natural and cultural resources, and is sustainable.</li> <li>• Providing affordable and moderately-priced housing for sale and rent to the working families of Hawai'i, specifically those that work in Ka'ū.</li> <li>• Providing homes near employment centers, thereby increasing quality of life through decreased commuting.</li> <li>• Providing a variety of housing options (mixed-income) integrated into a complete community rather than an affordable housing "project."</li> </ul>			
<b>HRS § 226-107: Quality education.</b>			
<i>Priority guidelines to promote quality education:</i>			
(1) <i>Pursue effective programs which reflect the varied district, school, and student needs to strengthen basic skills achievement;</i>	<b>X</b>		
(2) <i>Continue emphasis on general education "core" requirements to provide common</i>			<b>X</b>

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<i>background to students and essential support to other university programs;</i>			
(3) <i>Initiate efforts to improve the quality of education by improving the capabilities of the education work force;</i>			<b>X</b>
(4) <i>Promote increased opportunities for greater autonomy and flexibility of educational institutions in their decision-making responsibilities;</i>			<b>X</b>
(5) <i>Increase and improve the use of information technology in education by the availability of telecommunications equipment for:</i>			
(A) <i>The electronic exchange of information;</i>			<b>X</b>
(B) <i>Statewide electronic mail; and</i>			<b>X</b>
(C) <i>Access to the Internet.</i>			<b>X</b>
<i>Encourage programs that increase the public's awareness and understanding of the impact of information technologies on our lives;</i>			<b>X</b>
(1) <i>Pursue the establishment of Hawaii's public and private universities and colleges as research and training centers of the Pacific;</i>	<b>X</b>		
(2) <i>Develop resources and programs for early childhood education;</i>			<b>X</b>
(3) <i>Explore alternatives for funding and delivery of educational services to improve the overall quality of education; and</i>			<b>X</b>
(4) <i>Strengthen and expand educational programs and services for students with special needs.</i>			<b>X</b>
<p><b>Discussion:</b> Creation of Kahuku Village represents an opportunity to expand the research and educational programs conducted at the Site. The Hawaiian Heritage Center presents an opportunity to create a living classroom for students of all ages to learn about the natural and cultural resource stewardship and traditional Hawaiian practices.</p>			

### 5.1.5 State Functional Plans

The Hawai'i State Plan directs State agencies to prepare functional plans for their respective program areas. There are 14 State functional plans that serve as the primary implementing vehicle for the goals, objectives, and policies of the Hawai'i State Plan. The functional plans applicable to Kahuku Village, along with each plan's applicable objectives, policies, and actions, are discussed below.

<b>HAWAII STATE FUNCTIONAL PLANS</b> (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	S	N/S	N/A
<b>AGRICULTURE FUNCTIONAL PLAN</b>			
<b>Objective A:</b> <i>Achievement of increased agricultural production and growth through cultural and management practices.</i>			<b>X</b>
<b>Objective B:</b> <i>Achievement of an orderly agricultural marketing system through product promotion and industry organization.</i>			<b>X</b>
<b>Objective C:</b> <i>Achievement of increased consumption of and demand for Hawaii's agricultural products through consumer education and product quality.</i>			<b>X</b>
<b>Objective D:</b> <i>Achievement of optimal contribution by agriculture to the State's economy.</i>			<b>X</b>
<b>Objective E:</b> <i>Achievement of adequate capital, and knowledge of its proper management, for agricultural development.</i>			<b>X</b>
<b>Objective F:</b> <i>Achievement of increased agricultural production and growth through pest and disease controls.</i>			<b>X</b>
<b>Objective G:</b> <i>Achievement of effective protection and improved quality of Hawaii's land, water, and air.</i>			<b>X</b>
<b>Objective H:</b> <i>Achievement of productive agricultural use of lands most suitable and needed for agriculture.</i>			<b>X</b>
<b>Objective I:</b> <i>Achievement of efficient and equitable provision of adequate water for</i>			<b>X</b>



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<b>HAWAII STATE FUNCTIONAL PLANS</b>		<b>S</b>	<b>N/S</b>	<b>N/A</b>
<i>(Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)</i>				
	<i>agricultural use.</i>			
<b>Objective J:</b>	<i>Achievement of maximum degree of public understanding and support of agriculture in Hawaii.</i>			X
<b>Objective K:</b>	<i>Achievement of adequate supply of properly trained labor for agricultural needs.</i>			X
<b>Objective L:</b>	<i>Achievement of adequate transportation services and facilities to meet agricultural needs.</i>			X
<b>Objective M:</b>	<i>Achievement of adequate support services and infrastructure to meet agricultural needs.</i>			X
<p><b>Discussion:</b> Kahuku Village will not impact agricultural activities since none currently occur on the Property. As discussed in Section 3.3 (Soils), the Property is rated “E” and unclassified on the LSB classification, and not classified for the ALISH, indicating that the Property is not agriculturally significant. Therefore, the proposed Project will not reduce the inventory of agriculturally significant lands, and this State Functional Plan is not applicable.</p>				
<b>CONSERVATION LANDS FUNCTIONAL PLAN</b>				
<b>Objective IA:</b>	<i>Establishment of data bases for inventories of existing lands and resources.</i>			X
<b>Objective IB:</b>	<i>Establishment of criteria for management of land and natural resources.</i>			X
<b>Objective IIA:</b>	<i>Establishment of plans for natural resources and land management.</i>			X
<b>Objective IIB:</b>	<i>Protection of fragile or rare natural resources.</i>	X		
<b>Objective IIC:</b>	<i>Enhancement of natural resources.</i>	X		
<b>Objective IID:</b>	<i>Appropriate development of natural resources.</i>	X		
<b>Objective IIE:</b>	<i>Promotion and marketing of appropriate natural resources designated for commercial development.</i>			X
<b>Objective IIF:</b>	<i>Increase enforcement of land and natural resource use laws and regulations.</i>			X
<b>Objective IIIA:</b>	<i>Develop and implement conservation education programs for the general public and visitors.</i>			X
<b>Objective IIIB:</b>	<i>Increase access to land and natural resource data by the public and increase cooperation between agencies by making access to land and natural resource information more efficient.</i>			X
<p><b>Discussion:</b> Creation of Kahuku Village will enable the active management of the Site’s natural and cultural resources. Without active management, these resources are susceptible to overuse, degradation, or destruction. Establishment of the Hawaiian Heritage Center will facilitate the long-term protection and management of the Site’s coastal resources. The Hawaiian Heritage Center will actively manage the Site’s natural and cultural resources and provide a catalyst to expand research and educational programs.</p>				
<b>EDUCATION FUNCTIONAL PLAN</b>				
<b>Objective A(1):</b>	<b>Academic Excellence.</b> <i>Emphasize quality educational programs in Hawaii’s institutions to promote academic excellence.</i>			X
<b>Objective A(2):</b>	<b>Basic Skills.</b> <i>Promote programs and activities that facilitate the acquisition of basic skills, such as reading, writing, computing, listening, speaking, and reasoning. Pursue effective programs which reflect the varied district, school, and student needs to strengthen basic skills achievement.</i>			X
<b>Objective A(3):</b>	<b>Education Workforce.</b> <i>Initiate efforts to improve the quality of education by improving the capabilities of the education workforce.</i>			X
<b>Objective A(4):</b>	<b>Services and Facilities.</b> <i>Ensure the provision of adequate and accessible educational services and facilities that are designed to meet individual and community needs.</i>	X		
<b>Objective B(1):</b>	<b>Alternatives for Funding and Delivery.</b> <i>Explore alternatives for funding and delivery of educational services to improve the overall quality of education.</i>	X		
<b>Objective B(2):</b>	<b>Autonomy and flexibility.</b> <i>Promote increased opportunities for greater</i>			X

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<i>autonomy and flexibility of educational institutions in their decision-making responsibilities.</i>			
<b>Objective B(3): Increased Use of Technology.</b> Increase and improve the use information technology in education and encourage programs which increase the public's awareness and understanding of the impact of information technologies on our lives.			X
<b>Objective B(4): Personal Development.</b> Support education programs and activities that enhance personal development, physical fitness, recreation, and cultural pursuits of all groups.	X		
<b>Objective B(5): Students with Special Needs.</b> Provide appropriate educational opportunities for groups with special needs.			X
<b>Objective C(1): Early Childhood Education.</b> Develop resources and programs for early childhood education.			X
<b>Objective C(2): Hawaii's Cultural Heritage.</b> Promote educational programs which enhance understanding of Hawaii's cultural heritage.	X		
<b>Objective C(3): Research Programs and [Communication] Activities.</b> Support research programs and activities that enhance the education programs of the State.			X
<p><b>Discussion:</b> The Applicant proposes to dedicate lands to the DOE for an elementary school. As discussed in section 4.9.1 (Schools), elementary students living in Hawaiian Ocean View presently must travel about 10 miles to Nā'ālehu Elementary School. Development of the Hawaiian Heritage Center presents the opportunity to create a living classroom that will educate students of all ages about traditional Hawaiian practices and natural resource management.</p>			
<b>EMPLOYMENT FUNCTIONAL PLAN</b>			
<b>Objective A:</b> Improve the qualifications of entry-level workers and their transition to employment.	X		
<b>Objective B:</b> Develop and deliver education, training and related services to ensure and maintain a quality and competitive workforce.			X
<b>Objective C:</b> Improve labor exchange.			X
<b>Objective D:</b> Improve the quality of life for workers and families.	X		
<b>Objective E:</b> Improve planning of economic development, employment and training activities			X
<p><b>Discussion:</b> It is anticipated that the Hawaiian Heritage Center will offer a range programs and services, including programs to train residents about natural and cultural resource management. Development of Kahuku Village will improve the quality of life for area workers and families by providing nearby employment opportunities, new commercial services, affordable housing, civic facilities, and new recreational amenities.</p>			
<b>ENERGY FUNCTIONAL PLAN</b>			
<b>Objective A:</b> Moderate the growth in energy demand through conservation and energy efficiency.	X		
<b>Objective B:</b> Displace oil and fossil fuels through alternate and renewable energy resources.	X		
<b>Objective C:</b> Promote energy education and legislation.			X
<b>Objective D:</b> Support and develop an integrated approach to energy development and management.	X		
<b>Objective E:</b> Ensure State's abilities to implement energy emergency actions immediately in event of fuel supply disruptions. Ensure essential public services are maintained and provisions are made to alleviate economic and personal hardships which may arise.			X
<p><b>Discussion:</b> Energy conservation measures will be implemented where possible in the design of Kahuku Village, as discussed in Section 4.8.5 (Electrical System). The Applicant will actively seek methods to utilize renewable sources of energy instead of sources dependent on oil and</p>			

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<b>HAWAII STATE FUNCTIONAL PLANS</b>		<b>S</b>	<b>N/S</b>	<b>N/A</b>
(Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)				
fossil fuels.				
<b>HEALTH FUNCTIONAL PLAN</b>				
<b>Objective 1:</b>	<i>Health promotion and disease prevention. Reduction in the incidence, morbidity and mortality associated with preventable and controllable conditions.</i>	X		
<b>Objective 2:</b>	<i>Prevention and control of communicable diseases. Reduction in the incidence, morbidity, and mortality associated with infectious and communicable diseases.</i>			X
<b>Objective 3:</b>	<i>Health needs of special populations with impaired access to health care. Increased availability and accessibility of health services for groups with impaired access to health care programs.</i>			X
<b>Objective 4:</b>	<i>Community hospitals system. Development of a community hospital system which is innovative, responsive and supplies high quality care to the constituencies it serves.</i>			X
<b>Objective 5:</b>	<i>Environmental programs to protect and enhance the environment. Continued development of new environmental protection and health services programs to protect, monitor, and enhance the quality of life in Hawaii.</i>			X
<b>Objective 6:</b>	<i>DOH leadership. To improve the Department of Health's ability to meet the public health need of the State of Hawai'i in the most appropriate, beneficial and economical way possible.</i>			X
<b>Discussion:</b> A Veterans Administration facility providing patient care to eligible recipients is proposed to be developed at the Mixed-Use Village. In addition, the Applicant proposes to dedicate land to the County for provision of an emergency medical services facility.				
<b>HIGHER EDUCATION FUNCTIONAL PLAN</b>				
<b>Objective A:</b>	<i>A number and variety of postsecondary education institutions sufficient to provide the diverse range of programs required to satisfy individual and societal needs and interests.</i>	X		
<b>Objective B:</b>	<i>The highest level of quality, commensurate with its mission and objectives, of each educational, research, and public service program offered in Hawai'i by an institution of higher education.</i>	X		
<b>Objective C:</b>	<i>Provide appropriate educational opportunities for all who are willing and able to benefit from postsecondary education.</i>	X		
<b>Objective D:</b>	<i>Provide financing for postsecondary education programs sufficient to ensure adequate diversity, high quality, and wide accessibility.</i>			X
<b>Objective E:</b>	<i>Increase program effectiveness and efficiency through better coordination of educational resources.</i>	X		
<b>Discussion:</b> It is anticipated that the Hawaiian Heritage Center will develop partnerships with universities, schools, and other organizations that share the Center's mission of natural and cultural resource stewardship and education.				
<b>HISTORIC PRESERVATION FUNCTIONAL PLAN</b>				
<b>Objective A:</b>	<i>Identification of historic properties.</i>	X		
<b>Objective B:</b>	<i>Protection of historic properties.</i>	X		
<b>Objective C:</b>	<i>Management and treatment of historic properties.</i>	X		
<b>Objective D:</b>	<i>Provision of adequate facilities to preserve historic resources.</i>	X		
<b>Objective E:</b>	<i>The establishment of programs to collect and conserve historic records, artifacts, and oral histories and to document and perpetuate traditional arts, skills, and culture.</i>	X		
<b>Objective F:</b>	<i>Provision of better access to historic information.</i>	X		
<b>Objective G:</b>	<i>Enhancement of skills and knowledge needed to preserve historical resources.</i>	X		

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<b>HAWAII STATE FUNCTIONAL PLANS</b>		<b>S</b>	<b>N/S</b>	<b>N/A</b>
<i>(Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)</i>				
<p><b>Discussion:</b> As discussed in Section 4.1 (Archaeological and Historic Resources), an archaeological inventory survey was prepared to document historic properties at the Site and define appropriate measures to protect and mitigate impacts to significant historic properties.</p> <p>The Hawaiian Heritage Center, to be created as part of Kahuku Village, will actively protect the Site's historic properties and develop programs to educate residents and visitors about the significance of the cultural and historic resources.</p> <p>Nani Kahuku Aina will comply with all State and County laws and rules regarding the preservation of archaeological and historic sites. Should historic remains, such as artifacts, burials, concentrations of shell or charcoal be encountered during construction activities, work will cease in the immediate vicinity of the find and the SHPD will be contacted for appropriate mitigation, if necessary.</p>				
<b>HOUSING FUNCTIONAL PLAN</b>				
<b>Objective A:</b>	<i>Homeownership for at least sixty percent, or roughly 248,500 households by the year 2000.</i>			X
<b>Objective B:</b>	<i>Sufficient amount of affordable rental housing units by the year 2000 so as to increase the State's rental vacancy rate to at least 3%, with priority given to increasing the supply of units affordable to very low and lower income households.</i>			X
<b>Objective C:</b>	<i>Increased development of rental housing units for the elderly and other special need groups to afford them an equal access to housing.</i>			X
<b>Objective D:</b>	<i>Preservation of existing public and private housing stock.</i>			X
<b>Objective E:</b>	<i>Acquire and designate land suitable for housing development in sufficient amount to locate the deficit in housing units by the year 2000.</i>			X
<b>Objective F:</b>	<i>Maintain a statewide housing data system for use by public and private agencies engaged in the provision of housing.</i>			X
<p><b>Discussion:</b> Although Kahuku Village does not directly relate to the Housing Functional Plan's objectives, Kahuku Village will implement objectives and policies for socio-cultural advancement in housing by:</p> <ul style="list-style-type: none"> <li>• Creating a community that fosters a sense of place, respects the land, and is sustainable.</li> <li>• Providing affordable and moderately-priced housing for sale and rent to the working families of Hawai'i, specifically those that work in West Hawai'i.</li> <li>• Providing homes near employment centers, thereby increasing quality of life through decreased commuting.</li> <li>• Providing a variety of housing options (mixed-income) integrated into a complete community rather than an affordable housing "project."</li> </ul>				
<b>HUMAN SERVICES FUNCTIONAL PLAN</b>				
<b>Objective A:</b>	<i>To sustain and improve current elder abuse and neglect services.</i>			X
<b>Objective B:</b>	<i>To increase cost-effective, high quality home and community based services.</i>			X
<b>Objective C:</b>	<i>To increase home-based services to keep children in their homes and to increase placement resources for those children who must be temporarily or permanently removed from their homes, due to abuse or neglect.</i>			X
<b>Objective D:</b>	<i>To address factors that contribute to child abuse and other forms of family violence.</i>			X
<b>Objective E:</b>	<i>To provide affordable, accessible, and quality child care.</i>			X
<b>Objective G:</b>	<i>To provide AFDC recipients with a viable opportunity to become independent of the welfare system.</i>			X

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<i>(Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)</i>				
<b>Objective H:</b>	<i>To facilitate client access to human services.</i>			X
<b>Objective I:</b>	<i>To eliminate organizational barriers which limit client access to human services.</i>			X
<b>Discussion:</b> Kahuku Village does not include the creation of human service programs; therefore, the Human Services Functional Plan is not applicable.				
<b>RECREATION FUNCTIONAL PLAN</b>				
<b>Objective I.A:</b>	<i>Address the problem of saturation of the capacity of beach parks and nearshore waters.</i>	X		
<b>Objective I.B:</b>	<i>Reduce the incidence of ocean recreation accidents.</i>			X
<b>Objective I.C:</b>	<i>Resolve conflicts between different activities at heavily used ocean recreation areas.</i>			X
<b>Objective I.D:</b>	<i>Provide adequate boating facilities. Balance the demand for boating facilities against the need to protect the marine environment from potential adverse impacts.</i>			X
<b>Objective II.A:</b>	<i>Plan, develop, and promote recreational activities and facilities in mauka and other areas to provide a wide range of alternatives.</i>	X		
<b>Objective II.B:</b>	<i>Meet special recreation needs of the elderly, the disabled, woman, single-parent families, immigrants, and other groups.</i>			X
<b>Objective II.C:</b>	<i>Improve and expand the provision of recreation facilities in urban areas and local communities.</i>	X		
<b>Objective III.A:</b>	<i>Prevent the loss of access to shoreline and upland recreation areas due to new developments.</i>	X		
<b>Objective III.B:</b>	<i>Resolve the problem of landowner liability that seriously hampers public access over private lands.</i>			X
<b>Objective III.C:</b>	<i>Increase access to State Forest Reserve lands over federal property, leased State lands, and other government lands.</i>			X
<b>Objective III.D:</b>	<i>Acquire, develop, and manage additional public accessways.</i>			X
<b>Objective IV.A:</b>	<i>Promote a conservation ethic in the use of Hawaii's recreational resources.</i>	X		
<b>Objective IV.B:</b>	<i>Prevent degradation of the marine environment.</i>	X		
<b>Objective IV.C:</b>	<i>Improve the State's enforcement capabilities.</i>			X
<b>Objective IV.D:</b>	<i>Mitigate adverse impacts of tour helicopters on the quality of recreational experiences in wilderness areas.</i>			X
<b>Objective V.A:</b>	<i>Properly maintain existing parks and recreation areas.</i>			X
<b>Objective V.B:</b>	<i>Promote interagency coordination and cooperation to facilitate sharing of resources, joint development efforts, clarification of responsibilities and jurisdictions, and improvements in enforcement capabilities.</i>	X		
<b>Objective V.C:</b>	<i>Assure adequate support for priority outdoor recreation programs and facilities.</i>			X
<b>Objective VI.A:</b>	<i>Increase recreational access and opportunities in Hawaii's wetlands.</i>			X
<b>Objective VI.B:</b>	<i>Develop an adequate information base to assist the County planning departments and other regulatory agencies in make decisions regarding wetlands.</i>			X
<b>Objective VI.C:</b>	<i>Assure the protection of the most valuable wetlands in the state.</i>			X

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<b>HAWAII STATE FUNCTIONAL PLANS</b>		<b>S</b>	<b>N/S</b>	<b>N/A</b>
<i>(Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)</i>				
<b>Discussion:</b> Creation of Kahuku Village will allow accessibility to the Site's coast and allow for marine recreational activities. The Hawaiian Heritage Center will actively manage coastal recreational activities to prevent saturation of recreational areas and activities that may degrade coastal resources. The Hawaiian Heritage Center will also educate residents and visitors about natural resource management, thereby instilling a conservation ethic to the Site's visitors. Other recreational opportunities to be created include community parks, dedication of land for a district park, and a golf course.				
<b>TOURISM FUNCTIONAL PLAN</b>				
<b>Objective I.A:</b>	<i>Development, implementation and maintenance of policies and actions which support the steady and balanced growth of the visitor industry.</i>			X
<b>Objective II.A:</b>	<i>Development and maintenance of well-designed visitor facilities and related developments which are sensitive to the environment, sensitive to neighboring communities and activities, and adequately serviced by infrastructure and support services.</i>	X		
<b>Objective III.A:</b>	<i>Enhancement of respect and regard for the fragile resources which comprise Hawaii's natural and cultural environment. Increased preservation and maintenance efforts.</i>	X		
<b>Objective IV.A:</b>	<i>Support of Hawaii's diverse range of lifestyles and natural environment.</i>			X
<b>Objective IV.B:</b>	<i>Achievement of mutual appreciation among residents, visitors, and the visitor industry.</i>			X
<b>Objective V.A:</b>	<i>Development of a productive workforce to maintain a high quality visitor industry.</i>			X
<b>Objective V.B:</b>	<i>Enhancement of career and employment opportunities in the visitor industry.</i>			X
<b>Objective VI.A:</b>	<i>Maintenance of a high customer awareness of Hawaii as a visitor destination in specific desired market segments.</i>			X
<b>Discussion:</b> The visitor facilities to be created at Kahuku Village will be low-key in nature and designed to be consistent with the Ka'ū region's rural character. It is anticipated that the Site will attract visitors with a desire to experience and learn about the Site's diverse natural and cultural resources in a secluded, rural setting.				
<b>TRANSPORTATION FUNCTIONAL PLAN</b>				
<b>Objective I.A:</b>	<i>Expansion of the transportation system.</i>			X
<b>Objective I.B:</b>	<i>Reduction of travel demand through zoning and decentralization initiatives.</i>	X		
<b>Objective I.C:</b>	<i>Management of existing transportation systems through a program of transportation systems management (TSM).</i>			X
<b>Objective I.D:</b>	<i>Identification and reservation of lands and rights-of-way required for future transportation improvements.</i>			X
<b>Objective I.E:</b>	<i>Planning and designing State highways to enhance inter-regional mobility.</i>			X
<b>Objective I.F:</b>	<i>Improving and enhancing transportation safety.</i>			X
<b>Objective I.G:</b>	<i>Improved transportation maintenance programs.</i>			X
<b>Objective I.H:</b>	<i>Ensure that transportation facilities are accessible to people with disabilities.</i>			X
<b>Objective II.A:</b>	<i>Development of a transportation infrastructure that supports economic development initiatives.</i>	X		
<b>Objective III.B:</b>	<i>Expansion of revenue bases for transportation improvements.</i>			X
<b>Objective IV.A:</b>	<i>Providing educational programs.</i>			X

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<b>HAWAII STATE FUNCTIONAL PLANS</b> (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	S	N/S	N/A
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**Discussion:** Kahuku Village supports the Transportation Functional Plan through the provision of improvements necessary to provide an adequate level of service for the Project. Roadways will be designed with sufficient capacity and to applicable State and County standards. Appropriate mitigation measures will be implemented as identified in Section 4.3 (Roadways and Traffic).

In addition, as discussed in 4.7 (Socio-Economic Characteristics) a number of jobs will be created at Kahuku Village, reducing the need for Ka‘ū residents to commute outside of the community to employment opportunities.

**WATER RESOURCES DEVELOPMENT FUNCTIONAL PLAN**

<i>Objective A: Enunciate State water policy and improve management framework.</i>			X
<i>Objective B: Maintain the long-term availability of freshwater supplies, giving consideration to the accommodation of important environmental values.</i>	X		
<i>Objective C: Improve management of floodplains.</i>			X
<i>Objective D: Assure adequate municipal water supplies for planned urban growth.</i>			X
<i>Objective E: Assure the availability of adequate water for agriculture.</i>			X
<i>Objective F: Encourage and coordinate with other water programs the development of self-supplied industrial water and the production of water-based energy.</i>			X
<i>Objective G: Provide for the protection and enhancement of Hawaii’s freshwater and estuarine environment.</i>	X		
<i>Objective H: Improve State grant and loan procedures for water program and projects.</i>			X
<i>Objective I: Pursue water resources data collection and research to meet changing needs.</i>	X		

**Discussion:** Kahuku Village’s preferred alternative for providing both potable and non-potable water is an on-site desalination plant, as discussed in Section 4.8.2 (Water System).

Due to the availability of R-1 effluent from the private wastewater treatment plant to be installed with Kahuku Village as described in Section 4.8.2 (Wastewater System), non-potable recycled water will be used for general irrigation of the landscaping features within the community. Potable water demand will be limited to that used for consumption, general household/commercial use, and irrigation of landscaping within residential areas.

## 5.2 COUNTY OF HAWAI'I

Discussion of County-specific land use plans and ordinances pertaining to Kahuku Village include the *County of Hawai'i General Plan*, the Ka'ū CDP, and the Hawai'i County Code. Specific County objectives and policies applicable Kahuku Village are discussed below.

### 5.2.1 County of Hawai'i General Plan

The County of Hawai'i General Plan (February 2005 as amended) is a policy document adopted by ordinance intended to guide the long-range development of the island and county of Hawai'i. The plan contains goals, objectives, policies, courses of action, a land use map, and facilities maps.

The existing land use map, referred to as the LUPAG Map, designates the Site as Open Space, Conservation, and Extensive Agriculture (see Figure 28 and Table 16). The Open Space and Conservation boundaries are coterminous with the existing State Conservation District. The Extensive Agricultural boundary is coterminous with the existing State Agricultural District. Presently about 8,286 acres is designated Extensive Agriculture, 7,586 acres is designated Conservation, and 585 acres is designated as Open.

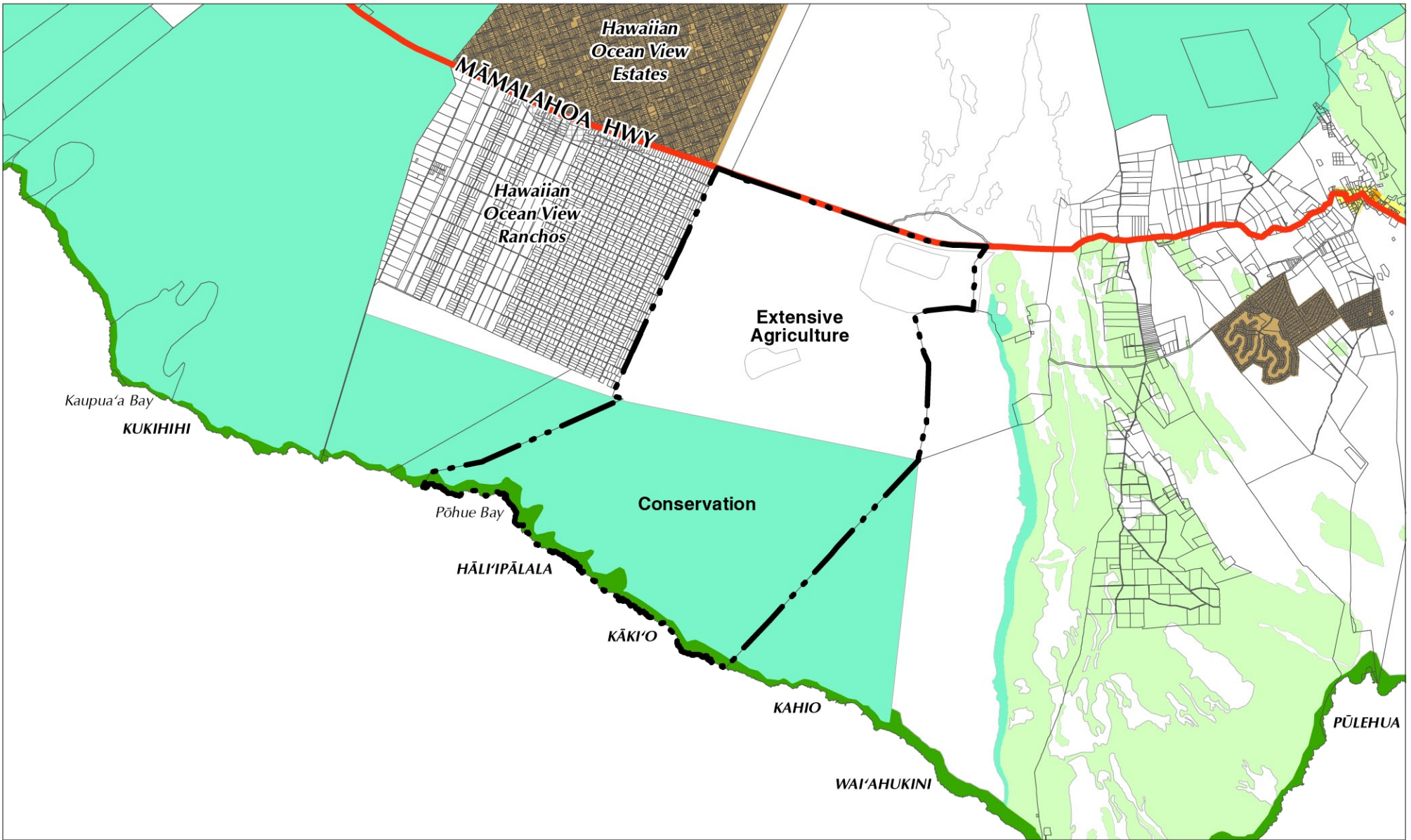
To allow for creation of Kahuku Village, Nani Kahuku Aina will apply for a General Plan Amendment pursuant to section 16.2 of the General Plan (for "interim" as compared with "comprehensive review" amendments). The proposed interim General Plan amendment would revise LUPAG Map No. 23 to reflect the land uses shown in Figure 29 (with associated updates to tables 14-4 and 14-5 that tabulate the acreage and urban uses from the LUPAG Map). There are no proposed text amendments to the General Plan goals, objectives, or policies. The proposed amendment would result in Extensive Agriculture (8,183 acres), Conservation (5,833 acres), Open Space (728 acres), Medium Density Urban (124 acres), Resort (Intermediate) (179 acres), and Rural (1,410 acres). Proposed changes are summarized in Table 16.

The current Open Space boundary approximates the SMA boundary, except in the locations of the littoral cinder cones and Pōhue Bay where the Open Space boundary is further inland than the SMA. Only a few changes are proposed to the Open Space boundary-- reduction in areas that are not resource-sensitive but suitable for development, and expansion in other areas to better encompass the littoral cones or other resources. The sensitive areas along the coast, such as the anchialine ponds, Pōhue Bay, littoral cinder cones, and sufficient setback for the Ala

**Table 16: Proposed General Plan LUPAG Map Amendment**

	Existing Designation	Proposed Designation
Extensive Agriculture	8,286	8,183
Conservation	7,586	5,833
Open Area	585	728
Rural		1,410
Medium Density Urban		124
Resort		179
<b>Total</b>	<b>16,457</b>	<b>16,457</b>





**LEGEND**

- |  |                            |  |                       |  |                      |  |            |
|--|----------------------------|--|-----------------------|--|----------------------|--|------------|
|  | Nani Kahuku 'Āina Property |  | Conservation          |  | Low Density Urban    |  | Resort     |
|  | 2010 Hawai'i TMK           |  | Extensive Agriculture |  | Medium Density Urban |  | Rural      |
|  | Major Roads                |  | High Density Urban    |  | Open Area            |  | Urban Exp. |
|  |                            |  | Important Ag. Lands   |  | Orchards             |  | University |
|  |                            |  | Industrial            |  | Resort Node          |  |            |

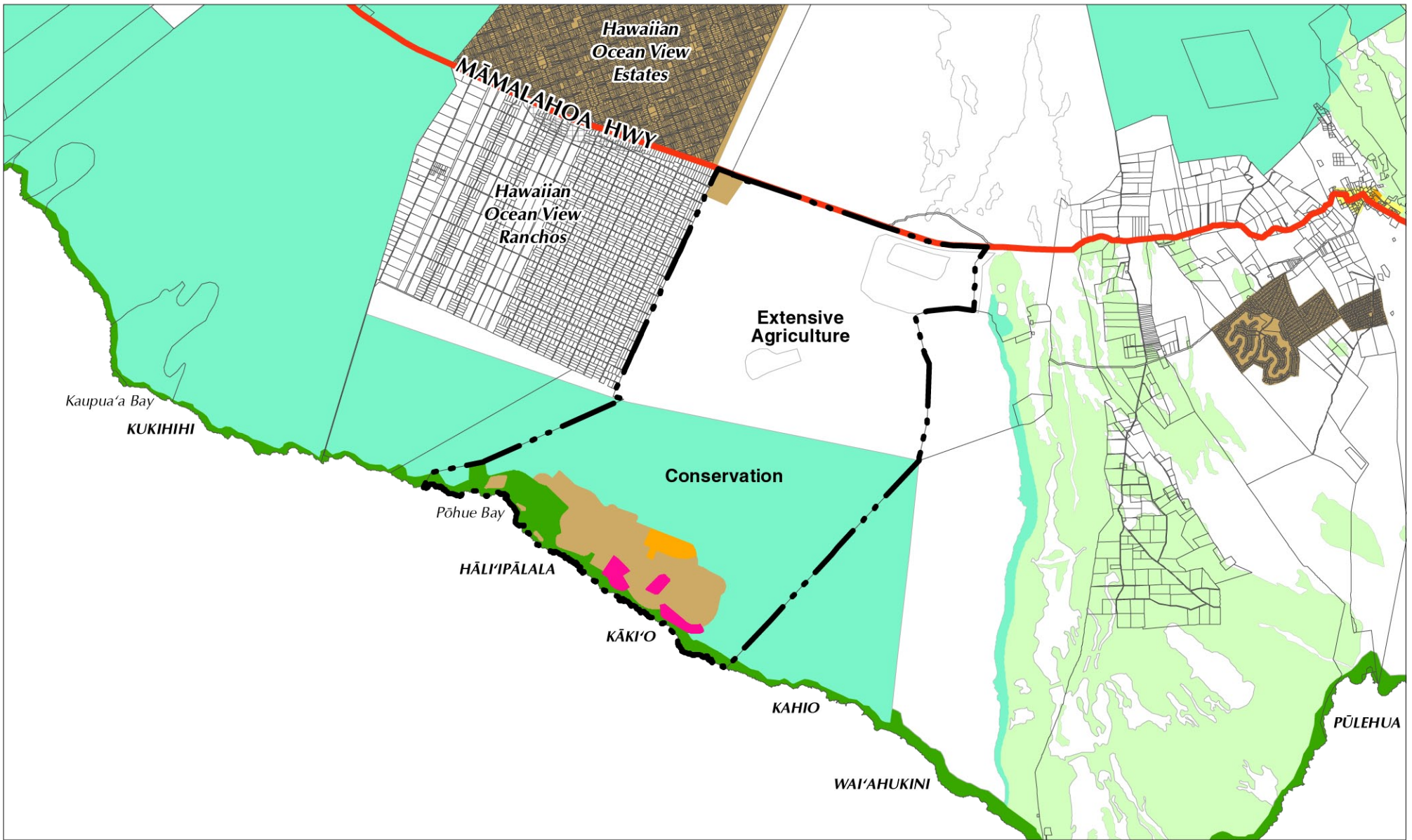
**FIGURE 28**  
 General Plan LUPAG  
**KAHUKU VILLAGE**

Nani Kahuku 'Āina LLC Ka'ū, Hawai'i

North Lineal Scale (in feet)

0 5,000 10,000 20,000

Source: Hawai'i TMK, 2010 (GIS); County of Hawai'i Department of Planning, 2005 (GIS)  
 Disclaimer: This graphic has been prepared for general planning purposes only.



**LEGEND**

- |                            |                       |                      |            |
|----------------------------|-----------------------|----------------------|------------|
| Nani Kahuku 'Äina Property | Conservation          | Low Density Urban    | Resort     |
| 2010 Hawai'i TMK           | Extensive Agriculture | Medium Density Urban | Rural      |
| Major Roads                | High Density Urban    | Open Area            | Urban Exp. |
|                            | Important Ag. Lands   | Orchards             | University |
|                            | Industrial            | Resort Node          |            |

**FIGURE 29**  
 Proposed General Plan LUPAG Map  
**KAHUKU VILLAGE**

Nani Kahuku 'Äina LLC Ka'u, Hawai'i

North Lineal Scale (in feet)

0 5,000 10,000 20,000

PBR HAWAII  
 & ASSOCIATES, INC.

Source: Hawai'i TMK, 2010 (GIS); County of Hawai'i Department of Planning, 2005 (GIS)  
 Disclaimer: This graphic has been prepared for general planning purposes only.

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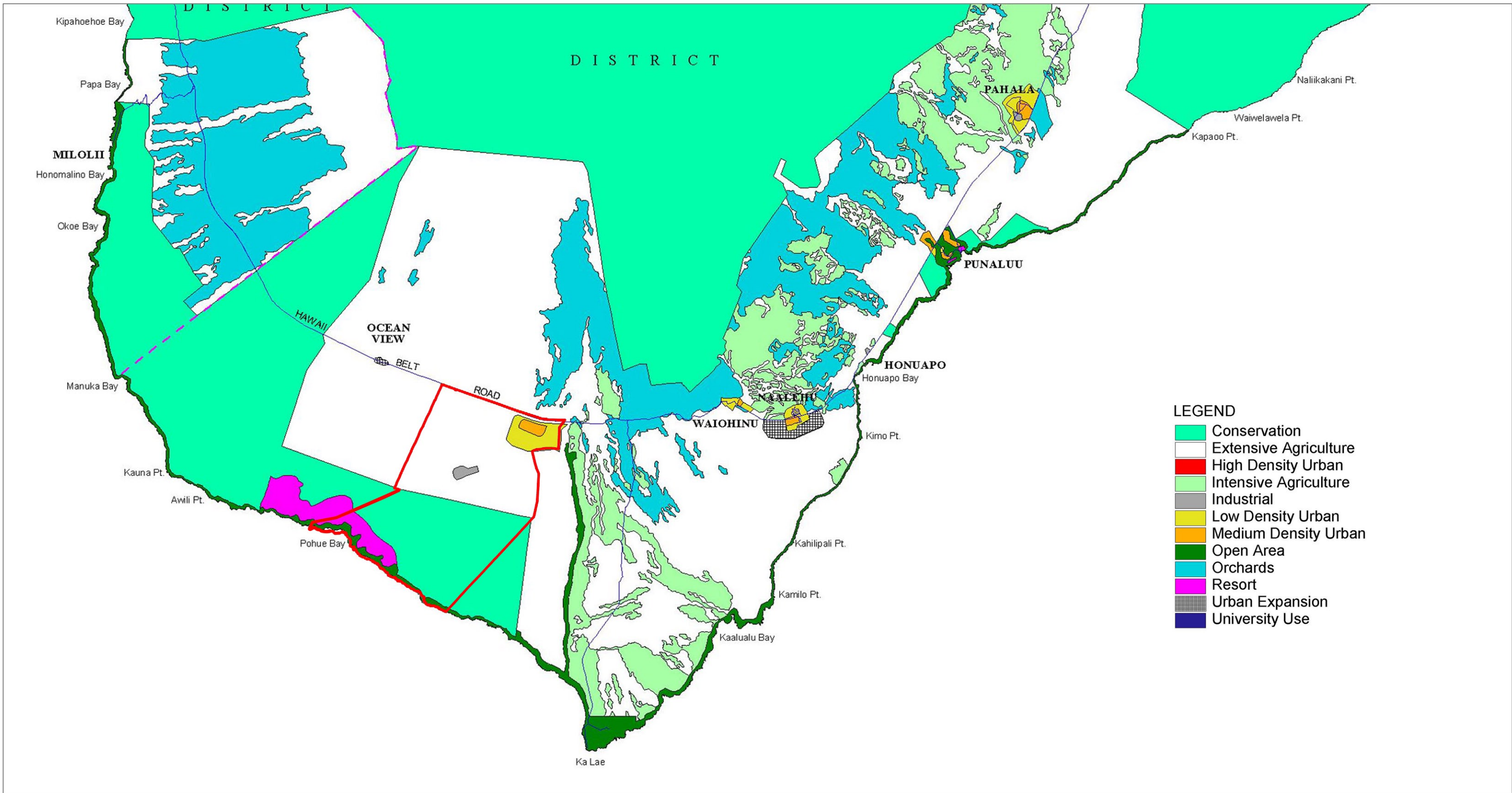
Kahakai lateral public access trail, are all encompassed and protected within the existing Open Space designation.

Before the County amended the General Plan in 2005, the Site had similar LUPAG designations than are being requested, but at a more extensive scale and in more sensitive areas (see Figure 30). The differences between the 1989 LUPAG and the subject request are as follows:

- Makai area. Where the Resort designation in the 1989 LUPAG totaled approximately 6,000 acres centered around Pōhue Bay (including the area extending west outside the Site of which 890 acres are within the Site), the proposed designation in this request is for pockets of Resort away from Pōhue Bay totaling 70 acres. Rather than developing around Pōhue Bay, the subject request proposes to expand the Open Space or Conservation designation around Pōhue Bay. The subject request includes a Rural designation mauka of the proposed Resort areas for the planned golf course(s) and large residential lots. While this type of upscale large-lot golf course residential concept would be appropriate for a Resort designation, the Rural designation reduces the range of permitted uses and densities for this area compared to a Resort designation.
- Industrial area for airport. The 1989 LUPAG had an Industrial designation in the middle of the Petition Area for a planned airport. An airport, and the associated Industrial designation, is not a part of the proposed action.
- Mauka area. Where the 1989 LUPAG had medium- and low-density urban for a mauka village at the northeast corner of the Site, the subject request only proposes the dedication of land to State and/or County agencies for civic facilities including an elementary school site, police substation, fire station, emergency medical facility, and district park.

Compared to the 1989 LUPAG designation, it seems the designations proposed in the subject request are more in keeping with the social, cultural, historic, economic, and physical environment in furtherance of the General Plan policies. Kahuku Village’s consistency with the General Plan Goals and Policies and factors supporting the General Plan amendment are presented below.

<b>COUNTY OF HAWAI‘I GENERAL PLAN</b> (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	S	N/S	N/A
<b>ECONOMIC</b>			
<b>Goals:</b>			
(a) Provide residents with opportunities to improve their quality of life through economic development that enhances the County’s natural and social environments.	X		
(b) Economic development and improvement shall be in balance with the physical, social, and cultural environments of the island of Hawaii.	X		
(c) Strive for diversity and stability in the economic system.	X		
(d) Provide an economic environment that allows new, expanded, or improved economic opportunities that are compatible with the County’s cultural, natural and social environment.	X		
(e) Strive for an economic climate that provides its residents an opportunity for choice of occupation.	X		
(f) Strive for diversification of the economy by strengthening existing industries and attracting new endeavors.	X		
(g) Strive for full employment.	X		
(h) Promote and develop the island of Hawai‘i into a unique scientific and cultural model, where economic gains are in balance with social and physical amenities. Development should be reviewed on the basis of total impact on the residents of the County, not only in terms of immediate short run economic benefits.	X		
<b>Policies:</b>			



**LEGEND**

— Project Boundary

**LEGEND**

- Conservation
- Extensive Agriculture
- High Density Urban
- Intensive Agriculture
- Industrial
- Low Density Urban
- Medium Density Urban
- Open Area
- Orchards
- Resort
- Urban Expansion
- University Use

**FIGURE 30**  
 1989 General Plan LUPAG  
**KAHUKU VILLAGE**

Nani Kahuku 'Aina, LLC  
 NORTH

KA'U, HAWAII



**NOT TO SCALE**



Source: County of Hawaii General Plan (1989)  
 Disclaimer: This graphic has been prepared for general planning purposes only.

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<b>COUNTY OF HAWAI‘I GENERAL PLAN</b> (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	S	N/S	N/A
(a) Assist in the expansion of the agricultural industry through the protection of important agricultural lands, development of marketing plans and programs, capital improvements and continued cooperation with appropriate State and Federal agencies.			X
(b) Encourage the expansion of the research and development industry by working with and supporting the University of Hawai‘i at Hilo and West Hawaii, the Natural Energy Laboratory at Hawai‘i Authority and other agencies’ programs that support sustainable economic development in the County of Hawaii.	X		
(c) Encourage the development of a visitor industry that is in harmony with the social, physical, and economic goals of the residents of the County.	X		
(d) Require a study of the significant cultural, social and physical impacts of large developments prior to approval.	X		
(e) Encourage the sustainable development of the fishing industry, various forms of aquaculture, and other fresh and sea water-based activities.			X
(f) Support all levels of educational, employment and training opportunities and institutions.	X		
(g) Capital improvements program shall improve the quality of existing commercial and industrial areas.			X
(h) The land, water, air, sea, and people shall be considered as essential resources for present and future generations and should be protected and enhanced through the use of economic incentives.	X		
(i) Continue to encourage the research, development and implementation of advanced technologies and processes.	X		
(j) Support the development of high technology industries.			X
(k) Continue to encourage development and utilization of by-products from alternate energy conversion projects.	X		
(l) Identify and encourage primary industries that are consistent with the social, physical, and economic goals of the residents of the County.	X		
(m) Encourage active liaison with the private sector with respect to the County’s requirements for establishing businesses on the island.	X		
(n) Encourage the development of the retirement industry.			X
(o) Promote a distinctive identity for the island of Hawai‘i to enable government, businesses and travel industries to promote the County of Hawai‘i as an entity unique within the State of Hawaii.	X		
(p) Identify the needs of the business community and take actions that are necessary to improve the business climate.	X		
(q) Support research and development that would lead to the removal of marketing restrictions on Hawaiian fruits and other perishables.			X
(r) Assist in the development of a film and video industry program to market Big Island sites and coordinate film and video activities on the Big Island.			X
(s) Assist the further development of agriculture through the protection of important agricultural lands.			X
(t) Assist in the promotion of the agriculture industry whose products are recognized as being produced on the island of Hawaii.			X
(u) Encourage the establishment of open farmers markets to allow local agricultural producers to market their products.	X		
(v) Assist in cooperative marketing and distribution endeavors to expand opportunities for local agricultural products for export as well as to the local market.			X
(w) Encourage the further development of the overseas capacity of Hilo International Airport for the exportation of agricultural crops.			X
(x) Encourage the health/wellness industry.			X
(y) Encourage new industries that provide favorable benefit-cost relationships to the people of the County. Benefit-cost relationships include more than fiscal considerations.			X

**Discussion:** Kahuku Village is envisioned to serve as an economic engine for the Ka‘ū region by providing long-term jobs for area residents. Since the closing of Ka‘ū Sugar Company in 1996, other agricultural enterprises or industries have been unable to provide significant replacement jobs. Consequently, unemployment in the Ka‘ū district is high and many residents

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must travel long distances to Hilo, Kona, or South Kōhala for work.			
As discussed in Section 4.7 (Socio-Economic Characteristics) 393 FTE annual construction and 1,493 FTE annual long-term jobs will be created at Kahuku Village. The visitor accommodations to be created will be sensitive to the Ka'ū region's rural character and emphasize the Site's unique natural and cultural resources. Partnerships will be sought with agencies, educational institutions, and organization's that share the Applicant's mission of stewarding the Site's resources and it is anticipated the partnerships will lead to a diverse range of programs, providing employment opportunities for area residents.			
<b>ENERGY</b>			
<b>Goals:</b>			
(a) <i>Strive towards energy self-sufficiency.</i>	X		
(b) <i>Establish the Big Island as a demonstration community for the development and use of natural energy resources.</i>	X		
<b>Policies:</b>			
(a) <i>Encourage the development of alternate energy resources.</i>	X		
(b) <i>Encourage the development and use of agricultural products and by-products as sources of alternate fuel.</i>			X
(c) <i>Encourage the expansion of energy research industry.</i>	X		
(d) <i>Strive to educate the public on new energy technologies and foster attitudes and activities conducive to energy conservation.</i>	X		
(e) <i>Ensure a proper balance between the development of alternative energy resources and the preservation of environmental fitness and ecologically significant areas.</i>	X		
(f) <i>Strive to assure a sufficient supply of energy to support present and future demands.</i>	X		
(g) <i>Provide incentives that will encourage the use of new energy sources and promote energy conservation.</i>	X		
(h) <i>Seek funding from both government and private sources for research and development of alternative energy resources.</i>			X
(i) <i>Coordinate energy research and development efforts of both the government and private sectors.</i>	X		
(j) <i>Encourage the continuation of studies concerning the development of power that can be distributed at lower costs to consumers.</i>			X
(k) <i>Strive to diversify the energy supply and minimize the environmental impacts associated with energy usage.</i>	X		
(l) <i>Continue to encourage the development of geothermal resources to meet the energy needs of the County of Hawaii.</i>			X
(m) <i>Encourage the use of solar water heating through the continuation of state tax credit programs, through the Building Code, and in County construction.</i>			X
(n) <i>Encourage energy-saving design in the construction of buildings.</i>	X		
(o) <i>Support net-metering and other incentives for independent power producers.</i>			X
<b>Discussion:</b> Energy conservation measures will be implemented where possible in the design of Kahuku Village, as discussed in Section 4.8.4 (Electrical System).			
<b>ENVIRONMENTAL QUALITY</b>			
<b>Goals:</b>			
(a) <i>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.</i>	X		
(b) <i>Maintain and, if feasible, improve the existing environmental quality of the island.</i>	X		
(c) <i>Control pollution.</i>	X		
<b>Policies:</b>			
(a) <i>Take positive action to further maintain the quality of the environment.</i>	X		

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(b) Reinforce and strengthen established standards where it is necessary, principally by initiating, recommending, and adopting ordinances pertaining to the control of pollutants that affect the environment.			X
(c) Advise the public of environmental conditions and research undertaken on the island's environment.	X		
(d) Encourage the concept of recycling agricultural, industrial, and municipal waste material.			X
(e) Encourage the State to establish air and water quality monitoring stations in areas of existing and potential urban growth.			X
(f) Encourage the State to continue aircraft noise abatement strategies at Hilo International Airport and the Kona International Airport at Keahole.			X
(g) Participate in watershed management projects to improve stream and coastal water quality and encourage local communities to develop such projects.	X		
(h) Work with the appropriate agencies to adopt appropriate measures and provide incentives to control point and nonpoint sources of pollution.	X		
(i) Support programs to prevent harmful alien species from becoming established.			X
(j) Require golf courses to implement best management practices to limit leaching of nutrients to groundwater in areas where they may affect streams or coastal ecosystems.	X		
(k) Require implementation of the management measures contained in Hawaii's Coastal Nonpoint Pollution Control Program as a condition of land use permitting.			X
(l) Review the County grading and grubbing ordinances to ensure that they adequately address potential erosion and runoff problems.			X
<p><b>Discussion:</b> Development of Kahuku Village will provide the funding necessary to actively manage the Site's environmental resources. As discussed in Section 2.3, Nani Kahuku Aina's objective in developing Kahuku Village is to responsibly develop the Site in a manner consistent with the desires of the Ka'ū community and to balance protection and preservation of the Site's natural and cultural resources with revenue generating land uses that will provide funding for long-term management of the Site's resource. An Integrated Natural and Cultural Resources Management Plan will be prepared to and implemented to steward and preserve the site's natural and cultural resources.</p> <p>As discussed throughout this EIS, where impacts to the environment may occur, appropriate measures will be implemented to mitigate impacts.</p>			
<b>FLOODING AND OTHER NATURAL HAZARDS</b>			
<b>Goals:</b>			
(a) Protect human life.	X		
(b) Prevent damage to man-made improvements.	X		
(c) Control pollution.	X		
(d) Prevent damage from inundation.	X		
(e) Reduce surface water and sediment runoff.	X		
(f) Maximize soil and water conservation.	X		
<b>Policies:</b>			
(a) 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.			X
(b) Review land use policy as it relates to flood plain, high surf, and tsunami hazard areas.			X
(c) Update and improve the Flood Insurance Rate Maps and other flood maps in compliance with the National Flood Insurance Program (NFIP) as needed.			X
(d) Any development within the Federal Emergency Management Agency designated flood plain must be in compliance with Chapter 27.			X
(e) Promote and provide incentives for participation in the Soil and Water Conservation Districts' conservation programs for developments on agricultural and conservation lands.			X

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(f) <i>The “Drainage Master Plan for the County of Hawaii” shall be reviewed and updated to incorporate new studies and reflect newly identified priorities.</i>			X
(g) <i>Development-generated runoff shall be disposed of in a manner acceptable to the Department of Public Works and in compliance with all State and Federal laws.</i>	X		
(h) <i>Develop a comprehensive program for the coordinated construction of a drainage network along a single drainage system.</i>			X
(i) <i>Explore new methods of funding for the provision of adequate drainage systems and regulating potential flood inundation areas.</i>			X
(j) <i>The County and the private sector shall be responsible for maintaining and improving existing drainage systems and constructing new drainage facilities.</i>	X		
(k) <i>Develop an integrated shoreline erosion management plan that ensures the preservation of sandy beaches and public access to and along the shoreline, and the protection of private and public property from flood hazards and wave damage.</i>	X		
(l) <i>Continue to promote public education programs on tsunامي, hurricane, storm surge, and flood hazards.</i>			X
(m) <i>Encourage grassed shoulder and swale roadway design where climate and grade are conducive.</i>	X		
(n) <i>Develop drainage master plans from a watershed perspective that considers nonstructural alternatives, minimizes channelization, protects wetlands that serve drainage functions, coordinates the regulation of construction and agricultural operation, and encourages the establishment of floodplains as public green ways.</i>	X		
(o) <i>Encourage and provide incentives for agricultural operators to participate in Soil and Water Conservation District Programs.</i>			X
(p) <i>Where applicable, natural drainage channels shall be improved to increase their capacity with special consideration for the practices of proper soil conservation, and grassland and forestry management.</i>			X
(q) <i>Consider natural hazards in all land use planning and permitting.</i>	X		
(r) <i>Discourage intensive development in areas of high volcanic hazard.</i>	X		
<p><b>Discussion:</b> Section 3.4 (Natural Hazards) of this EIS provides discussion of potential natural hazards, such as flooding, tsunami inundation, hurricanes, volcanic eruptions, sea level rise, and earthquakes. Mitigation measures to reduce risks are specified.</p>			
<b>HISTORIC SITES</b>			
<b>Goals:</b>			
(a) <i>Protect, restore, and enhance the sites, buildings, and objects of significant historical and cultural importance to Hawaii.</i>	X		
(b) <i>Appropriate access to significant historic sites, buildings, and objects of public interest should be made available.</i>	X		
(c) <i>Enhance the understanding of man’s place on the landscape by understanding the system of ahupua’a.</i>			X
<b>Policies:</b>			
(a) <i>Agencies and organizations, either public or private, pursuing knowledge about historic sites should keep the public apprised of projects.</i>			X
(b) <i>Amend appropriate ordinances to incorporate the stewardship and protection of historic sites, buildings and objects.</i>			X
(c) <i>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.</i>	X		
(d) <i>Public access to significant historic sites and objects shall be acquired, where appropriate.</i>	X		
(e) <i>Embark on a program of restoring significant historic sites on County lands. Assure the protection and restoration of sites on other public lands through a joint effort with the State.</i>			X
(f) <i>Encourage the restoration of significant sites on private lands.</i>	X		



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(g) <i>Collect and distribute historic sites information of public interest and keep an inventory of sites.</i>	X		
(h) <i>Aid in the development of a program of public education concerning historic sites.</i>	X		
(i) <i>Signs explaining historic sites, buildings and objects shall be in keeping with the character of the area or the cultural aspects of the feature.</i>	X		
(j) <i>Develop a continuing program to evaluate the significance of historic sites.</i>			X
(k) <i>Develop policies to protect Hawaiian rights as identified under judicial decisions.</i>			X
(l) <i>Support the establishment of Hawaiian Heritage Corridors.</i>			X
(m) <i>All new historic sites placed on the State or Federal Register after the adoption of the general plan shall be included in the General Plan.</i>			X
(n) <i>Consider requiring Cultural Assessments for certain developments as part of the rezoning process.</i>	X		
(o) <i>Recognize the importance of certain natural features in Hawaiian culture by incorporating the concept of “cultural landscapes” in land use planning.</i>	X		

**Discussion:** As discussed in Section 4.1 (Archaeological and Historic Resources), an archaeological inventory survey was prepared to document historic properties at the Site and define appropriate measures to protect and mitigate impacts to significant historic properties. No significant impact to archaeological resources is anticipated as necessary mitigation measures will be implemented.

Establishment of the Hawaiian Heritage Center will have a beneficial effect on historic resources by providing the resources and opportunity to interpret and preserve significant archaeological and cultural sites.

Nani Kahuku Aina and KHHC will comply with all State and County laws and rules regarding the preservation of archaeological and historic sites. Should historic remains, such as artifacts, burials, concentrations of shell or charcoal be encountered during construction activities, work will cease in the immediate vicinity of the find and the State Historic Preservation Division will be contacted for appropriate mitigation, if necessary.

**NATURAL BEAUTY**

**Goals:**

(a) <i>Protect, preserve and enhance the quality of areas endowed with natural beauty, including the quality of coastal scenic resources.</i>	X		
(b) <i>Protect scenic vistas and view planes from becoming obstructed.</i>	X		
(c) <i>Maximize opportunities for present and future generations to appreciate and enjoy natural and scenic beauty.</i>	X		

**Policies:**

(a) <i>Increase public pedestrian access opportunities to scenic places and vistas.</i>	X		
(b) <i>Develop and establish view plane regulations to preserve and enhance views of scenic or prominent landscapes from specific locations, and coastal aesthetic values.</i>			X
(c) <i>Maintain a continuing program to identify, acquire and develop viewing sites on the island.</i>			X
(d) <i>Access easement to public or private lands that have natural or scenic value shall be provided or acquired for the public.</i>			X
(e) <i>Develop standard criteria for natural and scenic beauty as part of design plans.</i>	X		
(f) <i>Consider structural setback from major thoroughfares and highways and establish development and design guidelines to protect important viewplanes.</i>	X		
(g) <i>Maintain a continuing program to identify exceptional trees or tree masses.</i>			X
(h) <i>Protect the views of areas endowed with natural beauty by carefully considering the effects of proposed construction during all land use reviews.</i>	X		
(i) <i>Do not allow incompatible construction in areas of natural beauty.</i>	X		

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<b>Discussion:</b> Coastal scenic views from public vantage points will be largely unaffected since no development is planned along Māmalahoa Highway, except for the possible civic facilities adjacent to the Hawaiian Ocean View Ranchos subdivision. The nearest development will be about 5-miles distant from the highway. While the visual and aesthetic qualities along the Site's coast may be affected by adjacent development, it must be recognized that presently there is no public shoreline access to the site's coastal frontage. With the development of Kahuku Village, managed public shoreline access will be provided, thereby enhancing the public's ability to access and enjoy the Site's visual and aesthetic coastal qualities.			
<b>NATURAL RESOURCES AND SHORELINE</b>			
<b>Goals:</b>			
(a) <i>Protect and conserve the natural resources from undue exploitation, encroachment and damage.</i>	X		
(b) <i>Provide opportunities for recreational, economic, and educational needs without despoiling or endangering natural resources.</i>	X		
(c) <i>Protect and promote the prudent use of Hawaii's unique, fragile, and significant environmental and natural resources.</i>	X		
(d) <i>Protect rare or endangered species and habitats native to Hawaii.</i>	X		
(e) <i>Protect and effectively manage Hawaii's open space, watersheds, shoreline, and natural areas.</i>	X		
(f) <i>Ensure that alterations to existing land forms, vegetation, 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 an earthquake.</i>	X		
<b>Policies:</b>			
(a) <i>Require users of natural resources to conduct their activities in a manner that avoids or minimizes adverse effects on the environment.</i>	X		
(b) <i>Encourage a program of collection and dissemination of basic data concerning natural resources.</i>			X
(c) <i>Maintain the shoreline for recreational, cultural, educational, and/or scientific uses in a manner that is protective of resources and is of the maximum benefit to the general public.</i>	X		
(d) <i>Protect the shoreline from the encroachment of man-made improvements and structures.</i>	X		
(e) <i>Coordinate programs to protect natural resources with other government agencies.</i>			X
(f) <i>Investigate methods of beach replenishment and sand erosion control.</i>			X
(g) <i>Promote sound management and development of Hawaii's land and marine resources for potential economic benefit.</i>	X		
(h) <i>Encourage public and private agencies to manage the natural resources in a manner that avoids or minimizes adverse effects on the environment and depletion of energy and natural resources to the fullest extent.</i>	X		
(i) <i>Encourage an overall conservation ethic in the use of Hawaii's resources by protecting, preserving, and conserving the critical and significant natural resources of the County of Hawaii.</i>	X		
(j) <i>Encourage the protection of watersheds, forest, brush, and grassland from destructive agents and uses.</i>			X
(k) <i>An identification and inventory of forest lands suitable for watershed purposes should be conducted jointly by County, appropriate State and Federal agencies, and private landowners.</i>			X
(l) <i>Work with the appropriate State, Federal agencies, and private landowners to establish a program to manage and protect identified watersheds.</i>			X
(m) <i>Encourage appropriate State agencies to review and designate forest and watershed areas into the conservation district during State land use boundary comprehensive reviews.</i>			X
(n) <i>The installation of utility facilities, highways and related public improvements in natural and wildland areas should avoid the contamination or despoilment of natural resources where feasible by design review, conservation principles, and by mutual agreement between the County and affected agencies.</i>			X
(o) <i>Encourage the continued identification and inclusion of unique wildlife habitat areas of</i>			X

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<i>native Hawaiian flora and fauna within the Natural Area Reserve System.</i>			
<i>(p) Encourage the use of native plants for screening and landscaping.</i>	X		
<i>(q) Develop policies by which native Hawaiian gathering rights will be protected as identified under judicial decisions.</i>			X
<i>(r) Ensure public access is provided to the shoreline, public trails and hunting areas, including free public parking where appropriate.</i>	X		
<i>(s) Establish a system of pedestrian access trails to places of scenic, historic, cultural, natural, or recreational values.</i>	X		
<i>(t) Preserve and protect significant lava tube caves.</i>			X
<i>(u) Ensure that activities authorized or funded by the County do not damage important natural resources.</i>			X
<i>(v) Within the Kona high rainfall/fog-drip belt, ground disturbing activities such as excessive soil compaction and excessive removal of vegetative cover should be minimized and mitigated consistent with management strategies that encourage the retention of existing forested and pasture areas, reforestation, minimal coverage by impervious surfaces and other strategies that encourage effective infiltration to groundwater.</i>	X		
<i>(w) Implement Council Resolution Nos. 330-96 and 58-97 in land use approvals.</i>			X
<i>(x) Create incentives for landowners to retain and re-establish forest cover in upland watershed areas with emphasis on native forest species.</i>			X

**Discussion:** Kahuku Village will have a beneficial impact on coastal ecosystems by providing the opportunity and funding to actively manage the Site's coastal resources. Kahuku Village's concept plan avoids development in resource rich areas. Lands in the vicinity of Pōhue Bay, where many natural and cultural resources are located, will be preserved and dedicated to the Hawaiian Heritage Center. A shoreline conservation area extending at least 300-feet inland from the shoreline will prevent impact to coastal resources. As discussed in Section 3.6.1, no impact to nearshore marine or anchialine pond communities is expected to occur with development of Kahuku Village. Nani Kahuku Aina has partnered with the U.S. Fish and Wildlife Service on the Hawai'i Island Hawksbill Turtle Recovery Project for the past several years and is committed to continuing this partnership. It is anticipated that establishment of the Hawaiian Heritage Center will create new opportunities to partner with agencies, educational institutions, and organizations interested in resource protection and conservation.

Public shoreline access will be improved with development of Kahuku Village. The coast is approximately 6-miles from Māmalahoa Highway and accessible only by an unimproved road. The nearest public shoreline access is about 2-miles west of the site at Humuhumu Point and is accessible only through a 9-mile 4-wheel drive jeep trail. Development of Kahuku Village will provide greater accessibility for public enjoyment of the Site's coastal resources as well as provide greater accessibility for educational and research activities.

**HOUSING**

**Goals:**

<i>(a) Attain safe, sanitary, and livable housing for the residents of the County of Hawaii.</i>	X		
<i>(b) Attain a diversity of socio-economic housing mix throughout the different parts of the County.</i>	X		
<i>(c) Maintain a housing supply that allows a variety of choices.</i>	X		
<i>(d) Create viable communities with affordable housing and suitable living environments.</i>	X		
<i>(e) Improve and maintain the quality and affordability of the existing housing inventory.</i>	X		
<i>(f) Seek sufficient production of new affordable rental and fee-simple housing in the County in a variety of sizes to satisfactorily accommodate the needs and desires of families and individuals.</i>	X		
<i>(g) Ensure that housing is available to all persons regardless of age, sex, marital status, ethnic background, and income.</i>	X		

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<i>(h) Make affordable housing available in reasonable proximity to employment centers.</i>	X		
<i>(i) Encourage and expand home ownership opportunities for residents.</i>	X		
<b>Policies:</b>			
<i>(a) Encourage a volume of construction and rehabilitation of housing sufficient to meet growth needs and correct existing deficiencies.</i>	X		
<i>(b) Encourage the construction of specially designed facilities or communities for elderly persons needing institutional care and small home care units for active elderly persons.</i>			X
<i>(c) Encourage corporations and nonprofit organizations to participate in Federal, State and private programs to provide new and rehabilitated housing for low and moderate income families.</i>			X
<i>(d) Support the construction of housing for minimum wage and agricultural workers.</i>			X
<i>(e) Continue to review codes and ordinances for overly stringent restrictions that may impose unnecessary hardship and adopt amendments if warranted.</i>			X
<i>(f) Continue to study and implement appropriate measures to curb property speculative practices that result in increased housing costs.</i>			X
<i>(g) Large industries or developments that create a demand for housing shall provide employee housing based upon a ratio to be determined by an analysis of the locality's needs.</i>			X
<i>(h) Formulate a program for housing that identifies specific mechanisms to implement the housing goals.</i>			X
<i>(i) Initialize housing powers and programs to accomplish housing goals and seek out new programs and resources to address the housing needs of the residents.</i>			X
<i>(j) Initiate and participate in activities with the private sector including the provision of leadership and expertise to neighborhoods and nonprofit organizations in the development of housing and community development projects.</i>			X
<i>(k) Increase rental opportunities and choices in terms of quality, cost, amenity, style and size of housing, especially for low and moderate income households.</i>	X		
<i>(l) Support programs that improve, maintain, and rehabilitate the existing housing inventory to maintain the viability of existing communities.</i>			X
<i>(m) Accommodate the housing requirements of special need groups including the elderly, handicapped, homeless and those residents in rural areas.</i>			X
<i>(n) Investigate, develop, and promote the creation of new innovative and timely financing techniques and programs to reduce the cost of housing.</i>			X
<i>(o) Encourage the use of suitable public lands for housing purposes in fee or lease.</i>			X
<i>(p) Encourage the construction of homes for lease or lease with option to purchase.</i>			X
<i>(q) Promote research and development of methods, programs, and activities including the review of regulatory requirements and procedures as they affect housing, to reduce the costs consistent with the public health, safety and welfare.</i>			X
<i>(r) Adopt appropriate ordinances and rules as necessary to implement its housing programs and activities.</i>			X
<i>(s) Utilize financing techniques that reduce the cost of housing, including the issuance of tax-exempt bonds and the implementation of interim financing programs.</i>			X
<i>(t) Ensure that adequate infrastructure is available in appropriate locations to support the timely development of affordable housing.</i>	X		
<i>(u) Investigate the use of the County's taxing powers as a possible means to increase the supply of affordable housing.</i>			X
<i>(v) Work with, encourage and support private sector efforts in the provision of affordable housing.</i>			X
<i>(w) Encourage the development of affordable retirement communities.</i>			X
<i>(x) Vacant lands in urban areas and urban expansion areas should be made available for residential uses before additional agricultural lands are converted into residential uses.</i>	X		
<i>(y) Aid and encourage the development of a wide variety of housing to achieve a diversity of socio-economic housing mix.</i>	X		

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<p><b>Discussion:</b> As discussed in Section 4.7.2 (Housing), Kahuku Village will implement objectives and policies for socio-cultural advancement in housing by:</p> <ul style="list-style-type: none"> <li>• Creating a community that fosters a sense of place, respects the land, and is sustainable.</li> <li>• Providing affordable and moderately-priced housing for sale and rent to the working families of Hawai‘i, specifically those that work in Ka‘ū.</li> <li>• Providing homes near employment centers, thereby increasing quality of life through decreased commuting.</li> <li>• Providing a variety of housing options (mixed-income) integrated into a complete community rather than an affordable housing “project.”</li> </ul>			
<b>PUBLIC FACILITIES</b>			
<b>Goal:</b>			
(a) <i>Encourage the provision of public facilities that effectively service community and visitor needs and seek ways of improving public service through better and more functional facilities in keeping with the environmental and aesthetic concerns of the community.</i>	X		
<b>Policies:</b>			
(a) <i>Continue to seek ways of improving public service through the coordination of service and maximizing the use of personnel and facilities.</i>			X
(b) <i>Coordinate with appropriate State agencies for the provision of public facilities to serve the needs of the community.</i>	X		
(c) <i>Develop short and long-range capital improvement programs and operating budgets for public facilities and services.</i>			X
(d) <i>Develop and adopt an Impact Fees Ordinance.</i>			X
(e) <i>Capital Improvement and Operating budgets shall reflect the goals and policies of the County General Plan.</i>			X
(f) <i>Require a six-year, long-term, capital improvements budget by County Departments and agencies that shall be reviewed for consistency with the General Plan.</i>			X
<p><b>Discussion:</b> Kahuku Village is contributing towards its fair share of public facilities by providing recreational amenities to serve residents and dedicating land for civic facilities that will benefit the regional population. As discussed in Section 4.7.4 (Economic and Fiscal), Kahuku Village is anticipated to have a positive net fiscal impact on State and County revenue through the contribution of increased property taxes, general excise taxes, transient accommodation taxes, and income taxes.</p>			
<b>EDUCATION</b>			
<b>Policies:</b>			
(a) <i>Encourage continuous joint pre-planning of schools with the Department of Education and the University of Hawai‘i to ensure coordination with roads, water, and other support facilities and considerations such as traffic and safety, and access for vehicle, bicycle, and pedestrian. Encourage master planning of present and proposed public and private institutions.</i>			X
(b) <i>Encourage combining schoolyards with county parks and allow school facilities for afterschool use by the community for recreational, cultural, and other compatible uses.</i>			X
(c) <i>Encourage joint community-school library facilities, where a separate community library may not be feasible, in proximity to other community facilities, affording both pedestrian and vehicular access.</i>			X
(d) <i>Encourage implementation of the Department of Education's 'Educational Specifications and Standards for Facilities.'</i>			X
(e) <i>Encourage the Hawai‘i State Library System to seek alternate sites for public libraries located on the campuses of public schools.</i>			X

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**Discussion:** Planning for public school programs and facilities is beyond the scope of Kahuku Village. However, dedication of 12-acres of land for an elementary school is proposed as part of the Project.

**PROTECTIVE SERVICES**

**Policies:**

(a) <i>Development of police and fire facilities should entail joint use structures whenever feasible.</i>			X
(b) <i>The establishment of a fire/police facility shall consider site size and locations that permit quick and efficient vehicular access.</i>	X		
(c) <i>Development of volunteer fire facilities with proper planning to be replaced or to co-exist with full time Fire/EMS personnel.</i>	X		
(d) <i>Police headquarters shall be near the geographic center of the service area and near concentrations of commercial and industrial use.</i>			X
(e) <i>Stations in outlying districts shall be based on the population to be served and response time rather than on geographic district.</i>	X		
(f) <i>Correctional facilities should emphasize rehabilitation. Establish additional rehabilitation and counseling centers, including drug and behavioral treatment facilities in secure settings, when necessary.</i>			X
(g) <i>Encourage the further development and expansion of community policing programs and neighborhood and farm watch programs in urban, rural and agricultural communities.</i>			X
(h) <i>The County of Hawai‘i Emergency Operations Center shall be improved to meet the requirements set forth by federal and State regulations.</i>			X
(i) <i>Maintain an appropriate number and type of emergency helicopters, including appropriate aero medical capabilities.</i>			X
(j) <i>Mitigate hazards through the preparation of disaster assessment reports and appropriate follow-up on the assessment recommendations.</i>			X
(k) <i>Educate the public regarding disaster preparedness and response, especially proper responses for sudden impact hazards.</i>			X
(l) <i>Encourage the State to evaluate the disaster shelters’ ability to withstand various natural disasters.</i>			X
(m) <i>Consider the proximity to fire stations in approving any rezoning to permit urban development.</i>			X
(n) <i>The Fire Department, in cooperation with other related governmental agencies and the involved land owners, shall prepare a fire protection and prevention plan for forest reserves and other natural areas.</i>			X

**Discussion:** The Applicant proposes to dedicate over 100-acres of land to the County of Hawai‘i and/or State, a portion of which could be used for a police station, fire station, and emergency medical facility. The fire station is proposed to replace the volunteer fire station in HOVE and the police substation could replace the unmanned substation also located in HOVE. The lands to be dedicated are appropriately situated in the mauka portion of the Property near Māmalahoa Highway, where they will be well positioned to serve the regional population.

**HEALTH AND SANITATION**

**Policies:**

(a) <i>Encourage the development of new health care facilities or the improvement of existing health care facilities to serve the needs of Hamakua, North and South Kohala, and North and South Kona.</i>			X
(b) <i>Develop and implement a cemeteries master plan for the siting of future cemeteries.</i>			X
(c) <i>Appropriately designed and cost-effective solid waste transfer station sites shall be located in areas of convenience and easy access to the public.</i>			X
(d) <i>Encourage the State to continue operation of the rural hospitals.</i>			X
(e) <i>Encourage the establishment or expansion of community health centers and rural health</i>			X

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<i>clinics.</i>			
(f) <i>Continue to encourage programs such as recycling to reduce the flow of refuse deposited in landfills.</i>	X		
(g) <i>Investigate the possibility of developing new landfill sites on the island.</i>			X
(h) <i>Encourage the full development and implementation of a green waste recycling program.</i>	X		
<b>Discussion:</b> As discussed in Section 4.8.5 (Solid Waste) during construction on-site green waste composting and recycling of construction waste will be encouraged. Long-term programs to recycle green waste on-site and encourage community recycling are being considered..			
<b>PUBLIC UTILITIES</b>			
<b>Goals:</b>			
(a) <i>Ensure that properly regulated, adequate, efficient and dependable public and private utility services are available to users.</i>	X		
(b) <i>Maximize efficiency and economy in the provision of public utility services.</i>			X
(c) <i>Design public utility facilities to fit into their surroundings or concealed from public view.</i>			X
<b>Policies:</b>			
(a) <i>Public utility facilities shall be designed to complement adjacent land uses and shall be operated to minimize pollution or disturbance.</i>			X
(b) <i>Provide utilities and service facilities that minimize total cost to the public and effectively service the needs of the community.</i>	X		
(c) <i>Utility facilities shall be designed to minimize conflict with the natural environment and natural resources.</i>	X		
(d) <i>Improvement of existing utility services shall be encouraged to meet the needs of users.</i>			X
(e) <i>Encourage the clustering of developments in order to reduce the cost of providing utilities.</i>	X		
(f) <i>Develop short and long range capital improvement programs and plans for public utilities within its jurisdiction that are consistent with the General Plan.</i>			X
(g) <i>Water, sewerage, electricity, gas, and telecommunication services are treated individually in this section to clarify the factors that comprise the public utilities element.</i>			X
<b>Discussion:</b> Infrastructure utility systems constructed for Kahuku Village will be designed in compliance with applicable standards and regulations. Utility systems will also be designed and sited to minimize impact to surrounding land uses and the natural environment.			
<b>WATER</b>			
<b>Policies:</b>			
(a) <i>Water system improvements shall correlate with the County's desired land use development pattern.</i>	X		
(b) <i>All water systems shall be designed and built to Department of Water Supply standards.</i>	X		
(c) <i>Improve and replace inadequate systems.</i>			X
(d) <i>Water sources shall be adequately protected to prevent depletion and contamination from natural and man-made occurrences or events.</i>	X		
(e) <i>Water system improvements should be first installed in areas that have established needs and characteristics, such as occupied dwellings, agricultural operations and other uses, or in areas adjacent to them if there is need for urban expansion.</i>	X		
(f) <i>A coordinated effort by County, State and private interests shall be developed to identify sources of additional water supply and be implemented to ensure the development of sufficient quantities of water for existing and future needs of high growth areas and agricultural production.</i>			X
(g) <i>The fire prevention systems shall be coordinated with water distribution systems in order to ensure water supplies for fire protection purposes.</i>	X		
(h) <i>Develop and adopt standards for individual water catchment units.</i>			X
(i) <i>Cooperate with the State Department of Health to develop standards and/or guidelines for the construction and use of rainwater catchment systems to minimize the intrusion of any chemical and microbiological contaminants.</i>			X

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(j) Cooperate with appropriate State and Federal agencies and the private sector to develop, improve and expand agricultural water systems in appropriate areas on the island.			X
(k) Promote the use of ground water sources to meet State Department of Health water quality standards.	X		
(l) Continue to participate in the United States Geological Survey's exploratory well drilling program.			X
(m) Seek State and Federal funds to assist in financing projects to bring the County into compliance with the Safe Drinking Water Act.			X
(n) Develop and adopt a water master plan that will consider water yield, present and future demand, alternative sources of water, guidelines and policies for the issuing of water commitments.	X		
(o) Expand programs to provide for agricultural irrigation water.			X
<p><b>Discussion:</b> An on-site desalination plant will be developed to provide potable water for residences and facilities at Kahuku Village, as discussed in Section 4.8.2 (Water System). Development of the water system will have no significant adverse impact on water resources.</p> <p>Non-potable recycled water will be used for irrigation of the golf course and common area landscaping. Potable water demand will be limited to that used for consumption, general household/commercial use, and irrigation of landscaping within private residential yards.</p>			
<b>TELECOMMUNICATIONS</b>			
<b>Policies:</b>			
(a) Encourage underground telephone lines where they are economically and technically feasible.	X		
(b) Work with the telecommunications industry to increase the availability of emergency telephones throughout the island.			X
(c) Develop standards for the construction of wireless telecommunication facilities.			X
(d) Work closely with the telephone company to provide all users with efficient service.	X		
<p><b>Discussion:</b> Coordination with the various communication companies will be undertaken, as discussed in Section 4.8.5 (Electrical and Communications Systems).</p>			
<b>ELECTRICITY</b>			
<b>Policies:</b>			
(a) Power distribution shall be placed underground when and where practical. Encourage developers of new urban areas to place utilities underground.	X		
(b) Route selection for high voltage transmission lines should include consideration for setbacks from major thoroughfares and residential areas. Where feasible, delineate energy corridors for such high voltage transmission lines.			X
(c) Continue to advise the electrical utility companies on the future revisions of their comprehensive Integrated Resource Plans.			X
(d) Conform to safety standards as established by appropriate regulatory authorities.			X
<p><b>Discussion:</b> Energy conservation measures and use of renewable sources of energy will be implemented where possible at Kahuku Village, as discussed in Section 4.8.5 (Electrical and Communications Systems).</p>			
<b>GAS</b>			
<b>Policy:</b>			
(a) Gas storage facilities shall be located to minimize danger to commercial and residential areas.	X		



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<b>Discussion:</b> Gas storage facilities, should they be utilized at Kahuku Village, will be appropriately sited to minimize danger to commercial and residential areas.			
<b>SEWER</b>			
<b>Policies:</b>			
(a) <i>The “Sewerage Study for All Urban and Urbanizing Areas of the County of Hawaii, State of Hawaii,” December 1970, and the “Water Quality Management Plan for the County of Hawaii,” December 1980, shall be updated and used as guides for the general planning of sewerage disposal systems.</i>			X
(b) <i>Private systems shall be installed by land developers for major resort and other developments along shorelines and sensitive higher inland areas, except where connection to nearby treatment facilities is feasible and compatible with the County’s long-range plans, and in conformance with State and County requirements.</i>	X		
(c) <i>Immediate steps should be taken to designate treatment plant sites, sewerage pump station sites, and sewer easements according to the facility plans to facilitate their acquisition.</i>			X
(d) <i>Continue to seek State and Federal funds to finance the construction of proposed sewer systems and improve existing systems.</i>			X
(e) <i>Plans for wastewater reclamation and reuse for irrigation and biosolids composting (remaining solids from the treatment of wastewater is processed into a reusable organic material) shall be utilized where feasible and needed.</i>	X		
(f) <i>Require major developments to connect to existing sewer treatment facilities or build their own.</i>	X		
<b>Discussion:</b> As recommended in the General Plan’s Courses of Action for the Ka‘ū District, adequate sewerage will be provided for Kahuku Village. An on-site WWTP will be constructed as part of the project. Design and construction will be in accordance with DOH and County of Hawai‘i standards and treated water will be reused for irrigation, as discussed in Section 4.8.2 (Wastewater).			
<b>RECREATION</b>			
<b>Goals:</b>			
(a) <i>Provide a wide variety of recreational opportunities for the residents and visitors of the County.</i>	X		
(b) <i>Maintain the natural beauty of recreation areas.</i>	X		
(c) <i>Provide a diversity of environments for active and passive pursuits.</i>	X		
<b>Policies:</b>			
(a) <i>Strive to equitably allocate facility-based parks among the districts relative to population, with public input to determine the locations and types of facilities.</i>			X
(b) <i>Improve existing public facilities for optimum usage.</i>	X		
(c) <i>Recreational facilities shall reflect the natural, historic, and cultural character of the area.</i>	X		
(d) <i>The use of land adjoining recreation areas shall be compatible with community values, physical resources, and recreation potential.</i>	X		
(e) <i>Develop short and long range capital improvement programs and plans for recreational facilities that are consistent with the General Plan.</i>			X
(f) <i>The “County of Hawai‘i Recreation Plan” shall be updated to reflect newly identified recreational priorities.</i>			X
(g) <i>Facilities for compatible multiple uses shall be provided.</i>	X		
(h) <i>Provide facilities and a broad recreational program for all age groups, with special considerations for the handicapped, the elderly and young children.</i>	X		
(i) <i>Coordinate recreational programs and facilities with governmental and private agencies and organizations. Innovative ideas for improving recreational facilities and opportunities shall be considered.</i>	X		
(j) <i>Develop local citizen leadership and participation in recreation planning, maintenance, and programming.</i>			X

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<i>(k) Adopt an on-going program of identification, designation, and acquisition of areas with existing or potential recreational resources, such as land with sandy beaches and other prime areas for shoreline recreation in cooperation with appropriate governmental agencies.</i>	X		
<i>(l) Public access to the shoreline shall be provided in accordance with an adopted program of the County of Hawaii.</i>	X		
<i>(m) Develop a network of pedestrian access trails to places of scenic, historic, natural or recreational values. This system of trails shall provide, at a minimum, an islandwide route connecting major parks and destinations.</i>	X		
<i>(n) Establish a program to inventory ancient trails, cart roads and old government roads on the island in coordination with appropriate State agencies.</i>	X		
<i>(o) Develop facilities and safe pathway systems for walking, jogging, and biking activities.</i>	X		
<i>(p) Develop a recreation information dissemination system for the public's use.</i>	X		
<i>(q) Revise the ordinance requiring subdivisions to provide land area for park and recreational use or pay a fee in lieu thereof.</i>			X
<i>(r) Develop and adopt an Impact Fees Ordinance.</i>			X
<i>(s) Consider alternative sources of funding for recreational facilities.</i>			X
<i>(t) Develop best management practices for the development of golf courses in coordination with developers, State Department of Health, and other government agencies.</i>			X
<i>(u) Provide access to public hunting areas.</i>			X

**Discussion:** Kahuku Village will enhance recreational resources in the area by providing shoreline access and recreational opportunities, 20-acres of park space in the Mixed-Use Village, dedicating lands to the County for a District Park, and creation of a golf course. The Applicant will also consult with the National Park Service regarding extending the Ala Kahakai Trail through the Property. It is also anticipated that the Hawaiian Heritage Center will host programs with an emphasis on natural and cultural resource education.

**TRANSPORTATION**

**Goals:**

<i>(a) Provide a transportation system whereby people and goods can move efficiently, safely, comfortably and economically.</i>	X		
<i>(b) Make available a variety of modes of transportation that best meets the needs of the County.</i>	X		

**Policies:**

<i>(a) A framework of transportation facilities that will promote and influence desired land use shall be established by concerned agencies</i>			X
<i>(b) The agencies concerned with transportation systems shall provide for present traffic and future demands, including the programmed development of mass transit programs for high growth areas by both the private and public sectors.</i>			X
<i>(c) The improvement of transportation service shall be encouraged.</i>	X		
<i>(d) Consider the provision of adequate transportation systems to enhance the economic viability of a given area.</i>	X		
<i>(e) Develop a comprehensive, islandwide multi-modal transportation plan that identifies the location and operation of automobile, mass transit, bicycle and pedestrian systems, in coordination with appropriate Federal and State agencies.</i>			X
<i>(f) Work with various non-profit agencies to coordinate transportation opportunities.</i>			X

**Discussion:** As discussed in Section 4.3, a TIAR has been prepared to identify transportation system improvements to mitigate Project impacts. With mitigation, traffic in the vicinity of the Site is projected to operate at an acceptable level of service following development of Kahuku Village. Roadways will be designed with sufficient capacity and to applicable State and County standards.

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<b>ROADWAYS</b>			
<b>Goals:</b>			
(a) Provide a system of roadways for the safe, efficient and comfortable movement of people and goods.	X		
(b) Provide an integrated State and County transportation system so that new major routes will complement and encourage proposed land policies.			X
<b>Policies:</b>			
(a) Encourage the programmed improvement of existing roadways by both public and private sectors.	X		
(b) Investigate various methods of funding road improvements, including private sector participation, to meet the growing transportation needs of the island.	X		
(c) Encourage the State to establish a continuous State highway system connecting the County's major airports and harbors.			X
(d) Support the development of programs to identify and improve hazardous and substandard sections of roadway and drainage problems.			X
(e) Coordinate with appropriate Federal and State agencies for the funding of transportation projects for areas of anticipated growth.			X
(f) Consider the development of alternative means of transportation, such as mass transit, bicycle and pedestrian systems, as a means to increase arterial capacity.	X		
(g) There shall be coordinated planning of Federal, State, and County street systems to meet program goals of the other elements such as historic, recreational, environmental quality, and land use.			X
(h) Provisions for on-street parking shall be incorporated into the design of street systems.	X		
(i) Encourage the State Department of Transportation to establish special scenic routes within and between communities.			X
(j) Transportation and drainage systems shall be integrated where feasible.	X		
(k) Support the development of an efficient transit route between east and west Hawaii.			X
(l) Adopt street design standards that accommodate, where appropriate, flexibility in the design of streets to preserve the rural character of an area and encourage a pedestrian-friendly design, including landscaping and planted medians.	X		
(m) Develop minimum street standards for homestead and other currently substandard roadways that are offered for dedication to the County to ensure minimal levels of public safety.			X
(n) Encourage the development of walkways, jogging, and bicycle paths within designated areas of the community.	X		
(o) Explore means and opportunities to enhance the shared use of the island's roadways by pedestrians and bicyclists, in coordination with appropriate government agencies and organizations.	X		
(p) The Bikeway Plan for the County of Hawai'i (1979) shall be updated to include the development of a safe and usable bikeway system throughout the island.			X
(q) Work in conjunction with the State to establish a clear agreement of the ownership and maintenance of the old homestead roads.			X
(r) Develop short and long range capital improvement programs and plans for transportation that are consistent with the General Plan.			X
<p><b>Discussion:</b> Roadways at Kahuku Village will be designed with sufficient capacity and to applicable State and County standards. Appropriate mitigation measures will be implemented as identified in Section 4.3 (Roadways and Traffic). The Mixed-Use Village is being designed to promote alternatives to use of private automobiles, such as walking and biking. Design measures being incorporated include the provision of a network of sidewalks and bike paths providing connectivity throughout the community, development of a compact Mixed-Use core providing convenient access to a variety of services and amenities, and creating a “complete” community that reduces the need to travel elsewhere for everyday goods and services.</p>			

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<b>TRANSPORTATION TERMINALS: AIRPORTS &amp; HARBORS</b>			
<b>Goal:</b>			
(a) Provide transportation terminals and related facilities for the safe, efficient and comfortable movement of people and goods.			X
<b>Policies:</b>			
(b) Encourage the programmed improvement of existing terminals, including adequate provisions for control of pollution and appropriate and adequate covered storage facilities for agricultural products.			X
(c) The State Department of Transportation should continue to implement its plans for transportation terminals and related facilities to promote and influence desired land use policies.			X
(d) Transportation terminals should be developed in conjunction with the different elements of the overall transportation system.			X
(e) Encourage maximum use of the island's airport and harbor facilities.			X
(f) Encourage the development, maintenance, and enhancement of Hilo and Kawaihae Harbors as detailed within the State's Hawai'i Commercial Harbors 2020 Master Plan.			X
(g) Support the State's objectives to acquire rights within the runway clear-zones, limit heights within approach zones, and restrict noise-sensitive uses within designated noise contours determined by the State.			X
<b>Discussion:</b> With the exception of a heliport, Kahuku Village does not involve transportation terminals: airports or harbors; therefore, these goals and policies are not applicable.			
<b>MASS TRANSIT</b>			
<b>Goal:</b>			
(a) Provide residents with a variety of public transportation systems that are affordable, efficient, accessible, safe, environmentally friendly, and reliable.			X
<b>Policies:</b>			
(a) Improve the integration of transportation and land use planning in order to optimize the use, efficiency, and accessibility of existing and proposed mass transportation systems.			X
(b) Support and encourage the development of alternative modes of transportation, such as enhanced bus services and bicycle paths.			X
(c) Incorporate, where appropriate, bicycle routes, lanes, and paths within road rights-of-way in conformance with The Bikeway Plan for the County of Hawaii.			X
(d) Provisions to enhance the mobility of minors, non-licensed adults, low-income, elderly, and people with disabilities shall be made.			X
<b>Discussion:</b> A multi-modal transportation system accommodating automobiles, bicycles and pedestrian facilities will provide accessibility at Kahuku Village. Provision of a mass transit system is beyond the scope of Kahuku Village's development.			
<b>LAND USE</b>			
<b>Goals:</b>			
(a) Designate and allocate land uses in appropriate proportions and mix and in keeping with the social, cultural, and physical environments of the County.	X		
(b) Protect and encourage the intensive and extensive utilization of the County's important agricultural lands.			X
(c) Protect and preserve forest, water, natural and scientific reserves and open areas.	X		
<b>Policies:</b>			
(a) Zone urban- types of uses in areas with ease of access to community services and employment centers and with adequate public utilities and facilities.	X		
(b) Promote and encourage the rehabilitation and use of urban areas that are serviced by basic community facilities and utilities.			X
(c) Allocate appropriate requested zoning in accordance with the existing or projected needs of neighborhood, community, region and County.	X		

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(d) <i>Conduct a review and re-evaluation of the real property tax structure to assure compatibility with land use goals and policies.</i>			X
(e) <i>Incorporate innovations such as the “zone of mix” and “mixed use zones” into the Zoning Code.</i>	X		
(f) <i>Encourage the development and maintenance of communities meeting the needs of its residents in balance with the physical and social environment.</i>	X		
(g) <i>Establish a program of continuing review of the Zoning Code in light of emerging new industries and technologies and incorporate revisions to land use regulations as necessary.</i>			X
(h) <i>Develop community development or regional plans for all of the districts or combinations of districts in cooperation with community residents and periodically review and amend these documents as necessary or as mandated.</i>			X
(i) <i>Ensure that condominium property regimes (CPR) comply with the requirements of the Zoning Code, Subdivision Control Code and other applicable rules and regulations.</i>			X
(j) <i>Encourage urban development within existing zoned areas already served by basic infrastructure, or close to such areas, instead of scattered development.</i>			X
<p><b>Discussion:</b> Kahuku Village will serve as an economic engine for the Ka‘ū region and provide lands for needed civic facilities for the region’s growing population. As discussed in Section 4.7 (Socio-Economic Characteristics), Ka‘ū’s population has been growing faster than the County’s overall population. Creation of Kahuku Village presents an opportunity to develop a community that will provide long-term employment opportunities for area residents, a mix of housing choices including workforce housing, and recreational amenities in a manner that respects the region’s rural character and the Site’s natural and cultural resources.</p>			
<b>AGRICULTURE</b>			
<b>Goals:</b>			
(a) <i>Identify, protect and maintain important agriculture lands on the island of Hawaii.</i>			X
(b) <i>Preserve the agricultural character of the island.</i>			X
(c) <i>Preserve and enhance opportunities for the expansion of Hawaii’s Agricultural Industry.</i>			X
<b>Policies:</b>			
(a) <i>Implement new approaches to preserve important agricultural land.</i>			X
(b) <i>Assist in the development of basic resources such as water, roads, transportation and distribution facilities for the agricultural industry.</i>			X
(c) <i>Assist other State agencies, such as the University of Hawaii, College of Tropical Agriculture and Human Resources, University of Hawai‘i at Hilo, College of Agriculture, Forestry and Natural Resources Management, Department of Business, Economic Development and Tourism, Office of Planning, Department of Land and Natural Resources and Department of Agriculture, on programs that aid agriculture.</i>			X
(d) <i>Agricultural land may be used as one form of open space or as green belt.</i>			X
(e) <i>Coordinate and encourage efforts to solve the problems of the agricultural industry in the County of Hawaii.</i>			X
(f) <i>In order to minimize the potential conflicts between agricultural and non-agricultural uses, standards and guidelines for the establishment of well defined buffer areas as part of new, non-agricultural developments that are located adjacent to important agricultural lands shall be developed.</i>			X
(g) <i>Land zoned for use in the Rural District shall be expanded, where appropriate.</i>			X
(h) <i>Develop subdivision standards that make a distinction between agricultural and urban land uses.</i>			X
(i) <i>Designate, protect and maintain important agricultural lands from urban encroachment.</i>			X
(j) <i>Ensure that development of important agricultural land be primarily for agricultural use.</i>			X
(k) <i>Support the development of private and State agricultural parks to make agricultural land available for agricultural activities.</i>			X
(l) <i>Assist in the development of agriculture.</i>			X
(m) <i>Assist in the development of water for agricultural purposes.</i>			X

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(n) Investigate possibilities to prevent non-agricultural uses that could interfere with potential or existing agricultural activities on important agricultural lands.			X
(o) Support efforts to provide tax relief and other incentives to enhance competitive capabilities of commercial farms and ranches, thereby insuring long-term preservation, enhancement, and expansion of viable agricultural lands.			X
(p) Ensure that condominium property regimes (CPR) on agricultural-designated lands comply with the requirements of the Zoning Code and other applicable laws, rules and regulations.			X
(q) Farm labor housing projects shall be developed in a manner that minimizes the use of important agricultural lands and is consistent with the character of surrounding land uses.			X
(r) Encourage, where appropriate, the establishment of visitor-related uses and facilities that directly promote the agriculture industry.			X
(s) Important agricultural lands shall not be rezoned to parcels too small to support economically viable farming units.			X
(t) Discourage speculative residential development on agricultural lands.			X
(u) Encourage other compatible economic uses that complement existing agricultural and pastoral activities.			X
<p><b>Discussion:</b> Kahuku Village will not impact agricultural activities since none currently occur on the Property. As discussed in Section 3.3 (Soils), the Property is rated “E” and unclassified on the LSB classification, and not classified for the ALISH, indicating that the Property is not agriculturally significant. Therefore, the proposed project will not reduce the inventory of agriculturally significant lands, and this State Functional Plan is not applicable.</p>			
<b>COMMERCIAL DEVELOPMENT</b>			
<b>Goals:</b>			
(a) Provide for commercial developments that maximize convenience to users.	X		
(b) Provide commercial developments that complement the overall pattern of transportation and land usage within the island's regions, communities, and neighborhoods.	X		
<b>Policies:</b>			
(a) Urban renewal, rehabilitation, and/or redevelopment programs shall be undertaken in cooperation with communities, businesses and governmental agencies.			X
(b) Commercial facilities shall be developed in areas adequately served by necessary services, such as water, utilities, sewers, and transportation systems. Should such services not be available, the development of more intensive uses should be in concert with a localized program of public and private capital improvements to meet the expected increased needs.	X		
(c) Distribution of commercial areas shall meet the demands of neighborhood, community and regional needs.	X		
(d) Existing strip development shall be converted to more appropriate uses when and where it is feasible.			X
(e) Encourage the concentration of commercial uses within and surrounding a central core area.	X		
(f) The development of commercial facilities should be designed to fit into the locale with minimal intrusion while providing the desired services. Appropriate infrastructure and design concerns shall be incorporated into the review of such developments.	X		
(g) Applicable ordinances shall be reviewed and amended as necessary to include considerations for urban design, aesthetic quality and the protection of amenities in adjacent areas through landscaping, open space and buffer areas.	X		
(h) Require developers to provide basic infrastructure necessary for development.	X		
(i) Encourage commercial areas to develop on an axis perpendicular to the highway.	X		
<p><b>Discussion:</b> Commercial uses at Kahuku Village will be centralized in a compact central core within the Mixed-Use Village. A variety of commercial establishments will be situated in the</p>			

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<b>COUNTY OF HAWAI'I GENERAL PLAN</b> (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	S	N/S	N/A
central core to maximize convenience to area residents and visitors. The Applicant will provide all infrastructure and utility systems necessary for the commercial uses.			
<b>Industrial</b>			
<b>Goals:</b>			
(a) Designate and allocate industrial areas in appropriate proportions and in keeping with the social, cultural, and physical environments of the County.			X
(b) Promote and encourage the rehabilitation of industrial areas that are serviced by basic community facilities and utilities.			X
<b>Policies:</b>			
(a) Support the creation of industrial parks in appropriate locations as an alternative to strip development.			X
(b) Achieve a broader diversification of local industries by providing opportunities for new industries and strengthening existing industries.			X
(c) Locate industrial areas convenient to transportation facilities, and provide a variety of industrial zoned districts and lot sizes, depending on the needs of the industries and the communities.			X
(d) Improve the aesthetic quality of industrial sites and protect amenities of adjacent areas by requiring landscaping, open spaces, buffer zones, and design guidelines.			X
(e) Industrial development shall be located in areas adequately served by transportation, utilities, and other essential infrastructure.			X
(f) Provide flexibility within the Zoning Code to accommodate emerging new industries.			X
(g) Industrial-commercial mixed use districts shall be provided in appropriate locations.			X
(h) Require developers to provide basic infrastructure necessary for development.			X
<b>Discussion:</b> Kahuku Village does not include industrial development, and therefore, these goals and policies are not applicable.			
<b>MULTIPLE RESIDENTIAL</b>			
<b>Goals:</b>			
(a) To provide for multiple residential developments that maximize convenience for its occupants.	X		
(b) To provide for suitable living environments that accommodate the physical, social and economic needs of the island residents.	X		
(c) To enhance the overall quality of life in our residential communities.	X		
<b>Policies:</b>			
(a) Appropriately zoned lands shall be allocated as the demand for multiple residential dwellings increases. These areas shall be allocated with respect to places of employment, shopping facilities, educational, recreational and cultural facilities, and public facilities and utilities.	X		
(b) Incorporate reasonable flexibility in applicable codes and ordinances to achieve a diversity of socio-economic housing mix.			X
(c) Encourage flexibility in the design of residential sites, buildings and related facilities to achieve a diversity of socio-economic housing mix and innovative means of meeting the market requirements.	X		
(d) The rehabilitation and/or utilization of multiple residential areas shall be encouraged.			X
(e) To assure the use of multiple residential zoned areas and to curb speculation and resale of undeveloped lots only, the County may impose incremental and conditional zoning, which shall be based on performance requirements.			X
(f) Applicable codes and ordinances shall be reviewed and amended as necessary to include consideration for urban design, and aesthetic quality through landscaping, open space, and buffer areas.			X
(g) Support the rezoning of those multiple residentially zoned lands that are used for other purposes to a more appropriate zoning designation.	X		
(h) Require developers to provide basic infrastructure necessary for development.	X		

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COUNTY OF HAWAI'I GENERAL PLAN (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	S	N/S	N/A
<b>Discussion:</b> Kahuku Village will provide a variety of housing options including workforce, single-family, and multi-family housing. Recreational amenities, commercial uses and civic facilities are also incorporated to create a “complete” community. All necessary infrastructure systems required for Kahuku Village will be provided by Nani Kahuku Aina.			
<b>SINGLE-FAMILY RESIDENTIAL</b>			
<b>Goals:</b>			
(a) To maximize choices of single-family residential lots and/or housing for residents of the County.	X		
(b) To ensure compatible uses within and adjacent to single-family residential zoned areas.	X		
(c) To rehabilitate and/or rebuild deteriorating single-family residential areas.			X
(d) To provide single-family residential areas conveniently located to public and private services, shopping, other community activities and convenient access to employment centers that takes natural beauty into consideration.	X		
(e) To enhance the overall quality of life in our residential communities.	X		
<b>Policies:</b>			
(a) To assure the orderly use of single-family residential zoned areas and to curb speculation and resale of undeveloped lots, the County may impose incremental and conditional zoning, which would be based on performance requirements. This is to assure that a certain percentage of buildings will be constructed.			X
(b) Encourage innovative uses of land with respect to geologic and topographic conditions through the use of residential cluster and planned unit developments.	X		
(c) Encourage and coordinate with the State in providing fee simple and leasehold single-family residential lots to the residents through State and/or County Housing Programs.			X
(d) Incorporate reasonable flexibility in codes and ordinances to achieve a diversity of socio-economic housing mix and to permit aesthetic balance between single-family residential structures and open spaces.			X
(e) Re-evaluate existing undeveloped single-family residential zoned areas and reallocate zoned lands in appropriate locations.			X
(f) Designate and allocate single-family residential zoned lands at varying densities for future use in accordance with the needs of the communities and the stated goals, policies, and standards.	X		
(g) Rural-style residential-agricultural developments, such as new small scale rural communities or extensions of existing rural communities, shall be encouraged in appropriate locations.			X
(h) Review and amend land use ordinances and codes to include considerations for rural-style residential subdivisions in appropriate locations. Standards and criteria for the establishment of these areas shall be developed.			X
(i) Require developers to provide basic infrastructure necessary for development.	X		
<b>Discussion:</b> Kahuku Village will provide a variety of housing options including workforce, single-family, and multi-family housing. Recreational amenities, commercial uses and civic facilities are also incorporated to create a “complete” community. All necessary infrastructure systems required for Kahuku Village will be provided by Nani Kahuku Aina.			
<b>RESORT</b>			
<b>Goals:</b>			
(a) Maintain an orderly development of the visitor industry.	X		
(b) Provide for resort development that maximizes conveniences to its users and optimizes the benefits derived by the residents of the County.	X		
(c) Ensure that resort developments maintain the cultural and historic, social, economic, and physical environments of Hawai'i and its people.	X		
<b>Policies:</b>			
(a) The County may impose incremental and conditional zoning that would be based on			X



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<b>COUNTY OF HAWAI‘I GENERAL PLAN</b> (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	S	N/S	N/A
<i>performance requirements.</i>			
<i>(b) Promote and encourage the rehabilitation and the optimum utilization of resort areas that are presently serviced by basic facilities and utilities.</i>			X
<i>(c) Lands currently designated Resort should be utilized before new resorts are allowed in undeveloped coastal areas.</i>			X
<i>(d) Zoning of resort areas shall be granted when the proposed development is consistent with and incorporates the stated goals, policies and standards of the General Plan.</i>	X		
<i>(e) Continue to seek funds from the State Capital Improvement Program to help develop visitor destination areas in accordance with the County's General Plan.</i>			X
<i>(f) Designate and allocate future resort areas in appropriate proportions and in keeping with the social, economic, and physical environments of the County.</i>	X		
<i>(g) Evaluate resort areas and the areas surrounding existing resorts to insure that viable quality resorts are developed and that the surrounding area contributes to the quality, ambience and character of the existing resorts.</i>	X		
<i>(h) Encourage the visitor industry to provide resort facilities that offer an educational experience of Hawai‘i as well as recreational activities.</i>	X		
<i>(i) Coastal resort developments shall provide public access to and parking for beach and shoreline areas.</i>	X		
<i>(j) Re-evaluate existing undeveloped resort designated and/or zoned areas and reallocate these lands in appropriate locations.</i>			X
<i>(k) Require developers to provide the basic infrastructure necessary for development.</i>	X		
<p><b>Discussion:</b> The visitor facilities to be created at Kahuku Village will be low-key in nature and designed to be consistent with the Ka‘ū region’s rural character. It is anticipated that the Site will attract visitors with a desire to experience and learn about the Site’s diverse natural and cultural resources in a secluded, rural setting.</p>			
<b>OPEN SPACE</b>			
<b>Goals:</b>			
<i>(a) Provide and protect open space for the social, environmental, and economic wellbeing of the County of Hawai‘i and its residents.</i>	X		
<i>(b) Protect designated natural areas.</i>	X		
<b>Policies:</b>			
• <i>Open space shall reflect and be in keeping with the goals, policies, and standards set forth in the other elements of the General Plan.</i>	X		
• <i>Open space in urban areas shall be established and provided through zoning and subdivision regulations.</i>			X
• <i>Encourage the identification, evaluation, and designation of natural areas.</i>	X		
• <i>Zoning, subdivision and other applicable ordinances shall provide for and protect open space areas.</i>			X
• <i>Amend the Zoning Code to create a category for lands that should be kept in a largely natural state, but that may not be in the Conservation District, such as certain important viewplanes, buffer areas, and very steep slopes.</i>			X
<p><b>Discussion:</b> Over 15,000 acres of the Site will remain in open space in the form of undeveloped lands, parks, golf course, a 325-acre shoreline conservation area, and the 300-acre Hawaiian Heritage Center. Open space will be distributed within the Mixed Use Village to provide all residents with convenient access to recreational and open space amenities.</p>			
<b>PUBLIC LANDS</b>			
<b>Goals:</b>			
<i>(a) Utilize publicly owned lands in the best public interest and to the maximum benefit for the greatest number of people.</i>			X
<i>(b) Acquire lands for public use to implement policies and programs contained in the General</i>			X

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COUNTY OF HAWAI'I GENERAL PLAN (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	S	N/S	N/A
<i>Plan.</i>			
<b>Policies:</b>			
(a) <i>Encourage uses of public lands that will satisfy specific public needs, such as housing, recreation, open space and education.</i>			X
(b) <i>Encourage the adoption of State programs for State lands consistent with the General Plan.</i>			X
(c) <i>State and County Capital Improvement Programs should continue to be coordinated.</i>			X
(d) <i>A sub-classification, University use, shall continue to be utilized, permitting the primary institutional and numerous supportive and accessory uses required for establishing and/or expanding a public university. Its designation shall continue to be shown on the Land Use Pattern Allocation Guide map.</i>			X
(e) <i>Support the U.S. Department of Interior, National Park Service's expansion plans for the Hawai'i Volcanoes, Puukohola and Puuhonua O Honaunau National Historic Parks.</i>			X
(f) <i>Encourage the State to continue the Villages of Lai'opua project at Kealakehe.</i>			X
<b>Discussion:</b> Kahuku Village will not use public lands or funds; therefore, these goals and policies are not applicable.			

### 5.2.2 Ka'ū Community Development Plan

In 2005, the County of Hawai'i General Plan established the Community Development Plan (CDP) Program. The intent of the CDP Program is to translate broad General Plan goals, policies and standards into implementation actions as they apply to specific geographic regions on Hawai'i island. The CDPs are also intended to serve as a forum for community input into land use, delivery of government services, and other land use issues relating to the CDP area. Seven CDP districts have been established and the County has adopted, or is in the process of preparing, a CDP for each district. Kahuku Village is located within the Ka'ū CDP district, for which preparation of a CDP is presently ongoing.

A draft of the Ka'ū CDP is not expected to be available until 2012. However, numerous community meetings for preparation of the CDP have been conducted by the County and its consultants to obtain input on the vision for the Ka'ū district and values that should be reflected in the Ka'ū CDP. The following Values and Vision Statement has been adopted by the Ka'ū Steering Committee:

*The Ka'ū CDP should honor Kau's unique rural lifestyle, its connection between people and place, and its distinctive Hawaiian cultural heritage. It must plan for the future in ways that:*

- *Increase economic opportunities through a diverse, resilient, and sustainable economy.*
- *Protect and provide reasonable access to natural and recreational resources, including the mauka forests, the coastline, open spaces, and park facilities and programs.*
- *Strengthen families, communities, and the diversity of local cultures.*

About 6,500 responses were received on a survey of values that reflective of the Ka'ū district. The following values were expressed as capturing the people, place, and lifestyle connections with Ka'ū:

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*Aina or Natural Resources (natural beauty, beaches, open space, coastline, mountains, land, access, ocean, outdoor recreation, weather)*

*Ohana (people, community, family, schools, safety, aloha, diversity, church)*

*Country or Rural Lifestyle (quiet, lifestyle, country, small, agriculture, isolation, little traffic, culture, uncrowded, freedom, pace)*

### **Discussion**

Nani Kahuku Aina has striven to develop the Master Plan for Kahuku Village in accordance with the values and vision expressed to date by the Ka'ū community. Nani Kahuku Aina has been an active participant in the Ka'ū CDP planning process, having participated Ka'ū CDP planning charrette and providing project updates to the County Planning Department and the Ka'ū CDP Steering Committee.

Kahuku Village is consistent with the Ka'ū CDP vision statement and community values. Kahuku Village will increase economic opportunities by providing new employment opportunities, opportunities for the establishment of new businesses, increasing the flow of federal, state and private funding through partnerships at the Hawaiian Heritage Center, and training natural and cultural resource stewards by providing living classrooms.

Kahuku Village also will increase access to natural, cultural, and recreational resources while implementing measures to ensure their long-term protection. Presently, access to the shoreline, where most of the Site's natural, cultural, and recreational resources are located, is limited due to the 6-mile distance from Māmalahoa highway to the coast which is accessible only by a rough, unimproved road. With development of Kahuku Village, shoreline access will be greatly enhanced and interpretive exhibits will be provided to inform visitors of significant natural, cultural and historic resources. A shoreline conservation zone extending at least 300-feet inland will be provided to protect coastal habitat aesthetic qualities of the nearshore environment. An Integrated Natural and Cultural Resources Management Plan specifying resource management actions will be prepared and implemented by the Hawaiian Heritage Center.

Kahuku Village will establish the foundation to build healthy families and community relationships. Within the mixed-use village, at least 20% of homes will be affordable and parks, recreational opportunities, neighborhood commercial establishments, and employment opportunities will be created, providing the essential amenities and services needed for a healthy community. In addition, more than 100-acres of land will be dedicated to State and/or County of Hawai'i agencies for facilities that could serve the greater Ka'ū district such as an elementary school, police sub-station, fire station, and district park.

Since development along Māmalahoa Highway is not being proposed, the rural character of the property for travelers on the highway will be maintained. Except for the civic facilities that may be developed near Hawaiian Ocean View Ranchos, development will be located near the makai portion of the Site, which is 6-miles distant from Māmalahoa Highway.

### **5.2.3 County of Hawai'i Zoning**

Similar to the State Land Use Districts, the Hawai'i County Code regulates the type and location of development permitted on the island. Hawai'i County Code designations are more specific in terms of describing permitted land uses. For example, there are residential, resort, agricultural, commercial, industrial, open, planned unit development, cluster plan development, 'ohana dwellings, project districts, agricultural project districts, and special districts, many of which have subcategories based on a variety of development standards such as permitted lot size or structures.

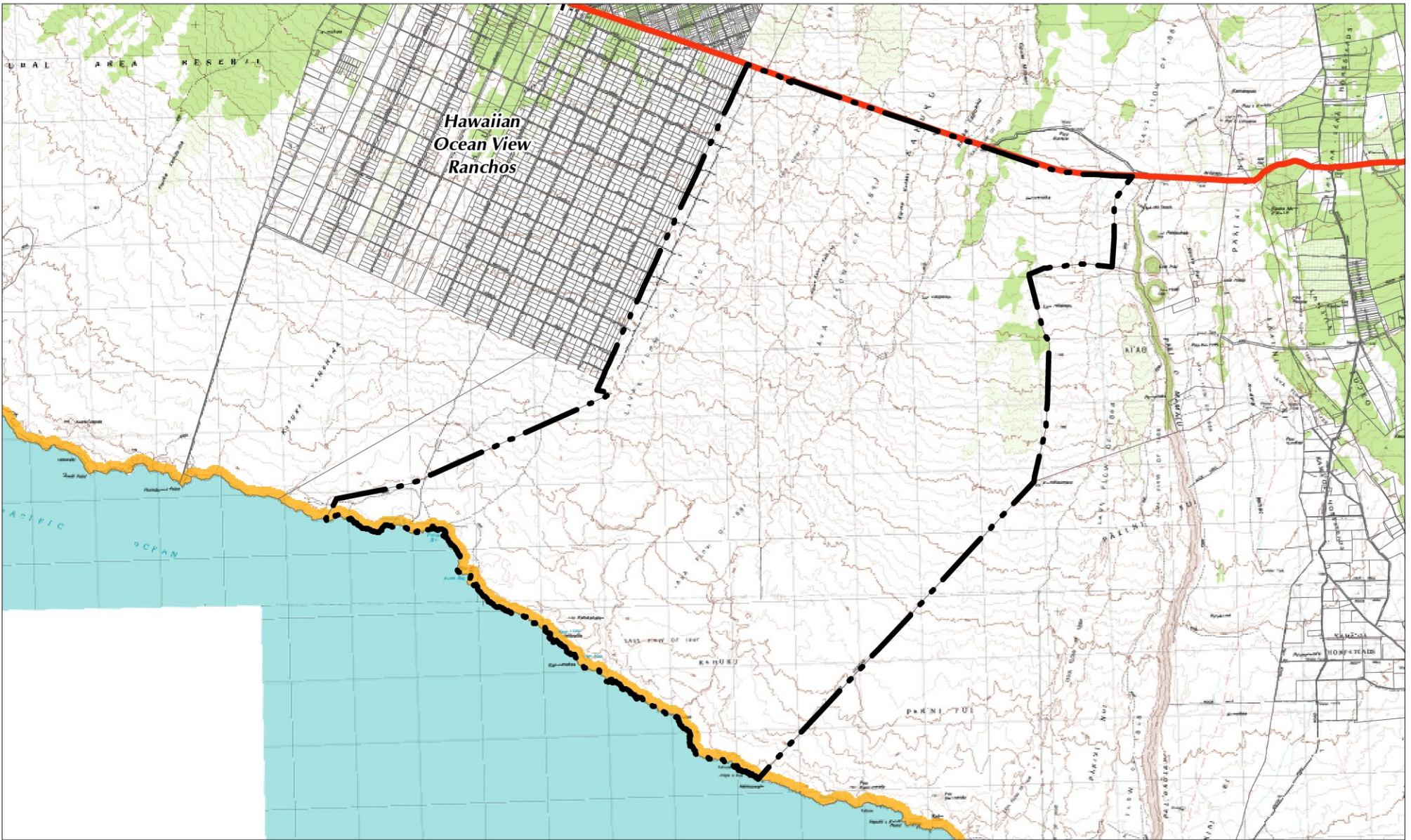
The existing zoning for the Site is consistent with the existing General Plan LUPAG designations: The General Plan Open and Conservation areas are zoned Open (O), and the Extensive Agricultural area is zoned Agricultural-20 (minimum 20- acre lot size).

If the General Plan Amendment is approved, then the Applicant will petition to rezone the Site to be consistent with the amended General Plan. To implement the proposed master plan, the Applicant intends to seek rezoning to a Project District to encompass all General Plan designations outside the Conservation and Open areas. Project Districts are "intended to provide for a flexible and creative planning approach rather than specific land use designations, for quality developments." (HCC section 25-6-40) Any uses permitted in the Residential (RS, RD, RM), Commercial (RCX, CN, CG), or Resort (V) districts are permitted within a Project District, provided these uses are also consistent with the underlying General Plan and State Land Use designations. A master plan approved by the Planning Director would control the permitted uses and density.





### **5.2.4 Special Management Area**

The Hawai'i Coastal Zone Management Program embodied in Chapter 205A, HRS, contains the general objectives and policies upon which all Counties within the State have structured specific legislation which created Special Management Areas (SMA). Any development within the SMA requires an SMA Permit, which is administered by the County of Hawai'i Planning Department.

As shown in Figure 31, the SMA extends about 500-feet inland along the length of the Site's coast. An SMA permit may be required for development within the SMA.






**LEGEND**

-  Nani Kahuku 'Āina Property
-  2010 Hawai'i TMK
-  Within the Special Management Area
-  Major Roads

**FIGURE 31**  
 Special Management Area  
**KAHUKU VILLAGE**

Nani Kahuku 'Āina LLC Ka'ū, Hawai'i

North Lineal Scale (in feet)

Source: U.S. Geological Survey (GIS); County of Hawai'i Planning Department, 2009 (GIS); Hawai'i TMK, 2010 (GIS)  
 Disclaimer: This graphic has been prepared for general planning purposes only.

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**5.3 APPROVALS AND PERMITS**

A listing of anticipated permits and approvals required for Kahuku Village is presented below:

**Table 17: Anticipated Approvals and Permits**

<b>Permit/Approval</b>	<b>Responsible Agency</b>
<b>Planning Phase Approvals</b>	
General Plan Amendment	County Planning Commission/County Council
State Land Use District Boundary Amendment	State Land Use Commission
Change of Zone	County Planning Department/County Council
Special Management Area Use Permit (Major)	County Planning Department/Planning Commission
Conservation District Use Permit	State Department of Land and Natural Resources
<b>Design/Construction Phase Approvals</b>	
Subdivision and/or Planned Unit Development (PUD) Approval	County Planning Department
National Pollutant Discharge Elimination System (NPDES) Permit	State Department of Health
Plan Approval	County Planning Department
Grading/Building Permits	County Department of Public Works
Approval for Wastewater Treatment Facility	State Department of Health
Permit to Perform Work within a State Right-of-Way	State Department of Transportation
Air Permits	State Department of Health
Underground Injection Control Permit	State Department of Health
Well Construction/Pump Installation Permit	State Commission on Water Resource Management
FAA Form 7460-1 (Notice of Proposed Construction or Alteration)	Federal Aviation Administration
<b>Operational Phase Approvals</b>	
Approval for sale and distribution of potable water	Public Utilities Commission

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# CHAPTER VI

ALTERNATIVES TO THE PROPOSED ACTION



## **6 ALTERNATIVES TO THE PROPOSED ACTION**

Under HAR Title 11, DOH, Chapter 200, EIS Rules, Section 11-200-17(F), a Draft EIS must contain a section discussing alternatives that could attain the project objectives, regardless of cost, in sufficient detail to explain why the specific alternative was rejected. Alternatives to Kahuku Village, along with reasons why each alternative was rejected, are discussed below.

### **6.1 NO ACTION ALTERNATIVE**

Under the No Action alternative, no development would occur and the property would remain in its existing state. Impacts associated with development of the proposed Kahuku Village, both beneficial and adverse, would not occur.

The No Action alternative was rejected because it is not consistent with several objectives of the proposed action. Specific objectives that the No Action alternative is inconsistent with include the following.

Protect and steward the precious natural and cultural resources at the Site. While it would appear that the No Action alternative is consistent with natural resource protection, this alternative would forego the opportunity to actively manage the Site's cultural and natural resources. Nani Kahuku Aina strives to protect the Site's resources, however, management is difficult due to the Site's vast size and very limited revenue generated from activities at the Site. If left unmanaged, the Site's resources are susceptible to damage, degradation and overuse. For example, litter and trash is an ongoing problem and the marine assessment found that stocks of preferred fish have already been impacted by fishing, spear fishing, and aquarium collection. The plan for Kahuku Village seeks to strike a balance between developing revenue generating land uses and resource protection and stewardship. As discussed in Section 2.3.2 (Proposed Project), a portion of proceeds from revenue generating land uses will supplement funding for the proposed Hawaiian Heritage Center, which will be empowered to protect and steward the Site's natural and cultural resources. The Hawaiian Heritage Center, in conjunction with area residents, will develop and enforce a comprehensive Integrated Natural and Cultural Resources Management Plan that will balance access and education of the Site's resource with protection and preservation.

Create Job Opportunities. As discussed in Section 4.7 (Socio-Economic Characteristics) Kahuku Village will create 393 FTE annual construction related jobs and 1,493 FTE annual long-term jobs. Since the closure of Ka'ū Sugar Company in 1996, no industry in the Ka'ū region has provided a significant number of replacement jobs and many residents must commute to Hilo or Kona for employment opportunities. Creation of employment opportunities associated with Kahuku Village would be foregone under the No Action alternative, as would be the opportunity to create an economic engine for the Ka'ū region.

Provide Diverse Housing Opportunities. As discussed in Section 4.7.2, Kahuku Village will provide approximately 1,050 residential units at a range of price points and for a variety of household types. As required by the County at least 20% of the units will be affordable units. The No Action alternative foregoes the opportunity to provide these housing opportunities.

Increase Basic Services. The HOVE and Hawaiian Ocean View Ranchos communities are rapidly growing and are underserved by existing public facilities. As part of the development of Kahuku Village, the Applicant will dedicate land for civic facilities including an elementary school, police station, fire station, and district park that will serve the regional population. The

No Action alternative will forego the opportunity for these civic facilities that benefit the larger regional community.

## **6.2 AGRICULTURAL SUBDIVISION**

An agricultural subdivision could be developed at the Site as an alternative to the proposed Kahuku Village. Presently, about 8,305 acres of the Site are within the State Land Use Agriculture district and zoned by the County as Agricultural-20 (minimum 20-acre lot size). This allows for the development of up to 415 agricultural lots at the Site. The agricultural subdivision alternative was rejected because it is inconsistent with the following objectives of Kahuku Village.

Protect and steward the precious natural and cultural resources at the Site. As discussed in section 2.3.2 (Proposed Project), an integral component of Kahuku Village is the formation of a Hawaiian Heritage Center to steward the Site's natural and cultural resources. The Hawaiian Heritage Center will in part be funded through revenue generating land uses. It is unlikely that an agricultural subdivision could provide sufficient revenue to fund the activities and programs associated with stewarding the Site's resources, given the Site's vast size and the range of natural and cultural resources.

Maximize Open Space. An agricultural subdivision could result in development of all of the Site's agricultural zoned lands which total 8,305 acres. While the conservation lands would remain in open space, all of the mauka lands could be developed for agricultural related uses. Furthermore, since all of the lands fronting Māmalahoa Highway would be subdivided into smaller agricultural lots, the character of the Site as viewed from the Highway would become more rural in character, as compared to natural, open space being proposed.

Create Job Opportunities. Construction related jobs would be created for development of roads, utilities and structures associated with an agricultural subdivision, however, the quantity of jobs created would likely be substantially less than that projected in Section 4.7.4. Furthermore, given the agricultural subdivision's single-use zoning, the diversity of long-term operational jobs created would be greatly reduced as compared to the proposed Kahuku Village.

Provide Diverse Housing Opportunities. Under an agricultural subdivision, only farm dwellings may be constructed. In addition, the Applicant would not be required to provide affordable dwelling units. Subsequently, the diversity of housing product types and price-points would be greatly reduced.

Increase Basic Services. If an agricultural subdivision were to be developed, the lands proposed for the civic facilities may be developed as agricultural lots. Consequently, the opportunity to provide civic facilities that benefit the larger regional community may be foregone.

Leverage low-key, high-quality visitor accommodations to subsidize community benefits. As discussed in section 2.3.2 (Proposed Project), an integral component of Kahuku Village is the formation of a Hawaiian Heritage Center to steward the Site's natural and cultural resources. The Hawaiian Heritage Center will, in part, be funded through revenue generating land uses. The proposed visitor accommodations could be a significant source of operational revenue for the Hawaiian Heritage Center and this revenue source would be foregone under the agricultural subdivision alternative.

### 6.3 ALTERNATE DEVELOPMENT PLANS

A number of alternative development plans could be developed for the Site. Relative to the objectives of Kahuku Village, any alternate development scheme will involve tradeoffs between protection and preservation of the Site’s natural and cultural resources and developing revenue generating urban land uses that can fund stewardship efforts. Two alternative development schemes are discussed below, the development of Mauka and Makai Villages which was the preferred alternative in the EISPN, and the Hawaiian Riviera Resort alternative which was previously proposed at the Site and adjacent lands.

#### 6.3.1 Mauka and Makai Villages

Development of both Mauka and Makai Villages was initially proposed, and was the preferred alternative discussed in the EISPN. This alternative proposed the development of up to 3,090 residential, condominium, hotel, and agricultural units and reclassification of 8,425 acres from the State Land Use Conservation and Agriculture districts to the Urban, Rural, and Agriculture districts. The development program for the Mauka and Makai Villages alternative as described in the EISPN is provided in Table 18.

**Table 18: Mauka and Makai Villages Alternative Development Program**

	Potential Uses	Acreage	Units
<b>Mauka Village</b>			
Village Core	Mixed residential, plaza, civic, police/fire, school, medical center, commercial	280	300-450 (residential)
Mixed Use Expansion Area	Single-family residential, district park, light industrial	810	350-600 (residential)
<b>Makai Village</b>			
Low-scale resort	Hotel(s), condominiums, eco-lodge, eco-cabins, oceanfront lots	600	400-650 (hotel, condo), 200-300 (eco-lodge, eco-cabins)
Golf course	36-hole	610	
Large lot residential	Golf estates and villas	1,820	850 lots
<b>Hawaiian Heritage Center &amp; other Open Space</b>			
	Heritage Center, shoreline open space and trails	720	
<b>Airport/Helipad</b>			
Airport	Airport or helipad facilities	500	
Ancillary lots	Residential or industrial lots	140	70 lots
<b>Agricultural/Energy Lots</b>			
	>5-acre lots limited to agricultural or energy production uses	1,820	170 lots
<b>Unplanned open area</b>			
		9,150	

As discussed in Section 2.3.1, this alternative was rejected because of community concerns regarding the loss of open space which would change the character of the Site. Although over 9,000 acres of the Site would have remained as open space, development of a Mauka Village would have changed the character of the Site, particularly as seen from Māmalahoa Highway, from one of undeveloped open space to a rural or urban character. Therefore, although this alternative is consistent with Kahuku Village's objectives as described in Section 2.2.1 of this EIS, it was determined that confining development to the Makai portion of the Site struck the proper balance among the project's objectives and community desires.

In addition to visual impacts, potential impacts to air quality, water quality, and noise associated with this alternative would likely have been magnified as compared to the proposed alternative due to the larger development footprint and broader range of urban uses. Beneficial impacts would have included the creation of a larger number of construction and long-term employment opportunities, increased and more diverse housing opportunities, increased tax revenue to the County and State, and increased revenue to fund resource stewardship efforts.

### **6.3.2 Hawaiian Riviera Resort**

As discussed in Section 2.1.7 of this EIS, The Hawaiian Riviera Resort project was previously proposed on the Site and adjacent lands. The Hawaiian Riviera Resort was envisioned to be a major visitor destination area with a luxury hotel, various resort condominium structures, residential homesites, commercial space, three 18-hole golf courses, and recreational facilities. In addition, a marina, cruise ship docking facility, petroglyph park and cultural center were planned.

Development of a project such as the Hawaiian Riviera Resort would not be consistent with Kahuku Village's objectives. In particular, this objective is not consistent with the objectives of protecting and stewarding the Site's natural and cultural resources and leveraging low-key quality resorts to subsidize community benefits. A large, luxury resort development would not be consistent with the rural character or the Ka'ū region. Furthermore, introducing a large number of visitors to the Site, as was being proposed, would increase the likelihood of resource overuse, damage and degradation.

## **6.4 POSTPONE DEVELOPMENT**

Postponing development to a future date would have similar impacts in the interim to the No Action alternative described previously. Resource protection and stewardship efforts would be hampered due to the lack of financial resources to fund programs. The project's objectives of creating job opportunities, providing diverse housing opportunities, increasing basic services, and leveraging a low-key high quality resort to subsidize community benefits would only be attained when the project proceeds.

There is no reason, however, to postpone the project. The resource stewardship efforts should be undertaken immediately to prevent their further degradation. This can only be done, however, if sufficient funds are available from revenue generating land uses. As discussed in Section 4.7, there is presently sufficient market demand for the residential, commercial, and visitor uses to justify their development.

## **6.5 ALTERNATE SITE**

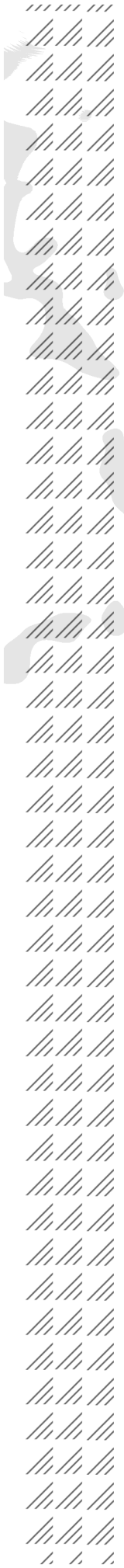
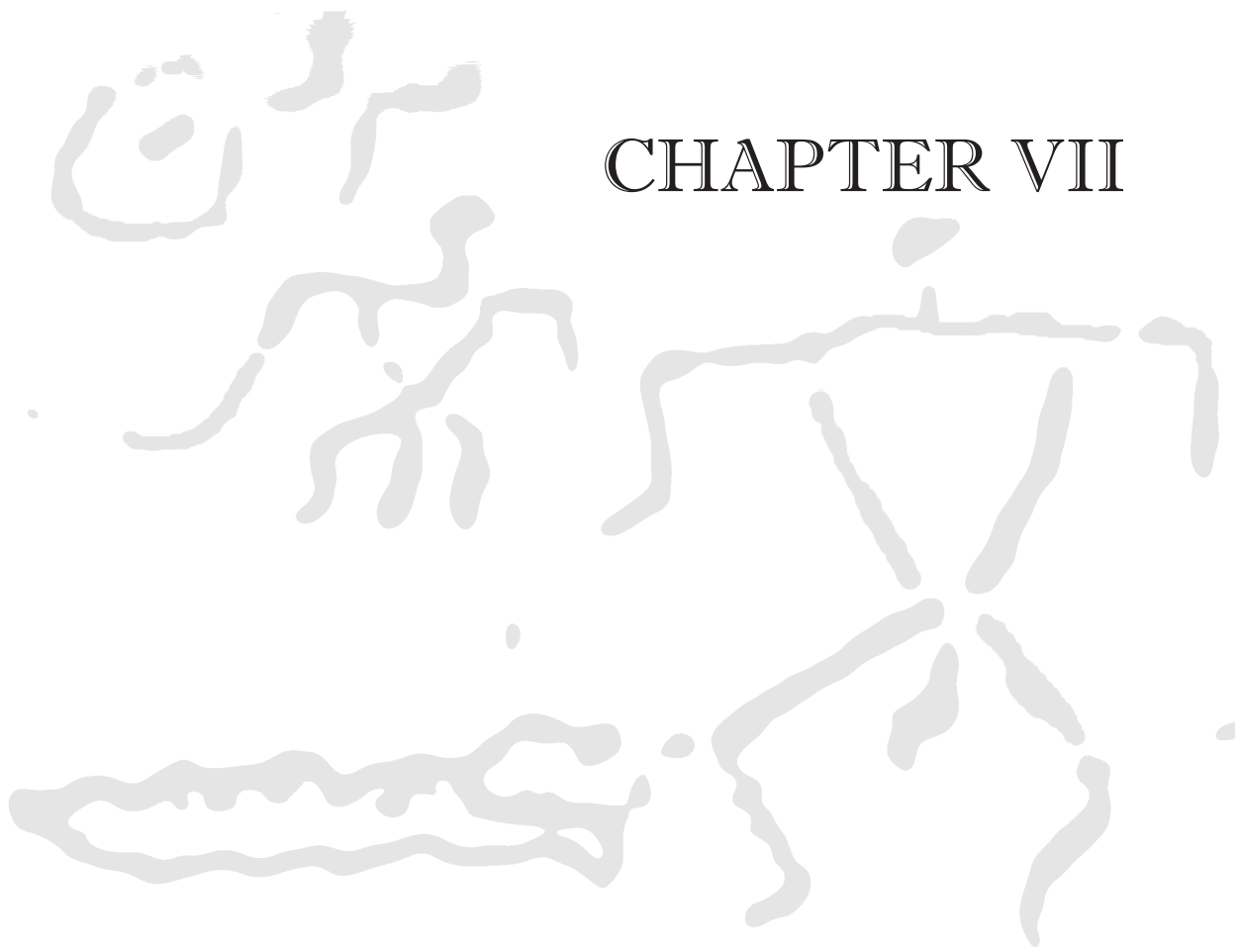
Development of the project on another site is not feasible due to the site-specific nature of the project's resources. As described in chapters 3 and 4 of this EIS, there are numerous natural and cultural resources associated with the Site. An overriding objective of developing Kahuku Village is to protect and steward the Site's resources. The stewardship efforts in turn require balanced development of revenue generating land uses to fund stewardship efforts. While hypothetically it may be possible to develop revenue generating land uses on an alternate site, the nexus of the revenue generated to the Site would be lost, as would be the motivation to fund stewardship programs specifically associated with the Kahuku Village site.

Furthermore, a component of the stewardship objective is to provide managed public access to the Sites resources in concert with programs hosted by the proposed Hawaiian Heritage Center. However, public access to the Site and facilities associated with the Hawaiian Heritage Center would be severely limited without development of Kahuku Village as roadways, water, sewer, electrical and communications systems are proposed to be shared between the Mixed Use Village and Hawaiian Heritage Center.

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# CHAPTER VII

CONTEXTUAL ISSUES



## **7 CONTEXTUAL ISSUES**

This chapter presents key issues within the context of Kahuku Village.

### **7.1 RELATIONSHIP BETWEEN THE SHORT-TERM USES OF THE ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY**

Short-term uses and long-term productivity consist of a project's short-term construction phase and the long-term benefits of the project after construction.

During construction, there will be short-term uses of the environment involving temporary and permanent use of land for grading, site work and building construction. Short-term impacts may also occur to air quality, water quality, ambient noise levels, and traffic conditions. Construction related impacts associated with Kahuku Village can be avoided or mitigated through implementation of BMPs as discussed in Chapters 3 and 4 of this EIS. The trade-off of the short-term uses of the environment are the increase in employment and economic benefits associated with construction of Kahuku Village.

As discussed in Section 2.4.1 (Development Timetable and Preliminary Costs), full build-out and absorption is estimated to occur over approximately 12-years following the issuance of the last discretionary permit for the Project. However, most major grading and backbone infrastructure improvements will be completed during the initial construction period. Construction of the homes and commercial areas will be completed over the entire build-out period.

In the long-term, development of Kahuku Village will commit approximately 1,600 acres of the Site to urban and rural uses. This will preclude the reversion of developed lands to their current undeveloped state. However, the vast majority, over 90%, of the Site will be undeveloped and remain as open space. In addition, development of Kahuku Village presents an opportunity to formalize and perpetuate the educational and research programs conducted at the Site and to implement an Integrated Natural and Cultural Resources Management Plan to protect the Site's resources.

Measures will be implemented to prevent impact to water resources. Drainage systems will be designed to utilize low-impact development techniques and wastewater systems will be designed to provide R1 treatment, the highest standard of wastewater treatment. Other mitigation measures are specified in Section 3.5. These measures will prevent impacts to coastal and ground water quality.

Other long-term effects include changes in regional traffic patterns, demands on public services, and construction of new infrastructure. Appropriate mitigation measures will be implemented to mitigate traffic demands and all infrastructure necessary for Kahuku Village will be constructed and maintained by the Applicant as part of the project. Additionally, 125-acres of lands are proposed to be dedicated to the State and/or County to provide for necessary regional civic facilities.

The long-term productivity of Kahuku Village will outweigh the short-term uses of the environment. Long-term community benefits include stewardship of the Site's resources, improved public access to the shoreline, permanent open space, restored trails, and protected



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coastal and archaeological resources. The supply of various affordable, gap group, and market rate homes within a planned community, along with the provisions of neighborhood needs, will help to satisfy socio-economic needs for area residents.

As the community builds out, its productivity in terms of generating tax revenues will increase. Employment opportunities generated will have benefits that ripple through the regional economy. As discussed in Section 4.7.4 income from property, personal, and excise taxes are expected to more than offset expenses associated with expanded public services to meet the requirements of Kahuku Village.

## **7.2 CUMULATIVE IMPACTS**

Cumulative impacts are those that result from the incremental impact of the action when added to other past, present and reasonably foreseeable future actions. Together with other existing and anticipated development in the region, Kahuku Village has the potential to generate cumulative impacts including impacts to regional traffic volumes and demand on public services such as school facilities, and police and fire protection services, and groundwater resources.

The analysis of impacts on the natural and human environment has taken into account other relevant developments in the Ka‘ū district. The major ongoing developments in the vicinity of Kahuku Village are the 1,229 lot Hawaiian Ocean View Ranchos subdivision (Ranchos), the 10,697 lot HOVE subdivision. Although the Ranchos and HOVE subdivisions initially were created in the 1950’s, most of the lots are undeveloped.

**Schools** - As discussed in Section 4.9.1, students residing at Kahuku Village would likely attend Nā‘ālehu Elementary School and Ka‘ū High School. Presently, Ka‘ū High School/Pahala Elementary School is operating under capacity, however, Naalahu Elementary School is operating over capacity. In the long-term, as resident population at Kahuku Village, HOVE, and Ranchos increases, new school facilities may be required. Kahuku Village addresses long-term impacts by dedicating over 100-acres of land to State and/or County of Hawai‘i agencies, a portion of which can be used for development of school facilities.

**Traffic** - The traffic study prepared for Kahuku Villages factored ambient growth in traffic from increasing population in the vicinity, including continued build-out of HOVE and Ranchos. Traffic operations on Māmalahoa Highway in the vicinity of the Site are expected to remain at an acceptable level (LOS D or better) through build-out of Kahuku Village. Findings of the traffic study are summarized in Section 4.3.

**Public Services** - Development of Kahuku Village in conjunction with HOVE and Ranchos will increase the need for public services such as police protection, fire protection and emergency medical services. Lands are proposed to be dedicated to the County to enable the construction of civic facilities when they are needed and resources are available. The increased State and County revenues from increased property taxes, general excise taxes, transient accommodations taxes, and increased income taxes from employment generated by development of Kahuku Village will help to offset costs associated with the additional public services.

**Groundwater** - Development and operation of Kahuku Village’s water and wastewater systems are anticipated to have no significant adverse impact on groundwater resources. As build-out of the HOVE and Ranchos subdivisions progresses, water demand will increase, as will the

generation of wastewater. Water to HOVE and Ranchos is provided by catchment systems only. Should a public water system using groundwater be developed in the future, it would need to comply with DOH and Commission on Water Resource Management regulations, as well as County water supply regulations to prevent impact to the underlying groundwater aquifer. New wastewater systems, including individual wastewater systems such as septic systems, must comply with State DOH regulations to prevent impact to water resources.

### **7.3 SECONDARY IMPACTS**

Secondary impacts include those that are caused by the Project and occur later in time or are farther removed in distance, but are still reasonably foreseeable. They may include growth inducing effects, induced changes in the pattern of land use, environmental impacts, socio-economic impacts, or fiscal impacts.

**Air quality** - Depending on electrical demand levels and the source of electrical power, long-term impacts on air quality are possible due to indirect emissions associated with electrical power requirements. However, in context of Kahuku Village's electrical requirements in relation to the total output of HELCO's generating plants, the increase is anticipated to be negligible. Regardless of the extent of impact, Kahuku Village will seek to incorporate energy conserving measures and sources of alternate energy, as discussed in Section 4.8.4.

**Population** - Kahuku Village's housing units are expected to appeal to a broad range of buyers, including off-shore buyers. In addition, the Hawaiian Heritage Center and visitor accommodation units may increase the number of visitors to the County and Ka'u District. The impact to public services associated with the increased population will be offset by additional revenue in the form of property taxes, transient accommodations taxes, general excise taxes, and income taxes. In addition, the added population will likely spur additional demand for goods and services, thereby supporting employment opportunities.

**Employment and Workforce Income** - Kahuku Village will bring about positive benefits to the local economy, including increased expenditures for construction, infrastructure improvements, and construction-related jobs and tax revenue. During construction, Kahuku Village could generate development related employment of approximately 393 jobs per year. The 393 jobs are expected to translate to about \$295.3 million increase in workforce income during the construction period.

At full build-out, Kahuku Village is anticipated to generate about 1,493 long-term job opportunities at its commercial, civic, and hospitality facilities. These could include entry-level, professional, technical, and managerial opportunities. The long-term jobs created are expected to translate to about \$43.2 million annually in long-term workforce income.

**Fiscal Impacts** - Kahuku Village will increase the demand for public services provided by the County of Hawai'i and State. However, as discussed in Section 4.7.4, the increased revenue in the form of increased property taxes, general excise taxes, transient accommodations taxes, and increased income taxes from employment generated will create a net fiscal benefit to the State and County. At build-out, Kahuku Village is expected to generate an annual \$9.8 million "profit" to the County of Hawai'i and a \$250,000 profit to the State.

**Solid Waste** - Solid waste generated at Kahuku Village that cannot be reused or recycled will likely be disposed of at a County landfill. The County's *Integrated Resources and Solid Waste*

*Management Plan Update, December 2009*, however, accounts for population growth and in-migration based on historical trends in its forecasts. New developments such as Kahuku Village, therefore, should not have a significant effect on the County's landfill capacity projections so long as the total population increase is in-line with projections.

#### **7.4 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES**

Kahuku Village will result in the irreversible and irretreivable commitment of certain natural, human, and fiscal resources. Major irreversible resource commitments include the project lands, financing, construction material, labor, and energy required for construction of Kahuku Village. The impacts associated with commitment of these resources, however, should be weighed against the positive environmental, socio-economic, and fiscal benefits that will be derived from creation of Kahuku Village.

**Land and Open Space** - Kahuku Village will transform a portion of the Nani Kahuku Aina site into urban and rural uses which represents an irretreivable loss of open space and use of the land for other purposes. Kahuku Village will also change the aesthetic qualities of developed portions of the site, changing it one representative of a rural community.

**Labor** - Development of Kahuku Village will require an irretreivable commitment of labor resources to plan, design, and construct the project. Labor committed to Kahuku Villages will be irreversible and not available for other endeavors.

**Energy** - Use of energy in the form of fossil fuels for construction vehicles and equipment and electrical power generation will be required for construction of Kahuku Village. Once developed, Kahuku Village will also require energy in the form of electricity for homes and businesses, civic uses, transportation needs, and operation of infrastructure systems.

**Materials** - A variety of construction materials will be needed for Kahuku Village including, but not limited to, fill and aggregate for roadways, materials for construction, finishing, and furnishing buildings, and materials for construction of infrastructure systems. Use of these materials at Kahuku Village represents an irretreivable commitment of resources, unless they are recycled in the future.

#### **7.5 PROBABLE ADVERSE ENVIRONMENTAL EFFECTS THAT CANNOT BE AVOIDED**

The following describes adverse environmental impacts that are unavoidable. As discussed throughout this EIS, mitigation measures can be implemented to prevent and minimize impacts. In addition, unavoidable impacts should be weighed against the positive environmental, socio-economic, and fiscal benefits that will be derived from creation of Kahuku Village.

**Land Use Character** –Kahuku Village will change the character of developed portions of the site from open space to a rural community character. However, since lands near Māmalahoa Highway will largely remain undeveloped, most travelers on the highway will not notice the change in land use character. In addition access to the property's coast, where development will be located, is limited due to the 6-mile distance from Māmalahoa Highway that is accessible only by a rough, unimproved road. Therefore, while the character of the coastal region will change, the Site's coastal resources will also become more accessible to residents and visitors. Impacts to the natural characteristics of the shoreline area will be minimized through designation of a shoreline conservation zone extending at least 300 feet inland.

**Traffic Impacts** – Traffic on Māmalahoa Highway is expected to increase even if Kahuku Village is not built. As discussed in Section 4.3, necessary traffic improvements have been identified and will be implemented by Nani Kahuku Aina. Traffic in the vicinity of Kahuku Village is expected to continue to operate at an acceptable level of service.

**Solid Waste** – As detailed in Section 4.8.5, solid waste will be generated during construction and after development of Kahuku Village. Initiatives to reduce solid waste, such as green waste composting and construction waste recycling are being considered. Solid waste that cannot be recycled will be disposed of at the County Landfill.

**Electrical Power** – At build-out, Kahuku Village’s electrical demand is projected to be 30,409 kVA. To reduce energy consumption, Nani Kahuku Aina is considering implementing a number of energy conserving measures, as well as using sources of renewable energy. These measures include using solar energy for energy production and water heating, energy efficient design of buildings, use of Energy Star appliances, and using landscaping for shading buildings.

**Air Quality** – Construction related air quality impacts may occur from fugitive dust releases at construction areas. Mitigation measures, including frequent watering of exposed surfaces, will help to reduce and control such releases, and all construction activities will comply with the provisions of HAR, Chapter 11-60.1, Air Pollution Control, Section 11-60.1-33, “Fugitive Dust.” Over the long-term, an air quality modeling analysis of estimated community-related traffic indicates that even during worst-case conditions, predicted concentrations of pollutants will remain well below State and Federal standards.

**Noise** – During construction, temporary noise impacts may occur. The dominant noise sources during construction will most likely be earth-moving equipment, such as bulldozers and diesel trucks. Noise from construction activities will comply with all federal and state noise control regulations. In the long-term, traffic-generated noise to the community will be mitigated by providing adequate setbacks from project roadways.

### **7.5.1 Rationale for Proceeding with Kahuku Village Notwithstanding Unavoidable Effects**

In light of the above mentioned unavoidable effects, Kahuku Village should proceed because adverse impacts can be mitigated and are offset by substantial positive factors, including:

- Establishment of a Hawaiian Heritage Center that will interpret and preserve the site’s significant archaeological and cultural resources for the benefit of residents and visitors.
- Implementation of an Integrated Natural Resources and Cultural Management Plan to actively steward the Site’s natural and cultural resources.
- Dedication of over 100-acres of land to the County of Hawai’i and State for regional serving civic facilities.
- Substantial compliance with policies of the *Hawai’i State Plan*, State Functional Plans, and the Coastal Zone Management Act.
- Consistency with the vision of the Ka’ū CDP.
- The provision of diverse housing opportunities, including affordable housing.
- The wage, tax, and overall positive economic impacts of Kahuku Village, including approximately:

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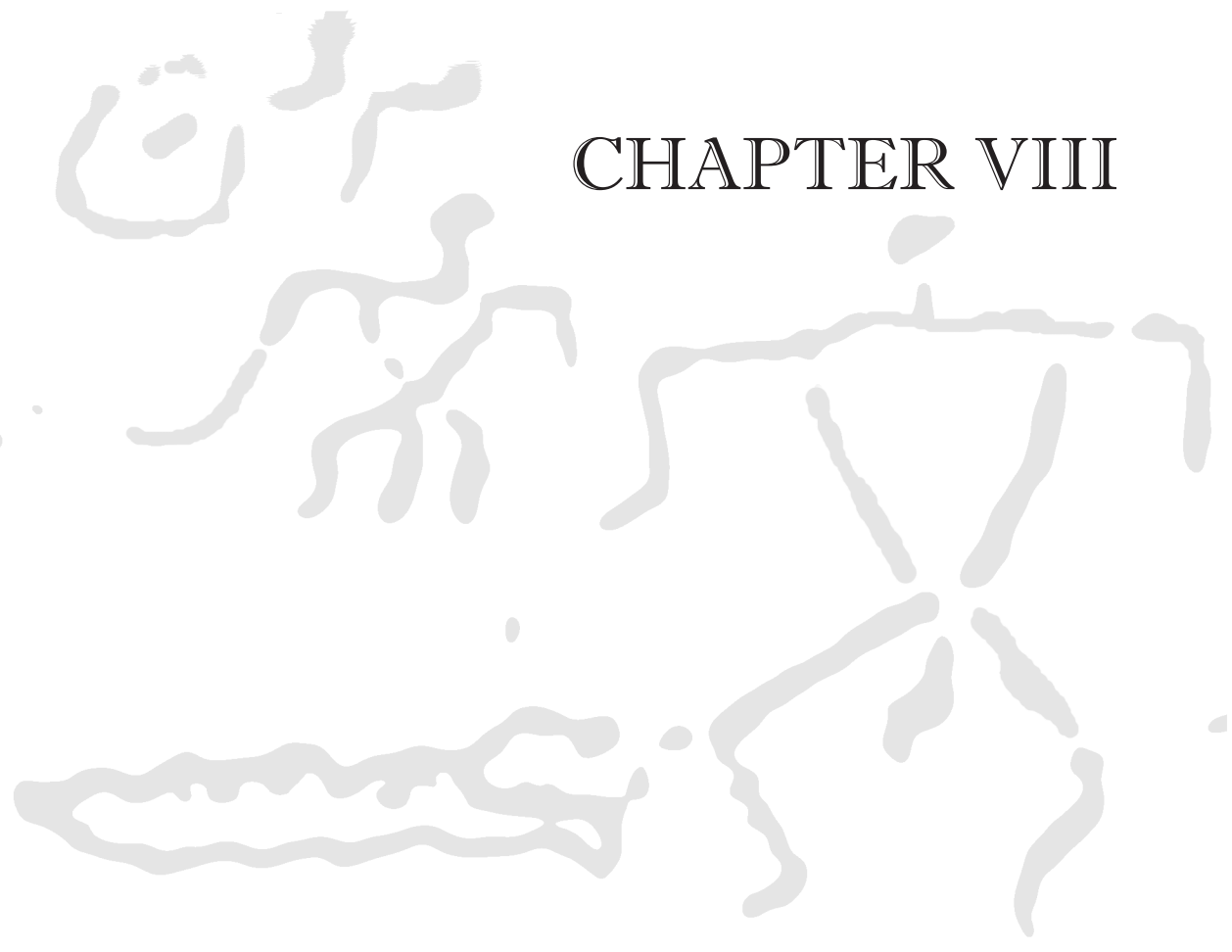
- 393 FTE development-related jobs per year (average) during Kahuku Village's construction.
- 1,509 direct permanent, ongoing FTE new jobs after build-out.
- About \$10 million per year in net County revenues (additional government revenues less associated operating revenues) at build-out and thereafter.

## **7.6 UNRESOLVED ISSUE**

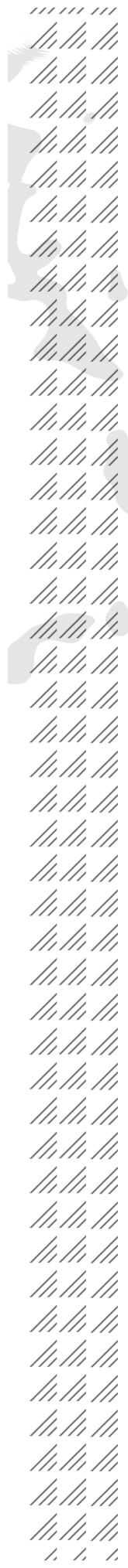
**Electrical Power** - As discussed in Section 4.8.4, two sources of power are being considered for Kahuku Village: 1) a connection to HELCO's facilities, or 2) a connection to the Kamaoa Wind Farm. The decision of which alternative to pursue will be made based upon factors such as reliability of power supply, construction and operational costs, and the availability of easements or access rights for transmission lines.

**Schedule for Development of Civic Uses** – Approximately 100-acres of land in the northwest corner of the Site are proposed to be dedicated to the State and/or County for the construction of regional-serving civic facilities such as an elementary school, district park, police sub-station, fire station and emergency medical center. It is anticipated that these facilities will be constructed by the State and County when they are needed and resources are available. Separate environmental documentation will be required prior to development of facilities by the State and/or County.

# CHAPTER VIII



CONSULTATION



## **8 CONSULTATION**

### **8.1 PRE-CONSULTATION**

In the course of planning for Kahuku Village, the following agencies or individuals were consulted or provided information in preparation of the EISPN:

#### **Federal**

- Natural Resources Conservation Service

#### **State of Hawai‘i**

- Department of Agriculture
- Department of Business Economic Development & Tourism, Office of Planning
- Department of Hawaiian Home Lands
- Office of Hawaiian Affairs
- Land Use Commission
- Department of Transportation
- University of Hawai‘i at Hilo
- University of Hawai‘i at Mānoa
- Department of Defense, Office of the Adjutant General

#### **Hawai‘i County**

- Planning Department
- Department of Public Works
- Department of Water Supply
- Mayor
- Fire Department
- Police Department
- Council Members

#### **Other**

- Ka‘ū Hawaiian Civic Club
- Ka‘ū Preservation Council
- Ka‘ū Chamber of Commerce
- Hawaiian Ocean View Ranchos Road Maintenance Corporation
- Hawaiian Ranchos Community Association
- Ocean View Community Association
- Ocean View Community Development Corporation
- Ocean View Neighborhood Watch
- Nā‘ālehu Main Street
- Kona Historical Society

## **8.2 EISPN CONSULTATION**

The EISPN was sent to the following agencies, organizations, and individuals. The public comment period on the EISPN was from September 8, 2009 to October 7, 2009. Section 11.0 of this EIS contains comment letters on the EISPN and responses.

### **Federal**

- Natural Resources Conservation Service
- U.S. Army Corp. of Engineers Division
- U.S. Department of the Interior, Fish and Wildlife Service
- U.S. Geological Survey, Hawaiian Volcano Observatory
- National Park Service, Ala Kahakai Trails
- National Park Service, Volcanoes National Park

### **State of Hawai'i**

- Department of Agriculture
- DBEDT, Office of Planning
- DBEDT, Resources & Technology Division
- Department of Education
- Department of Hawaiian Home Lands
- Office of Hawaiian Affairs
- Department of Health
- Department of Land and Natural Resources (DLNR), Office of Conservation and Coastal Lands
- DLNR, Historic Preservation Division
- DLNR, Na Ala Hele Program
- DOH, Office of Environmental Quality Control
- Land Use Commission
- Department of Transportation
- University of Hawai'i at Hilo
- University of Hawai'i at Mānoa (UHM)
- UHM Environmental Center
- Department of Defense (DOD), Office of the Adjutant General
- DOD, Office of Veterans Services

### **Hawai'i County**

- Civil Defense
- Department of Environmental Management
- Department of Parks and Recreation
- Department of Public Works
- Department of Research and Development, Ka'ū Community Development Plan Steering Committee
- Department of Water Supply
- Fire Department
- Mass Transit Agency
- Office of the Mayor
- Planning Department
- Police Department
- Council Members



**Other**

- Ka‘ū Hawaiian Civic Club
- Ka‘ū Preservation Council
- Ka‘ū Chamber of Commerce
- Hawaiian Electric Light Company
- Hawaiian Telcom
- Hawaiian Ocean View Ranchos Road Maintenance Corporation
- Hawaiian Ranchos Community Association
- Ocean View Community Association
- Ocean View Community Development Corporation
- Ocean View Neighborhood Watch
- Oceanic Time Warner Cable
- Nā‘ālehu Main Street
- Kona Historical Society

**8.3 DRAFT EIS CONSULTATION**

The Draft EIS has been distributed to the following agencies and organizations:

**Federal**

- Natural Resources Conservation Service
- U.S. Army Corp. of Engineers Division
- U.S. Department of the Interior, Fish and Wildlife Service
- U.S. Geological Survey, Hawaiian Volcano Observatory
- National Park Service, Ala Kahakai Trails
- National Park Service, Volcanoes National Park

**State of Hawai‘i**

- Department of Agriculture
- Department of Business Economic Development & Tourism, Office of Planning
- DBEDT, Resources & Technology Division
- Department of Education
- Department of Hawaiian Home Lands
- Office of Hawaiian Affairs
- Department of Health
- Department of Land and Natural Resources, Office of Conservation and Coastal Lands
- DLNR, Commission on Water Resource Management
- DLNR, Historic Preservation Division
- DLNR, Na Ala Hele Program
- DOH, Office of Environmental Quality Control
- Land Use Commission
- Department of Transportation
- University of Hawai‘i at Hilo
- University of Hawai‘i at Mānoa (UHM)
- UHM Environmental Center
- Department of Defense (DOD), Office of the Adjutant General
- DOD, Office of Veterans Services

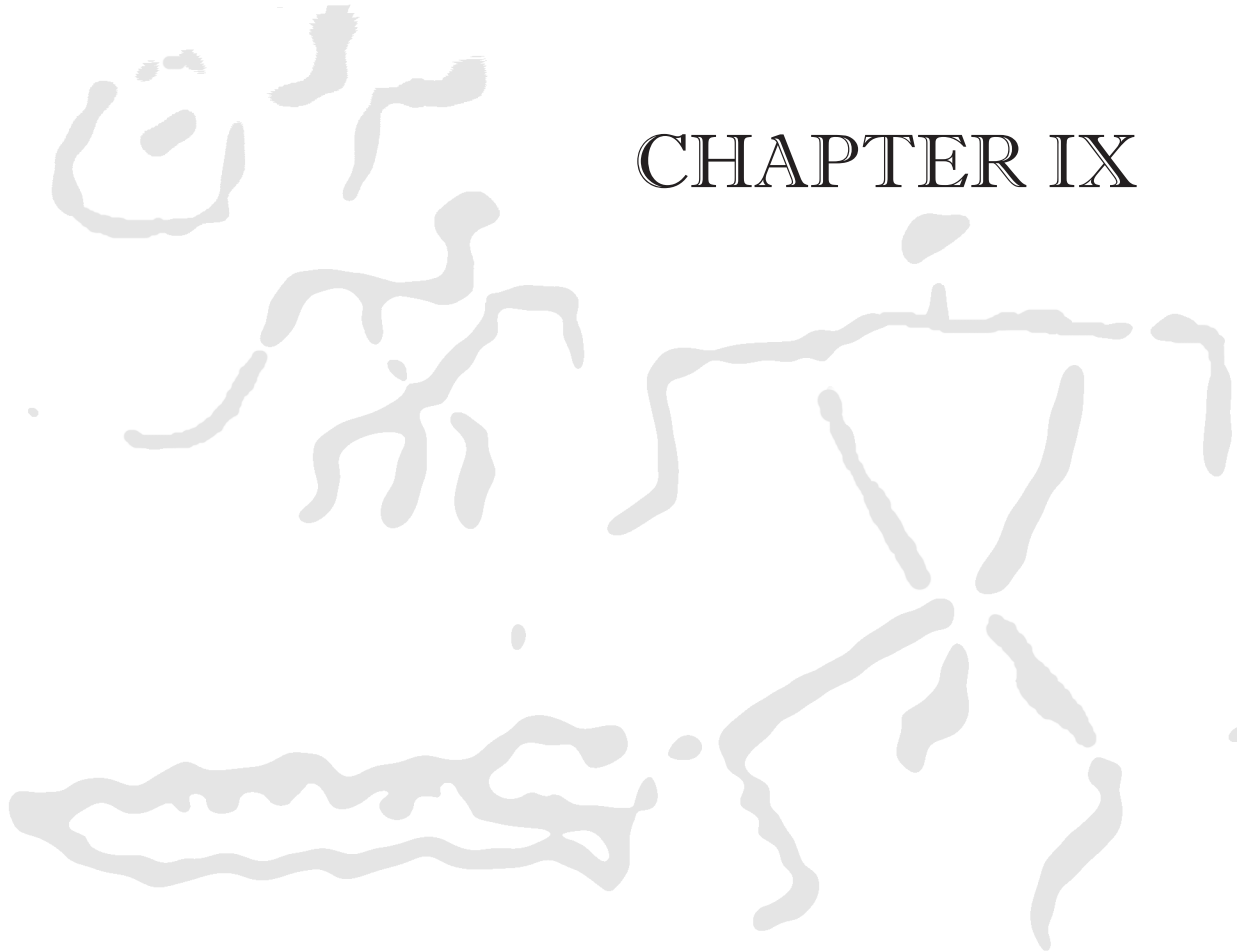
**Hawai'i County**

- Civil Defense
- Department of Environmental Management
- Department of Parks and Recreation
- Department of Public Works
- Department of Research and Development, Ka'ū Community Development Plan Steering Committee
- Department of Water Supply
- Fire Department
- Mass Transit Agency
- Office of the Mayor
- Planning Department
- Police Department
- Council Members

**Other**

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- Ka'ū Preservation Council
- Ka'ū Chamber of Commerce
- Hawaiian Electric Light Company
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- Hawaiian Ranchos Community Association
- Ocean View Community Association
- Ocean View Community Development Corporation
- Ocean View Neighborhood Watch
- Oceanic Time Warner Cable
- Nā'ālehu Main Street
- Kona Historical Society

# CHAPTER IX



LIST OF PREPARERS



## 9 LIST OF PREPARERS

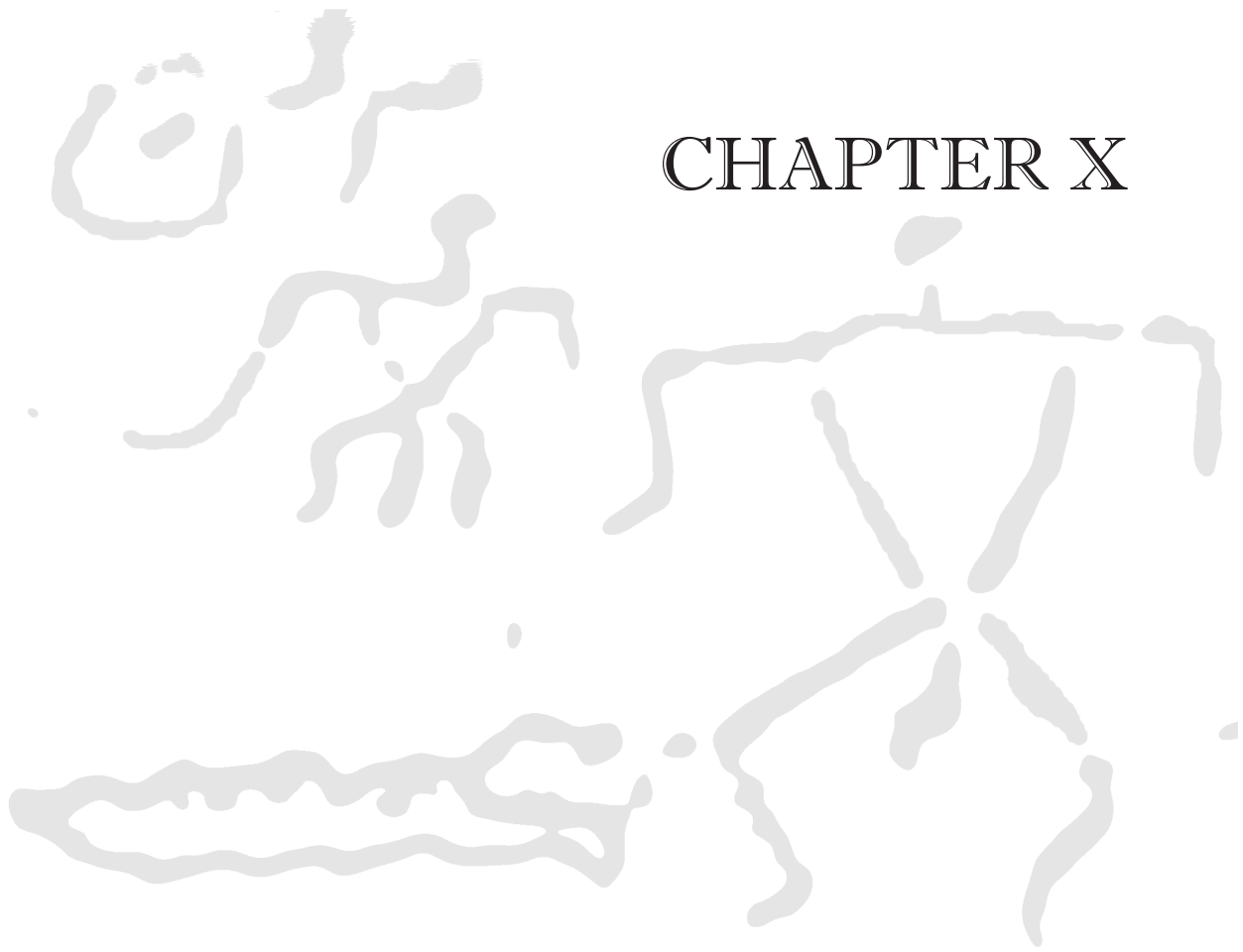
The Draft EIS has been prepared by PBR HAWAII, 1001 Bishop Street, ASB Tower, Suite 650, Honolulu, Hawai'i 96813.

Several key technical consultants were employed to provide specific assessments of environmental factors for this project. These consultants and their specialty are listed below:

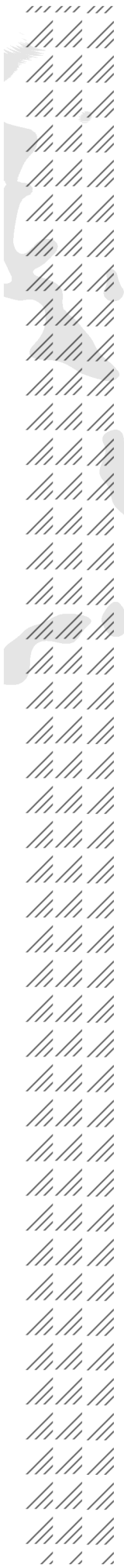
<b>Name</b>	<b>Area of Expertise</b>
B. D. Neal & Associates	Air Quality Impact Assessment
T.S. Dye & Colleagues	Archeological Inventory Survey
Helen Wong Smith	Cultural Impact Assessment
The Traffic Management Consultant	Traffic and Engineering
Ricky Cassidy	Real Estate Market Assessment
The Hallstrom Group	Economic and Fiscal Impact Assessment
Tom Nance Water Resources Engineering	Hydrology
LeGrand Biological Surveys	Botanical Survey
Steven Lee Montgomery, Ph.D.	Terrestrial Wildlife Survey
Marine Research Consultants	Marine Biological and Water Quality Baseline Surveys
Gray Hong Nojima and Associates, Inc.	Preliminary Engineering
Geolabs, Inc.	Geotechnical Engineering
Y. Ebisu & Associates	Noise Assessment

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# CHAPTER X



REFERENCES



## 10 REFERENCES

- Belt Collins & Associates, 1987. Final EIS for the Hawaiian Riviera Resort, Kahuku, Ka'ū, Hawai'i, Prepared for Palace Development Corporation and Hawai'i Ka'ū Aina Partnership.
- Bruner, P., 1987. Avifaunal and Feral Mammal Survey of Hawaiian Riviera Resort Property at Ka'ū, Hawai'i. Appendix B in Belt Collins 1987.
- Clark, John, 1985. Beaches of the Big Island. University of Hawai'i Press: Honolulu.
- Dames & Moore, 1987. "Geological Investigation: Proposed Hawaiian Riviera Resort, Ka'ū, Hawai'i," included as Appendix G in Belt Collins & Associates, 1987.
- Dames & Moore, 1988. "Geophysical Investigation of Ground Cracks: Proposed Hawaiian Riviera Resort, Ka'ū, Hawai'i, Hawai'i, TMK: 9-2-01: Portion 72 (Draft Report)." Prepared for Place Development Cooperation and Ka'ū Aina Partnership.
- Department of Land & Natural Resources (DLNR), State of Hawai'i, 1970. An Inventory of Basic Water Resources Data: Island of Hawai'i. Report R34.
- Handy, C. and G. Handy, 1072. Native Planters in Old Hawai'i: Their Life, Lore, and Environment. Bernice P. Bishop Museum Bulletin 233, Bishop Museum Press: Honolulu.
- Haun, Alan and Alan Walker, 1987. Archaeological Reconnaissance Survey: Hawaiian Riviera Resort Project Area. Paul H. Rosendahl, Ph.D., Inc., Appendix E in Belt Collins and Associates 1987.
- Lipman, P.W., 1980a. "Rates of Volcanic Activity Along the Southwest Rift Zone of Mauna Loa, Hawai'i," Bull. Volcano, Vol. 43-4, pp. 703-725, cited in Dames & Moore, 1987.
- Lipman, P.W., 1980b. "The Southwest Rift Zone of Mauna Loa: Implications for Structural Evolution of Hawaiian Volcanoes," American Journal of Science, vol. 280-A, 1980, pp. 752-776, cited in Dames & Moore, 1987.
- Morrow, J.W., 1987. "Air Quality Impact Analysis: Hawaiian Riviera Resort," included as Appendix A in Belt Collins & Associates, 1987.
- Mullineaux, D.R., D.W. Peterson, and D.R. Crandall, 1987. "Volcanic Hazards in the Hawaiian Islands," USGS Professional Paper 1350, Chap. 22, pp. 599-622, cited in Dames & Moore, 1987.
- Seitz, William and Kyle Kagimoto, 2008. Hawai'i Island Hawksbill Turtle Recovery Project: 2007 Annual Report. University of Hawai'i at Manoa Pacific Cooperative Studies Unit and Hawai'i Volcanoes National Park Resources Management Division.
- Silva, Carol, 1987. "Historical Documentary Research," Appendix D in Haun and Walker 1987.

### GIS References

- Baker, H.L. et al. (1965) *Detailed Land Classification, Island of Hawai'i*. L.S. Land Study Bureau, University of Hawai'i.
- FEMA, *Flood Insurance Rate Maps*.
- Hawai'i State Department of Agriculture (1977) *Agricultural Lands of Importance to the State of Hawai'i*. Honolulu, Hawai'i.

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**General References**

- Juvik, Sonia P. and James O. Juvik, eds. (1998) *Atlas of Hawai'i*. 3<sup>rd</sup> Edition. Honolulu: University of Hawai'i Press, Honolulu, Hawai'i.
- Hawai'i Center for Volcanology. (2009). Internet. Available online at [www.soest.hawaii.edu/GG/HCV/abouthcv.html](http://www.soest.hawaii.edu/GG/HCV/abouthcv.html),
- Hawai'i County. (2005) *County of Hawai'i General Plan February 2005*. Hilo: Hawai'i County Planning Department, Hawai'i. Available on the Hawai'i County website: [http://www.hawaii-county.com/directory/dir\\_plan.htm](http://www.hawaii-county.com/directory/dir_plan.htm)
- Hawai'i County. (2008) *County of Hawai'i Data book, Department of Research and Development, Geography and Environment*. Available on the Hawai'i County website: [http://www.co.hawaii.hi.us/databook\\_current/dbooktoc.htm](http://www.co.hawaii.hi.us/databook_current/dbooktoc.htm)
- Hawai'i County, Civil Defense Agency. (2005) *Multihazard Mitigation Plan, County of Hawai'i*. Available online at <http://co.hawaii.hi.us/cd/mmp/main.html>
- Hawai'i Health Systems Corporation. (2006). Kona Community Hospital. Internet. Available online at [www.kch.hhsc.org/](http://www.kch.hhsc.org/)
- Macdonald, Gordon A., Agatin Abbott, Frank L. Peterson. (1983) *Volcanoes Under the Sea: The Geology of Hawai'i*. University of Hawai'i Press, Honolulu, Hawai'i.
- National Oceanic & Atmospheric Administration 2008. National Weather Service Forecast. Western Regional Climate Center. Hawai'i Climate Summaries. Internet. Available online at: <http://www.wrcc.dri.edu/summary/climsmhi.html>
- Natural Energy Laboratory of Hawai'i. (2006). About NELHA. Internet. Available at [www.nelha.org/about/facilities](http://www.nelha.org/about/facilities).
- Pukui, Mary Kawena and Elbert Samuel H. 1986. *Hawaiian Dictionary: Hawaiian-English, English-Hawaiian*. University of Hawai'i Press, Honolulu, Hawai'i.
- State of Hawai'i, Department of Health, Clean Air Branch. 2008. "Documentation of Natural Event Excluded Data. Internet. Available at [hawaii.gov/health/environmental/air/cab/cabmaps/pdf/doc\\_for\\_natural\\_event\\_1st\\_08.pdf](http://hawaii.gov/health/environmental/air/cab/cabmaps/pdf/doc_for_natural_event_1st_08.pdf)
- United States Census Bureau. (2000). Census Report. Internet. Available at: [www.census.gov](http://www.census.gov).
- United States Department of Agriculture Soil Conservation Service. (1972) *Island of Hawai'i, State of Hawai'i*.
- United States Department of the Interior, National Park Service. 2008. *Ala Kahakai National Historic Trail, Draft Comprehensive Management Plan & Environmental Impact Statement*. Available at <http://parkplanning.nps.gov/alka>
- United States Department of the Interior, National Park Service. 2008. *Ala Kahakai National Historic Trail, Abbreviated Final Comprehensive Management Plan & Environmental Impact Statement*. Available at <http://parkplanning.nps.gov/projectHome.cfm?parkID=289&projectId=15805>
- United States Geologic Survey. 1996. *Geologic Map of the Island of Hawai'i*.
- United State Geologic Survey. 1997. Lava Flow Hazard Zone Maps. Internet. Available at [pubs.usgs.gov/gip/hazards/maps.html](http://pubs.usgs.gov/gip/hazards/maps.html)



**Kahuku Village**  
Draft Environmental Impact Statement

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United State Geologic Survey. 2004. Hawaiian Volcano Observatory. Available at <http://hvo.wr.usgs.gov/maunaloa/history/1984.html>

University of Hawaii, Coastal Geology Group. Sea Level Rise Website. Available at <http://www.soest.hawaii.edu/coasts/sealevel/>

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# CHAPTER XI

COMMENTS AND RESPONSES ON THE ENVIRONMENTAL  
IMPACT STATEMENT PREPARATION NOTICE



## **11 COMMENTS AND RESPONSES ON THE EISPN**

The public comment period on the EISPN was from September 8, 2009 to October 7, 2009. Agencies, organizations, or individuals that submitted comments on the EISPN are listed below. Comments received on the EISPN and corresponding response letters are reproduced herein.

### **Federal**

Department of the Army  
National Park Service, Ala Kahakai National Historic Trail  
National Park Service, Hawaii Volcanoes National Park  
National Marine Fisheries Service  
U.S. Department of Agriculture, Natural Resource Conservation Service  
U.S. Fish and Wildlife Service  
U.S. Geological Survey, Hawaii Volcano Observatory

### **State of Hawaii**

Department of Business, Economic Development & Tourism, Office of Planning  
DBEDT Strategic Industries Division  
Department of Defense  
Department of Education  
Department of Health  
Department of Land and Natural Resources, Land Division  
DLNR, Na Ala Hele Program  
DLNR State Historic Preservation Division  
Department of Transportation  
Office of Hawaiian Affairs

### **County of Hawaii**

Department of Public Works  
Department of Water Supply  
Fire Department  
Planning Department  
Police Department

### **Other**

Aaron Smith  
Adam Naha  
[brigitte@alohabroadband.net](mailto:brigitte@alohabroadband.net)  
Carl Hahn  
David Kimo Frankel  
Debera Kahana First  
Debralyn Breithaupt  
Dennis Elwell

**Kahuku Village**  
Draft Environmental Impact Statement

---

**Other (continued)**

Donna Ashenmacher

Eldridge Naboa

Fleur Weymouth

[geomike5@att.net](mailto:geomike5@att.net)

Glen M. Winterbottom

Hua-Wai M. Mahi

James Guerreiro

Kau Malama Aina - Ralph Roland

Ligaya Guerrero

Marge Elwell

Rick Warshauer

Robert & Karen Guerreiro

Robert Shallenberger

Ruth Levin

Ruth Marie Bass

Surfrider Foundation - RH Bennett

Theodore Heath

Illegible



**DEPARTMENT OF THE ARMY**  
U.S. ARMY CORPS OF ENGINEERS, HONOLULU DISTRICT  
FORT SHAFTER, HAWAII 96858-5440

REPLY TO  
ATTENTION OF:

September 29, 2009

Regulatory Branch

File Number: POH-2009-0286

PBR Hawaii  
Attn: Vincent Shigekuni  
1001 Bishop Street, Suite 650  
Honolulu, Hawai'i 96813

Dear Mr. Shigekuni:

This letter is in response to your request, dated September 8, 2009, for our review and early consultation comments of the Environmental Impact Statement Preparation Notice for the proposed development of Kahuku Villages, located in the Kahuku Ahupua'a, Ka'u district, Island of Hawai'i, Hawai'i (TMK 392001072).

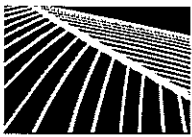
We recommend your Draft Environmental Impact Statement identify all water resources (i.e. streams, wetlands, anchialine ponds) on and in the immediate vicinity of the proposed project site; characterize the hydrology and ecology of those features; provide a detailed description of all ground-disturbing activities associated with the project construction occurring on and in the immediate vicinity of the project site; and provide a cross-section of the proposed work and the existing conditions at the proposed project location.

Section 10 of the Rivers and Harbors Act (RHA) of 1899 requires that a Department of Army (DA) permit be obtained for structures or work in or affecting navigable waters of the U.S. (33 U.S.C. 403). Section 404 of the Clean Water Act (CWA) of 1972 requires that a DA permit be obtained for the discharge (placement) of dredge and/ or fill material into waters of the U.S., including jurisdictional wetlands. The Corps defines wetlands as those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support a prevalence of vegetation typically adapted for life in saturated soil conditions.

If you have any questions, please contact Ms. Meris Bantilan-Smith, of my Regulatory staff at 808-438-7023 or by electronic mail at [Meris.Bantilan-Smith@usace.army.mil](mailto:Meris.Bantilan-Smith@usace.army.mil). Please include File Number POH-2009-286 in any future correspondence regarding this project. Please be advised you can provide comments on your experience with the Corps' Honolulu District Regulatory Branch by accessing our web-based customer survey form at <http://per2.nwp.usace.army.mil/survey.html>.

Sincerely,

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



June 14, 2011

**PRINCIPALS**

THOMAS S. WITTEN, ASLA  
*President*

R. STAN DUNCAN, ASLA  
*Executive Vice-President*

RUSSELL Y. J. CHUNG, FASLA, LEED<sup>®</sup> AP  
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VINCENT SHIGEKUNI  
*Vice-President*

GRANT T. MURAKAMI, AICP, LEED<sup>®</sup> AP  
*Principal*

W. FRANK BRANDT, FASLA  
*Chairman Emeritus*

Mr. George P. Young, P.E.  
Chief, Regulatory Branch  
U.S. Army Corps of Engineers, Honolulu District  
Fort Shafter, Hawaii, 96858-5440

**SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION  
NOTICE (EISPN)  
KAHUKU VILLAGE  
KA'Ū, ISLAND OF HAWAII  
TAX MAP KEY (3) 9-2-001:072**

Dear Mr. Young:

**ASSOCIATES**

TOM SCHNELL, AICP  
*Senior Associate*

RAYMOND T. HIGA, ASLA  
*Senior Associate*

KEVIN K. NISHIKAWA, ASLA  
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KIMI MIKAMI YUEN, LEED<sup>®</sup> AP  
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SCOTT MURAKAMI, ASLA, LEED<sup>®</sup> AP  
*Associate*

DACHENG DONG, LEED<sup>®</sup> AP  
*Associate*

Thank you for your letter dated September 29, 2009 (File Number POH-2009-286) commenting on the Environmental Impact Statement Preparation Notice (EISPN) for Kahuku Village, a master-planned mixed-use community in the Ka'ū district of the County of Hawaii. As the planning consultant for the landowner, Nani Kahuku 'Āina, LLC, we are responding to your comments.

As requested, the Draft EIS will identify all water resources on the project site, including streams, wetlands and anchialine ponds as well as characterize the hydrology and ecology of those features. The Draft EIS will also describe ground-disturbing activities associated with project construction. Cross-sections for grading and construction of structures are presently not available as the project is in the early planning stages. However, site plans and topographic maps will be provided in the Draft EIS.

We acknowledge that Section 10 of the Rivers and Harbors Act requires that a Department of the Army permit be obtained for structures or work that may be in or affect navigable waters and that a Section 404 permit be obtained for discharges of dredge or placement of fill in waters of the U.S. We do not anticipate that construction of Kahuku Village will trigger a Section 10 or Section 404 permit.

We appreciate your participation in the environmental review process. A copy of the Draft EIS will be sent to you when it is available.

Sincerely,

PBR HAWAII

Dean Minakami, AICP  
Planner

cc: Valentine Peroff, Nani Kahuku Aina, LLC  
Bobby Jean Leithead-Todd, Hawaii County Planning Department

HONOLULU OFFICE  
1001 Bishop Street, Suite 650  
Honolulu, Hawaii 96813-3484  
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IN REPLY REFER TO:

## United States Department of the Interior

NATIONAL PARK SERVICE  
Ala Kahakai National Historic Trail  
73-4786 Kanalani St., Suite 14  
Kailua-Kona, HI 96740

October 08, 2009

Mr. Valentine Peroff, President  
Nani Kahuku Aina, LLC  
99-0880 Iwaena Street  
Aiea, HI 96701

RE: EIS Preparation Notice: Kahuku Villages: *Kahuku, Ka'ū, Island & County of Hawai'i*

Dear Mr. Peroff:

Thank you for providing the National Park Service with the opportunity to submit comments to you during your preparation of the EIS for Kahuku Villages in Kahuku, Ka'ū, Island & County of Hawai'i.

The National Park Service (NPS) administers the Ala Kahakai National Historic Trail (NHT), added to the National Trails System by the U.S. Congress on November 13, 2000 (Public Law 106-509). In January 2009, the Ala Kahakai NHT Comprehensive Management Plan (CMP) and EIS were adopted as policy and listed in the Federal Register. The legislation authorizing the Ala Kahakai NHT identifies an approximately 175-mile portion of prehistoric *ala loa*, and other trails on or parallel to the seacoast extending from Upolu Point on the northern tip of Hawaii Island down the west coast of the island around South Point to the east boundary of Hawaii Volcanoes National Park. The Ala Kahakai National Historic Trail combines surviving elements of the *ala loa* with segments of later *alanui aupuni*, which was developed on or parallel to traditional routes, *mauka-makai* trails, and more recent pathways and roads that create links between the historic segments. Natural and cultural resources and landscapes are vital to the mission of the Ala Kahakai National Historic Trail.

Ala Kahakai National Historic Trail was established to administer the preservation and protect, reestablish as necessary, and maintain the ancient coastal *ala loa* and associated resources and values, along with linking trails on or parallel to the shoreline. The goal is to provide high quality experience, enjoyment and education guided by Native Hawaiian protocol and etiquette while protecting the trail's natural and cultural heritage and respecting private and community interests. The 175 mile trail corridor includes those trails found within Kahuku.

The National Park Service thanks the applicant for recognizing Ala Kahakai NHT in the Kahuku Villages EISPN. Please note, contrary to the EISPN, no consultation meeting between Ala Kahakai NHT and Kahuku Villages has taken place in regards to the proposed development.



### **Airport or helipad**

Our concerns for flights over Kahuku include potential impacts to Ala Kahakai NHT soundscapes, threatened and endangered species, resources of cultural importance to Native Hawaiians, wilderness qualities, and the trail user experience.

### **Marine and Near-Shore Ecosystems and Species**

Activities proposed for the shoreline and near-shore environment of the project area have the potential to impact the protection activities for endangered hawksbill sea turtles, threatened green sea turtles, and endangered Hawaiian monk seals. Concerns include loss and degradation of foraging and nesting habitat from near shore development (e.g., landscaping, artificial lighting, contaminants from construction run-off, sewage and other pollutants), threats from increased human presence (e.g., nest trampling, harassment by humans and domestic pets), and increased risk of predation from increased numbers of rats, cats and mongoose. Recommended mitigation would include monitoring and protection of nests and forage areas, predator control, pet management, controls on public access, and consultation with biological experts for the vegetation, landscape, pathway, and lighting design, and public education. Depending on location, any ground water withdrawal for the project should consider potential impacts to the anchialine ponds.

### **Cultural Resources**

The National Park Service looks forward to reviewing the upcoming Archaeological Inventory Survey Report by Tom S. Dye. We anticipate formally responding to the State Historic Preservation Office during the Section 106 consultation process for the EIS.

Again, the National Park Service thanks the applicant for recognizing Ala Kahakai NHT in the Kahuku Villages EISPN. Ala Kahakai NHT is looking forward to working with the landowners and communities of Kahuku and greater Ka'ū to initiate managed access along this unique and fragile section of the Ala Kahakai NHT corridor.

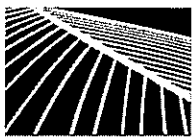
Thank you for the opportunity to provide these comments early in your environmental review process. I look forward to our continuing communication on this proposed project. Please contact me, 808-326-6012 ext.101, or our resource staff archeologist, Rick Gmirkin, at ext. 102 to discuss any questions you may have on our comments.

Sincerely,



Aric Arakaki  
Superintendent

cc: Mr. Vincent Shigekuni, PBR Hawaii  
B. Leithead-Todd, County of Hawaii Planning Department  
State of Hawaii, DLNR, Department of Forestry and Wildlife, Na Ala Hele  
State of Hawaii, State Historic Preservation Division  
Office of Environmental Quality Control  
NPS Pacific West Region



# PBR HAWAII

& ASSOCIATES, INC.

June 14, 2011

## PRINCIPALS

THOMAS S. WITTEN, ASLA  
*President*

R. STAN DUNCAN, ASLA  
*Executive Vice-President*

RUSSELL Y. J. CHUNG, FASLA, LEED<sup>®</sup> AP  
*Executive Vice-President*

VINCENT SHIGEKUNI  
*Vice-President*

GRANT T. MURAKAMI, AICP, LEED<sup>®</sup> AP  
*Principal*

W. FRANK BRANDT, FASLA  
*Chairman Emeritus*

Mr. Aric Arakaki, Superintendent  
Ala Kahakai National Historic Trail  
National Park Service  
73-4786 Kanalani Street, Suite 14  
Kailua-Kona, Hawaii 96740

**SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE  
(EISPN)  
KAHUKU VILLAGE  
KA'Ū, ISLAND OF HAWAI'I  
TAX MAP KEY (3) 9-2-001:072**

## ASSOCIATES

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*Senior Associate*

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*Associate*

SCOTT MURAKAMI, ASLA, LEED<sup>®</sup> AP  
*Associate*

DACHENG DONG, LEED<sup>®</sup> AP  
*Associate*

Dear Mr. Arakaki:

Thank you for your letter dated October 8, 2009 commenting on the Environmental Impact Statement Preparation Notice (EISPN) for Kahuku Village, a master-planned mixed-use community in the Ka'ū district of the County of Hawaii. As the planning consultant for the landowner, Nani Kahuku 'Āina, LLC, we are responding to your comments. We offer the following responses in the respective order of your comments.

### Airport or helipad

Please be aware that an airport at Kahuku Village is no longer being proposed. A heliport to allow for emergency transports associated with the proposed Veterans Administration facility is still proposed, however, the heliport will not be used for commercial tour or private operations.

### Marine and Near-Shore Ecosystems and Species

We acknowledge that activities proposed near the shoreline could impact the endangered hawksbill sea turtle, threatened green sea turtle, and endangered Hawaiian monk seal. We wish to note that Nani Kahuku Aina will continue to partner with the U.S. Fish and Wildlife Service on the Hawaii Island Hawksbill Turtle Recovery Project. In addition, an assessment of the marine and anchialine pool communities was prepared for Kahuku Village. The assessment determined that no significant adverse impact to the hawksbill turtle, green sea turtle, or Hawaiian monk seal will occur so long as appropriate mitigation measures are implemented. Mitigation measures will be discussed in the Draft EIS and the marine and anchialine pool assessment report will be appended to the Draft EIS.

### Cultural Resources

A cultural impact assessment (CIA) and archaeological inventory survey (AIS) for Kahuku Village have been prepared. The CIA and AIS will be summarized in the Draft EIS and attached as appendices to the Draft EIS.

**HONOLULU OFFICE**  
1001 Bishop Street, Suite 650  
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Fax: (808) 535-3163

Mr. Aric Arakaki

SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE (EISPN),  
KAHUKU VILLAGE, KA'Ū, ISLAND OF HAWAI'I, TAX MAP KEY (3) 9-2-001:072

June 14, 2011

Page 2 of 2

We appreciate your participation in the environmental review process. A copy of the Draft EIS will be sent to you when it is available.

Sincerely,

PBR HAWAII

A handwritten signature in cursive script, appearing to read "Dean Minakami".

Dean Minakami, AICP  
Planner

cc: Valentine Peroff, Nani Kahuku Aina, LLC  
Bobby Jean Leithead-Todd, Hawaii County Planning Department



# United States Department of the Interior

NATIONAL PARK SERVICE  
Hawai'i Volcanoes National Park  
Post Office Box 52  
Hawaii National Park, Hawai'i 96718



IN REPLY REFER TO:  
**L76 (HAVO)**

October 5, 2009

Mr. Vincent Shigekuni  
PBR Hawaii  
1001 Bishop Street, Suite 650  
Honolulu, Hawaii 96813

Dear Mr. Shigekuni:

Thank you for sending the preparation notice regarding the impending Environmental Impact Statement (EIS), for the proposed Kahuku Villages Project in K'au on Hawaii Island. This letter is intended to provide some background on the issues detailed in your initial report. As a neighboring land management agency directly mauka to the proposed project, we appreciate the opportunity to comment.

- One of the primary purposes for the 2004 addition of the Kahuku Unit to Hawai'i Volcanoes National Park was due to its importance as an ecological reservoir. This area is the occupied habitat of several endangered and threatened bird and wildlife species, which include Nene or Hawaiian Goose, Hawaii Creeper, Hawaii Akepa, Akiapolaau, Hawaiian Petrel, Hawaiian Hoary Bat and Hawaiian Hawk ('Io). The Kahuku Unit is also the range of other pelagic seabirds and migratory shorebirds. The USFWS will have the most current information regarding distribution and nesting of these species and the most recent survey data to update the 1987 surveys mentioned. Some of the federally listed species in the Kahuku area are sensitive to artificial night lighting. We are interested in working with you on a lighting plan to minimize the impacts of artificial lighting on bats and petrels.
- Airport or helipad: The National Park Service is cooperating with the Federal Aviation Administration (FAA), in developing an Air Tour Management Plan (ATMP) and associated Environmental Impact Statement (EIS) for Hawai'i Volcanoes National Park. This plan will attempt to mitigate or prevent the significant impacts of air tour operations at 5,000' agl (above ground level) and below over our park. Our concerns for flights over the Kahuku Unit include potential impacts to park sound scapes, threatened and endangered species, resources of cultural importance to Native Hawaiians, volcanic hazards, data collection and monitoring, wilderness qualities, and the ground visitor experience. The ATMP EIS will include identification of specific flight routes or zones in the park where flights will be allowed and other specific guidance for air tour operations. In addition, the park currently has six fixed wing and eleven helicopter air tour companies that have been granted legal operating authority by the FAA to fly over Hawai'i Volcanoes National Park. At this time, no other air tour companies are authorized to fly below 5,000' agl over our park and ½ mile buffer of air space beyond the boundary. We anticipate that later this year draft alternatives will be sent out for public review. We will add your name to the ATMP/EIS mailing list.
- Marine and Near-Shore Ecosystems and Species: Activities proposed for the shoreline and near-shore environment of the project area have the potential to impact the protection activities for endangered hawksbill sea turtles, threatened

green sea turtles, and endangered Hawaiian monk seals. Concerns include loss and degradation of foraging and nesting habitat from near shore development (e.g., landscaping, artificial lighting, contaminants from construction run-off, sewage and other pollutants), threats from increased human presence (e.g., nest trampling, harassment by humans and domestic pets), and increased risk of predation from increased numbers of rats, cats and mongoose. Recommended mitigation would include monitoring and protection of nests and forage areas, predator control, pet management, controls on public access, and consultation with biological experts for the vegetation, landscape, pathway, and lighting design, and public education. Depending on location, any ground water withdrawal for the project should consider potential impacts to the anchialine ponds. We suggest adding the National Oceanic Atmospheric Administration (NOAA) and National Marine Fisheries Service to the federal list of consulted parties regarding the presence of both turtles and Hawaiian monk seals.

- **Cultural Resources:** We anticipate formally responding to the State Historic Preservation Office during the Section 106 consultation process for the EIS.
- **Public Services and Facilities:** In this area, Hawaii County Police have the largest land area to cover with minimum staff. Hawai'i Volcanoes National Park currently has a Memorandum of Understanding (MOU) with both the police and county fire. Our staff is requested to support emergency operations in the vicinity of Kahuku. This includes crimes in progress, motor vehicle accidents (especially on Hwy 11), and marijuana eradication. Our staffing numbers are inadequate to handle the added incidents associated with this development. Our Pacific Area Communications Center will also be tasked to handle the additional emergency call load, both with phone and radio communications possibly requiring additional staff. It is important that any development include construction of a multi-agency emergency services sub-station, as part of this new presence in the community.
- **Other Infrastructure:** We have been told by the Waiohinu-Naalehu County Water System that we are not able to add lines or capability to our park water uses due to a lack of infrastructure capacity. This development plan will need to address water capacity in the area. There also are traffic flow concerns at or around our Kahuku entrance. Presently our park entrance is a direct, uncontrolled entrance and exit off a two-lane state highway. Increased traffic within the area may require road improvements to accommodate traffic congestion.
- **Invasive Species Introduction:** The introduction and spread of invasive species such as volatile exotic grass seeds, coqui frogs, etc., are of critical concern for our numerous species recovery projects. Most of our park activities now require measures to minimize the spread of non-native species, especially during construction activities and in selection of landscape materials. We encourage adoption of an aggressive invasive species action plan for your development.

We are including an attachment that lists a few corrections to your document. Please feel free to contact Catherine Lentz (808-541-2693, ext 724), on the Hawai'i Volcanoes staff, if you have any further questions regarding data needs or background resources that would help to inform the EIS process. Please make sure we are notified of all future actions related to the proposal.

Sincerely,

  
Cynthia L. Orlando  
Superintendent

cc:  
Office of Environmental Quality Control  
County of Hawaii Planning Department

## **Addendum**

Clarification to hawksbill and green sea turtles info (p.36)

***“Pohue Bay is one of the four sites that have been intensively monitored under the Hawaii Island Hawksbill Turtle Recovery Project. Ten other sites are also frequently monitored for nesting activity under this program but to a lesser degree than the four sites. Of all the sites, the highest numbers of nesting turtles, newly tagged adult females, nests, and hatchlings were documented at Pohue Bay.”***

This information relates specifically to findings from the 2007 nesting season, when Pohue Bay had the highest documented number of nesting turtles. Typically nesting activity and monitoring intensity varies across beaches year to year. In recent years, Pohue Bay has been among the top three most active nesting beaches documented along the Ka'u coastline

Within the area proposed for development, hawksbill activity has been also documented at Kahakahakea and at the black sand beach north of Keliuli Bay. In addition, some turtles use multiple beaches that include areas outside the property, so potential impacts by the development may affect nesting activity at beaches beyond the proposed development.

***“Typically, the turtle's nesting season at Pohue starts in March when the first nests are laid and continues through November when the last nests are excavated.”***

This statement was true for the 2007 nesting season, but varies year to year. Peak nesting season is primarily between June and December. Although March nesting can occur.

***“Nesting activity has increased since stricter public access controls were imposed in 2004.”***

An increase in nesting activity from previous years was documented between 2005-2007. While this occurred after public access was limited, other factors may have contributed to an increase in nesting activity, including normal variation in nesting activity among turtles year to year

### **Green Sea Turtles:**

The green sea turtle is a federally listed threatened species (not endangered as stated on pp36). The green turtle is commonly found in the waters adjacent to the property, and while they may occasionally haul out to bask or rest on the property, no green turtle nesting has been documented at Pohue (as stated on pp36).

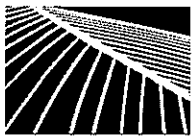
### **Other items for the DEIS:**

Hawaiian monk seals have been documented hauling out to rest at Kahakahakea, Halilipalaia, Pohue Bay, and the rocky beach at Kanaone.

Hawaiian hawk is currently a federally listed **endangered** species, proposed for de-listing.

Metabetaeus lohena (anchialine pond) is a candidate for listing as endangered or threatened.





# PBR HAWAII

& ASSOCIATES, INC.

June 14, 2011

## PRINCIPALS

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*President*

R. STAN DUNCAN, ASLA  
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GRANT T. MURAKAMI, AICP, LEED® AP  
*Principal*

W. FRANK BRANDT, FASLA  
*Chairman Emeritus*

Ms. Cynthia L. Orlando, Superintendent  
Hawaii Volcanoes National Park  
National Park Service  
P.O. Box 52  
Hawaii National Park, Hawaii 96718

**SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE  
(EISPN)  
KAHUKU VILLAGE  
KA'Ū, ISLAND OF HAWAI'I  
TAX MAP KEY (3) 9-2-001:072**

## ASSOCIATES

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*Associate*

SCOTT MURAKAMI, ASLA, LEED® AP  
*Associate*

DACHENG DONG, LEED® AP  
*Associate*

Dear Ms. Orlando:

Thank you for your letter dated October 5, 2009 (L76 HAVO) commenting on the EISPN for Kahuku Village, a master-planned mixed-use community in the Ka'ū district of the County of Hawaii. As the planning consultant for the landowner, Nani Kahuku 'Āina, LLC, we are responding to your comments. We offer the following responses in the respective order of your comments.

### Bullet 1

Biological surveys for the Kahuku Village project site have been conducted. Findings of the surveys will be summarized in the Draft EIS. The Applicant, Nani Kahuku Aina, is aware of the potential impact that lighting can have on seabirds, bats, and sea turtles, and looks forward to working with you on a lighting plan to minimize impacts.

### Bullet 2

We acknowledge that the National Park Service is cooperating with the Federal Aviation Administration in developing an Air Tour Management Plan and associated EIS. While a heliport is being proposed at Kahuku Village, it will be used for emergency transport in conjunction with the planned Veterans Administration facility rather than commercial tour operations. We appreciate being placed on the mailing list for the Air Tour Management Plan EIS.

### Bullet 3

We acknowledge that activities proposed near the shoreline could impact the endangered hawksbill sea turtle, threatened green sea turtle, and endangered Hawaiian monk seal. We wish to note that Nani Kahuku Aina will continue to partner with the U.S. Fish and Wildlife Service on the Hawaii Island Hawksbill Turtle Recovery Project. In addition, an assessment of the marine and anchialine pool communities was prepared for the project. The assessment determined that no significant adverse impact to the hawksbill turtle, green sea turtle, or Hawaiian monk seal will occur so long as appropriate mitigation measures are implemented. Mitigation measures will be discussed in the Draft EIS and the marine and anchialine pool assessment report will be appended to the Draft EIS.

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Kapolei, Hawai'i 96707-2005  
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Fax: (808) 535-3163

Ms. Cynthia L. Orlando

SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE (EISPN),  
KAHUKU VILLAGE, KA'Ū, ISLAND OF HAWAI'I, TAX MAP KEY (3) 9-2-001:072

June 14, 2011

Page 2 of 2

Bullet 4

A cultural impact assessment (CIA) for Kahuku Village has been prepared. The CIA will be summarized in the Draft EIS and attached as an appendix to the Draft EIS.

Bullet 5

Over 100 acres of land in the mauka portion of the property, adjacent to Mamalahoa Highway, will be dedicated to the State of Hawaii and County for civic facilities. It is anticipated that the land could be used for development of regional serving public uses such as a police substation, fire station, emergency medical facility, elementary school, and district park.

Bullet 6

Water for Kahuku Village will be provided by a privately constructed and operated desalination plant. A traffic impact assessment report has been prepared and required transportation system improvements have been identified and will be implemented by Nani Kahuku Aina. As the entry road to Kahuku Village is more than 3 miles east from the National Park's Kahuku entrance, no significant impact to traffic flow or traffic congestion at the Park's Kahuku entrance is anticipated.

Bullet 7

We acknowledge that the introduction and spread of invasive species is a concern. Measures that will be implemented at Kahuku Village to prevent the establishment of alien species include inspecting construction materials, cleaning construction equipment, removing trash regularly, and restricting the feeding of feral animals. These measures will be specified in the Draft EIS.

The attachment clarifying information from the EIS Preparation Notice is acknowledged and the Draft EIS will include the information.

We appreciate your participation in the environmental review process. A copy of the Draft EIS will be sent to you when it is available.

Sincerely,

PBR HAWAII



Dean Minakami, AICP  
Planner

cc: Valentine Peroff, Nani Kahuku Aina, LLC  
Bobby Jean Leithead-Todd, Hawaii County Planning Department



U.S. DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
NATIONAL MARINE FISHERIES SERVICE  
Pacific Islands Regional Office  
1601 Kapiolani Blvd., Suite 1110  
Honolulu, Hawaii 96814-4733  
(808) 944-2200 • Fax: (808) 973-2941

Mr. Vincent Shigekuni  
PBR Hawaii  
1001 Bishop St., Suite 650  
Honolulu, HI 96813

OCT 06 2009

Dear Mr. Shigekuni:

This letter provides comments on the Environmental Impact Statement Preparation Notice (EISPN) for the proposed Nani Kahuku 'Aina development project on the Big Island of Hawai'i. The National Marine Fisheries Service (NMFS) Pacific Islands Region's Protected Resources Division is concerned about how the development may affect three marine species protected under the Endangered Species Act (ESA) that frequent the area in question: the threatened green sea turtle (*Chelonia mydas*), the endangered hawksbill sea turtle (*Eretmochelys imbricata*), and the Hawaiian monk seal (*Monachus schauinslandi*).

The island of Hawaii hosts a nesting population of the hawksbill sea turtle. As noted in the EISPN, the action area contains a regionally significant nesting beach for hawksbills. Green turtles also occur off shore of the action area and occasionally bask on the beach at Pohue Bay.

Hawksbills tend to favor vegetation at the back of the beach for nesting sites. The draft EIS should address the preservation of natural and native plant species such as naupaka and morning glory at the back of the beach at Pohue Bay as important habitat for the endangered hawksbill turtle. (Not mentioned in the flora section of this document).

The Draft EIS should address the protection of nesting habitat from human disturbance and include sufficient mitigation measures including but not limited to: light restrictions on/near the beach, no debris or beach chairs, etc. left on the beach at night, limited foot traffic so as not to compact sand over nests, no digging of large holes, no campfires, etc.

Roadways and traffic plans should address lighting issues from streetlamps so they do not shine on the beach and disorient nesting females or hatchlings during the nesting season.

Turtle-friendly lighting measures should be included in the electricity section and impacts to biological resources. The Applicant should complete a lighting assessment based on planned light sources to ensure minimal impacts from artificial light reaching the nesting beach.

Hawaiian monk seals are known to frequent the area around the proposed development. There are at least 2 seals known to have been frequently sighted hauled out on beaches in the area. These critically endangered animals are very sensitive to human disturbance and could be negatively affected by increased human presence in this relatively remote location. Mitigation measures to minimize human disturbance and interactions with the seals should be proposed in the Draft EIS.



Impacts from climate change such as sea level rise should also be considered. Development and structures adjacent to beaches prohibit their natural migration as they adjust to changes in sea level. The Hawaiian Heritage Center and several of the eco-cabin structures appear to be situated in close proximity to the shoreline. Additionally, as noted in the EISPN, the Ka'u and Puna districts are among the most vulnerable to tsunamis - structures near the beach could create debris or affect erosion patterns in the case of tsunamis or big storm events such as hurricanes.

p.36: Biological community

Green turtles are not recorded nesting at Pohue but they do occasionally bask on the beach there. Correction to the Endangered Species Act status for sea turtles: green turtles are listed as threatened and hawksbills are as endangered.

Additional comments will be provided when the Draft EIS and associated studies are completed and published. If you have any questions regarding these comments, please contact Jayne LeFors on my staff at (808) 944-2277 or at the e-mail address [Jayne.LeFors@noaa.gov](mailto:Jayne.LeFors@noaa.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "Lisa Van Atta". The signature is fluid and cursive, with a long horizontal stroke at the end.

Lisa Van Atta  
Assistant Regional Administrator  
Protected Resources Division

cc: Office of Environmental Quality Control



June 14, 2011

**PRINCIPALS**

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Ms. Lisa Van Atta, Assistant Regional Administrated  
Protected Resources Division  
National Marine Fisheries Service, Pacific Islands Regional Office  
1601 Kapiolani Boulevard, Suite 1110  
Honolulu, Hawaii 96814-4733

**SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION  
NOTICE (EISPN)  
KAHUKU VILLAGE  
KA'Ū, ISLAND OF HAWAI'I  
TAX MAP KEY (3) 9-2-001:072**

Dear Ms. Van Atta:

Thank you for your letter dated October 6, 2009 commenting on the Environmental Impact Statement Preparation Notice (EISPN) for Kahuku Village, a master-planned mixed-use community in the Ka'ū district of the County of Hawaii. As the planning consultant for the landowner, Nani Kahuku 'Āina, LLC, we are responding to your comments.

We acknowledge your concerns relating to the threatened green sea turtle, endangered hawksbill sea turtle, and the Hawaiian monk seal. The Applicant, Nani Kahuku Aina, is committed to stewardship of the Site's natural resources. Nani Kahuku Aina will continue to partner with the U.S. Fish and Wildlife Service (FWS) for the Hawaii Island Hawksbill Turtle Recovery Project. For the past several years, Nani Kahuku Aina, has allowed U.S. FWS personnel to conduct research at the site, monitor Hawksbill turtle activity, remove invasive flora, and secure nesting grounds. The partnership is planned to continue with development of Kahuku Village. An Integrated Natural and Cultural Resources Management plan will be prepared specifying mitigation measures necessary to protect all of the natural resources on the project site. In addition, a shoreline management zone extending 300 to 1,000 feet inland from the will help to prevent and minimize impact to marine species and their habitat. Other mitigation measures to be implemented to protect the hawksbill sea turtle, green sea turtle and Hawaiian monk seal will be specified in the Draft EIS.

As requested, impact from climate change and sea level rise will be discussed in the Draft EIS. We note that habitable structures will be set back at least 300-feet from the shoreline, and at this distance most structures will be at least 40-feet above sea level.

Mr. Lisa Van Atta

SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE (EISPN),  
KAHUKU VILLAGE, KA'Ū, ISLAND OF HAWAI'I, TAX MAP KEY (3) 9-2-001:072

June 14, 2011

Page 2 of 2

We appreciate your participation in the environmental review process. A copy of the Draft EIS will be sent to you when it is available.

Sincerely,

PBR HAWAII

A handwritten signature in black ink, appearing to read "Dean Minakami". The signature is fluid and cursive, written in a dark ink on a white background.

Dean Minakami, AICP  
Planner

cc: Valentine Peroff, Nani Kahuku Aina, LLC  
Bobby Jean Leithead-Todd, Hawaii County Planning Department

United States Department of Agriculture



Natural Resources Conservation Service  
P.O. Box 50004 Rm. 4-118  
Honolulu, HI 96850  
808-541-2600

---

October 2, 2009

PBR HAWAII  
1001 Bishop Street, Suite 650  
Honolulu, Hawaii 96813  
Attn: Vincent Shigekuni

Dear Mr. Shigekuni,

Thank you for providing Natural Resources Conservation Service (NRCS) the opportunity to review the Environment Impact Statement Preparation Notice (EISPN) for Kuhuku Villages project on the Island of Hawaii. In review of the project site location it was found that no Prime or Important Farmlands exist or will be impacted at this site. In addition, no hydric soils are located in the project area. Hydric soils identify potential areas of wetlands. If wetlands do exist, any proposed impacts to these wetlands would need to demonstrate compliance with the "Clean Water Act", and may need an Army Corp of Engineers 404 permit.

Please find enclosed a soil map and soil interpretation reports for the Kahuku Villages Project Area. The area is made up of a'a and pahoehoe lava flows. The soil interpretations include ratings for building site development, local roads and streets, landscaping and septic systems. All soil interpretation ratings on lava flows are severe, very limited or not rated. Lava flows are miscellaneous areas having essentially no soil and support little or no vegetation and for this reason map unit rLW – Lava Flows, Pahoehoe is "not rated" for these interpretations. These ratings do not preclude the intended land use, however they do identify potential limitations for the use, which may require corrective measures, increase costs, and/or require continued maintenance.

If you have any questions concerning the soils for this project please contact, Tony Rolfes, Assistant State Soil Scientist, by phone (808) 541-2600 x129 or email, [Tony.Rolfes@hi.usda.gov](mailto:Tony.Rolfes@hi.usda.gov).

Sincerely

A handwritten signature in blue ink, appearing to read "Lawrence T. Yamamoto", written over a faint blue line.

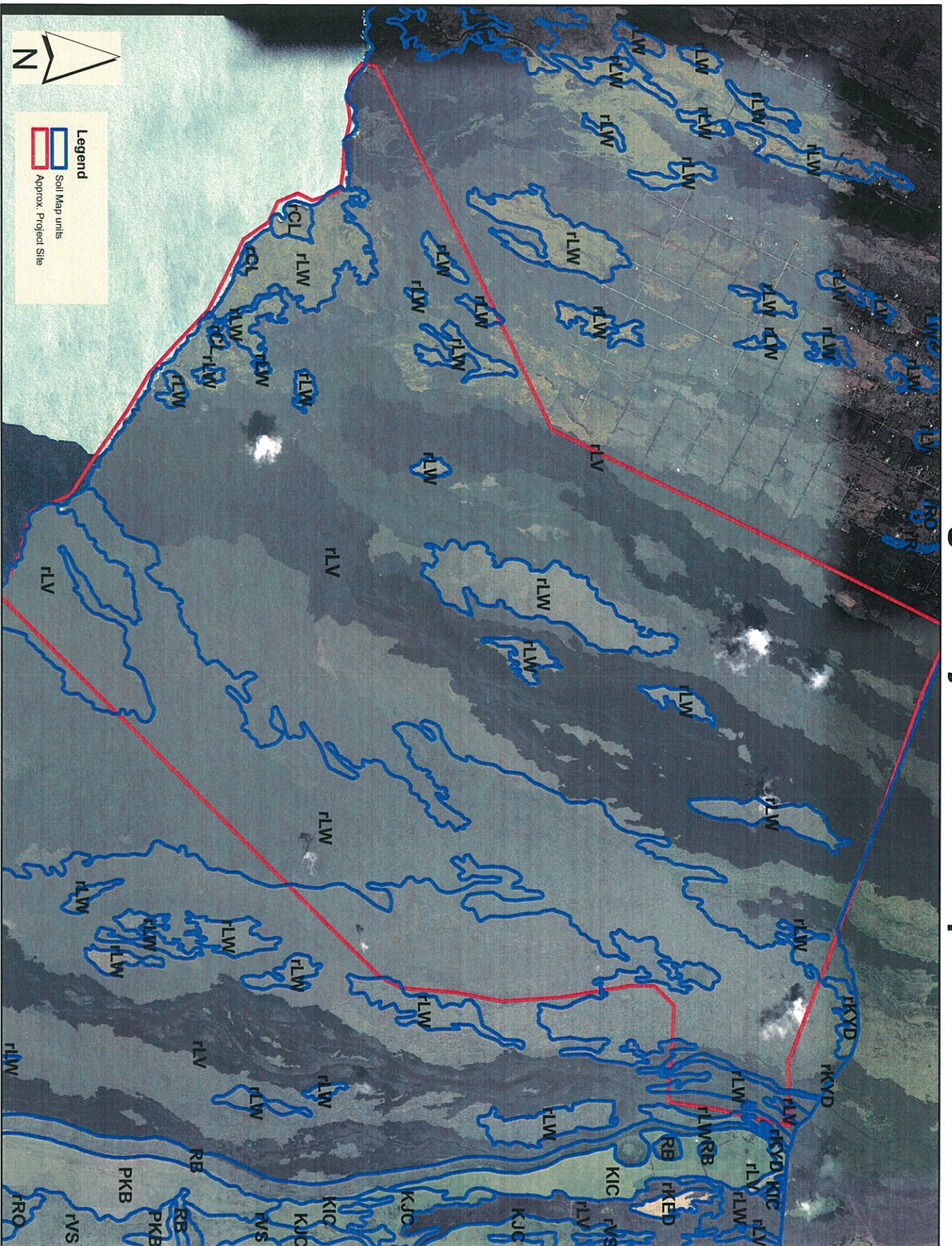
LAWRENCE T. YAMAMOTO  
Director  
Pacific Islands Area

cc: Michael Robotham, Asst. Director for Soil Science and Natural Resource  
Assessments, NRCS State Office  
*Helping People Help the Land*

An Equal Opportunity Provider and Employer



# Kahuku Villages Project Soils Map



**Legend**  
 Soil Map units  
 Approx. Project Site

NRCS  
 10/2009

0 0.3 0.6 1.2 1.8 2.4  
 Miles



## Selected Soil Interpretations

Island of Hawaii Area, Hawaii

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The table shows only the top five limitations for any given soil. The soil may have additional limitations]

\*This soil interpretation was designed as a "limitation" as opposed to a "suitability". The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation.

Map symbol and soil name	Pct. of map unit	ENG - Dwellings W/O Basements (HI) *		ENG - Lawn, Landscape, Golf Fairway *		ENG - Local Roads and Streets *	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
rCL:							
Cinder land	100	Severe		Very limited		Very limited	
		Slopes > 15%	1.00	Too steep	1.00	Too steep	1.00
				Gravel	1.00		
				Droughty	1.00		
				Large stones	0.03		
rLV:							
Lava flows, aa, Aa	100	Severe		Not rated		Very limited	
		Fragments (>3") >50%	1.00			Large stones	1.00
		Slopes > 15%	1.00			Too steep	1.00
rLW:							
Lava flows, pahoehoe, Pahoehoe	100	Not rated		Not rated		Not rated	

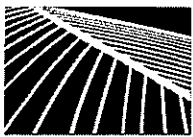
## Selected Soil Interpretations

Island of Hawaii Area, Hawaii

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The table shows only the top five limitations for any given soil. The soil may have additional limitations]

\*This soil interpretation was designed as a "limitation" as opposed to a "suitability". The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation.

Map symbol and soil name	Pct. of map unit	ENG - Septic Tanks (HI) *		ENG - Shallow Excavations (HI) *		ENG - Small Commercial Buildings (HI) *	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
<b>rCL:</b>							
Cinder land	100	Severe		Severe		Severe	
		Slopes > 15%	1.00	Slopes > 15%	1.00	Slopes > 8%	1.00
		Permeability > 6"/hr in 24-60" (seepage and poor filter)	1.00	Unstable excavation walls	0.10		
		Rapid ((6.0 to < 20 in/hr)	0.75				
<b>rLV:</b>							
Lava flows, aa, Aa	100	Severe		Severe		Severe	
		Fragments (>3") >50%	1.00	Fragments (>3") >50%	1.00	Slopes > 8%	1.00
		-UNKNOWN-	1.00	Slopes > 15%	1.00	Fragments (>3") >50%	1.00
		Permeability > 6"/hr in 24-60" (seepage and poor filter)	1.00	Unstable excavation walls	0.10		
		Slopes > 15%	1.00				
		Depth to bedrock 40 - 72"	0.27				
<b>rLW:</b>							
Lava flows, pahoehoe, Pahoehoe	100	Not Rated		Not Rated		Not rated	



# PBR HAWAII

& ASSOCIATES, INC.

June 14, 2011

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*Chairman Emeritus*

Mr. Lawrence T. Yamamoto, Director  
Pacific Islands Area  
Natural Resources Conservation Service  
P.O. Box 50004, Room 4-118  
Honolulu, Hawaii 96850

**SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION  
NOTICE (EISPN)  
KAHUKU VILLAGE  
KA'Ū, ISLAND OF HAWAI'I  
TAX MAP KEY (3) 9-2-001:072**

**ASSOCIATES**

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SCOTT ALIKA ABRIGO, LEED® AP  
*Associate*

SCOTT MURAKAMI, ASLA, LEED® AP  
*Associate*

DACHENG DONG, LEED® AP  
*Associate*

Dear Mr. Yamamoto:

Thank you for your letter dated October 2, 2009 commenting on the Environmental Impact Statement Preparation Notice (EISPN) for Kahuku Village, a master-planned mixed-use community in the Ka'ū district of the County of Hawaii. As the planning consultant for the landowner, Nani Kahuku 'Āina, LLC, we are responding to your comments.

We acknowledge your finding that no Prime or Important Farmlands exist or will be impacted at the project site, and that no hydric soils are located in the project area. We further acknowledge that if wetlands are determined to exist and may be impacted by the proposed development, compliance with the Clean Water Act may be required, including possible procurement of an Army Corp of Engineers 404 permit.

We appreciate the soil map and soil interpretation reports for the project area provided with your letter.

We appreciate your participation in the environmental review process. A copy of the Draft EIS will be sent to you when it is available.

Sincerely,

PBR HAWAII

Dean Minakami, AICP  
Planner

cc: Valentine Peroff, Nani Kahuku Aina, LLC  
Bobby Jean Leithead-Todd, Hawaii County Planning Department

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# United States Department of the Interior



FISH AND WILDLIFE SERVICE  
Pacific Islands Fish and Wildlife Office  
300 Ala Moana Boulevard, Room 3-122, Box 50088  
Honolulu, Hawaii 96850

NOV 19 2009

In Reply Refer To:  
2009-TA-0432

Mr. Vincent Shigekuni  
PBR Hawaii  
1001 Bishop Street  
ASB Tower, Suite 650  
Honolulu, Hawaii 96813

Subject: Information for Preparation of an Environmental Impact Statement for the  
Kahuku Villages, Hawaii

Dear Mr. Shigekuni:

Thank you for your letter dated September 8, 2009, received September 14, 2009, requesting information for the preparation of a Draft Environmental Impact Statement (DEIS) for the proposed Kahuku Villages. On October 2, 2009, Jeff Zimpfer from our office spoke with Malia Cox from your office asking for a time extension to comment on this project. We would like to thank you for granting us an extension to allow us additional time for review and comment. The proposed project is located along the southern coast in the District of Kau, island of Hawaii [TMK 9-2-001:072]. At build-out, this master-planned community will have a residential and business area close to Mamalahoa Highway and a resort adjacent to the ocean. This project will be located on 16,457 acres of land that is currently undeveloped. The proposed project will develop about 26 percent of the 16,457 acres (ac) (6,660 hectares (ha)), that will be roughly allocated as follows: residential resort areas (1,800 ac 1800 (ha)), mauka mixed-use village including the urban expansion area (approximately 1,100 ac (440 ha)), resort areas collectively comprised of three hotel sites, an eco-lodge and a resort village (600 ac 250 ha), airport (650 ac (265 ha)), and eco-cabins at the Hawaiian Heritage Center (45 ac 18 (ha)). In addition, the proposed project will construct two, 18-hole golf courses along the shoreline.

These comments are provided in accordance with the National Environmental Policy Act of 1969 [42 U.S.C. 4321 *et seq.*; 83 Stat.852] (NEPA); and other authorities mandating Federal oversight of environmental resources the Endangered Species Act of 1973 [16 U.S.C. 1531 *et seq.*; 87 Stat. 884], as amended (ESA); and the Migratory Bird Treaty Act of 1918 [16 U.S.C. 703 *et seq.*; 40 Stat. 755] as amended (MBTA).

We have reviewed the project information you provided and pertinent information in our files, including data compiled by the Hawaii Biodiversity and Mapping Program and the Hawaii GAP

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Program. We recommend you address potential project impacts to the sensitive and listed species and native ecosystems discussed below and include measures to minimize adverse impacts to these resources in your DEIS.

- Hawaiian hoary bats (*Lasiurus cinereus semotus*) roost in both exotic and native woody vegetation and leave their young unattended in “nursery” trees and shrubs when they forage. If trees or shrubs suitable for bat roosting are cleared during the bat breeding season (April to August) there is a risk that young bats could inadvertently be harmed or killed. Page 35 of the Environmental Impact Statement Preparation Notice (EISPN) states “sightings of hoary bat have occurred on several different occasions in the area.” To minimize impacts to the endangered Hawaiian hoary bat, woody plants greater than 4.6-meters (15-feet) tall should not be removed or trimmed during the bat birthing and pup rearing season (May 15 through August 15).
- Hawaiian hawks (*Buteo solitarius*) also nest in both exotic and native woody vegetation. To avoid impacts to Hawaiian hawks we recommend avoiding brush and tree clearing during the breeding season for Hawaiian hawks (March through September). If you must clear the property during the Hawaiian hawk breeding season, we recommend conducting biological surveys to determine if nests are present. Please contact our office regarding survey methodology.
- The endangered Blackburn's sphinx moth (*Manduca blackburni*) may occur in the project area. The adult moth feeds on nectar from native plants including beach morning glory (*Ipomoea pes-caprae*), iliee (*Plumbago zeylanica*), maiapilo (*Capparis sandwichiana*), and the larvae known to feed upon non-native tree tobacco (*Nicotiana glauca*) and the native aiea (*Nothoestrum breviflorum*). Other potential host plants include non-native commercial tobacco (*Nicotiana tabacum*), eggplant (*Solanum melongena*), tomato (*Lycopersicon esculentum*), and Jimson weed (*Datura stramonium*). The full range of taxa Blackburn's sphinx moth larvae may feed on is not known. Larvae of a close relative of Blackburn's sphinx moth, *Manduca sexta* are known to feed on a wide variety of taxa in the Solanaceae family including: *Capsicum* (sweet and chili pepper), *Cestrum* (ornamental plants), *Cymphomandra* (tomarillo), *Datura* (Jimson weed, loco weed), *Lycium* (ornamental plants used for Chinese herbal medicines), *Lycopersicum* (tomato), *Petunia* (petunia), *Physalis* (tomatillo and ground cherry), *Solanandra* (ornamental vines) and *Solanum* (potato, eggplant, Christmas cherry, nightshade). We recommend you have the project area surveyed by a qualified botanist for the presence of taxa in the Solanaceae family and if you find taxa in the Solanaceae family, contact our office for guidance.
- The endangered Hawaiian goose (*Branta sandvicensis*) may be attracted to ditches and mowed grass areas in the project area, increasing their vulnerability to collision with vehicles and exposure to domesticated animal predators. We recommend you address the presence of the Hawaiian goose in your DEIS and how the project will avoid and minimize any potential adverse impacts to the species.
- At build-out, this proposed project could potentially impact the aquifer in the vicinity of the proposed project. The U. S. Fish and Wildlife Service (Service) is concerned that the

long-term demand for water from the aquifer system would exceed the aquifer's sustainable yield and result in increased salinity of wetlands, anchialine pools, and coastal waters. Four candidate species for listing, including three shrimp (*Metabetaeus lohena*, *Antecaridina lauensis* and *Palaemonella burnsi*) and a damselfly (*Megalagrion xanthomelas*), and two endangered waterbirds, Hawaiian stilt (*Himantopus mexicanus knudseni*) and Hawaiian coot (*Fulica alai*), depend on these aquatic ecosystems and may be adversely impacted by increases in salinity. The cumulative impacts of development in the area and the increased demand for water in the area have the potential to affect listed species and native ecosystems. We recommend you address potential impacts to increased salinity in your DEIS.

- This proposed development will lead to an increase in impervious surfaces and an associated increase in stormwater runoff in the project area. This may lead to an increase in non-point source pollution. These increases in stormwater runoff and non-point source pollution may decrease the water quality of the wetlands, anchialine pools, and coastal waters in the vicinity of this proposed project. We recommend the use of treated wastewater for irrigation and restrictions on the use of termiticides.
- Six anchialine ponds have been identified on the site of the proposed project. The EISPN describes one anchialine pond, Kanonone, as the "most prominent of the ponds encircled by coconut and hala trees." The Service supports your effort in conducting a marine water quality assessment to determine the "successional" phases of the ponds. We recommend that "pristine" anchialine pond be protected and "senescent" anchialine pond be restored through vegetation management. Anchialine ponds are unique ecosystem and they are disappearing in the State of Hawaii as housing developments, resorts and roads fill in the ponds. As these ponds become more accessible to the public, exotic fish are often introduced resulting in the eventual degradation of these ecosystems for the native shrimp and insect species. The Service recommends developing a long-term management plan for the anchialine ponds located within proposed project. The Service also recommends installing signage informing the public about these unique and fragile ecosystems.
- Lava tube caves are known to harbor rare cave invertebrates. We support your plans to conduct a survey to determine whether cave invertebrates are present at the proposed site. We recommend that you survey lava tubes for cave invertebrates including the Kaumana cave cricket (*Cacōnemobius varius*), volcanoes cave cricket (*Thaumotogryllus cavicola*), Doc Bellou cave oliarus planthopper (*Oliarus* spp.), and Pahoia cave oliarus planthopper (*Oliarus* spp.). Additional detailed surveys may be warranted if rare or federally protected species are found. Survey results for these species should be included in the DEIS. The Hawaii Speleological Survey may be able to provide you with information regarding the location of lava tubes.
- The proposed project includes Pohue Bay which has been documented as prime nesting habitat for the endangered Hawksbill sea turtle (*Eretmochelys imbricata*) and threatened green sea turtle (*Chelonia mydas*), collectively referred to as sea turtles. We appreciate your efforts to conserve sea turtles and support of the Hawaii Island Hawksbill Turtle Recovery Project. Sea turtles are susceptible to artificial lighting which can disorientate

turtles away from the ocean. Sea turtles come ashore to nest on beaches from May through September, peaking in June and July. Optimal nesting habitat is a dark beach free of barriers that restrict their movement. Turtle nests and hatchlings are susceptible to predation by feral mammals [small Indian mongoose (*Herpestes auropunctatus*), cats (*Felis catus*), dogs (*Canis familiaris*), and pigs (*Sus scrofa*)], and human disturbance. We recommend installation of shielded lighting around the shoreline development. This will reduce the direct and ambient lighting of the beach habitats within and adjacent to the project site. Effective light shields should be completely opaque, sufficiently large, and positioned so that light from the shielded source does not reach the beach. The DEIS should identify other avoidance and minimization measures for nesting sea turtles in the vicinity of your project.

- Outdoor lighting, such as street lights, can adversely impact listed and migratory seabird species. Urban areas can present many hazards for birds protected under the MBTA or ESA. Bright, night lighting poses a significant threat to fledgling federally protected seabirds such as the Hawaiian petrel (*Pterodroma sandwichensis*) or the Newell's shearwater (*Puffinus auricularis newelli*). The DEIS should address all potential impacts to listed seabirds and outline conservation measures to minimize these impacts. Your proposed project will be an area that is virtually undeveloped with very few night time light sources. The EISPN does not address artificial lighting by conforming to County of Hawaii's regulations and shielding lights. Seabirds fly at night and are attracted to artificially-lighted areas which can result in disorientation and subsequent fallout due to exhaustion or collision with objects such as utility lines, guy wires, and towers that protrude above the vegetation layer. Any increase in the use of night-time lighting, particularly during each year's peak fallout period (September 15 through December 15), could result in seabird injury or mortality. Once grounded, they are vulnerable to predators or often struck by vehicles along roadways. Potential impacts to seabirds could be minimized by shielding outdoor lights associated with the project to the maximum extent possible, minimizing night-time construction, and providing all project staff and residents with information about seabird fallout. All lights, including street lights, should be shielded so the bulb can only be seen from below and use the lowest wattage bulbs possible.
- We recommend that the proposed "shoreline access management plan" (page 37) include: prohibiting free movement of pets in proposed Beach Parks; feral animal and predator control; and signs should be posted that discourage feeding feral animals in or near beach habitats. In addition, we recommend a litter control program provide sturdy animal-proof garbage containers to prevent the invasion of house mice, rats, mongoose, and feral cats to the beach parks and shoreline development areas.
- Page 35 of the EISPN indicates that the federally endangered plant hala pepe (*Pleomele hawaiiensis*) was "identified in the mauka portion of the site during a survey conducted in 1987." We recommend that a new botanical survey be conducted by a knowledgeable biologist to determine if federally listed plant species occur within the proposed project footprint. Surveys should be conducted during the wettest season when detection of listed plant species is most likely to occur. If listed species are present, the DEIS should

address all potential direct and indirect impacts that may result from the proposed project to these species. Information obtained from the surveys should be provided in the DEIS.

- A number of recent human-caused wildland fires have escaped containment by the available interagency initial attack fire suppression forces, resulting in significant impacts to listed species and critical habitat in dry areas of Hawaii County. The proposed project may potentially result in an increased fire risk to listed resources in Kau. Measures to minimize fire risk to listed resources should be incorporated into the project. The Service is partnering with the Hawaii Wildfire Management Organization, the Division of Forestry and Wildlife, the Hawaii County Fire Department, the National Park Service, the Federal Highway Administration, the USDA Natural Resource Conservation Service, the U.S. Forest Service, and the Army to develop fuelbreaks, water sources for firefighting, fire prevention projects, and an increased fire suppression response to minimize the impact of human-caused wildfires to listed species and critical habitat in West Hawaii. We recommend you coordinate with Hawaii County Fire Department's wildland fire management specialists to ensure any wildland fire risk, interdependent with the proposed development, is minimized.
- Hawaii's native ecosystems are heavily impacted by exotic invasive plants. We support your plans that promote the use of native and drought-tolerant plants for landscaping purposes. The following websites are good resources to use when choosing landscaping plants: Pacific Island Ecosystems at Risk (<http://www.hear.org/Pier/>), Hawaii-Pacific Weed Risk Assessment ([http://www.botany.hawaii.edu/faculty/daehler/wra/full\\_table.asp](http://www.botany.hawaii.edu/faculty/daehler/wra/full_table.asp)) and Global Compendium of Weeds ([www.hear.org/gcw](http://www.hear.org/gcw)).
- We recommend that you educate the public regarding the negative impacts of invasive species to native species, specifically the impacts from cats, pigs, sheep, goats, rats, mice, and mongoose, and methods to prevent the spread of these animals. An informed public is the key to maintaining and restoring the ecological integrity of Kau. We recommend you humanely control feral dogs, cats, pigs, sheep and goats. Outreach campaigns should encourage people to call the local Humane Society when they see feral dogs and cats, encourage spaying and neutering of pets, and discourage people from feeding feral animals.

Thank you for the opportunity to provide comments related to your EISPN. If you have any questions regarding this letter, please contact Dr. Jeff Zimpfer, Fish and Wildlife Biologist, Consultation and Technical Assistance Program (phone: 808-792-9431; email: [jeff\\_zimpfer@fws.gov](mailto:jeff_zimpfer@fws.gov)).

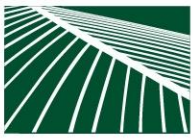
Sincerely,



for Loyal Mehrhoff  
Field Supervisor

cc: Office of Environmental Quality Control, County of Hawaii Planning Department





June 14, 2011

**PRINCIPALS**

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Dr. Loyal Mehrhoff, Field Supervisor  
Fish and Wildlife Service  
300 Ala Moana Boulevard, Room 3-122  
Honolulu, Hawaii 96850

**SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE  
(EISPN)  
KAHUKU VILLAGE  
KA'Ū, ISLAND OF HAWAII  
TAX MAP KEY (3) 9-2-001:072**

Dear Dr. Mehroff:

Thank you for your letter dated November 19, 2009 commenting on the Environmental Impact Statement Preparation Notice (EISPN) for Kahuku Village, a master-planned mixed-use community in the Ka'ū district of the County of Hawaii. As the planning consultant for the landowner, Nani Kahuku 'Āina, LLC, we are responding to your comments. We offer the following responses in the respective order of your comments.

**Bullets 1 to 4**

A terrestrial wildlife survey has been conducted for the project site. The survey did not encounter any threatened or endangered terrestrial wildlife species such as the Hawaiian hoary bat, Hawaiian hawk, Blackburn's sphinx moth, or Hawaiian goose on the project site. The survey noted that while the Hawaiian hoary bat may overfly the project site and occasionally feed there, the portion of the site to be developed does not provide appropriate habitat for roosting.

**Bullet 5**

Your concern relating to the sustainable yield of the underlying aquifer is acknowledged. Potable and non-potable water for Kahuku Village will be provided by desalinated salt water and brackish water. Non-potable water will also be supplemented by treated waste water. A groundwater assessment has been prepared to evaluate existing groundwater resources and the potential impact of the proposed water systems. The assessment, which will be summarized in and appended to the Draft EIS, determined that no adverse impact to water chemistry or basal flowrate is anticipated with development of Kahuku Village. In addition, an assessment of the marine and anchialine pool environments determined that development of the Kahuku Village will not adversely affect the anchialine communities.

**Bullet 6**

We acknowledge that development of Kahuku Village will increase impervious surface area and stormwater runoff from such areas. Stormwater runoff will be directed to infiltration swales or drywells. Due to the highly porous nature of the underlying lavas, no direct discharges from developed areas to coastal waters or anchialine ponds will occur.

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*Senior Associate*

RAYMOND T. HIGA, ASLA  
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Dr. Loyal Mehrhoff

SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE (EISPN),  
KAHUKU VILLAGE, KA'Ū, ISLAND OF HAWAI'I, TAX MAP KEY (3) 9-2-001:072

June 14, 2011

Page 2 of 3

#### Bullet 7

The aforementioned assessment of the marine and anchialine pool environments will be summarized in and appended to the Draft EIS. The assessment determined that development of Kahuku Village would have no significant impact to the anchialine communities as long as appropriate Best Management Practices are implemented. Best Management Practices will be described in the Draft EIS.

#### Bullet 8

The terrestrial wildlife survey included surveys of representative caves on the project site. The survey found, however, that lava tubes at the project site generally do not provide an appropriate habitat for cave adapted invertebrate species and none were observed.

#### Bullet 9

The Applicant, Nani Kahuku Aina, will continue to partner with the U.S. Fish and Wildlife Service on the Hawaii Island Hawksbill Turtle Recovery Project. As recommended, lighting near the shoreline will be shielded to prevent adverse impacts to nesting turtles. The Draft EIS will specify mitigative measures to be implemented to protect sea turtles and their nesting habitat.

#### Bullet 10

We acknowledge that outdoor lighting such as street lights can impact listed and migratory bird species. The Draft EIS will specify that all lights near shoreline areas be shielded and that the lowest light output necessary be used near the shoreline. In addition, project residents and workers will be educated about the adverse impact unshielded outdoor lighting can have on migratory seabirds and sea turtles.

#### Bullet 11

As recommended, free movement of pets will be prohibited along the shoreline and signage will be provided to discourage feeding of feral animals. A litter control program will be implemented and all residents and visitors will be directed to dispose of trash into animal-proof garbage containers.

#### Bullet 12

A new botanical survey has been prepared for Kahuku Village. Fieldwork was conducted in December 2010 and January 2011. One halapepe tree was found at the mauka portion of the property. No other listed plant species were identified. The area in which the halapepe tree was found is not planned for development.

#### Bullet 13

As recommended, prior to construction development of Kahuku Village will be coordinated with the Hawaii County Fire Department wildland fire management specialists to ensure that wildland fire risk is minimized.

#### Bullet 14

We acknowledge and appreciate the reference to the website relating to landscaping plants.

Dr. Loyal Mehrhoff

SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE (EISPN),  
KAHUKU VILLAGE, KA'Ū, ISLAND OF HAWAI'I, TAX MAP KEY (3) 9-2-001:072

June 14, 2011

Page 3 of 3

Bullet 15

Your recommendation to educate the public regarding the negative impacts of invasive species is acknowledged and appropriate outreach efforts will be implemented during development of Kahuku Village.

We appreciate your participation in the environmental review process. A copy of the Draft EIS will be sent to you when it is available.

Sincerely,

PBR HAWAII



Dean Minakami, AICP  
Planner

cc: Valentine Peroff, Nani Kahuku Aina, LLC  
Bobby Jean Leithead-Todd, Hawaii County Planning Department



# United States Department of the Interior



U.S. GEOLOGICAL SURVEY  
Hawaiian Volcano Observatory  
Post Office Box 51  
Hawai'i National Park, Hawai'i 96718-0051

IN REPLY REFER TO:  
October 6, 2009

To: Whom it may concern  
From: Jim Kauahikaua, Scientist-in-Charge  
Subject: Comments on the Nani Kahuku 'aina LLC EIS Preparation Notice

I read your preparation notice with great interest because of the history of development attempts in this hazardous area. Your recognition of the very serious hazards in this area and your plans for their mitigation will be a vital aspect of your development. I include some comments below which may be of use to you in your full EIS:

### Volcanic Hazards:

The State of Hawaii has 6 active volcanoes – Kīlauea, Mauna Loa, Lo'īhi, Hualālai, Haleakalā, and Mauna Kea by definitions found in <http://pubs.usgs.gov/of/2005/1164/>. Mauna Loa is the 8<sup>th</sup> most threatening volcano in the US, 2<sup>nd</sup> most threatening in Hawai'i. Lava flow inundation areas have been published for the slopes of Mauna Loa (<http://pubs.usgs.gov/mf/2002/2401/>). A preliminary estimate of 10% chance that the next eruption of Mauna Loa will affect HOVE [http://hvo.wr.usgs.gov/volcanowatch/2005/05\\_11\\_23.html](http://hvo.wr.usgs.gov/volcanowatch/2005/05_11_23.html).

### Earthquake Hazards:

There is a 10% probability that ground accelerations will exceed 0.8g in your development in any 50 year period. [http://earthquake.usgs.gov/research/hazmaps/products\\_data/Hawaii/his.php#maps](http://earthquake.usgs.gov/research/hazmaps/products_data/Hawaii/his.php#maps)

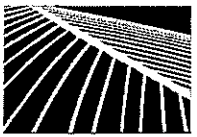
### Air Quality:

This area is likely directly impacted by Kīlauea eruptions from several locations. Currently, the emission from Kīlauea summit are blown through this area by trade winds 70-80% of the year. The State Department of Health intends to install a real-time AQ monitor in HOVE soon if they have not already done so. I would encourage you to install one or more monitors within your proposed development as soon as possible to better estimate what the SO<sub>2</sub> and PM<sub>2.5</sub> concentrations might be during significant summit emissions.

Alternatively, air quality might be estimated using dispersion modeling.

I believe there was an error on p. 73. I'm not aware that anyone was contacted at HVO about this project. Certainly the coverage of lava flow, earthquake, and gas hazards in this Preparation Notice is not to the level recommended by HVO. Please add HVO to the list of federal agencies that will be consulted regarding the EIS to assure that the lava flow, earthquake, and gas hazards are properly represented and addressed.





# PBR HAWAII & ASSOCIATES, INC.

June 14, 2011

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Mr. Jim Kauahikaua, Scientist-in-Charge  
Hawaiian Volcano Observatory  
U.S. Geological Survey  
P.O. Box 51  
Hawaii National Park, Hawaii 96718-0051

**SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE  
(EISPN)  
KAHUKU VILLAGE  
KA'Ū, ISLAND OF HAWAI'I  
TAX MAP KEY (3) 9-2-001:072**

Dear Mr. Kauahikaua:

Thank you for your letter dated October 6, 2009 commenting on the Environmental Impact Statement Preparation Notice (EISPN) for Kahuku Village, a master-planned mixed-use community in the Ka'ū district of the County of Hawaii. As the planning consultant for the landowner, Nani Kahuku 'Āina, LLC, we are responding to your comments. We offer the following responses in the respective order of your comments.

Volcanic Hazards

We appreciate the information and references provided relating to volcanic hazards. We have reviewed the information and incorporated relevant material in the project's Draft EIS.

Earthquake Hazards

The Draft EIS will acknowledge earthquake hazards and specify mitigation measures that can be implemented to minimize damage and improve public safety in the event of an earthquake.

Air Quality

We acknowledge that air quality at the project site may be affected by emissions from Kilauea volcano. An air quality study for the project has been prepared and its findings will be included in the Draft EIS. Please be aware that we did consider installing air quality monitoring equipment on-site, however, we found this to be cost-prohibitive due to the equipment's installation requirements.

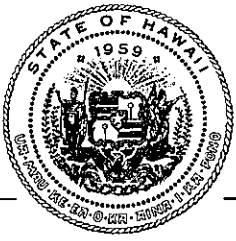
The discussion of lava flow, earthquake, and gas hazards has been expanded in the Draft EIS. As requested, Hawaiian Volcano Observatory will be a consulted party for the project's EIS. We appreciate your participation in the environmental review process.

Sincerely,

PBR HAWAII

Dean Minakami, AICP  
Planner

cc: Valentine Peroff, Nani Kahuku Aina, LLC  
Bobby Jean Leithead-Todd, Hawaii County Planning Department



## DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM

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GOVERNOR  
THEODORE E. LIU  
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### OFFICE OF PLANNING

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Telephone: (808) 587-2846  
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Ref. No. P-12798

October 7, 2009

Mr. Vincent Shigekuni  
PBR Hawaii  
1001 Bishop Street, Suite 650  
Honolulu, Hawaii 96813

Dear Mr. Shigekuni:

Subject: Kahuku Villages  
Environmental Impact Statement Preparation Notice  
TMK(s): 9-2-001: 072  
Ka'u, Island of Hawaii

Thank you for sending the Office of Planning (OP) an Environmental Impact Statement Preparation Notice (EISPN) to implement the proposed master plan. The proposed project will necessitate the reclassification of 1,090 acres from the State Agricultural District to the State Urban District, and reclassification within the State Conservation District for 1,240 acres to the State Urban District; 2,430 acres to the State Rural District and 3,660 acres to the State Agricultural District. The project will develop a 16,450-acre parcel into two villages containing mixed residential uses with a maximum of 1,050 units, and low-scale resort uses with approximately 1,050 hotel, condo, eco-lodge and cabin units, a Hawaiian Heritage Center, an airport/helipad, industrial lots, 170 agricultural lots, ancillary uses, and open space.

OP will be coordinating the State's position on areas of State concern. OP requests that the Draft Environmental Impact Statement (DEIS) consider the impacts of the proposed project on the following issues:

1. **Water Resources** – Water resource protection and water quality are critical State issues. Please discuss the water requirements of the proposed project, the proposed potable and non-potable water sources to be used for the project, and what measures are proposed to reduce water demand and promote water reuse in the project. Please identify whether the proposed project is within a designated Water Management Area, the impact of the project on the sustainable yield of affected aquifers, and the impact of the project on projected water use and system improvements contained in the County's water use and development plan.

2. **Agricultural Lands** – Preservation of important agricultural lands is a priority for the State and Counties. Please discuss how the loss of these lands can be justified, or how other lands of equal importance can be protected.
3. **Affordable Housing** – Increasing the supply of affordable housing is a critical State and County issue. Please discuss specifically how the Petitioner plans to meet the County affordable housing requirements.
4. **Public Health** – Please quantify the volume of solid waste likely to be generated by the project, and describe the impact the project will have on the County's existing and planned capacity for managing solid waste as represented in the County's solid waste management plan. The DEIS should discuss any mitigation measures to be incorporated in the project to reduce solid waste generation. If the project will have a potential to generate hazardous materials or result in the possible contamination of the air, soil, or water, please discuss how public health and safety will be protected. Please identify and discuss any potential health and environmental threats that may be present due to contamination from past or current use of the site, including findings from Phase I or Phase II environmental site assessments conducted at the site.
5. **Cultural, Archaeological, and Historic Resources** – Please include an inventory of archaeological and historic sites on the subject property. Please also identify the status of any monitoring and preservation plans being prepared for or approved by the State Historic Preservation Division. Please identify and describe any cultural resources and cultural practices, including visual landmarks, if applicable, on the subject property and within the ahupua`a in which the property is situated. Please discuss the impact of the proposed project on identified cultural resources and practices, alternatives considered, and proposed mitigation measures.
6. **Environmental, Recreational, and Scenic Resources** – Please include an inventory of flora and fauna, including invertebrates, found on or in proximity to the project site and in any lava tubes and caves on the property. Flora and fauna of concern should not be limited to listed threatened or endangered species or those under consideration for listing, and should include those species and ecosystems identified as "rare" by The Nature Conservancy of Hawaii. The DEIS should discuss measures to be taken to protect rare, threatened, or endangered species or ecosystems of concern. You should consider in the design of your field observations, including both wet and dry season surveys to capture the fullest range of flora and fauna. Please include a description of recreational uses on or near the project site. A description of scenic resources should also be included.

7. **Coastal Zone Management (CZM)** – The State oversees protection of natural, cultural, and economic resources within the coastal zone, which is defined as 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 (§205A-1, Hawaii Revised Statutes). Please discuss how the proposed project will balance the competing values of economic development and preservation of coastal resources. We note that on page 60, the characterization of CZM is inadequate. It seems to imply that satisfaction of CZM is accomplished by the SMA permit system. This is not a supportable thought. Irrespective of where the proposed development is, there is a need for the applicant to discuss the project’s relationship with the CZM objectives and policies. This is the overriding perspective. The possibility that there will not be any structures in the SMA does not excuse the applicant from the broader CZM assessment. Hence, the EIS should include a full discussion of the matter.

The SMA permit is essentially a management tool to assure that the allowable uses are designed and carried out in a manner that assures compliance with the CZM objectives and policies and SMA guidelines. In addition, the applicant should consult with the County regarding changes to the building code that resulted from the wind speed studies underwritten with CZM funds.

8. A comprehensive discussion of the project’s relationship with the Ocean Resources Management Plan management goals and strategic actions and the provisions of the Coastal Nonpoint Pollution Control Program should be included.

- a. **Coastal and Ocean Resources** – The State has an affirmative duty to protect Hawaii’s nearshore waters. Please discuss important coastal and marine resources and ecosystems that may be impacted by the proposed project. Please discuss how stormwater and wastewater generated by the project will be prevented from reducing the quality of nearshore waters.

The DEIS should discuss the impact of the project on existing site and offsite hydrology and how the project will manage stormwater and runoff. OP recommends the use of best management practices (BMP) that promote onsite infiltration and minimize runoff from storm events. More information on stormwater BMPs can be found at <http://hawaii.gov/dbedt/czm/initiative/lid.php>.

- b. **Coastal and Other Hazards** – Please describe any hazard conditions that are relevant to the site, such as potential risk or harm from tsunamis,





with respect to the Counties' adopted general, community, or development plans. Thus, the DEIS should discuss the proposed project's consistency with the County land use plans. If the proposed project is not consistent with the County plans, would require a County plan amendment, or lies outside a County urban growth or rural community boundary, then the DEIS should provide an analysis and discussion of the following:

- a. **Alternative Sites Considered** – The DEIS should describe and discuss alternative sites that were considered for the project, and discuss why the project could not be accommodated on lands within the urban growth or rural community boundary, if the County plan delineates such boundaries, or on land already designated by the County for similar uses.
  - b. **Impact on Surrounding Lands** – The DEIS should discuss what the impacts of changing the County plan designation or extending the urban growth or rural community boundary would have on the surrounding lands.
  - c. **Significant Public Benefit** – The DEIS should discuss what, if any, public benefits are provided by the proposed project above that already required under existing approval and permitting requirements.
13. **Development Timetable** – Due to the magnitude of the proposed project, it is apparent that development may not be substantially complete within ten (10) years of the LUC's approval. The DEIS should reference LUC Rules (Sections 15-15-50 and 15-15-78, Hawaii Administrative Rules), and provide a schedule of development for each 10-year increment of the total project and a map with a table showing the location and timing of each increment of development.

OP recommends that the EA/EIS process be used as a means to identify and incorporate sustainable design and development practices, including green building practices in the proposed project. The adoption of sustainable building and development practices has long-term environmental, social, and economic benefits to Hawaii's residents and communities. The Office of Environmental Quality Control's, *Guidelines for Sustainable Building Design in Hawai'i*, and the U.S. GBC LEED programs for new construction and its pilot program for neighborhood development (LEED-ND) offer guidelines and checklists for this purpose.

The LEED-ND rating system is especially useful in profiling how a project protects and enhances the overall health, natural environment, and quality of life of communities. The rating system provides a range of development features and strategies that promote efficient water, energy, and resource use, including waste reduction, as well as location and design elements to

Mr. Vincent Shigekuni  
Page 6  
October 7, 2009

reduce transportation impacts. OP recommends that the DEIS include a preliminary overview of LEED features that could be incorporated into the project, based on the U.S. GBC LEED checklists available. This information would greatly aid agencies, decision-makers, and the public in reviewing the project application.

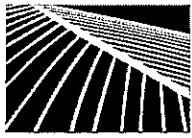
OP looks forward to receiving the DEIS with the potential impacts and mitigation measures for the above issues addressed. If you have any questions, please call Lorene Maki in the Land Use Division at 587-2888.

Sincerely,

A handwritten signature in black ink, appearing to read "Abbey Seth Mayer", with a long horizontal flourish extending to the right.

Abbey Seth Mayer  
Director

c: Mr. Orlando Davidson, LUC  
Ms. Katherine Kealoha, OEQC  
Ms. Bobby Jean Leithead-Todd, Planning Department, County of Hawaii



**PBR HAWAII**  
& ASSOCIATES, INC.

DATE

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GRANT T. MURAKAMI, AICP, LEED<sup>®</sup> AP  
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*Chairman Emeritus*

Mr. Jesse Souki, Director  
Office of Planning  
State of Hawaii  
235 South Beretania Street, 6<sup>th</sup> Floor  
Honolulu, Hawaii 96813

**SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION  
NOTICE (EISPN)  
KAHUKU VILLAGE  
KA'Ū, ISLAND OF HAWAII  
TAX MAP KEY (3) 9-2-001:072**

Dear Mr. Souki:

ASSOCIATES

TOM SCHNELL, AICP  
*Senior Associate*

RAYMOND T. HIGA, ASLA  
*Senior Associate*

KEVIN K. NISHIKAWA, ASLA  
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*Associate*

SCOTT MURAKAMI, ASLA, LEED<sup>®</sup> AP  
*Associate*

DACHENG DONG, LEED<sup>®</sup> AP  
*Associate*

Thank you for your letter dated October 7, 2009 commenting on the Environmental Impact Statement Preparation Notice (EISPN) for Kahuku Village, a master-planned mixed-use community in the Ka'ū district of the County of Hawaii. As the planning consultant for the landowner, Nani Kahuku Aina, LLC, we are responding to your comments.

We offer the following responses in the respective order of your comments:

1. **Water Resources.** We acknowledge that water resource protection and water quality are critical State issues. The project's anticipated potable and non-potable water requirements will be discussed in the Draft EIS. In addition, the Draft EIS will discuss the ground water source, impact on sustainable yield of the affected aquifer, and measures proposed to reduce water demand. No impact to county facilities is anticipated as the proposed water system will be privately constructed and operated.
2. **Agricultural Lands.** We acknowledge that the preservation of important agricultural lands is a priority for the State and Counties. The Kahuku Village property, however, is unsuitable for most agricultural pursuits as reflected by its classification of "E" by the Land Study Bureau Detailed Land Classification and unclassified status by the Agricultural Lands of Importance to the State of Hawaii (ALISH) rating system. This information will be provided in the Draft EIS.
3. **Affordable Housing.** The Draft EIS will include a discussion of Kahuku Village's consistency with County affordable housing requirement.

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Mr. Jesse Souki

SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE (EISPN),  
KAHUKU VILLAGE, KA'Ū, ISLAND OF HAWAI'I, TAX MAP KEY (3) 9-2-001:072

June 14, 2011

Page 2 of 3

4. **Public Health.** The Draft EIS will include a discussion of the quantity of solid waste likely to be generated by the project, the project's impact on the county's planned capacity, and measures that may be implemented to reduce solid waste generation. The Draft EIS will also include a discussion of anticipated impacts and mitigation measures for air quality, soils, and water quality. Please be aware that there are no known existing contaminants that may threaten public health on the property as it has not been previously developed.
5. **Cultural, Archaeological, and Historic Resources.** An archaeological inventory survey and cultural impact assessment have been prepared for the project. Findings of the studies and the project's impact to archaeological, historic, and cultural resources will be discussed in the Draft EIS.
6. **Environmental, Recreational, and Scenic Resources.** Flora, terrestrial wildlife, and marine environment surveys have been prepared for the project. The terrestrial wildlife survey searched for invertebrates in lava tubes on the project site. Findings of the surveys and mitigation measures required to protect endangered, threatened, or rare species will be discussed in the Draft EIS. As requested, the Draft EIS will also include a discussion of planned and nearby recreational uses and the project's impact on scenic resources.
7. **Coastal Zone Management.** The Draft EIS will include a discussion of the project's consistency with CZM objectives and policies. A discussion of the project's balancing the competing values of economic development and preservation of coastal resources will also be included in the Draft EIS.
- 8a. **Coastal and Ocean Resources.** The Draft EIS will include a discussion of important coastal and marine ecosystems and the project's anticipated impact on these resources. Planned measures to mitigate impacts from stormwater runoff and wastewater will be discussed in the Draft EIS. Your recommendation to utilize best management practices that promote onsite infiltration is acknowledged.
- 8b. **Coastal and Other Hazards.** The Draft EIS will include a discussion of hazards relevant to the site including risk from tsunami, hurricane, storm waves, flooding, erosion, earthquakes, volcanic activity, and subsidence.
- 8c. **Coastal-dependent Uses and Beach Protection.** Kahuku Village's development concept will be explained in the Draft EIS. The Draft EIS will also include a discussion of economic uses that will benefit the State, and measures to be taken to enhance beach protection and access.
- 8d. **Coastal Issues –** The Draft EIS will include a discussion of sea level rise, coastal hazards, public access, coastal aesthetics and ecosystems.
9. **Energy Use and Impacts –** The Draft EIS will quantify the projected energy demand by type of use and discuss measures to be taken to reduce energy demand, promote energy

Mr. Jesse Souki

SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE (EISPN),  
KAHUKU VILLAGE, KA'Ū, ISLAND OF HAWAI'I, TAX MAP KEY (3) 9-2-001:072

June 14, 2011

Page 3 of 3

efficiency, and promote use of renewable energy sources. Generating or transmission capacity constraints, if any, will be identified. Nani Kahuku Aina is considering green building systems, such as LEED, and a discussion of sustainable design will be included in the Draft EIS. The Draft EIS will also discuss the degree to which the project promotes transportation energy savings for project residents and users.

10. Impact on State Facilities. The DEIS will include a discussion on State-funded facilities and measures needed to mitigate impacts.
11. Conservation District. An inventory of the project's Conservation District resources and impacts, if any, to these resources and the public will be discussed in the Draft EIS.
12. Conformance with County Plan Designations and Urban Growth or Rural Community Boundaries. The project's conformance with the County of Hawaii General Plan and Kau Community Development Plan will be discussed in the Draft EIS. The Draft EIS will also discuss alternative sites for the development, impact on surrounding lands, and public benefit of the project.
13. Development Timetable. The timing of Kahuku Village's development will be discussed in the Draft EIS. The Draft EIS will also reference applicable portions of Sections 15-15-50 and 15-15-78, Hawaii Administrative Rules.

We appreciate your reference to the Office of Environmental Quality Control's *Guidelines for Sustainable Building Design in Hawaii*, as well as the U.S. GBC LEED programs. As previously indicated, the Draft EIS will include a discussion of the sustainability initiatives to be incorporated at Kahuku Village.

We appreciate your participation in the environmental review process. We will send you a copy of the Draft EIS when it is available.

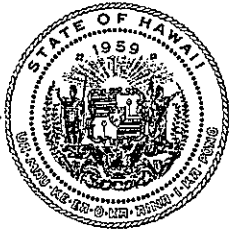
Sincerely,

PBR HAWAII



Dean Minakami, AICP  
Planner

cc: Valentine Peroff, Nani Kahuku Aina, LLC  
Bobby Jean Leithead-Todd, Hawaii County Planning Department



## DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM

LINDA LINGLE  
GOVERNOR  
THEODORE E. LIU  
DIRECTOR  
MARK K. ANDERSON  
DEPUTY DIRECTOR

STRATEGIC INDUSTRIES DIVISION  
235 South Beretania Street, Leiolopapa A Kamehameha Bldg., 5<sup>th</sup> Floor, Honolulu, Hawaii 96813  
Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804

Telephone: (808) 587-3807  
Fax: (808) 586-2536  
Web site: [www.hawaii.gov/dbedt](http://www.hawaii.gov/dbedt)

September 28, 2009

PBR HAWAII  
1001 Bishop Street, Suite 650  
Honolulu, Hawaii 96813

Attn: Vincent Shigekuni

Re: Draft Environmental Impact Statement (DEIS)  
Kahuku Villages, Kau, Hawaii  
Tax Map Key: (3) 9-2-001:072

In response to your September 8, 2009, notice, thank you for the opportunity to provide comments on the DEIS for Kahuku Villages, a 16,456 acre mixed use village, with hotels, eco-lodge and residential lots fronting a golf course.

We would like to call your attention to: (1) State energy conservation goals; and, (2) energy and resource efficiency and renewable energy and resource development.

1. **State energy conservation goals.** Project buildings, activities, and site grounds should be designed and/or retrofit with energy saving considerations. The mandate for such consideration is found in Chapter 344, HRS ("State Environmental Policy") and Chapter 226 ("Hawaii State Planning Act"). In particular, we would like to call to your attention HRS 226 18(c) (4) which includes a State objective of promoting all cost-effective energy conservation through adoption of energy-efficient practices and technologies. In addition, Act 155 SLH 2009 establishes comprehensive measures to promote energy efficiency and sets a goal of reducing electricity consumption from 'business as usual' by 4300 GWH, or 30%, by 2030. This Act also sets a goal of a 40% increase in the use of renewable energy by 2030.

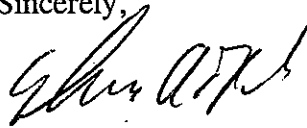
2. **Energy and resource efficiency and renewable energy and resource development.**

We note that the project will incorporate sustainable principles and practices, including alternative energy, water conservation measures, utilize the golf course as part of a green drainage system (sedimentation basin) and wastewater effluent reuse area, and encourage food/biofuel gardens for home use, and farmer's markets.

We encourage the parties to this development to make a firm commitment to energy and resource efficiency and include a requirement in the Conditions, Covenants, and Restrictions for a development that meets the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) Certification for Green Neighborhoods.

Our website (<http://www.hawaii.gov/dbedt/info/energy/efficiency/>) provides detailed information on guidelines, directives and statutes, as well as studies and reports on aspects of energy efficiency and renewable energy. Please do not hesitate to contact Carilyn Shon, Energy Efficiency Branch Manager, at telephone number 808-587-3810, for additional information on LEED and energy efficiency, and Maria Tome, Renewable Energy Branch Manager, at 808-587-3809 for renewable energy resources.

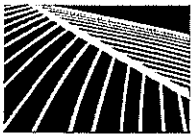
Sincerely,



Theodore A. Peck  
Administrator

c: OEQC  
State Land Use Commission  
County of Hawaii Planning Department





# PBR HAWAII & ASSOCIATES, INC.

June 14, 2011

**PRINCIPALS**

THOMAS S. WITTEN, ASLA  
*President*

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*Executive Vice-President*

RUSSELL Y. J. CHUNG, FASLA, LEED<sup>®</sup> AP  
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*Vice-President*

GRANT T. MURAKAMI, AICP, LEED<sup>®</sup> AP  
*Principal*

W. FRANK BRANDT, FASLA  
*Chairman Emeritus*

Mr. Theodore A. Peck, Administrator  
Strategic Industries Division  
Department of Business, Economic Development & Tourism  
State of Hawaii  
P.O. Box 2359  
Honolulu, Hawaii 96804

**SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE  
(EISPN)  
KAHUKU VILLAGE  
KA'Ū, ISLAND OF HAWAII  
TAX MAP KEY (3) 9-2-001:072**

Dear Mr. Peck:

Thank you for your letter dated September 28, 2009 commenting on the Environmental Impact Statement Preparation Notice (EISPN) for Kahuku Village, a master-planned mixed-use community in the Ka'ū district of the County of Hawaii. As the planning consultant for the landowner, Nani Kahuku Aina, LLC, we are responding to your comments.

We offer the following responses in the respective order of your comments:

1. We acknowledge the State energy conservation goals and policies as set forth in Chapter 344, HRS (State Environmental Policy), Chapter 226, HRS (Hawaii State Planning Act), and Act 155 SLH 2009. Energy conserving practices planned to be implemented at Kahuku Village will be discussed in the Draft EIS.
2. Nani Kahuku Aina is committed to developing Kahuku Village in a sustainable manner that respects the community's desires and the Site's natural and cultural resources. A description of the sustainability initiatives to be implemented at Kahuku Village will be discussed in the Draft EIS.

We appreciate the link to the energy efficiency information on your website and have reviewed the information therein.

We appreciate your participation in the environmental review process. We will send you a copy of the Draft EIS when it is available.

Sincerely,

PBR HAWAII

Dean Minakami, AICP  
Planner

cc: Valentine Peroff, Nani Kahuku Aina, LLC  
Bobby Jean Leithead-Todd, Hawaii County Planning Department

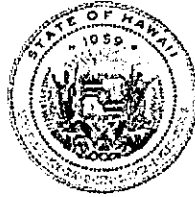
**HONOLULU OFFICE**  
1001 Bishop Street, Suite 650  
Honolulu, Hawaii 96813-3484  
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Fax: (808) 523-1402  
E-mail: [sysadmin@pbrhawaii.com](mailto:sysadmin@pbrhawaii.com)

**KAPOLEI OFFICE**  
1001 Kamokila Boulevard  
Kapolei Building, Suite 313  
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LINDA LINGLE  
GOVERNOR

MAJOR GENERAL ROBERT G. F. LEE  
DIRECTOR OF CIVIL DEFENSE

EDWARD T. TEIXEIRA  
VICE DIRECTOR OF CIVIL DEFENSE



PHONE (808) 733-4300  
FAX (808) 733-4287

**STATE OF HAWAII**  
**DEPARTMENT OF DEFENSE**  
**OFFICE OF THE DIRECTOR OF CIVIL DEFENSE**  
3949 DIAMOND HEAD ROAD  
HONOLULU, HAWAII 96816-4495

October 5, 2009

Mr. Vincent Shigekuni  
PBR Hawaii  
1001 Bishop Street, Suite 650  
Honolulu, Hawaii 96813

Dear Mr. Shigekuni:

Environmental Impact Statement Preparation Notice for Kahuku Villages

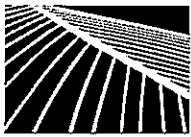
Thank you for the opportunity to comment on this notice. After review of the documents you have sent for this project, we have no early consultation comments to make. We will anticipate reviewing the Environmental Impact Statement when it is completed and make any appropriate comments at that time.

If you have any questions, please call Ms. Havinne Okamura, Hazard Mitigation Planner, at (808) 733-4300, extension 556.

Sincerely,

EDWARD T. TEIXEIRA  
Vice Director of Civil Defense

c: Ms. Bobby Jean Leithead-Todd, County of Hawaii, Department of Planning  
Office of Environmental Quality Control



# PBR HAWAII

& ASSOCIATES, INC.

June 14, 2011

**PRINCIPALS**

THOMAS S. WITTEN, ASLA  
*President*

R. STAN DUNCAN, ASLA  
*Executive Vice-President*

RUSSELL Y. J. CHUNG, FASLA, LEED<sup>®</sup> AP  
*Executive Vice-President*

VINCENT SHIGEKUNI  
*Vice-President*

GRANT T. MURAKAMI, AICP, LEED<sup>®</sup> AP  
*Principal*

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*Chairman Emeritus*

Mr. Edward T. Teixeira  
Vice Director of Civil Defense  
Department of Defense  
3949 Diamond Head Road  
Honolulu, Hawaii 96816

**SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE  
(EISPN)  
KAHUKU VILLAGE  
KA'Ū, ISLAND OF HAWAII  
TAX MAP KEY (3) 9-2-001:072**

**ASSOCIATES**

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*Senior Associate*

RAYMOND T. HIGA, ASLA  
*Senior Associate*

KEVIN K. NISHIKAWA, ASLA  
*Associate*

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*Associate*

SCOTT MURAKAMI, ASLA, LEED<sup>®</sup> AP  
*Associate*

DACHENG DONG, LEED<sup>®</sup> AP  
*Associate*

Dear Mr. Teixeira:

Thank you for your letter dated October 5, 2009 commenting on the Environmental Impact Statement Preparation Notice (EISPN) for Kahuku Village, a master-planned mixed-use community in the Ka'ū district of the County of Hawaii. As the planning consultant for the landowner, Nani Kahuku Aina, LLC, we are responding to your comments.

We acknowledge that the Department of Defense has no early consultation comments.

We appreciate your participation in the environmental review process. We will send you a copy of the Draft EIS when it is available.

Sincerely,

PBR HAWAII

Dean Minakami, AICP  
Planner

cc: Valentine Peroff, Nani Kahuku Aina, LLC  
Bobby Jean Leithead-Todd, Hawaii County Planning Department

HONOLULU OFFICE  
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Kapolei, Hawaii 96707-2005  
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Fax: (808) 535-3163



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

OFFICE OF SCHOOL FACILITIES AND SUPPORT SERVICES

September 23, 2009

Mr. Vincent Shigekuni, Vice President  
PBR Hawaii  
1001 Bishop Street, Suite 650  
Honolulu, Hawaii 96813

Dear Mr. Shigekuni:

Subject: Environmental Impact Statement Preparation Notice for the Proposed  
Kahuku Villages project, TMK (3) 9-2-001:072, Ka`u, Hawaii

The Department of Education (DOE) has reviewed the Environmental Impact Statement Preparation Notice (EISPN) for the proposed Kahuku Villages project.

The DOE notes that the school enrollment, capacity, and enrollment projection information in Section 4.8.3, Table 4-3 of the EISPN is outdated and incorrect. These figures should be corrected in the Draft EIS. Current data for enrollment, capacity, and projected enrollment are below.

	Capacity, 2008-2009	Enrollment, 2009-2010	Projected Enrollment, 2014-2015
Ka`u High School/Pahala Elementary School (K-12)	624	576	590
Naalehu Elementary School (K-6)	342	356	395

Given the project's magnitude and the above enrollment and capacity figures, this project would have an impact on the DOE's facilities. The DOE does note that Section 2.3, Figure 6 of the EISPN shows an elementary school site and a middle school site in the Mauka Village Master Plan. Nani Kahuku `Aina, LLC should contact the DOE to discuss these sites and to complete an Educational Contribution Agreement with the DOE.

If you have any questions, please contact Jeremy Kwock of the Facilities Development Branch at 377-8301.

Sincerely yours,

Duane Y. Kashiwai  
Public Works Administrator  
Facilities Development Branch

DYK:jmb

- c: Arthur Souza, CAS, Honokaa/Kealakehe/Kohala/Konawaena Complex Areas
- Katherine Kealoha, Director, OEQC
- Bobby Jean Leithead-Todd, Planning Director, County of Hawaii



**PBR HAWAII**  
& ASSOCIATES, INC.

June 14, 2011

**PRINCIPALS**

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*Chairman Emeritus*

Mr. Duane Y. Kashiwai  
Public Works Administrator  
Facilities Development Branch  
P.O. Box 2360  
Honolulu, Hawaii 96804

**SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE  
(EISPN)  
KAHUKU VILLAGE  
KA'Ū, ISLAND OF HAWAII  
TAX MAP KEY (3) 9-2-001:072**

Dear Mr. Kashiwai:

Thank you for your letter dated September 23, 2009 commenting on the Environmental Impact Statement Preparation Notice (EISPN) for Kahuku Village, a master-planned mixed-use community in the Ka'ū district of the County of Hawaii. As the planning consultant for the landowner, Nani Kahuku Aina, LLC, we are responding to your comments.

Representatives from Nani Kahuku Aina met with DOE Planning staff on January 7, 2011 to discuss Kahuku Village and the potential impact to DOE facilities. Our understanding is that Kahuku Village is not within a DOE assessment district. Nevertheless, Nani Kahuku Aina is interested in contributing towards educational facilities by setting aside approximately 12-acres of land which it plans to donate for the future development of an elementary school. We acknowledge and appreciate the updated school enrollment and capacity information and will include the information in the Draft EIS.

We appreciate your participation in the environmental review process. We will send you a copy of the Draft EIS when it is available.

Sincerely,

PBR HAWAII

Dean Minakami, AICP  
Planner

cc: Valentine Peroff, Nani Kahuku Aina, LLC  
Bobby Jean Leithead-Todd, Hawaii County Planning Department

**ASSOCIATES**

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*Associate*

DACHENG DONG, LEED® AP  
*Associate*

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

In reply, please refer to:  
EPO-09-139

November 4, 2009

Mr. Vincent Shigekuni  
PBR Hawaii  
1001 Bishop Street, Suite 650  
Honolulu, Hawaii 96813

Dear Mr. Shigekuni:

SUBJECT: Environmental Impact Statement Preparation Notice (EISPN) for Kahuku Villages Project, Kau, Island of Hawaii, Hawaii  
TMK: (3) 92-001: 072

Thank you for allowing us to review and comment on the subject application. The application was routed to the various branches of the Environmental Health Administration. We have the following Wastewater Branch, Safe Drinking Water Branch and General comments.

Wastewater Branch

The document proposes a cluster development and will create job opportunities especially for Kau residents and provide diverse housing and a high-quality resort to subsidize community benefits.

The project is located in the Critical Wastewater Disposal Area (CWDA) where no new cesspools will be allowed.

We have provided our comments below:

1. For Section 4.7.3 Wastewater System, Existing Conditions, it is stated that wastewater from farm buildings and operations may have special exemptions (HAR section 11-62-06(d)(2)). We need to clarify that we have special requirements, not special exemptions for wastewater generated from farm buildings and operations; and
2. No specific details have been provided in regards to the proposed project, therefore, we are unable to provide additional information about the proposed use of wastewater systems that was mentioned in the document.

Any means to reduce green house gas emissions, practice renewable energy and a reduction in waste is highly recommended.

Safe Drinking Water Branch

The Safe Drinking Water Branch has reviewed the subject document and offers the following comments:

1. The document does not identify whether the proposed water system will be County or privately owned, nor is there an identification of the source type (basal ground water, surface water, catchment or desalinated brackish water).
2. Assuming that a new regulated public water system is being proposed, the Applicant must comply with the following requirements under Hawaii Administrative Rules (HAR) Title 11, Chapter 20:
  - a. All new public water systems are required to demonstrate and meet minimum capacity requirements prior to their establishment. This requirement involves demonstration that the system will have satisfactory technical, managerial and financial capacity to enable the system to comply with safe drinking water standards and requirements.
  - b. Projects that propose development of new sources of potable water serving or proposed to serve a public water system must comply with the terms of HAR 11-20-29. This section requires that all new public water system sources be approved by the Director of Health prior to its use. Such approval is based primarily upon the submission of a satisfactory engineering report which addresses the requirements HAR 11-20-29.

The engineering report must identify all potential sources of contamination and evaluate alternative control measures which could be implemented to reduce or eliminate the potential for contamination, including treatment of the water source. In addition, water quality analyses for all regulated contaminants, performed by a laboratory certified by the State Laboratories Division of the state of Hawaii, must be submitted as part of the report to demonstrate compliance with all drinking water standards. Additional parameters may be required by the Director for this submittal or additional tests required upon his or her review of the information submitted.
  - c. All public water system sources must undergo a source water assessment which will delineate a source water protection area. This process is preliminary to the creation of a source water protection plan for that source and activities which will take place to protect the drinking water source.

- d. Projects proposing to develop new public water systems or proposing substantial modifications to existing public water systems must receive approval by the Director of Health prior to construction of the proposed system or modification. These projects include treatment, storage and distribution systems of public water systems. The approval authority for projects owned and operated by a County Board or Department of Water or Water Supply has been delegated to them.
- e. All public water systems must be operated by certified distribution system and water treatment plant operators as defined by Hawaii Administrative Rules, Title 11, Chapter 11-25 titled "Rules Pertaining to Certification of Public Water System Operators."
- f. All projects which propose the use of dual water systems or the use of a non-potable water system in proximity to an existing potable water system to meet irrigation or other needs must be carefully design and operate these systems to prevent the cross-connection of these systems and prevent the possibility of backflow of water from the non-potable system to the potable system. The two systems must be clearly labeled and physically separated by air gaps or reduced pressure principle backflow prevention devices to avoid contaminating the potable water supply. In addition backflow devices must be tested periodically to assure their proper operation. Further, all non-potable spigots and irrigated areas should be clearly labeled with warning signs to prevent the inadvertent consumption on non-potable water. Compliance with Hawaii Administrative Rules, Title 11, Chapter 11-21 titled "Cross-Connection and Backflow Control" is also required.
- g. All projects which propose the establishment of a potentially contaminating activity (as identified in the Hawai'i Source Water Assessment Plan) within the source water protection area of an existing source of water for a public water supply should address this potential, and activities that will be implemented to prevent or reduce the potential for contamination of the drinking water source.

If you have any questions, please call Michael Miyahira at 586-4258.

#### General

We strongly recommend that you review all of the Standard Comments on our website: [www.hawaii.gov/health/environmental/env-planning/landuse/landuse.html](http://www.hawaii.gov/health/environmental/env-planning/landuse/landuse.html). Any comments specifically applicable to this project should be adhered to.

The same website also features a Healthy Community Design Smart Growth Checklist (Checklist) created by Built Environment Working Group (BEWG) of the Hawaii State Department of Health. The BEWG recommends that State and county planning departments, developers, planners, engineers and other interested parties apply the healthy built environment



Mr. Shigekuni  
November 4, 2009  
Page 4

principles in the Checklist whenever they plan or review new developments or redevelopments projects. We also ask you to share this list with others to increase community awareness on healthy community design.

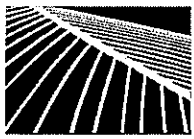
If there are any questions about these comments please contact Jiakai Liu with the Environmental Planning Office at 586-4346.

Sincerely,



GEVEVIEVE SALMONSON, Acting Manager  
Environmental Planning Office

c: EPO  
WWB  
SDWB  
EH-Hawaii



# PBR HAWAII

& ASSOCIATES, INC.

June 14, 2011

## PRINCIPALS

THOMAS S. WITTEN, ASLA  
*President*

R. STAN DUNCAN, ASLA  
*Executive Vice-President*

RUSSELL Y. J. CHUNG, FASLA, LEED<sup>®</sup> AP  
*Executive Vice-President*

VINCENT SHIGEKUNI  
*Vice-President*

GRANT T. MURAKAMI, AICP, LEED<sup>®</sup> AP  
*Principal*

W. FRANK BRANDT, FASLA  
*Chairman Emeritus*

Ms. Genevieve Salmonson, Manager  
Environmental Planning Office  
Department of Health  
State of Hawaii  
P.O. Box 3378  
Honolulu, Hawaii 96801

**SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE  
(EISPN)  
KAHUKU VILLAGE  
KA'Ū, ISLAND OF HAWAII  
TAX MAP KEY (3) 9-2-001:072**

## ASSOCIATES

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*Senior Associate*

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*Associate*

SCOTT MURAKAMI, ASLA, LEED<sup>®</sup> AP  
*Associate*

DACHENG DONG, LEED<sup>®</sup> AP  
*Associate*

Dear Ms. Salmonson:

Thank you for your letter dated November 4, 2009 forwarding comments from various branches of the Environmental Health Administration on the Environmental Impact Statement Preparation Notice (EISPN) for Kahuku Village, a master-planned mixed-use community in the Ka'ū district of the County of Hawaii. As the planning consultant for the landowner, Nani Kahuku Aina, LLC, we are responding to your comments.

We offer the following responses in the respective order of your comments:

### Wastewater Branch

1. We appreciate the clarification that the Department of Health has special requirements, rather than special exemptions, for wastewater generated from farm buildings and operations. We will make the appropriate revisions in the Draft EIS.
2. Further details about the proposed wastewater system proposed to service Kahuku Village will be provided in the Draft EIS.
3. Nani Kahuku Aina is committed to developing Kahuku Village in a responsible manner that minimizes environmental impacts. A description of the sustainability initiatives to be implemented at Kahuku Village will be discussed in the Draft EIS.

### Safe Drinking Water Branch

1. A privately constructed and owned water system using desalinated basal water is proposed to provide potable and non-potable water for Kahuku Village. Further details about the water system will be provided in the Draft EIS.
- 2a. As Kahuku Village will be constructing a new regulated public water system, we acknowledge that all new public waters systems are required to demonstrate and meet minimum capacity requirements prior to their establishment.

**HONOLULU OFFICE**  
1001 Bishop Street, Suite 650  
Honolulu, Hawaii 96813-3484  
Tel: (808) 521-5631  
Fax: (808) 523-1402  
E-mail: sysadmin@pbrhawaii.com

**KAPOLEI OFFICE**  
1001 Kamokila Boulevard  
Kapolei Building, Suite 313  
Kapolei, Hawaii 96707-2005  
Tel: (808) 521-5631  
Fax: (808) 535-3163

Ms. Genevieve Salmonson

SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE (EISPN),  
KAHUKU VILLAGE, KA'Ū, ISLAND OF HAWAI'I, TAX MAP KEY (3) 9-2-001:072

June 14, 2011

Page 2 of 2

- 2b. We acknowledge that the water system must comply with the terms of HAR 11-20-29, including receipt of approval from the Director of Health prior to its use.
- 2c. We acknowledge that the proposed water system must undergo a source water assessment which will delineate a source water protection area.
- 2d. We acknowledge that approval from the Director of Health is required prior to construction of any public water treatment, storage, or distribution systems.
- 2e. We acknowledge that the proposed water system must be operated by certified distribution system and water treatment plant operators as defined in HAR 11-25.
- 2f. As dual water systems are proposed at Kahuku Village, we acknowledge that the potable and non-potable systems must be designed to prevent cross-connection of the systems. Each system will be clearly labeled and physically separated and all non-potable spigots will be clearly labeled with warning signs to prevent inadvertent consumption of non-potable water. The water systems will comply with the cross-connection and backflow control requirements of HAR 11-21.
- 2g. We acknowledge that if an activity is proposed within a source water protection area that may contaminate a public water supply source, the potential for contamination and mitigation efforts to prevent or reduce contamination must be addressed.

General

We appreciate the reference to Department of Health's Standard Comments and Healthy Community Design Smart Growth Checklist and have reviewed the material therein.

We appreciate your participation in the environmental review process. We will send you a copy of the Draft EIS when it is available.

Sincerely,

PBR HAWAII



Dean Minakami, AICP  
Planner

cc: Valentine Peroff, Nani Kahuku Aina, LLC  
Bobby Jean Leithead-Todd, Hawaii County Planning Department

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

October 6, 2009

PBR Hawaii  
1001 Bishop Street Suite 650  
Honolulu, Hawaii 96813

Attention: Mr. Vincent Shigekuni

Ladies and Gentlemen:

Subject: Environmental Impact Statement Preparation Notice for Nani Kahuku  
Aina, LLC

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

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

Sincerely,

A handwritten signature in black ink, appearing to read "Morris M. Atta".

for Morris M. Atta  
Administrator

Cc: OEQC



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
LAND DIVISION

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

RECEIVED  
LAND DIVISION  
2009 SEP 21 A 10:19  
DEPT. OF LAND &  
NATURAL RESOURCES  
STATE OF HAWAII

September 14, 2009

MEMORANDUM

TO:

**DLNR Agencies:**

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

FROM:

*for* Morris M. Atta *Marlene*

SUBJECT: Environmental Impact Statement Preparation Notice for Kahuku Villages

LOCATION: Island of Hawaii

APPLICANT: PBR Hawaii on behalf of Nani Kahuku Aina, LLC

Transmitted for your review and comment on the above referenced document. We would appreciate your comments on this document. Please submit any comments by October 5, 2009.

If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact my office at 587-0433. Thank you.

Attachments

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

Signed:

Date:

9/18/09



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
LAND DIVISION

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

September 14, 2009

2009 SEP 16 A 9:45

RECEIVED  
DIVISION  
NATURAL RESOURCES  
STATE OF HAWAII

2009 SEP 24 A 10:01

RECEIVED  
LAND DIVISION

MEMORANDUM

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

FROM: *for* Morris M. Attal *Maalene*  
SUBJECT: Environmental Impact Statement Preparation Notice for Kahuku Villages  
LOCATION: Island of Hawaii  
APPLICANT: PBR Hawaii on behalf of Nani Kahuku Aina, LLC

Transmitted for your review and comment on the above referenced document. We would appreciate your comments on this document. Please submit any comments by October 5, 2009.

If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact my office at 587-0433. Thank you.

Attachments

- ( ) We have no objections.
- (  ) We have no comments.
- ( ) Comments are attached.

Signed: *[Signature]*  
Date: 9.23.09



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
LAND DIVISION

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

September 14, 2009

MEMORANDUM

TO:

**DLNR Agencies:**

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

FROM:

*for* Morris M. Atta *Marlene*

SUBJECT: Environmental Impact Statement Preparation Notice for Kahuku Villages

LOCATION: Island of Hawaii

APPLICANT: PBR Hawaii on behalf of Nani Kahuku Aina, LLC

DEPT. OF LAND &  
NATURAL RESOURCES  
STATE OF HAWAII

2009 OCT -6 P 2:53

09 SEP 15 AM 10:44 ENGINEERING DIVISION  
LAND DIVISION

Transmitted for your review and comment on the above referenced document. We would appreciate your comments on this document. Please submit any comments by October 5, 2009.

If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact my office at 587-0433. Thank you.

Attachments

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

Signed: \_\_\_\_\_

Date: 10/10/09

DEPARTMENT OF LAND AND NATURAL RESOURCES  
ENGINEERING DIVISION

LD/MorrisAtta

Ref.:EISPNKahukuVillagesPBRHawaii

Hawaii.452

COMMENTS

- ( ) We confirm that the project site, according to the Flood Insurance Rate Map (FIRM), is located in Flood Zone \_\_\_\_.
- (X) **Please take note that based on the map that you have provided the project site, according to the Flood Insurance Rate Map (FIRM), is located in Flood Zone X. The Flood Insurance Program does not have any regulations for developments within Flood Zone X.**
- ( ) Please note that the correct Flood Zone Designation for the project site according to the Flood Insurance Rate Map (FIRM) is \_\_\_\_.
- ( ) Please note that the project must comply with the rules and regulations of the National Flood Insurance Program (NFIP) presented in Title 44 of the Code of Federal Regulations (44CFR), whenever development within a Special Flood Hazard Area is undertaken. If there are any questions, please contact the State NFIP Coordinator, Ms. Carol Tyau-Beam, of the Department of Land and Natural Resources, Engineering Division at (808) 587-0267.

Please be advised that 44CFR indicates the minimum standards set forth by the NFIP. Your Community's local flood ordinance may prove to be more restrictive and thus take precedence over the minimum NFIP standards. If there are questions regarding the local flood ordinances, please contact the applicable County NFIP Coordinators below:

- ( ) Mr. Robert Sumitomo at (808) 768-8097 or Mr. Mario Siu Li at (808) 768-8098 of the City and County of Honolulu, Department of Planning and Permitting.
- ( ) Mr. Frank DeMarco at (808) 961-8042 of the County of Hawaii, Department of Public Works.
- ( ) Mr. Francis Cerizo at (808) 270-7771 of the County of Maui, Department of Planning.
- ( ) Mr. Mario Antonio at (808) 241-6620 of the County of Kauai, Department of Public Works.
  
- ( ) The applicant should include water demands and infrastructure required to meet project needs. Please note that projects within State lands requiring water service from the Honolulu Board of Water Supply system will be required to pay a resource development charge, in addition to Water Facilities Charges for transmission and daily storage.
- ( ) The applicant should provide the water demands and calculations to the Engineering Division so it can be included in the State Water Projects Plan Update.
  
- ( ) Additional Comments: \_\_\_\_\_  
\_\_\_\_\_
  
- ( ) Other: \_\_\_\_\_  
\_\_\_\_\_

Should you have any questions, please call Ms. Suzie S. Agraan of the Planning Branch at 587-0258.

Signed:   
ERIC HIRANAKA, CHIEF ENGINEER

Date: 10/6/09





**PBR HAWAII**  
& ASSOCIATES, INC.

June 14, 2011

**PRINCIPALS**

THOMAS S. WITTEN, ASLA  
*President*

R. STAN DUNCAN, ASLA  
*Executive Vice-President*

RUSSELL Y. J. CHUNG, FASLA, LEED® AP  
*Executive Vice-President*

VINCENT SHIGEKUNI  
*Vice-President*

GRANT T. MURAKAMI, AICP, LEED® AP  
*Principal*

W. FRANK BRANDT, FASLA  
*Chairman Emeritus*

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

**SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE  
(EISPN)  
KAHUKU VILLAGE  
KA‘Ū, ISLAND OF HAWAII  
TAX MAP KEY (3) 9-2-001:072**

**ASSOCIATES**

TOM SCHNELL, AICP  
*Senior Associate*

RAYMOND T. HIGA, ASLA  
*Senior Associate*

KEVIN K. NISHIKAWA, ASLA  
*Associate*

KIMI MIKAMI YUEN, LEED® AP  
*Associate*

SCOTT ALIKA ABRIGO, LEED® AP  
*Associate*

SCOTT MURAKAMI, ASLA, LEED® AP  
*Associate*

DACHENG DONG, LEED® AP  
*Associate*

Dear Mr. Atta:

Thank you for your letter dated October 6, 2009 forwarding comments from the Department of Land and Natural Resources Divisions on the Environmental Impact Statement Preparation Notice (EISPN) for Kahuku Village, a master-planned mixed-use community in the Ka‘ū district of the County of Hawaii. As the planning consultant for the landowner, Nani Kahuku ‘Āina, LLC, we are responding to your comments.

We acknowledge the Engineering Division’s comment that the project site is located in Flood Zone X and that the Flood Insurance Program does not have any regulations for developments within Flood Zone X.

We appreciate your participation in the environmental review process. We will send you a copy of the Draft EIS when it is available.

Sincerely,

PBR HAWAII

Dean Minakami, AICP  
Planner

cc: Valentine Peroff, Nani Kahuku Aina, LLC  
Bobby Jean Leithead-Todd, Hawaii County Planning Department

**HONOLULU OFFICE**  
1001 Bishop Street, Suite 650  
Honolulu, Hawai‘i 96813-3484  
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E-mail: sysadmin@pbrhawaii.com

**KAPOLEI OFFICE**  
1001 Kamokila Boulevard  
Kapolei Building, Suite 313  
Kapolei, Hawai‘i 96707-2005  
Tel: (808) 521-5631  
Fax: (808) 535-3163



**NA ALA HELE**  
Hawaii Trail & Access System

October 27, 2009

Ref: H09:13 Kahuku Villages

Vincent Shigekuni  
PBR Hawaii  
1001 Bishop Street, Suite 650  
Honolulu, Hawaii 96813

Dear Vincent,

Re: Environmental Impact Statement Preparation Notice (EISPN) for Kahuku Villages situate at Ka'u, on the Island of Hawaii, designated as Tax Map Key: 9-2-1-72

Thank you for the opportunity to comment on the proposed project.

There are ancient Hawaiian mauka-makai and lateral trails that provide access to the property. An ancient Hawaiian mauka-makai trail descends from the Hawaiian Ranchos subdivision and provides access to the shoreline just south of Pohue Bay. There are also lateral shoreline trails that provide access along the coast, one of which is accessible from the Road to the Sea to the north of the property. There is also a mauka-makai trail, which descends to the shoreline from the pali on the southern boundary of the property.

These trail alignments have been identified on the County of Hawaii Inventory of Public Shoreline Access, prepared by the Planning Department. A copy of the pertinent map is attached for your reference.

Pursuant to HRS §264-2(b), 'all trails, and other non-vehicular rights of way in the State declared to be public rights-of-ways by the highways act of 1892...are declared to be public trails.' The law further provides that trails that meet these criteria are owned in fee simple by the State of Hawaii through its Board of Land and Natural Resources.

Na Ala Hele will conduct historical record research to identify and verify the existence and alignment of any historical trails that may be claimed by the state.

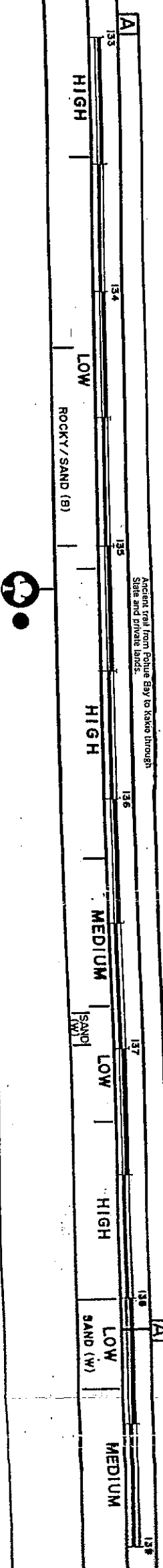
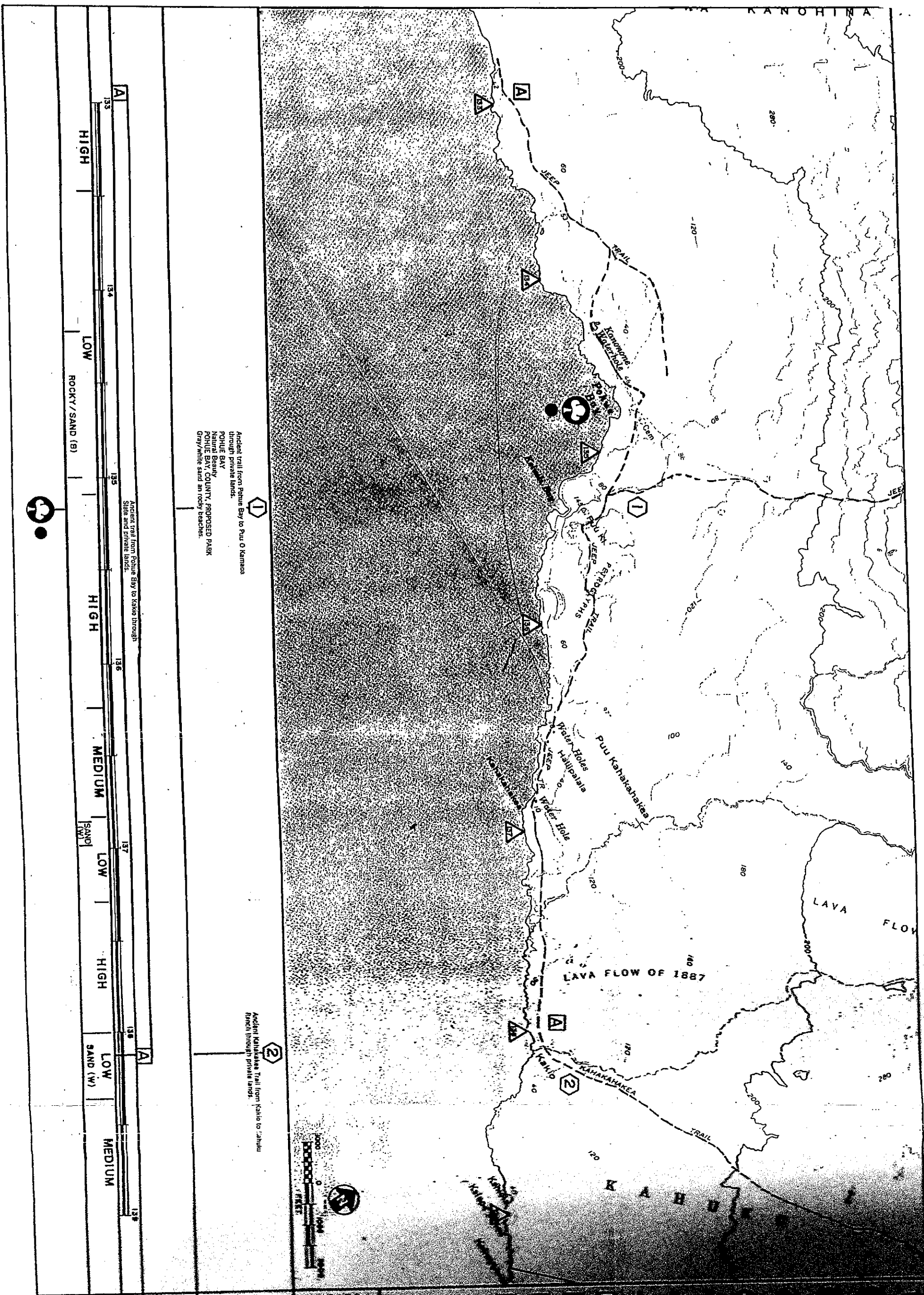
If you have any questions or comments please contact me at (808)587-0057.

Sincerely,

A handwritten signature in black ink that reads "Doris Moana Rowland". The signature is written in a cursive style with a large, prominent initial 'D'.

Doris Moana Rowland  
Na Ala Hele Abstractor and  
Interim Program Manager  
1151 Punchbowl Street  
Room 325  
Honolulu, Hawaii 96813  
Email: moana.rowland@hawaii.gov

c: Clem Chang, NAH Hilo  
OEQC  
COH Planning Department

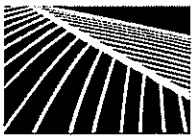


①  
Ancient trail from Pohue Bay to Puu O Kamaea through private lands.  
POHUE BAY  
Natural Beauty  
POHUE BAY, COUNTY, PROPOSED PARK  
Grey/white sand on rocky beaches.

②  
Ancient Kahakaha Trail from Kakio to Jahu through private lands.



SHEET NO. <b>30</b> OF 76 SHEETS	<b>INVENTORY OF PUBLIC SHORELINE ACCESS</b>		PLANNING DEPARTMENT, COUNTY OF HAWAII	
	<b>POHUE BAY - KAKIO</b>		PREPARED BY <b>BRIGGS KASAMOTO, INC.</b> PLANNING ENGINEERS	<b>P. YOSHIMURA, INC.</b> PLANNING & ENGINEERING CONSULTANTS



# PBR HAWAII & ASSOCIATES, INC.

June 14, 2011

PRINCIPALS

THOMAS S. WITTEN, ASLA  
*President*

R. STAN DUNCAN, ASLA  
*Executive Vice-President*

RUSSELL Y. J. CHUNG, FASLA, LEED<sup>®</sup> AP  
*Executive Vice-President*

VINCENT SHIGEKUNI  
*Vice-President*

GRANT T. MURAKAMI, AICP, LEED<sup>®</sup> AP  
*Principal*

W. FRANK BRANDT, FASLA  
*Chairman Emeritus*

Ms. Doris Moana Rowland  
Na Ala Hele Abstractor  
Department of Land and Natural Resources  
1151 Punchbowl Street, Room 325  
Honolulu, Hawaii 96813

**SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE  
(EISPN)  
KAHUKU VILLAGE  
KA'Ū, ISLAND OF HAWAI'I  
TAX MAP KEY (3) 9-2-001:072**

ASSOCIATES

TOM SCHNELL, AICP  
*Senior Associate*

RAYMOND T. HIGA, ASLA  
*Senior Associate*

KEVIN K. NISHIKAWA, ASLA  
*Associate*

KIMI MIKAMI YUEN, LEED<sup>®</sup> AP  
*Associate*

SCOTT ALIKA ABRIGO, LEED<sup>®</sup> AP  
*Associate*

SCOTT MURAKAMI, ASLA, LEED<sup>®</sup> AP  
*Associate*

DACHENG DONG, LEED<sup>®</sup> AP  
*Associate*

Dear Ms. Rowland:

Thank you for your letter dated October 27, 2009 commenting on the Environmental Impact Statement Preparation Notice (EISPN) for Kahuku Village, a master-planned mixed-use community in the Ka'ū district of the County of Hawaii. As the planning consultant for the landowner, Nani Kahuku 'Āina, LLC, we are responding to your comments.

We acknowledge that there are ancient Hawaiian mauka-makai and lateral trails that provide access to the project site and that the trails have been identified on the County of Hawaii Inventory of Public Shoreline Access. We further acknowledge that Na Ala Hele will conduct historical record research to identify and verify the existence and alignment of any historic trails that may be claimed by the State. Please be aware that lateral shoreline public access, as well as mauka-makai public access, is provided for in the plans for Kahuku Village.

We appreciate your participation in the environmental review process. We will send you a copy of the Draft EIS when it is available.

Sincerely,

PBR HAWAII

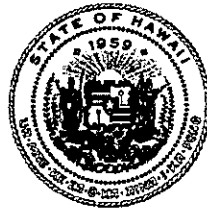
Dean Minakami, AICP  
Planner

cc: Valentine Peroff, Nani Kahuku Aina, LLC  
Bobby Jean Leithead-Todd, Hawaii County Planning Department

**HONOLULU OFFICE**  
1001 Bishop Street, Suite 650  
Honolulu, Hawai'i 96813-3484  
Tel: (808) 521-5631  
Fax: (808) 523-1402  
E-mail: sysadmin@pbrhawaii.com

**KAPOLEI OFFICE**  
1001 Kamokila Boulevard  
Kapolei Building, Suite 313  
Kapolei, Hawai'i 96707-2005  
Tel: (808) 521-5631  
Fax: (808) 535-3163

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

November 6, 2009

Mr. Vincent Shigekuni  
PBR Hawaii and Associates  
1001 Bishop Street, ASB Tower 650  
Honolulu, Hawaii 96813

LOG NO: 2009.3383  
DOC NO: 0911TD07  
Archaeology

Dear Mr. Sakaguchi:

Subject: **Chapter 6E-42 Historic Preservation Review –  
Environmental Impact Statement Preparation Notice for Kahuku Villages  
Kahuku Ahupua'a, Ka'ū District, Island of Hawai'i  
TMK: (3) 9-2-001: 072**

Thank you for notifying our office of the proposed project and pending EIS. We have no substantive comments at this time, due to the preliminary and general nature of the available information.

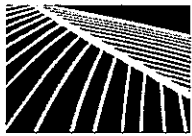
We would like to request that the archaeological inventory survey report being prepared for this project be submitted to our office in advance of the EIS, if at all possible. Due to the extensive size of this project area (16,456.5 acres), we anticipate that review of the findings and recommendations regarding historic properties may take more time than is generally allowed for the standard EIS comment period. We would also like to request that the applicant's archaeological consultant contact us to discuss the project and their approach to the inventory survey. If the survey involves sampling rather than 100% surface coverage, we normally receive an inventory survey plan in advance of the fieldwork so that the level of coverage and sampling methodology is reviewed and approved before the fieldwork is conducted. Please contact Theresa Donham at (808) 933-7653 regarding this project, or if you have any questions regarding these comments.

Aloha,

A handwritten signature in cursive script that reads "Nancy A. McMahon".

Nancy McMahon, Deputy SHPO/State Archaeologist  
and Historic Preservation Manager  
Historic Preservation Division

cc: Morris M. Atta, DLNR Land Division, PO Box 621, Honolulu, HI 96809  
Sam Lemmo, OCCL, 235 South Beretania Street, Suite 702, Honolulu, HI 96813



# PBR HAWAII & ASSOCIATES, INC.

June 14, 2011

**PRINCIPALS**

THOMAS S. WITTEN, ASLA  
*President*

R. STAN DUNCAN, ASLA  
*Executive Vice-President*

RUSSELL Y. J. CHUNG, FASLA, LEED® AP  
*Executive Vice-President*

VINCENT SHIGEKUNI  
*Vice-President*

GRANT T. MURAKAMI, AICP, LEED® AP  
*Principal*

W. FRANK BRANDT, FASLA  
*Chairman Emeritus*

Dr. Pua Aiu, Administrator  
State Historic Preservation Division  
601 Kamokila Boulevard, Room 555  
Kapolei, Hawaii 96707

**SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE  
(EISPN)  
KAHUKU VILLAGE  
KA‘Ū, ISLAND OF HAWAI‘I  
TAX MAP KEY (3) 9-2-001:072**

Dear Dr. Aiu:

**ASSOCIATES**

TOM SCHNELL, AICP  
*Senior Associate*

RAYMOND T. HIGA, ASLA  
*Senior Associate*

KEVIN K. NISHIKAWA, ASLA  
*Associate*

KIMI MIKAMI YUEN, LEED® AP  
*Associate*

SCOTT ALIKA ABRIGO, LEED® AP  
*Associate*

SCOTT MURAKAMI, ASLA, LEED® AP  
*Associate*

DACHENG DONG, LEED® AP  
*Associate*

Thank you for your letter dated November 6, 2009 commenting on the Environmental Impact Statement Preparation Notice (EISPN) for Kahuku Village, a master-planned mixed-use community in the Ka‘ū district of the County of Hawaii. As the planning consultant for the landowner, Nani Kahuku ‘Āina, LLC, we are responding to your comments.

We acknowledge that you have no substantive comments at this time due to the preliminary and general nature of the information available. As requested, an advance copy of the archaeological inventory survey report will be provided to your office when it is available.

We appreciate your participation in the environmental review process. We will send you a copy of the Draft EIS when it is available.

Sincerely,

PBR HAWAII

Dean Minakami, AICP  
Planner

cc: Valentine Peroff, Nani Kahuku Aina, LLC  
Bobby Jean Leithead-Todd, Hawaii County Planning Department

**HONOLULU OFFICE**  
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Kapolei, Hawai‘i 96707-2005  
Tel: (808) 521-5631  
Fax: (808) 535-3163



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

BRENNON T. MORIOKA  
DIRECTOR

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

IN REPLY REFER TO:

STP 8.3425

October 7, 2009

Mr. Vincent Shigekuni  
Vice President  
PBR HAWAII & Associates, Inc.  
1001 Bishop Street  
ASB Tower, Suite 650  
Honolulu, Hawaii 96813-3484

Dear Mr. Shigekuni:

Subject: Kahuku Villages  
Environmental Impact Statement Preparation Notice (EISPN)  
TMK: 9-2-001: 072

Thank you for requesting the State Department of Transportation's (DOT) initial review of the subject project's EISPN.

DOT understands that the proposed project will be located in two areas. The mauka portion of the project, along the State highway, Mamalahoa Highway, will be a village that includes a full range of community support services. The makai portion of the project, along the coast, will be a low-profile, visitor-oriented village. The proposed project will include the necessary infrastructure, including intersection improvements along Mamalahoa Highway, to provide access for the project. DOT also understands that an airport and/or helipad are being considered.

Given the potential impacts to Mamalahoa Highway and aviation, DOT submits the following comments for discussion in the Draft Environmental Impact Statement (DEIS).

1. The DOT Highways Division is reviewing the subject project and may provide additional comments upon completion of its review. In the interim, the Draft EIS should address all impacts to Mamalahoa Highway, including the proposed intersection and access improvements.
2. The Draft EIS should address the proposed airport/helipad and any potential impacts.
3. The developer may want to explore the possibility of reestablishing Kamaoa Field (TMK 9-3-001:011), formerly Morse Field, to serve as an airport for the Kau district. The grounds of the field are under the jurisdiction of another State agency. Any air service requires Federal Aviation Administration (FAA) approval.



Mr. Vincent Shigekuni  
October 7, 2009  
Page 2

DIR 1339  
STP 8.3425

4. The developer should file FAA Form 7480-1 Notice of Landing Area Proposal, which can be found online at the FAA website at <http://forms.faa.gov/forms/faa7480-1.pdf>, for the proposed airport/helipad.

DOT appreciates the opportunity to provide comments. DOT requests five (5) copies of the DEIS to facilitate review by its affected modal divisions. If there are any questions, please contact Mr. David Shimokawa of the DOT Statewide Transportation Planning Office at telephone number (808) 587-2356.

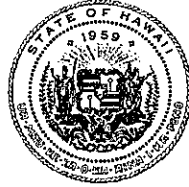
Very truly yours,

*Francis Paul Keeno*

*for* BRENNON T. MORIOKA, PH.D., P.E.  
Director of Transportation

c: Bobbie Jean Leithead-Todd, County of Hawaii, Planning Department  
Katherine Kealoha, Office of Environmental Quality Control

LINDA LINGLE  
GOVERNOR



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

BRENNON T. MORIOKA  
DIRECTOR

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

IN REPLY REFER TO:

STP 8.3484

December 21, 2009

Mr. Vincent Shigekuni  
PBR HAWAII  
1001 Bishop Street, Suite 650  
Honolulu, Hawaii 96813

Dear Mr. Shigekuni:

Subject: Kahuku Villages  
Environmental Impact Statement Preparation Notice (EISPN)

These comments are in addition to those submitted in the Department of Transportation's (DOT) letter STP 8.3425 dated October 7, 2009 (attached).

After an evaluation of the subject EISPN, the DOT offers the following comments:

1. A Traffic Impact Analysis Report (TIAR) should be submitted for DOT's review and approval. To expedite review, we request five (5) paper copies of the TIAR for the Highways Division to review. At least three (3) of those copies shall include the work sheets.
2. In the vicinity of the proposed development, Mamalahoa Highway is a minor arterial under State jurisdiction with a 55-mph speed limit. It is intended to provide safe, fast and efficient transportation between regions. To preserve capacity, safety, speed and efficiency on our arterial facility, we need to minimize the number of direct accesses and use cross intersections rather than tee intersections as much as possible. The potential of sharing a cross access with the Hawaii Volcanoes National Park should be considered and discussed in the Environmental Impact Statement (EIS) and the Traffic Impact Analysis Report (TIAR).
3. The distance from the planned access point(s) to the next access to the east and to the west on both sides of Mamalahoa Highway should be provided and identified on a map drawn to scale. DOT prefers a single cross access to preserve safety and capacity on Mamalahoa Highway. Further, DOT would like to see the roads that parallel Mamalahoa Highway through the Mauka Village Core connect to roads in Hawaiian Ocean View Ranchos to eliminate short trips on the State highway.

4. A map showing the existing permitted access opening at Mamalahoa Highway mentioned in Section 4.7.1, Roadways and Traffic, and any existing roads through the site should be included. The DEIS should also state if the proposed entry road starts at the existing permitted access.
5. Section 4.7.1 states that "access to the project is proposed from an improved intersection to the Site acceptable to the State Department of Transportation." However, Figure 6 shows two access roads to Mamalahoa Highway. The apparent discrepancy should be clarified.
6. The first intersection of the entry road in Figure 6, Mauka Village Master Plan, appears to be around 450 feet from the State highway right-of-way and may result in queuing back onto Mamalahoa Highway. DOT recommends that the distance be increased to 1,200 feet, which is the guideline derived from the *TRB Access Management Manual*.
7. The first intersection of the western access road in Figure 6 appears to be about 650 feet from Mamalahoa Highway and also may lead to queuing, especially during the a.m. peak hour as parents and buses drop off children at the two schools. DOT recommends that the applicant consider using the entry road as the only direct access to Mamalahoa Highway or that school locations be reconfigured to provide at least 1,200 feet of access restricted distance between Mamalahoa Highway and the first intersection of the western access road.
8. Section 2.4, Development Timetable and Preliminary Costs, states that development of the master-planned community will generally occur within three phases and may begin construction as soon as 2012 with full build out anticipated ten years after the start date. The phasing of the development should include specific improvements completed as a condition of project progression. The phasing plan should identify when improvements to the State highway will be implemented, number of dwelling units to be completed per phase, and planned completion of such traffic generators as the schools, shopping center, medical center, Hawaiian Heritage Village, hotels and the airport.
9. Although Figure 6, Mauka Village Master Plan, shows sites for a middle school, elementary school, a medical center and a police station, Section 4.8.1, Police, Fire, and Medical Services and Section 4.8.3, School, do not propose to provide those services within the Mauka Village but instead defer to the County of Hawaii for its preference for either on-site facilities or contributions to the enhancement of existing facilities. The TIAR should assess the traffic impacts of the option that is selected.
10. The TIAR and the EIS should identify the location of specific multi-modal travel ways and facilities to be provided and their interaction to prevent potential conflicts. Provision should be made for these specific improvements in advocating alternative means of transportation to and from the project site. Bicycle racks should be provided in both the Mauka Village Core and the Makai Village and bicycle/pedestrian paths should be provided to connect Hawaiian Ocean View Ranchos with the subject development.

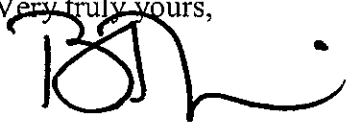
Mr. Vincent Shigekuni  
Page 3  
December 21, 2009

STP 8.3484

11. All required improvements shall be planned, designed and constructed to current State standards and provided at no cost to the State.
12. A permit is required for all construction work in the State highway right-of-way. Construction plans for all improvements in the State right-of-way must be prepared in compliance with current State requirements and submitted to the State Highways Hawaii District Office for review and approval.

DOT appreciates the opportunity to provide comments. DOT requests five (5) copies of the DEIS to facilitate review by its affected modal divisions. If there are any questions, please contact Mr. David Shimokawa of the DOT Statewide Transportation Planning Office at telephone number (808) 587-2356.

Very truly yours,

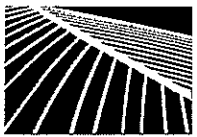


BRENNON T. MORIOKA, Ph.D., P.E.  
Director of Transportation

Attach.

c: Bobbie Jean Leithead-Todd, County of Hawaii, Planning Department  
Katherine Kealoha, Office of Environmental Quality Control

HWY- H, HWY-P(PS 09-374), STP(SLP)



June 14, 2011

**PRINCIPALS**

THOMAS S. WITTEN, ASLA  
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GRANT T. MURAKAMI, AICP, LEED<sup>®</sup> AP  
*Principal*

W. FRANK BRANDT, FASLA  
*Chairman Emeritus*

Mr. Glenn Okimoto, Director  
Department of Transportation  
State of Hawaii  
869 Punchbowl Street  
Honolulu, Hawaii 96813

**SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION  
NOTICE (EISPN)  
KAHUKU VILLAGE  
KA'Ū, ISLAND OF HAWAII'  
TAX MAP KEY (3) 9-2-001:072**

**ASSOCIATES**

TOM SCHNELL, AICP  
*Senior Associate*

RAYMOND T. HIGA, ASLA  
*Senior Associate*

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SCOTT MURAKAMI, ASLA, LEED<sup>®</sup> AP  
*Associate*

DACHENG DONG, LEED<sup>®</sup> AP  
*Associate*

Dear Mr. Okimoto:

Thank you for your letters dated October 7, 2009 and December 21, 2009 commenting on the Environmental Impact Statement Preparation Notice (EISPN) for Kahuku Village, a master-planned mixed-use community in the Ka'ū district of the County of Hawaii. As the planning consultant for the landowner, Nani Kahuku 'Āina, LLC, we are responding to your comments.

Please be aware that since the EISPN was published, the project has been revised and the airport and mauka village near Mamalahoa Highway are no longer being proposed. The most recent plan and the scope of the project's traffic impact analysis report were discussed with DOT staff on December 13, 2010. We offer the following responses in the respective order of the comments in the December 21, 2009 letter.

1. We acknowledge that a Traffic Impact Analysis Report (TIAR) should be submitted for review and approval and that you request five paper copies of the TIAR, and at least three copies with work sheets, for review by the Highways Division.
2. We acknowledge that in the vicinity of the project, Mamalahoa Highway is a minor arterial under State jurisdiction and that the DOT wishes to minimize the number of direct accesses and use cross intersections rather than tee-intersections as much as possible. Only one connection to Mamalahoa Highway for Kahuku Village is proposed. Please be aware that the location of the project's access road was determined after considering the site's topography, slope, sight-distance at Mamalahoa Highway, and land use concept for Kahuku Village. A cross-connection with a driveway leading into the Hawaii Volcanoes National Park was considered, however, issues with sight distance made this location undesirable. In addition, the driveway appears to have a low volume of vehicular traffic so no impact with traffic movements is anticipated.
3. A map showing the location of the proposed entry road in relation to other existing roadways off of Mamalahoa Highway will be provided in the Draft EIS. We acknowledge that that the DOT prefers a single cross access to preserve safety and capacity on Mamalahoa Highway. Please be aware that the comment relating to providing a parallel road through the Mauka Village no longer is applicable as the Mauka Village is no longer being proposed.

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1001 Kamokila Boulevard  
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Kapolei, Hawaii 96707-2005  
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Fax: (808) 535-3163

Mr. Glenn Okimoto

SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE (EISPN),

KAHUKU VILLAGE, KA 'Ū, ISLAND OF HAWAI'I, TAX MAP KEY (3) 9-2-001:072

June 14, 2011

Page 2 of 2

4. A map showing the existing access opening at Mamalahoa Highway to the project site will be provided in the Draft EIS.
5. The discrepancy regarding the number of access points referred to in the EISPN is acknowledged. Access to Kahuku Village will be clearly described in the Draft EIS.
6. This comment no longer appears to be applicable as the Mauka Village is no longer being proposed.
7. This comment no longer appears to be applicable as the Mauka Village is no longer being proposed.
8. Phasing of Kahuku Village and will be described in the Draft EIS and the TIAR will provide a detailed breakdown of uses to be developed in each phase and corresponding traffic improvements needed for each phase.
9. As noted previously, the Mauka Village is no longer being proposed. Land, however, is being proposed to be dedicated to the State and County for development of civic facilities such as an elementary school, district park, police substation, fire station farmers market, and emergency medical facility. Nani Kahuku Aina proposes to dedicate the land to the State and County for future development by the respective agencies. Development of the civic facilities has been incorporated in the TIAR
10. Multi-modal travel ways will be provided in the Makai Village. Land uses will be linked by a system of sidewalks, bicycle paths, and trails. Bicycle racks will be provided at appropriate locations in the Makai Village. Due to the relatively steep grade and distance, providing a bicycle path from the Makai Village and Hawaiian Ocean View Ranchos does not appear to be feasible. However, the provision of bicycle and pedestrian access from Hawaiian Ocean View Ranchos to the Mauka Community Facilities Reserve could be incorporated when the lands are developed by the State and County.
11. We acknowledge that all multi-modal travel wayrequired improvements shall be planned, designed and constructed to current State standards at no cost to the State.
12. We acknowledge that a permit is required for all construction work in the State highway right-of-way and that construction plans must be prepared in compliance with State requirements and submitted to the State Highways Hawaii District Office for review and approval.

We appreciate your participation in the environmental review process. As requested, we will send you five (5) copies of the Draft EIS when it is available.

Sincerely,

PBR HAWAII



Dean Minakami, AICP

Planner

cc: Valentine Peroff, Nani Kahuku Aina, LLC  
Bobby Jean Leithead-Todd, Hawaii County Planning Department



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

HRD09/4664

October 26, 2009

Vincent Shigekuni  
PBR Hawai'i  
1001 Bishop Street, Suite 650  
Honolulu, HI 96813

**RE: Environmental Impact Statement Preparation Notice for Kahuku Villages, Kahuku and Ka'u, Hawai'i Island, TMK: (3) 9-2-001: 072.**

Aloha e Vincent Shigekuni,

The Office of Hawaiian Affairs (OHA) received a letter requesting comments on the above-mentioned project. Nani Kahuku 'Āina, LLC, proposes to construct a resort/commercial/residential/agricultural/industrial development on 16,457 acres in Kahuku, Hawai'i Island. The proposed project calls for the construction of 1,900 residential lots, 950 resort units, 170 agriculture lots and an airport. OHA has reviewed the project and offers the following comments.

We appreciate that the Draft Environmental Impact Statement will include a Cultural Impact Assessment (CIA), in accordance with Chapter 343 of the Hawaii Revised Statutes (HRS). The CIA should include information relating to the Native Hawaiian practices and beliefs associated with the general area of the project site, and it is recommended that the community be involved in this assessment. Consideration must also be afforded to any individuals accessing the project area for constitutionally protected traditional and customary purposes, in accordance with the Hawai'i State Constitution, Article XII, Section 7.

We understand that an archaeological inventory survey is being conducted for the project site. OHA requests the opportunity to comment on the criteria assigned to any cultural or archaeological sites identified within the archaeological inventory survey. In addition, we request 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.

Vincent Shigekuni  
October 26, 2009  
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 by phone at (808) 594-0248 or e-mail him at [sterlingw@oha.org](mailto:sterlingw@oha.org).

'O wau iho nō me ka 'oia'i'o,

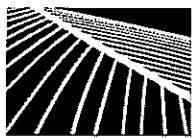


Clyde W. Nāmu'o  
Administrator

C: OHA Hilo and Kona CRC Offices

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





# PBR HAWAII

& ASSOCIATES, INC.

June 14, 2011

## PRINCIPALS

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*Executive Vice-President*

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*Executive Vice-President*

VINCENT SHIGEKUNI  
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*Chairman Emeritus*

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1001 Kamokila Boulevard  
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Tel: (808) 521-5631  
Fax: (808) 535-3163

Mr. Clyde W. Nāmu‘o, Administrator  
Office of Hawaiian Affairs  
State of Hawaii  
711 Kapiolani Boulevard, Suite 500  
Honolulu, Hawaii 96813

**SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION  
NOTICE (EISPN)  
KAHUKU VILLAGE  
KA‘Ū, ISLAND OF HAWAII‘I  
TAX MAP KEY (3) 9-2-001:072**

Dear Mr. Nāmu‘o:

Thank you for your letter dated October 26, 2009 commenting on the Environmental Impact Statement Preparation Notice (EISPN) for Kahuku Village, a master-planned mixed-use community in the Ka‘ū district of the County of Hawaii. As the planning consultant for the landowner, Nani Kahuku ‘Āina, LLC, we are responding to your comments.

The project’s Cultural Impact Assessment will include information relating to Native Hawaiian practices and beliefs associated with the area, and will include consultation with members of the community. We acknowledge that consideration must be afforded to individuals accessing the area for constitutionally protected traditional and customary purposes.

The project’s archaeological inventory survey will be appended to the forthcoming Draft EIS for your review and comment. Nani Kahuku ‘Āina provides their assurance that should iwi kūpuna or Native Hawaiian cultural or traditional deposits be found during construction of the project, work in the immediate vicinity will cease and the appropriate agencies will be contacted.

Your recommendation to use native vegetation for landscaping is acknowledged. Native vegetation will be used at Kahuku Village to the greatest extent practicable.

We appreciate your participation in the environmental review process. We will send you a copy of the Draft EIS when it is available.

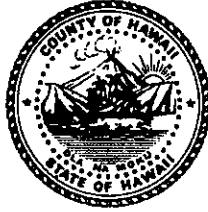
Sincerely,

PBR HAWAII

Dean Minakami, AICP  
Planner

cc: Valentine Peroff, Nani Kahuku Aina, LLC  
Bobby Jean Leithead-Todd, Hawaii County Planning Department

William P. Kenoi  
Mayor



Warren H. W. Lee  
Director

William T. Takaba  
Managing Director

**County of Hawai'i**  
**DEPARTMENT OF PUBLIC WORKS**

**Aupuni Center**

101 Pauahi Street, Suite 7 · Hilo, Hawai'i 96720-4224  
(808) 961-8321 · Fax (808) 961-8630  
[www.co.hawaii.hi.us](http://www.co.hawaii.hi.us)

October 1, 2009

Mr. Vincent Shigekuni, Vice President  
PBR Hawaii  
1001 Bishop Street, Suite 650  
Honolulu, HI 96813

Subject: Environmental Impact Statement Preparation Notice  
Kahuku Villages (Nani Kahuku Aina, LLC)  
Kahuku, Kau, Hawaii  
TMK: 9-2-001:072

We reviewed the subject notice dated August 2009 and have as the following comment:

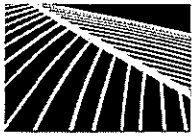
There is currently no Flood Insurance Rate Map (FIRM) panel printed for the subject property. The Federal Emergency Management Agency (FEMA) is in the process of developing revised FIRMs based on comparing results from a recent hurricane flood hazard study and the existing tsunami based coastal hazard study. Hawaii County Code Chapter 27 Floodplain Management regulates development within FIRM mapped Special Flood Hazard Areas, floodprone areas which are not indicated on a FIRM and improvements adjacent to watercourses.

Should there be any questions concerning this matter, please feel free to contact Kiran Emler of our Kona Engineering Division office at 327-3530.

Galen M. Kuba, Division Chief  
Engineering Division

KE

copy: Office of Environmental Quality Control  
Planning Director  
ENG-HILO/KONA



**PBR HAWAII**  
& ASSOCIATES, INC.

June 14, 2011

**PRINCIPALS**

THOMAS S. WITTEN, ASLA  
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*Executive Vice-President*

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*Vice-President*

GRANT T. MURAKAMI, AICP, LEED® AP  
*Principal*

W. FRANK BRANDT, FASLA  
*Chairman Emeritus*

Mr. Galen M. Kuba, Engineering Division Chief  
Department of Public Works  
County of Hawaii  
101 Pauahi Street, Suite 7  
Hilo, Hawaii 96720

**SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE  
(EISPN)  
KAHUKU VILLAGE  
KA'Ū, ISLAND OF HAWAII  
TAX MAP KEY (3) 9-2-001:072**

Dear Mr. Kuba:

**ASSOCIATES**

TOM SCHNELL, AICP  
*Senior Associate*

RAYMOND T. HIGA, ASLA  
*Senior Associate*

KEVIN K. NISHIKAWA, ASLA  
*Associate*

KIMI MIKAMI YUEN, LEED® AP  
*Associate*

SCOTT ALIKA ABRIGO, LEED® AP  
*Associate*

SCOTT MURAKAMI, ASLA, LEED® AP  
*Associate*

DACHENG DONG, LEED® AP  
*Associate*

Thank you for your letter dated October 1, 2009 regarding the Environmental Impact Statement Preparation Notice (EISPN) for Kahuku Village, a master-planned mixed-use community in the Ka'ū district of the County of Hawaii. As the planning consultant for the landowner, Nani Kahuku Aina, LLC, we are responding to your comments.

We acknowledge that there is currently no Flood Insurance Rate Map (FIRM) panel for the project area and that the Federal Emergency Management Agency (FEMA) is developing revised FIRMs. We further acknowledge that Hawaii County Code Chapter 27, Floodplain Management, regulates development within FIRM mapped Special Hazard Areas, floodprone areas which are not indicated on a FIRM, and improvements adjacent to watercourses.

We appreciate your participation in the environmental review process. We will send you a copy of the Draft EIS when it is available.

Sincerely,

PBR HAWAII

Dean Minakami, AICP  
Planner

**HONOLULU OFFICE**  
1001 Bishop Street, Suite 650  
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Tel: (808) 521-5631  
Fax: (808) 535-3163

cc: Valentine Peroff, Nani Kahuku Aina, LLC  
Bobby Jean Leithead-Todd, Hawaii County Planning Department



**DEPARTMENT OF WATER SUPPLY • COUNTY OF HAWAII**

345 KEKŪANAŌ'A STREET, SUITE 20 • HILO, HAWAII 96720

TELEPHONE (808) 961-8050 • FAX (808) 961-8657

October 13, 2009

Mr. Vincent Shigekuni  
PBR Hawaii  
1001 Bishop Street, Suite 650  
Honolulu, HI 96813

**ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE  
KAHUKU VILLAGES  
TAX MAP KEY 9-2-001:072**


We have reviewed the subject Environmental Impact Statement Preparation Notice and have the following comments.

Please be informed that the subject parcel is not within the Department's service limits. The nearest adequate point of connection to the Department's water system is an existing 8-inch waterline located in the town of Wai'ōhinu, approximately 4.5 miles from the eastern boundary of the subject parcel.

The State of Hawai'i, Department of Land and Natural Resources, Commission on Water Resource Management, as well as the State of Hawai'i, Department of Health, Safe Drinking Water Branch should be consulted regarding the requirements for providing a potable water system for the proposed development.

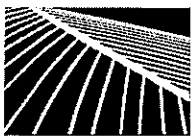
Should there be any questions, you may contact Mr. Finn McCall of our Water Resources and Planning Branch at 961-8070, extension 255.

Sincerely yours,

  
Milton D. Pavao, P.E.  
Manager

FM:dfg

copy - State of Hawai'i, Office of Environmental Quality Control



# PBR HAWAII

& ASSOCIATES, INC.

June 14, 2011

## PRINCIPALS

THOMAS S. WITTEN, ASLA  
*President*

R. STAN DUNCAN, ASLA  
*Executive Vice-President*

RUSSELL Y. J. CHUNG, FASLA, LEED<sup>®</sup> AP  
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*Vice-President*

GRANT T. MURAKAMI, AICP, LEED<sup>®</sup> AP  
*Principal*

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*Chairman Emeritus*

Mr. Milton D. Pavao, P.E., Manager  
Department of Water Supply  
County of Hawaii  
345 Kekuanaoa Street, Suite 20  
Hilo, Hawaii 96720

**SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION  
NOTICE (EISPN)  
KAHUKU VILLAGE  
KA'Ū, ISLAND OF HAWAI'I  
TAX MAP KEY (3) 9-2-001:072**

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*Associate*

SCOTT MURAKAMI, ASLA, LEED<sup>®</sup> AP  
*Associate*

DACHENG DONG, LEED<sup>®</sup> AP  
*Associate*

Dear Mr. Pavao:

Thank you for your letter dated October 13, 2009 regarding the Environmental Impact Statement Preparation Notice (EISPN) for Kahuku Village, a master-planned mixed-use community in the Ka'ū district of the County of Hawaii. As the planning consultant for the landowner, Nani Kahuku Aina, LLC, we are responding to your comments.

We acknowledge that the subject parcel is not within the Department's water service limits. A private water system is planned to provide potable and irrigation water for the project. A description of the water system improvements will be provided in the Draft EIS.

We appreciate your participation in the environmental review process. We will send you a copy of the Draft EIS when it is available.

Sincerely,

PBR HAWAII

Dean Minakami, AICP  
Planner

cc: Valentine Peroff, Nani Kahuku Aina, LLC  
Bobby Jean Leithead-Todd, Hawaii County Planning Department

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William P. Kenoi  
Mayor



Darryl J. Oliveira  
Fire Chief

Glen P. I. Honda  
Deputy Fire Chief

**County of Hawai'i**  
**HAWAII FIRE DEPARTMENT**  
25 Aupuni Street • Suite 103 • Hilo, Hawai'i 96720  
(808) 981-8394 • Fax (808) 981-2037

September 23, 2009

Mr. Vincent Shigekuni  
PBR Hawaii  
1001 Bishop Street, suite 650  
Honolulu, Hawaii 96813

**SUBJECT:** ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE  
PROJECT: KAHUKU VILLAGES  
KA'U, HAWAII  
TMK: (3) 9-2-001:072

---

In regards to the above-mentioned EISPN, the following shall be in accordance:

Fire apparatus access roads shall be in accordance with UFC Section 10.207:

**"Fire Apparatus Access Roads**

**"Sec. 10.207. (a) General.** Fire apparatus access roads shall be provided and maintained in accordance with the provisions of this section.

**"(b) Where Required.** Fire apparatus access roads shall be required for every building hereafter constructed when any portion of an exterior wall of the first story is located more than 150 feet from fire department vehicle access as measured by an unobstructed route around the exterior of the building.

**"EXCEPTIONS:** 1. When buildings are completely protected with an approved automatic fire sprinkler system, the provisions of this section may be modified.

"2. When access roadways cannot be installed due to topography, waterways, nonnegotiable grades or other similar conditions, the chief may require additional fire protection as specified in Section 10.301 (b).



"3. When there are not more than two Group R, Division 3 or Group M Occupancies, the requirements of this section may be modified, provided, in the opinion of the chief, fire-fighting or rescue operations would not be impaired.

"More than one fire apparatus road may be required when it is determined by the chief that access by a single road may be impaired by vehicle congestion, condition of terrain, climatic conditions or other factors that could limit access.

"For high-piled combustible storage, see Section 81.109.

"(c) **Width.** The unobstructed width of a fire apparatus access road shall meet the requirements of the appropriate county jurisdiction.

"(d) **Vertical Clearance.** Fire apparatus access roads shall have an unobstructed vertical clearance of not less than 13 feet 6 inches.

**"EXCEPTION:** Upon approval vertical clearance may be reduced, provided such reduction does not impair access by fire apparatus and approved signs are installed and maintained indicating the established vertical clearance.

"(e) **Permissible Modifications.** Vertical clearances or widths required by this section may be increased when, in the opinion of the chief, vertical clearances or widths are not adequate to provide fire apparatus access.

"(f) **Surface.** Fire apparatus access roads shall be designed and maintained to support the imposed loads of fire apparatus and shall be provided with a surface so as to provide all-weather driving capabilities." (20 tons)

"(g) **Turning Radius.** The turning radius of a fire apparatus access road shall be as approved by the chief." (45 feet)

"(h) **Turnarounds.** All dead-end fire apparatus access roads in excess of 150 feet in length shall be provided with approved provisions for the turning around of fire apparatus.

"(i) **Bridges.** When a bridge is required to be used as access under this section, it shall be constructed and maintained in accordance with the applicable sections of the Building Code and using designed live loading sufficient to carry the imposed loads of fire apparatus.

"(j) **Grade.** The gradient for a fire apparatus access road shall not exceed the maximum approved by the chief." (15%)

"(k) **Obstruction.** The required width of any fire apparatus access road shall not be obstructed in any manner, including parking of vehicles. Minimum required widths and clearances established under this section shall be maintained at all times.

"(l) **Signs.** When required by the fire chief, approved signs or other approved notices shall be provided and maintained for fire apparatus access roads to identify such roads and prohibit the obstruction thereof or both."

Water supply shall be in accordance with UFC Section 10.301(c):

"(c) **Water Supply.** An approved water supply capable of supplying required fire flow for fire protection shall be provided to all premises upon which buildings or portions of buildings are hereafter constructed, in accordance with the respective county water requirements. There shall be provided, when required by the chief, on-site fire hydrants and mains capable of supplying the required fire flow.

"Water supply may consist of reservoirs, pressure tanks, elevated tanks, water mains or other fixed systems capable of providing the required fire flow.

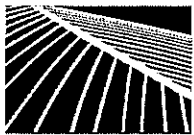
"The location, number and type of fire hydrants connected to a water supply capable of delivering the required fire flow shall be protected as set forth by the respective county water requirements. All hydrants shall be accessible to the fire department apparatus by roadways meeting the requirements of Section 10.207.

  
DARRYL OLIVEIRA  
Fire Chief

GA:lpc

CC. Office of Environmental Quality Control  
County of Hawai'i, Planning Department





**PBR HAWAII**  
& ASSOCIATES, INC.

June 14, 2011

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Chief Darryl J. Oliveira  
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25 Aupuni Street, Suite 103  
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**SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE  
(EISPN)  
KAHUKU VILLAGE  
KA'Ū, ISLAND OF HAWAI'I  
TAX MAP KEY (3) 9-2-001:072**

Dear Mr. Oliveira:

Thank you for your letter dated September 23, 2009 regarding the Environmental Impact Statement Preparation Notice (EISPN) for Kahuku Village, a master-planned mixed-use community in the Ka'ū district of the County of Hawaii. As the planning consultant for the landowner, Nani Kahuku Aina, LLC, we are responding to your comments.

We understand that fire apparatus access roads must be built in accordance with the Uniform Fire-Code (UFC) §10.207 and that more than one fire apparatus road may be required as determined by the chief. We further understand that water supply must be constructed in accordance with UFC §10.301(c).

We appreciate your participation in the environmental review process. We will send you a copy of the Draft EIS when it is available.

Sincerely,

PBR HAWAII

Dean Minakami, AICP  
Planner

cc: Valentine Peroff, Nani Kahuku Aina, LLC  
Bobby Jean Leithead-Todd, Hawaii County Planning Department

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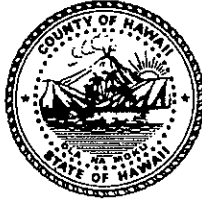
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William P. Kenoi  
Mayor



BJ Leithead Todd  
Director

Margaret K. Masunaga  
Deputy

## County of Hawai'i

### PLANNING DEPARTMENT

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

October 7, 2009

PBR Hawai'i  
Attn: Vincent Shigekuni  
1001 Bishop Street, Suite 650  
Honolulu, HI 96813

Dear Mr. Shigekuni:

**SUBJECT: Comments on Environmental Impact Statement Preparation Notice**  
**PROJECT: Kahuku Villages**  
**TMK: (3) 9-2-001:072, Kahuku, Ka'ū, Hawai'i**

---

This letter is prepared in response to correspondence received September 15, 2009, providing this office with a copy of an Environmental Impact Statement Preparation Notice (EISP), which was prepared in compliance with Hawai'i Revised Statutes, Chapter 343, and State of Hawai'i Administrative Rules, Title 11, Chapter 200.

Nani Kahuku 'Āina, LLC is proposing to the following land uses as part of the Kahuku Villages project:

- Mauka mixed-use village along Māmalahoa Highway, called Kahuku Village
- Coastal low-profile resort
- Hawaiian heritage center (encompassing the hawksbill turtle habitat at Pōhue Bay and Kanaone anchialine pond)
- Agricultural and Renewable Energy Production lots
- An extensive network of trails and open space
- An airport and/or helipad
- Infrastructure to support the proposed development including: intersection improvements along Māmalahoa to access the village, internal roadways, water system, drainage system, wastewater system with effluent reuse, trails/pathways, and possibly a private energy utility system using alternative energy sources.

We would like to acknowledge that Nani Kahuku 'Āina, LLC has agreed to participate in the planning charrette for the Ka'ū Community Development Plan (CDP). Nani Kahuku 'Āina, LLC has also agreed to finalize the Draft Environmental Impact Statement (DEIS)

PBR Hawai'i  
Attn: Vincent Shigekuni  
Page 2  
October 7, 2009

after the charrette so as to incorporate community preferences into the DEIS and future planning for the project.


With that in mind, this office has reviewed the EISPN for Kahuku Villages, and we offer the following comments:

- Clearly demonstrate the alignment between the Ka'ū community's values, vision, objectives, and specific community development strategies and each portion of the proposed project.
- When considering alternatives, assess whether the location of the mauka mixed-use village, including proposed housing units and private and public facilities, is appropriate from a regional planning perspective.
- In the discussion of phasing details, clearly delineate the phases and timeframe for build-out for the different portions of the proposed project (i.e., mauka, makai, heritage center, trails/parks, agriculture lots, etc.).
- In the market and economic impact study:
  - Identify the market for each portion of the project, including each component of the mauka village, the makai resort area, and the golf course
  - Specifically address the impacts of vog and lava hazards on market and financial projections
  - Assess the impacts of the village on nearby housing and commercial facilities, particularly those in Ocean View
  - Describe anticipated job creation both during construction and after completion of each phase.
- Address the opportunities for a connector road to Hawaiian Ocean View Ranchos subdivision, including the outcomes of discussions with residents.
- In the engineering report, consider the need for alternative/emergency routes connecting the project to Māmalahoa Highway.
- In the hydrogeological study, demonstrate how the project's projected water use is consistent with the County Department of Water Supply's plans relative to anticipated regional uses and assess the impact of long term use of the aquifer on coastal ecosystems.
- In addition to addressing project impacts on turtle nesting habitat and anchialine ponds, assess the impact of pollutants (point and nonpoint), runoff, and nutrients on both groundwater and near and off shore coastal water quality and ecosystems.
- Consult key community stakeholders, including the Hawai'i Volcanoes National Park and Kamehameha Schools.

PBR Hawai'i  
Attn: Vincent Shigekuni  
Page 3  
October 7, 2009

We have no further comments to offer at this time. If you have any questions or if you need any assistance, please feel free to contact Ron Whitmore of this office at 961-8137.

Sincerely,

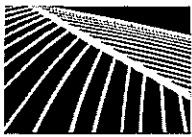


BJ LEITHEAD TODD  
Planning Director

RW:mad  
P:\wpwin60\RWhitmore\EA-EIS\KahukuVillagesDraftEA.doc

cc: Office of Environmental Quality Control  
235 South Beretania Street, Suite 702  
Honolulu, HI 96813

Long Range Planning Division



# PBR HAWAII

& ASSOCIATES, INC.

June 14, 2011

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Ms. Bobby Jean Leithead-Todd, Director  
Planning Department  
County of Hawaii  
101 Pauahi Street, Suite 3  
Hilo, Hawaii 96720

**SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION  
NOTICE (EISPN)  
KAHUKU VILLAGE  
KA'Ū, ISLAND OF HAWAI'I  
TAX MAP KEY (3) 9-2-001:072**

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DACHENG DONG, LEED<sup>®</sup> AP  
*Associate*

Dear Ms. Leithead-Todd:

Thank you for your letter dated October 7, 2009 commenting on the Environmental Impact Statement Preparation Notice (EISPN) for Kahuku Village, a master-planned mixed-use community in the Ka'ū district of the County of Hawaii. As the planning consultant for the landowner, Nani Kahuku Aina, LLC, we are responding to your comments.

We appreciate your acknowledgement that Nani Kahuku Aina, LLC participated in the planning charrette for the Kau Community Development Plan (CDP). Nani Kahuku Aina has been closely following the progress of the Kau CDP to ensure that Kahuku Village will be consistent with the vision and values of the region.

We offer the following responses in the respective order of your comments:

1. The Draft EIS will explain the alignment between Kahuku Village and the Kau community's values, vision, objectives, and community development strategies.
2. The mauka mixed-use village is no longer proposed. The project has been consolidated into a single mixed-use village that will be located near the coast. Dedication of land for civic facilities at the mauka portion of the site is still proposed to facilitate the provision of County and State facilities and services that could serve the Kau district.
3. Phasing of Kahuku Village will be clearly explained in the Draft EIS.
4. The market and economic impact study, which will be appended to the Draft EIS will clearly identify the market for each portion of the project. The market study also addresses the impact of vog and lava hazard on market and financial projections and assesses the impact of Kahuku Village on nearby housing and commercial facilities. The economic impact study describes construction and long-term job construction for each phase of the project.
5. Nani Kahuku Aina has presented plans for Kahuku Village to residents of Hawaiian Ocean View Ranchos. Discussions to allow use of Hawaiian Ocean View Ranchos roadways for Kahuku Village are ongoing.

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Ms. Bobby Jean Leithead-Todd

SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE (EISPN),  
KAHUKU VILLAGE, KA'Ū, ISLAND OF HAWAI'I, TAX MAP KEY (3) 9-2-001:072

June 14, 2011

Page 2 of 2

6. The existing road leading to Pohue Bay may be improved to provide access to the proposed Hawaiian Heritage Center. This road could also provide emergency access to Kahuku Village, and is identified as a potential emergency route in the Draft EIS.
7. A privately constructed and operated water system is proposed to provide potable and non-potable water for Kahuku Village. As such, there will be no effect on the County Department of Water Supply's operations. Impacts to the underlying aquifer and sustainable yields will be discussed in the Draft EIS.
8. The Draft EIS will include a discussion of the impact of pollutants, runoff, and nutrients on both groundwater and near/off-shore coastal water quality and ecosystems.
9. The Hawaii Volcanoes National Park was a consulted party for the EIS Preparation Notice. Their comment letter and the accompanying response letter will be included in the Draft EIS. Nani Kahuku Aina has met with representatives of Kamehameha Schools to discuss the project and to obtain their input.

We appreciate your participation in the environmental review process. We will send you a copy of the Draft EIS when it is available.

Sincerely,

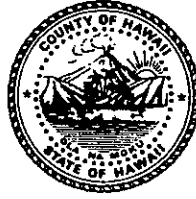
PBR HAWAII



Dean Minakami, AICP  
Planner

cc: Valentine Peroff, Nani Kahuku Aina, LLC

**William P. Kenoi**  
*Mayor*



**Harry S. Kubojiri**  
*Police Chief*

**Paul K. Ferreira**  
*Deputy Police Chief*

## County of Hawaii

### POLICE DEPARTMENT

349 Kapiolani Street • Hilo, Hawaii 96720-3998  
(808) 935-3311 • Fax (808) 961-8865

September 22, 2009

Mr. Vincent Shigekuni  
PBR Hawaii  
1001 Bishop Street, Suite 650  
Honolulu, HI 96813

Dear Mr. Shigekuni:

**Subject: Environmental Impact Statement Preparation Notice (EISPN) for  
Kahuku Villages Project  
Kau, Hawaii  
Tax Map Key: (3) 9-2-001:072**

Staff has reviewed the above-referenced EISPN and has no comments or concerns to offer at this time.

Should you have any questions, please contact Captain Andrew Burian, Commander of the Ka'u District, at (808) 939-2520.

Sincerely,

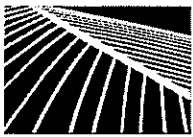
HARRY S. KUBOJIRI  
POLICE CHIEF

  
HENRY J. TAVARES JR.  
ASSISTANT CHIEF  
AREA II OPERATIONS

AB  
RS0900715

C: Office of Environmental Quality Control  
235 S. Beretania St., Ste. 702  
Honolulu, Hawaii 96813

County of Hawaii Planning Dept.



**PBR HAWAII**  
& ASSOCIATES, INC.

June 14, 2011

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Chief Harry S. Kubojiri  
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349 Kapiolani Street  
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**SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION  
NOTICE (EISPN)  
KAHUKU VILLAGE  
KA'Ū, ISLAND OF HAWAI'I  
TAX MAP KEY (3) 9-2-001:072**

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SCOTT MURAKAMI, ASLA, LEED<sup>®</sup> AP  
*Associate*

DACHENG DONG, LEED<sup>®</sup> AP  
*Associate*

Dear Mr. Kubojiri:

Thank you for your letter dated September 22, 2009 regarding the Environmental Impact Statement Preparation Notice (EISPN) for Kahuku Village, a master-planned mixed-use community in the Ka'ū district of the County of Hawaii. As the planning consultant for the landowner, Nani Kahuku Aina, LLC, we are responding to your comments.

We acknowledge that your department has reviewed the EISPN and have no comments to offer at this time.

We appreciate your participation in the environmental review process. We will send you a copy of the Draft EIS when it is available.

Sincerely,

PBR HAWAII

Dean Minakami, AICP  
Planner

cc: Valentine Peroff, Nani Kahuku Aina, LLC  
Bobby Jean Leithead-Todd, Hawaii County Planning Department

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October 1, 2009

Mr. Vincent Shigekuni, Vice President  
PBR Hawaii  
1001 Bishop Street  
ASB Tower, Ste 650  
Honolulu, HI 96813

Dear Mr Vincent Shigekuni:

We are residents of Ocean View, Kau District of the Big Island. We oppose the Nani Kahuku massive 16,000 plus acres development. We overlook this proposed project, the raw and wild rugged coastline. It is a pristine coastline....pristine and in conservation district due to its natural raw and wild landscape and for protection of the nesting grounds of the hawksbill turtle and home to some of the most valuable, irreplaceable archeological sites and home of the first landing of the original Polynesians over 1500 hundred years ago. Of the 16,000 plus acres being promoted for this high impact urban development, over 8,000 of this pristine, wild and rugged acres is in conservation district. The other half is zoned 20 A agriculture, meaning, 20 acres agriculture lot size minimum.

This audacious plan of Nani Kahuku developers would retain only, 720 acres of this pristine irreplaceable historical and wild coastline as conservation land. Only 720 acres for the nesting grounds of the endangered hawksbill turtle, preservation of archeological sites and retention of the expansive pristine, wild coastline.

This audacious plan requests change of both conservation land and agriculture land of 20 acre lots minimum, to be changed to URBAN district. There is no urban district in Ocean view. We in Ocean View chose Ocean View for its rugged, raw and wild lands, natural resources and coastline. Extensive surveys have been compiled in Kau for the Kau Development Plan. These results are available for all and state the people of Kau want Kau to stay wild, rugged. Its natural resources and pristine coastline and extreme rural feel are what brought people to Ocean View and what keeps them here.

We request, demand, you leave Kau as it is. Do not even breathe urbanization. Nani Kahuku developers need to choose already developed areas for their resort, condos, hotels, airstrips, golf course, industrial complex, apartments, etc. Nani Kahuku developers are requesting thousands of acres to be turned to urban district, from conservation district. With thousands of residents, tens of thousands of tourist, this once pristine, wild rugged coastline, home of the landing site of the first Polynesians, how can this beautiful rugged, wild pristine coastline be preserved with such urbanized development?

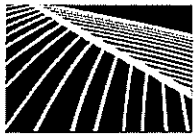
Tell Nani Kahuku developers, the people of Kau and the Big Island have spoken, take your plans to urban areas and leave Kau wild, rugged, pristine, and beautiful and preserve this area for us and our future

generations. We are not dictating Nani Kahuku developers can't develop in the 20 acre agriculture lots or develop the minimum allowed in the conservation district, we just want you to let Nani Kahuku developers know the people of Kau do not want the districts changed for Nani Kahuku developers nor for Nani Kahuku to make their fortunes off us and destroy this land forever. Once changed, it is changed forever.

Respectfully yours

*Raron Smith*

family residence  
92-8442 Maile Dr  
Ocean View, HI  
96737



# PBR HAWAII

& ASSOCIATES, INC.

June 14, 2011

## PRINCIPALS

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Fax: (808) 535-3163

Mr. Aaron Smith  
92-8442 Maile Drive  
Ocean View, Hawaii 96737

**SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE  
(EISPN)  
KAHUKU VILLAGE  
KA'Ū, ISLAND OF HAWAII  
TAX MAP KEY (3) 9-2-001:072**

Dear Mr. Smith:

Thank you for your letter dated October 1, 2009 regarding the Environmental Impact Statement Preparation Notice (EISPN) for Kahuku Village, a master-planned mixed-use community in the Ka'ū district of the County of Hawaii. As the planning consultant for the landowner, Nani Kahuku Aina, LLC, we are responding to your comments.

Since the EISPN was published, the plan for Kahuku Village has been significantly scaled back, both in terms of acreage and in terms of proposed uses. The Mauka Village that was planned near Mamalahoa Highway is no longer proposed and the proposed airport and agricultural/energy lots are no longer under consideration. Of the property's approximately 16,457 acres, only about 1,600 acres are proposed to be reclassified for Rural and Urban uses. The vast majority, over 90 percent of the property, will be undeveloped. Development will occur only on the makai portion of the property, which is nearly six-miles from Mamalahoa Highway, thereby preserving the rural character of the mauka area and scenic views for travelers on Mamalahoa Highway.

The Applicant and landowner, Nani Kahuku Aina, recognizes the importance of the natural and cultural resources on the property. The vision for Kahuku Village calls for development that balances revenue-generating land uses with resource stewardship and preservation efforts. Preservation of the property's natural and cultural resources requires an active stewardship role. Significant financial resources are required to collect litter, prevent trespassing and vandalism, remove invasive species, and monitor activities that may impair resources. Presently, stewardship activities are limited since the property has little revenue-generating uses. Development of Kahuku Village will provide revenue that will enable stewardship efforts to be expanded, formalized and perpetuated.

We acknowledge your concerns relating to coastal development and potential impact to the endangered Hawksbill turtle. For the past several years, Nani Kahuku Aina has partnered with the U.S. Fish and Wildlife Service on the Hawaii Island Hawksbill Turtle Recovery Project and intends to continue with this partnership. We note that an assessment of the marine environment and anchialine pools on the property has been prepared and the assessment determined that no adverse impact to the marine environment or anchialine pools will occur so long as sufficient Best Management Practices are implemented. Measures to be implemented to prevent or mitigate impacts

Mr. Aaron Smith

SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE (EISPN),  
KAHUKU VILLAGE, KA'Ū, ISLAND OF HAWAII, TAX MAP KEY (3) 9-2-001:072

June 14, 2011

Page 2 of 2

to coastal and marine resources include, but are not limited to, establishing a shoreline conservation zone, implementation of a konohiki-inspired Integrated Natural and Cultural Resources Management Plan, educating shoreline users about significant resource and habitats, and prohibiting activities that may impair the coastal environment and habitats. The Draft EIS will specify mitigation measures to be implemented to prevent impacts to the marine and anchialine pool communities.

We concur with your assessment that the property contains numerous archaeological and cultural sites. An extensive archaeological inventory survey and a cultural impact assessment have been prepared. Areas proposed for development were designed to avoid culturally and environmentally sensitive areas. The archaeological inventory survey and cultural impact assessment will be summarized in the Draft EIS and attached as appendices.

We appreciate your participation in the environmental review process.

Sincerely,

PBR HAWAII



Dean Minakami, AICP  
Planner

cc: Valentine Peroff, Nani Kahuku Aina, LLC  
Bobby Jean Leithead-Todd, Hawaii County Planning Department

October 1, 2009

Mr. Vincent Shigekuni, Vice President  
PBR Hawaii  
1001 Bishop Street  
ASB Tower, Ste 650  
Honolulu, HI 96813

Dear Mr Vincent Shigekuni:

We are residents of Ocean View, Kau District of the Big Island. We oppose the Nani Kahuku massive 16,000 plus acres development. We overlook this proposed project, the raw and wild rugged coastline. It is a pristine coastline....pristine and in conservation district due to its natural raw and wild landscape and for protection of the nesting grounds of the hawksbill turtle and home to some of the most valuable, irreplaceable archeological sites and home of the first landing of the original Polynesians over 1500 hundred years ago. Of the 16,000 plus acres being promoted for this high impact urban development, over 8,000 of this pristine, wild and rugged acres is in conservation district. The other half is zoned 20 A agriculture, meaning, 20 acres agriculture lot size minimum.

This audacious plan of Nani Kahuku developers would retain only, 720 acres of this pristine irreplaceable historical and wild coastline as conservation land. Only 720 acres for the nesting grounds of the endangered hawksbill turtle, preservation of archeological sites and retention of the expansive pristine, wild coastline.

This audacious plan requests change of both conservation land and agriculture land of 20 acre lots minimum, to be changed to URBAN district. There is no urban district in Ocean view. We in Ocean View chose Ocean View for its rugged, raw and wild lands, natural resources and coastline. Extensive surveys have been compiled in Kau for the Kau Development Plan. These results are available for all and state the people of Kau want Kau to stay wild, rugged. Its natural resources and pristine coastline and extreme rural feel are what brought people to Ocean View and what keeps them here.

We request, demand, you leave Kau as it is. Do not even breathe urbanization. Nani Kahuku developers need to choose already developed areas for their resort, condos, hotels, airstrips, golf course, industrial complex, apartments, etc. Nani Kahuku developers are requesting thousands of acres to be turned to urban district, from conservation district. With thousands of residents, tens of thousands of tourist, this once pristine, wild rugged coastline, home of the landing site of the first Polynesians, how can this beautiful rugged, wild pristine coastline be preserved with such urbanized development?

Tell Nani Kahuku developers, the people of Kau and the Big Island have spoken, take your plans to urban areas and leave Kau wild, rugged, pristine, and beautiful and preserve this area for us and our future

generations. We are not dictating Nani Kahuku developers can't develop in the 20 acre agriculture lots or develop the minimum allowed in the conservation district, we just want you to let Nani Kahuku developers know the people of Kau do not want the districts changed for Nani Kahuku developers nor for Nani Kahuku to make their fortunes off us and destroy this land forever. Once changed, it is changed forever.

Respectfully yours

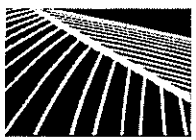
Adam Aaha

Family Residence

92-8442 Maile Dr

Ocean View HI

96737



June 14, 2011

**PRINCIPALS**

THOMAS S. WITTEN, ASLA  
*President*

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*Executive Vice-President*

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VINCENT SHIGEKUNI  
*Vice-President*

GRANT T. MURAKAMI, AICP, LEED<sup>®</sup> AP  
*Principal*

W. FRANK BRANDT, FASLA  
*Chairman Emeritus*

Mr. Adam Naha  
92-8442 Maile Drive  
Ocean View, Hawaii 96737

**SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE  
(EISPN)  
KAHUKU VILLAGE  
KA'Ū, ISLAND OF HAWAI'I  
TAX MAP KEY (3) 9-2-001:072**

Dear Mr. Naha:

Thank you for your letter dated October 1, 2009 regarding the Environmental Impact Statement Preparation Notice (EISPN) for Kahuku Village, a master-planned mixed-use community in the Ka'ū district of the County of Hawaii. As the planning consultant for the landowner, Nani Kahuku Aina, LLC, we are responding to your comments.

Since the EISPN was published, the plan for Kahuku Village has been significantly scaled back, both in terms of acreage and in terms of proposed uses. The Mauka Village that was planned near Mamalahoa Highway is no longer proposed and the proposed airport and agricultural/energy lots are no longer under consideration. Of the property's approximately 16,457 acres, only about 1,600 acres are proposed to be reclassified for Rural and Urban uses. The vast majority, over 90 percent of the property, will be undeveloped. Development will occur only on the makai portion of the property, which is nearly six-miles from Mamalahoa Highway, thereby preserving the rural character of the mauka area and scenic views for travelers on Mamalahoa Highway.

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*Senior Associate*

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*Associate*

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*Associate*

DACHENG DONG, LEED<sup>®</sup> AP  
*Associate*

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Tel: (808) 521-5631  
Fax: (808) 535-3163

Mr. Adam Naha

SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE (EISPN),  
KAHUKU VILLAGE, KA'Ū, ISLAND OF HAWAI'I, TAX MAP KEY (3) 9-2-001:072

June 14, 2011

Page 2 of 2

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We concur with your assessment that the property contains numerous archaeological and cultural sites. An extensive archaeological inventory survey and a cultural impact assessment have been prepared. Areas proposed for development were designed to avoid culturally and environmentally sensitive areas. The archaeological inventory survey and cultural impact assessment will be summarized in the Draft EIS and attached as appendices.

We appreciate your participation in the environmental review process.

Sincerely,

PBR HAWAII



Dean Minakami, AICP  
Planner

cc: Valentine Peroff, Nani Kahuku Aina, LLC  
Bobby Jean Leithead-Todd, Hawaii County Planning Department



## Vincent Shigekuni

---

**From:** brigitte@alohabroadband.net on behalf of Brigitte Freeman [brigitte@alohabb.net]  
**Sent:** Wednesday, October 07, 2009 12:44 PM  
**To:** Vincent Shigekuni  
**Subject:** Kahuku Village project in Kau District

I oppose this project. We don't need it here, and it seems ill fitted to this area and totally unrealistic.  
Thank you,

Brigitte Freeman  
808929-9708



**PBR HAWAII**  
& ASSOCIATES, INC.

June 14, 2011

**PRINCIPALS**

THOMAS S. WITTEN, ASLA  
*President*

R. STAN DUNCAN, ASLA  
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1001 Kamokila Boulevard  
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Tel: (808) 521-5631  
Fax: (808) 535-3163

To: Brigitte@alohabroadband.net

**SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE  
(EISPN)  
KAHUKU VILLAGE  
KA'Ū, ISLAND OF HAWAII  
TAX MAP KEY (3) 9-2-001:072**

Dear Ms. Freeman:

Thank you for your email dated October 7, 2009 regarding the Environmental Impact Statement Preparation Notice (EISPN) for Kahuku Village, a master-planned mixed-use community in the Ka'ū district of the County of Hawaii. As the planning consultant for the landowner, Nani Kahuku Aina, LLC, we are responding to your comments.

Your opposition to the project is acknowledged. Please be aware that since the EISPN was published, the plan for Kahuku Village has been significantly scaled back, both in terms of acreage and in terms of proposed uses. The Mauka Village that was planned near Mamalahoa Highway is no longer proposed and the proposed airport and agricultural/energy lots are no longer under consideration. Of the property's approximately 16,457 acres, only about 1,600 acres are proposed to be reclassified for Rural and Urban uses. The vast majority, over 90% of the property, will be undeveloped. Development will occur only on the makai portion of the property, which is nearly six-miles from Mamalahoa Highway, thereby preserving the rural character of the mauka area and scenic views for travelers on Mamalahoa Highway.

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We appreciate your participation in the environmental review process.

Sincerely,

PBR HAWAII

Dean Minakami, AICP  
Planner

cc: Valentine Peroff, Nani Kahuku Aina, LLC  
Bobby Jean Leithead-Todd, Hawaii County Planning Department

October 1, 2009

Mr. Vincent Shigekuni, Vice President  
PBR Hawaii  
1001 Bishop Street  
ASB Tower, Ste 650  
Honolulu, HI 96813

Dear Mr Vincent Shigekuni:

We are residents of Big Island, regular visitors of Ocean View, Kau District of the Big Island. We oppose the Nani Kahuku massive 16,000 plus acres development. We visit this area; we view this proposed project, the raw and wild rugged coastline. It is a pristine coastline....pristine and in conservation district due to its natural raw and wild landscape and for protection of the nesting grounds of the hawksbill turtle and home to some of the most valuable, irreplaceable archeological sites and home of the first landing of the original Polynesians over 1500 hundred years ago. Of the 16,000 plus acres being promoted for this high impact urban development, over 8,000 of this pristine, wild and rugged acres is in conservation district. The other half is zoned 20 A agriculture, meaning, 20 acres agriculture lot size minimum.

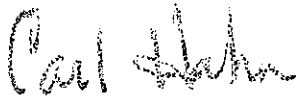
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This audacious plan requests change of both conservation land and agriculture land of 20 acre lots minimum, to be changed to URBAN district. There is no urban district in Ocean view. We in Ocean View chose Ocean View for its rugged, raw and wild lands, natural resources and coastline. Extensive surveys have been compiled in Kau for the Kau Development Plan. These results are available for all and state the people of Kau want Kau to stay wild, rugged. Its natural resources and pristine coastline and extreme rural feel are what brought people to Ocean View and what keeps them here.

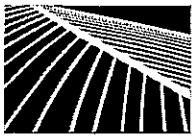
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Respectfully yours



Family Residents  
92-8442 Maile Dr.  
Ocean View HI  
96737



# PBR HAWAII & ASSOCIATES, INC.

June 14, 2011

## PRINCIPALS

THOMAS S. WITTEN, ASLA  
*President*

R. STAN DUNCAN, ASLA  
*Executive Vice-President*

RUSSELL Y. J. CHUNG, FASLA, LEED<sup>®</sup> AP  
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Tel: (808) 521-5631  
Fax: (808) 535-3163

Mr. Carl Hahn and family  
92-8442 Maile Drive  
Ocean View, Hawaii 96737

**SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE  
(EISPN)  
KAHUKU VILLAGE  
KA'Ū, ISLAND OF HAWAI'I  
TAX MAP KEY (3) 9-2-001:072**

Dear Mr. Hahn:

Thank you for your letter dated October 1, 2009 regarding the Environmental Impact Statement Preparation Notice (EISPN) for Kahuku Village, a master-planned mixed-use community in the Ka'ū district of the County of Hawaii. As the planning consultant for the landowner, Nani Kahuku Aina, LLC, we are responding to your comments.

Since the EISPN was published, the plan for Kahuku Village has been significantly scaled back, both in terms of acreage and in terms of proposed uses. The Mauka Village that was planned near Mamalahoa Highway is no longer proposed and the proposed airport and agricultural/energy lots are no longer under consideration. Of the property's approximately 16,457 acres, only about 1,600 acres are proposed to be reclassified for Rural and Urban uses. The vast majority, over 90 percent of the property, will be undeveloped. Development will occur only on the makai portion of the property, which is nearly six-miles from Mamalahoa Highway, thereby preserving the rural character of the mauka area and scenic views for travelers on Mamalahoa Highway.

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Mr. Carl Hahn and family

SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE (EISPN),  
KAHUKU VILLAGE, KA'Ū, ISLAND OF HAWAI'I, TAX MAP KEY (3) 9-2-001:072

June 14, 2011

Page 2 of 2

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We appreciate your participation in the environmental review process.

Sincerely,

PBR HAWAII

A handwritten signature in cursive script, appearing to read "Dean Minakami".

Dean Minakami, AICP  
Planner

cc: Valentine Peroff, Nani Kahuku Aina, LLC  
Bobby Jean Leithead-Todd, Hawaii County Planning Department

P.O. Box 1185  
Volcano, HI 96785

September 30, 2009

BJ Leithead Todd  
County of Hawaii, Planning Department,  
101 Pauahi Street, Suite 3,  
Hilo, HI 96720

Mr. Valentine Peroff, President  
Nani Kahuku Aina, LLC  
99-0880 Iwaena Street  
Aiea, HI 96701

Vincent Shigekuni, Vice President  
PBR HAWAII  
1001 Bishop Street, Suite 650,  
Honolulu, HI 96813

Katherine Puana Kealoha  
OEQC  
235 S. Beretania St. #702  
Honolulu, HI 96813

Please accept these comments on the August EISPN for Kahuku Villages, noticed in OEQC's September 8, 2009 Environmental Notice.

- 1) Consistency in names. Is the area on the western *ma kai* portion of the project a Hawaiian Heritage Village – implying that people live and work there – or is it a Hawaiian Heritage Center? The maps indicate that it is a village, but the text discusses a center. Which is it?
- 2) Marina. Figure 12, which does not disclose its source as it should, says, “Proposed Marina Location.” If a marina is proposed, it should be fully disclosed. If this is an error, the preparer of the document should do a better job of being accurate and sourcing material that is used.
- 3) Water quality. Development advocates tend to rely on the work of three people: Dollar, Brock and Grigg who consistently argue that development has no impact on coastal water quality. The County should reject an EIS that fails to include an analysis from objective scientists (i.e. those who do not routinely find “no impact” from development). Furthermore, any analysis on water quality impacts in this area should not neglect the impact on water quality within the first few meters of the shoreline, particularly in the Kanone area.
- 4) The EIS should disclose the current levels of all the pollutants identified in Hawaii Administrative Rules 11-54-04 measured at the shoreline of this project. How will each of these levels change in front of this project if it is fully built-out?
- 5) Introducing so many people into this pristine environment will dramatically increase nutrients

that will percolate into the ground and flow out to the ocean. Sources of nutrients include the golf courses, sewage, fertilizers etc. The EIS should study the quantity of nutrients that can be expected to be added to anchialine pools and coastal waters. It should also analyze the impact of the increased nutrient loading on these pools, nearshore waters, limu and the ecosystem.

6) The water quality analysis must also include a prediction regarding the quantities of other pollutants to be generated, including hydrocarbons, pesticides etc

7) The EIS should reveal the cumulative impact of all runoff and leaching on coastal waters. This includes fertilizers, sedimentation, heavy metals, grease, other urban runoff, and sewage effluent. To understand the full cumulative impact, the EIS should examine the impact of runoff traditionally associated with coastal development, including sediment runoff during construction, waste oil and other rubbish associated with urban uses. How much contaminated water (by nutrients or other contaminants) can be expected to leach through lava and make its way into the coastal waters (i.e., not surface runoff, but percolation)? What will be the cumulative impact of nutrients from wastewater -- together with percolation and runoff? What specific studies does the EIS rely on to support its conclusions? It should study the amount of nonpoint source water pollution associated with similar developments and discuss the degradation of coral reefs and coastal water quality caused by similar projects. A complete EIS would not glibly assume that mitigation measures would take care of all nonpoint source water pollution problems.

8) The EIS should consider the impact of termite treatment on coastal water quality. Houses in Hawai'i receive frequent termite treatments and that the impacts on waterbodies (such as the Ala Wai Canal) are well documented. It is imperative that the EIS fully disclose the impacts of pesticide runoff from frequent termite treatments.

9) The EIS should consider the issue of household hazardous waste. Will it be disposed of, as it is currently through out the state: down the drain, off the driveway, on the lawn? Or is the developer planning to include a guaranteed program that will collect all household hazardous waste?

10) Because an EIS is a full disclosure document and because there is no meaningful opportunity for public participation in the approval of erosion control plans, please provide a copy of the erosion control plan and best management practices in the EIS.

11) The EIS should include a complete archaeological inventory survey so that decisionmakers will know where historic sites are located and in particular where all burials are.

12) Sense of place. The cultural impact analysis as well as the archaeological survey should specifically discuss how the alteration of the setting and the context of the historic sites will affect the sites and the sense of place. For example, what will be the impact to the experience of hiking along the well preserved ala loa between Kanone and Pohue Bay?

13) The EIS should more fully disclose the threats posed by Mauna Loa to this development.

14) How does significantly increasing the population in this part of Ka'u affect the county's ability to evacuate when (not if) an eruption requires evacuation on a two-lane highway?

15) The EIS should disclose how close the nearest structure would be to the shoreline.



- 16) The EIS should disclose how many people can be expected to be living and working on this property at full build out.
- 17) The EIS should fully disclose the degree to which the predictions and disclosures of PBR have proven accurate. For example, PBR, the author of this EIS, should disclose the degree to which it correctly anticipated problems with the Hokulia development.
- 18) The EIS should discuss the impact of development of previously undeveloped areas in West Hawaii.
- 19) According to the Hawaii Tourism Authority's own survey, 72% of residents oppose more hotel construction. The EIS should disclose this fact.
- 20) The EIS should also disclose the current hotel occupancy rate on Hawai'i Island – and compare the vacancy rate of the island with that of other counties.
- 21) The EIS should disclose the impact from vog on the area. How many days out of the year does vog affect the area? How bad does the vog get? Given the potential health effects from vog, the EIS should not rely on air quality monitoring from other parts of the island.
- 22) The EIS should discuss how the character of the area will be dramatically affected by the proposed development. The EIS should discuss how use by these new residents will affect natural resources in the area, cultural practices and the wilderness experience.
- 23) The EIS should discuss the loss of this “unspoiled coastal environment,” the impact of this loss to native Hawaiians, the visitor experience, and the affect on visitors return to the islands.
- 24) People visit Hawai'i because of the *natural* environment. The EIS should discuss the results of the survey of 1,000 Maui tourists (A Visitor's View of Paradise: A Report on Maui's Visitors . . . Why They Come, What They Enjoy, Why They Return). Among the results:
  - The most memorable part of visitors' trip was “excursions into Nature.”
  - The feature that most visitors said that they would like to see more of was “natural coastlines”
  - 91% reported that the preservation of natural areas was very important in their decision to return to visit.
- 25) The EIS should disclose where the project will get its water from. It should discuss the impact that withdrawing water will have on the flow of freshwater into the ocean from seeps, and how this will affect coastal ecosystems, including anchialine pools.
- 26) The EIS should disclose how much soil is proposed to be imported to the site for the development. Where will this volume of soil come from? What will be the impact on traffic of moving this amount of soil? What will be the impact on coastal water quality?
- 27) What kind of wastewater treatment facility will be used? Where will the wastewater be

discharged? If the applicant proposes to discharge it through an underground injection well, please disclose how long it takes such effluent to reach the coastal waters and the level of contamination.

28) Where will the sludge go? How much will be generated? What are the impacts?

29) The EIS should disclose what kinds of demands this development will impose on the fire and police departments and whether adequate service will be available.

30) Police. The Hawai'i County police department has never been short of money. It is routinely short of qualified officers to serve – particularly in Ka'u. The county cannot recruit and retain enough qualified officers to meet the county's existing needs. This development will only increase these demands on the police department – without increasing the number of police officers available to protect the community. This development will only spread the police department thinner. This issue should be thoroughly addressed.

31) The EIS should address how more strip development along the highway is going to add to traffic congestion in the area. This issue is separate and apart from the issue of the amount of traffic that would be generated from the whole project. Strip development along a highway – even without any new traffic being generated – slows traffic flow through the area.

32) The EIS should fully discuss how the public can be assured that any proposed mitigation measures will be performed and will be effective. Please describe the county and state government's monitoring and enforcement programs so that we can be assured that promises made will be kept. How much staff do the State Health Department, County Public Works Department and County Planning Department have to ensure that promises are kept? How often can they be expected to visit the site? Please do not argue that it is beyond your ability to answer these questions. Please ask the departments themselves. Please report how short-handed they report that they are.

33) The applicant should identify all proposed mitigation measures in a consolidated list. These measures should be written in plain language that is easily enforceable when incorporated into a permit.

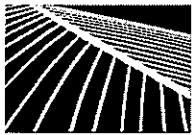
34) PBR should advise all its consultants that they will likely face cross examination under oath and that they should not attempt to spin their conclusions in order to satisfy their client.

Finally, as a consulted party, I wish to receive a hard copy of the DEIS. Please send it to my address in Honolulu: c/o Native Hawaiian Legal Corporation, 1164 Bishop St. #1205 Honolulu, HI 96813

Sincerely,



David Kimo Frankel



**PBR HAWAII**  
& ASSOCIATES, INC.

June 14, 2011

**PRINCIPALS**

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Mr. David Kimo Frankel  
c/o Native Hawaiian Legal Corporation  
1164 Bishop Street, #1205  
Honolulu, Hawaii 96813

**SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE  
(EISPN)  
KAHUKU VILLAGE  
KA'Ū, ISLAND OF HAWAI'I  
TAX MAP KEY (3) 9-2-001:072**

Dear Mr. Frankel:

Thank you for your letter dated September 30, 2009 regarding the Environmental Impact Statement Preparation Notice (EISPN) for Kahuku Village, a master-planned mixed-use community in the Ka'ū district of the County of Hawaii. As the planning consultant for the landowner, Nani Kahuku Aina, LLC, we are responding to your comments.

Since the EISPN was published, the plan for Kahuku Village has been significantly scaled back, both in terms of acreage and in terms of proposed uses. The Mauka Village that was planned near Mamalahoa Highway is no longer proposed and the proposed airport and agricultural/energy lots are no longer under consideration. Of the property's approximately 16,457 acres, only about 1,600 acres are proposed to be reclassified for Rural and Urban uses. The vast majority, over 90 percent of the property, will be undeveloped. Development will occur only on the makai portion of the property, which is nearly six-miles from Mamalahoa Highway, thereby preserving the rural character of the mauka area and scenic views for travelers on Mamalahoa Highway.

We offer the following responses in the respective order of your comments.

1. The correct name is "Hawaiian Heritage Center." This will be clarified in the Draft EIS.
2. A marina is not being proposed at Kahuku Village. An appropriate source will be indicated on the figure in the Draft EIS.
3. Kahuku Village's water resource assessment report is being prepared by Tom Nance Water Resource Engineers and the survey of marine and anchialine pond communities is being prepared by Marine Research Consultants (Steve Dollar). Both consultants are highly regarded and are considered experts in their respective field of specialty. A discussion of water quality impacts, including nearshore water quality impacts, will be included in the Draft EIS.
4. The Draft EIS will discuss the potential effect on water quality from construction stormwater runoff, runoff from developed sites, the project's water system, the project's wastewater system, and the application of fertilizers. Water quality sampling will focus on nutrients listed in Section 11-54-6(b)(3) HAR, as they are pollutants most commonly associated with development that can impair water quality. Most of the pollutants listed in Section 11-54-4(b)(3) HAR are likely not currently present in nearshore waters at the project site given the undeveloped nature of the site and surrounding lands.
5. The Draft EIS will discuss the impact from nutrients on groundwater, marine waters, and anchialine ponds, including nutrients from the proposed golf course, wastewater treatment facility, and the application of fertilizers.
6. The Draft EIS will include discussion on measures to prevent impact to water resources from pesticides and stormwater runoff.

Mr. David Kimo Frankel

SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE (EISPN),  
KAHUKU VILLAGE, KA'Ū, ISLAND OF HAWAI'I, TAX MAP KEY (3) 9-2-001:072

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Page 2 of 3

7. The cumulative impacts of stormwater runoff on water resources will be discussed in the Draft EIS.
8. The use of termite treatment pesticides is strictly regulated and adverse impact to water resources is not known to occur if they are properly applied. However, the Draft EIS, will state that restrictions on use and or alternatives to termite treatment pesticides will be considered.
9. The County of Hawaii periodically collects household hazardous waste at recycling and transfer stations on specified dates. Residents and visitors of Kahuku Villages will be educated about county programs and proper methods to store and dispose of household hazardous waste.
10. Site specific erosion control plans cannot be prepared until the design phase of the process when permitted uses are known and buildings have been sited. As Kahuku Village is in the early stages of the entitlement process, it unknown which areas will be approved for development and what uses and facilities will ultimately be approved. The Draft EIS, however, will include discussion of measures that may be implemented to prevent erosion and minimize impacts associated with site grading.
11. An extensive archaeological inventory survey has been prepared and findings of the survey will be discussed in the Draft EIS.
12. The project's cultural impact assessment and archaeological inventory survey will discuss the context of the historic sites, potential impact on historic sites from development of Kahuku Village, and necessary mitigation measures.
13. Volcanic hazards will be discussed in the Draft EIS.
14. An assessment of the evacuation capacity of Mamalahoa Highway will be provided in the Draft EIS.
15. A coastal setback of at least 300-feet is proposed. This will be disclosed in the Draft EIS.
16. The resident and de facto population of Kahuku Village will be discussed in the Draft EIS.
17. PBR Hawaii strives to comply with all requirements of Hawaii's Environmental Review Law and to fully disclose development impacts that are known at the time an EIS is prepared. We are unaware of any deficiencies of the EIS that PBR Hawaii prepared for the Hokulia development (formerly Villages at Hokukano). The County of Hawaii Planning Department accepted the Final EIS for the Villages at Hokukano and determined that the EIS met the content requirements for EIS' as specified in HAR Sections 11-200-17 and 11-200-18.
18. Please be aware that as Kahuku Village is located in the Kau district of Hawaii island, it is more than 40 miles south of Kailua-Kona and most of the undeveloped proposed developments in West Hawaii. However, any impact from development of undeveloped, entitled projects, as well as buildout of existing adjacent communities, will be discussed in the Draft EIS.
19. We are unaware of the Hawaii Tourism Authority survey referenced in your letter. However, during community meetings held for the project, Kau residents have expressed support for the visitor accommodation uses and the jobs they will provide.
20. The Draft EIS will discuss the market potential and feasibility of the proposed hotel use.
21. An assessment of the occurrence and potential impact of vog will be provided in the Draft EIS.
22. The impact of Kahuku Village on the character of the site and adjacent communities will be discussed in the Draft EIS. Impacts to natural and cultural resources will also be discussed in the Draft EIS.
23. The Draft EIS will discuss the impact of Kahuku Village on the coastal environment, cultural impacts, and on the hospitality industry.
24. We acknowledge that Hawaii's natural environment is an attraction for many visitors to the State. As previously indicated, the potential impact on the hospitality industry will be discussed in the Draft EIS.
25. A privately constructed and operated desalination facility will provide potable and non-potable water for Kahuku Village. The source of water and potential impact of the water system of water resources will be discussed in the Draft EIS.
26. Mitigation measures relative to transportation and storage of soils imported to the site will be discussed in the Draft EIS.

Mr. David Kimo Frankel

SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE (EISPN),  
KAHUKU VILLAGE, KA 'Ū, ISLAND OF HAWAI'I, TAX MAP KEY (3) 9-2-001:072

June 14, 2011

Page 3 of 3

27. Wastewater from Kahuku Village will be treated by a privately constructed and operated wastewater treatment plant. The Draft EIS will describe the proposed wastewater system and discuss potential impacts to water resources.
28. Sludge generation, handling and disposal for Kahuku Village's wastewater treatment plant will be discussed in the Draft EIS.
29. The impact of Kahuku Village on County police and fire protection services will be discussed in the Draft EIS. The County Police and Fire departments are also consulted parties in the EIS process.
30. As previously indicated, the potential impact to the County's police services will be discussed in the Draft EIS and the County Police Department is a consulted party in the EIS process.
31. As explained earlier in this letter, the Mauka Village that was previously planned to be developed adjacent to Mamalahoa Highway is no longer being proposed.
32. As stated in Section 343-1, Hawaii Revised Statutes, the purpose of Hawaii's environmental review system is to "alert decision makers to significant environmental effects which may result from implementation of certain actions." The forthcoming Draft EIS will fully disclose known environmental impacts that may be associated with Kahuku Village and propose measures that can be implemented to mitigate impacts. Based on information provided in the EIS, State and County approving agencies can require specific mitigation measures to be implemented as a condition of development approvals and permits. Typically, agencies also require the submittal of regular reports to provide the status of the implementation of required mitigation measures. It is beyond the scope of a project EIS, to assess the operational capabilities of State and County agencies.
33. The Draft EIS will provide proposed mitigation measures by subject topic. We feel that this facilitates the reviewer's ability to evaluate potential impacts in context with the existing environmental setting.
34. All of the technical consultant reports for Kahuku Village's EIS have been prepared by experts in their respective fields with no external influence to "spin" their conclusions. We are confident that should they be called as witnesses, each consultant will be qualified as experts in their field and will justify their conclusions.

We appreciate your participation in the environmental review process. As requested, a hard copy of the Draft EIS will be provided to you when it is available.

Sincerely,

PBR HAWAII



Dean Minakami, AICP  
Planner

cc: Valentine Peroff, Nani Kahuku Aina, LLC  
Bobby Jean Leithead-Todd, Hawaii County Planning Department

September 8, 2009

Ms. Bobby Jean Leithead-Todd, Planning Director  
County of Hawai'i  
Planning Department  
Aupuni Center  
101 Pauahi Street, Ste 3  
Hilo HI 96720

PBR HAWAII  
Contact: Mr. Vincent Shigekuni, Vice President  
PBR HAWAII  
1001 Bishop Street  
ASB Tower, Ste 650  
Honolulu HI 96813

Nani Kahuku 'Aina LLC  
Mr. Valentine Peroff, President  
Ms. Katherine Peroff, Vice President  
99-0880 Iwaena Street  
Aiea HI 96701

Aloha mai kākou,

I am writing to you to express my concerns and opposition to the Ka'u project being proposed around Pohue Bay Area, aka Nani Kahuku 'Aina.

Over 50% of the Nani Kahuku 'Aina project is in the state Conservation Land Use District for good reason.

The proposed project area is a critical habitat area for at least three endangered species, the hala pepe plant, the Hoary Bat, and the Hawksbill Turtle.

In 2006, the Hawai'i Supreme Court in Kelly v. 1250 Oceanside Partners (2006) ruled that both the state and the county of Hawai'i have an affirmative duty to protect near shore marine water quality. At the same time, the University of Hawai'i-Hilo Marine Sciences Department issued a report which concluded that West Hawai'i's near shore marine waters were on the verge of an "environmental disaster" due to deteriorating water quality.

The near shore waters are currently rated Class AA pristine, "not influenced by humans". Meanwhile, Class AA marine waters around coastal development in Kona and Kohala are now being be classified by the EPA as "impaired" and the stage has been set for a legal case arguing that near shore development is an illegal taking of public rights and the public trust.

Nani Kahuku 'Aina also contains numerous cultural sites. This project is being proposed at a time when the Hawai'i State Historic Preservation Division has openly admitted that it is "broken" and is under investigation by the U.S. National Park Service. More importantly, the developer and their consultant, PBR Hawai'i, have already revealed their lack of consideration

for the Native Hawaiian people and their culture by not disclosing in the EISPN that Nani Kahuku 'Āina must go through the National Historic Preservation Act Section 106 process.

Hawai'i State Constitution, Article XI, Section 1 states that everyone must, "conserve and protect Hawai'i's natural beauty and all natural resources, including land, water, air, minerals and energy sources...All public natural resources are held in trust by the State for the benefit of the people."

The Hawai'i Supreme Court in Wai'ola o Moloka'i, 103 Haw. 401, 439, 83 P.3d 664, 702 (2004) acknowledged the need for preserving Hawai'i's natural ecosystems in parallel with preserving Hawaiians' cultural link to those ecosystems by "(1) maintaining native Hawaiians' religious and spiritual relationship to the land and near shore environment and (2) perpetuating their commitment to 'malama i ka 'āina,' which mandates the protection of their natural ecosystems from desecration and deprivation of their natural freshwater resources." The court found the State inadequately conditioned permitted uses of natural resources that are integral to native Hawaiian customary and traditional rights.

Therefore, Nani Kahuku 'Āina proposes to cause irreparable harm to constitutionally-protected public trust resources. This is why the community was successful in preventing a previously proposed resort for this property.

With thousands of empty lots in H.O.V.E and an already approved Village commercial center on Mamalahoa Hwy, this development would create an insurmountable public infrastructure deficit in Ka'u. It is a self-serving proposal being made by a few individuals without regard to the Ka'u community, existing laws and rules, or the Ka'u Community Development Plan process.

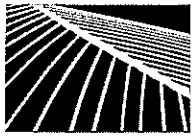
Please help preserve what natural land resources we still have on the Big Island....too many "resorts/golf courses" have taken away the natural beauty of our island and we who live here can no longer enjoy the coastal areas as our kūpuna once did.....save it for our mo'opuna to enjoy.

Mahalo for your time and consideration. Create a wonderful day.

O ka Maluhia nō me kākou,

Debera Kahana First  
PO Box 390363  
Keauhou, HI.  
96739





# PBR HAWAII

& ASSOCIATES, INC.

June 14, 2011

## PRINCIPALS

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R. STAN DUNCAN, ASLA  
*Executive Vice-President*

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*Executive Vice-President*

VINCENT SHIGEKUNI  
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Ms. Debera Kahana First  
P.O. Box 390363  
Keauhou, Hawaii 96739

**SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE  
(EISPN)  
KAHUKU VILLAGE  
KA'Ū, ISLAND OF HAWAI'I  
TAX MAP KEY (3) 9-2-001:072**

Dear Ms. First:

Thank you for your letter dated September 8, 2009 regarding the Environmental Impact Statement Preparation Notice (EISPN) for Kahuku Village, a master-planned mixed-use community in the Ka'ū district of the County of Hawaii. As the planning consultant for the landowner, Nani Kahuku Aina, LLC, we are responding to your comments.

Since the EISPN was published, the plan for Kahuku Village has been significantly scaled back, both in terms of acreage and in terms of proposed uses. The Mauka Village that was planned near Mamalahoa Highway is no longer proposed and the proposed airport and agricultural/energy lots are no longer under consideration. Of the property's approximately 16,457 acres, only about 1,600 acres are proposed to be reclassified for Rural and Urban uses. The vast majority, over 90 percent of the property, will be undeveloped. Development will occur only on the makai portion of the property, which is nearly six-miles from Mamalahoa Highway, thereby preserving the rural character of the mauka area and scenic views for travelers on Mamalahoa Highway.

The Applicant and landowner, Nani Kahuku Aina, recognizes the importance of the natural and cultural resources on the property. The vision for Kahuku Village calls for development that balances revenue-generating land uses with resource stewardship and preservation efforts. Preservation of the property's natural and cultural resources requires an active stewardship role. Significant financial resources are required to collect litter, prevent trespassing and vandalism, remove invasive species, and monitor activities that may impair resources. Presently, stewardship activities are limited since the property has little revenue-generating uses. Development of Kahuku Village will provide revenue that will enable stewardship efforts to be expanded, formalized and perpetuated.

Your concerns regarding the Halapepe plant, Hawaiian Hoary Bat and Hawksbill turtle are acknowledged. A single Halapepe plant was found on the property during the project's botanical survey, however, the area where the plant was found is not planned for development and the area in which it was found will be preserved. The Hawaiian Hoary Bat was not observed during the project's survey of terrestrial wildlife resources, and the



Ms. Debera Kahana First

SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE (EISPN),

KAHUKU VILLAGE, KA 'Ū, ISLAND OF HAWAII, TAX MAP KEY (3) 9-2-001:072

June 14, 2011

Page 2 of 2

survey states that areas proposed for development do not provide a suitable habitat for the bat. With regard to the Hawksbill turtle, Nani Kahuku Aina has partnered with the U.S. Fish and Wildlife Service on the Hawaii Island Hawksbill Turtle Recovery Project for the past several years and plans to continue the partnership. A survey of the marine environment and anchialine pools at the project site concluded that Kahuku Village will have no impact on the marine and anchialine pool communities, including the Hawksbill turtle, as long as Best Management Practices (BMPs) are implemented. BMPs to be implemented to prevent impacts to marine resources will be described in the Draft EIS.

Your concerns relating to the quality of near shore waters are acknowledged. A water resource assessment for Kahuku Village has been prepared and the assessment has determined that development of Kahuku Village will have no effect on water quality chemistry.

An extensive archaeological inventory survey and a cultural impact assessment have been prepared for the project. Findings of the reports will be summarized in the Draft EIS and both reports will be appended to the Draft EIS. Please be aware that since Kahuku Village is not a federally funded action, the Section 106 consultation process is not applicable.

Environmental impacts, including impacts to public trust resources, associated with development of Kahuku Village will be discussed in the forthcoming Draft EIS.

Development of Kahuku Village will not create a public infrastructure deficit as construction and maintenance of the project's roadways, sewer, and water systems will be privately funded. Long-term fiscal impacts of Kahuku Village will be discussed in the Draft EIS. Also, please be aware that Nani Kahuku Aina has been an active participant in the Kau Community Development Plan update process.

Your concerns regarding preservation of natural land resources are acknowledged. As previously stated in this letter, preservation and protection of natural resources requires an active stewardship role. The vision for Kahuku Village balances revenue generating land uses with resource stewardship and preservation and provides a long-term strategy to preserve the site's significant resources.

We appreciate your participation in the environmental review process.

Sincerely,

PBR HAWAII



Dean Minakami, AICP  
Planner

cc: Valentine Peroff, Nani Kahuku Aina, LLC  
Bobby Jean Leithead-Todd, Hawaii County Planning Department

October 1, 2009

Mr. Vincent Shigekuni, Vice President  
PBR Hawaii  
1001 Bishop Street  
ASB Tower, Ste 650  
Honolulu, HI 96813

Dear Mr Vincent Shigekuni:

We are residents of Big Island, regular visitors of Ocean View, Kau District of the Big Island. We oppose the Nani Kahuku massive 16,000 plus acres development. We visit this area; we view this proposed project, the raw and wild rugged coastline. It is a pristine coastline....pristine and in conservation district due to its natural raw and wild landscape and for protection of the nesting grounds of the hawksbill turtle and home to some of the most valuable, irreplaceable archeological sites and home of the first landing of the original Polynesians over 1500 hundred years ago. Of the 16,000 plus acres being promoted for this high impact urban development, over 8,000 of this pristine, wild and rugged acres is in conservation district. The other half is zoned 20 A agriculture, meaning, 20 acres agriculture lot size minimum.

This audacious plan of Nani Kahuku developers would retain only, 720 acres of this pristine irreplaceable historical and wild coastline as conservation land. Only 720 acres for the nesting grounds of the endangered hawksbill turtle, preservation of archeological sites and retention of the expansive pristine, wild coastline.

This audacious plan requests change of both conservation land and agriculture land of 20 acre lots minimum, to be changed to URBAN district. There is no urban district in Ocean view. We in Ocean View chose Ocean View for its rugged, raw and wild lands, natural resources and coastline. Extensive surveys have been compiled in Kau for the Kau Development Plan. These results are available for all and state the people of Kau want Kau to stay wild, rugged. Its natural resources and pristine coastline and extreme rural feel are what brought people to Ocean View and what keeps them here.

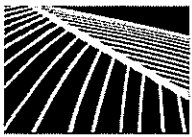
We request, demand, you leave Kau as it is. Do not even breathe urbanization. Nani Kahuku developers need to choose already developed areas for their resort, condos, hotels, airstrips, golf course, industrial complex, apartments, etc. Nani Kahuku developers are requesting thousands of acres to be turned to urban district, from conservation district. With thousands of residents, tens of thousands of tourist, this once pristine, wild rugged coastline, home of the landing site of the first Polynesians, how can this beautiful rugged, wild pristine coastline be preserved with such urbanized development?

generations. We are not dictating Nani Kahuku developers can't develop in the 20 acre agriculture lots or develop the minimum allowed in the conservation district, we just want you to let Nani Kahuku developers know the people of Kau do not want the districts changed for Nani Kahuku developers nor for Nani Kahuku to make their fortunes off us and destroy this land forever. Once changed, it is changed forever.

Respectfully yours

Debralyne Breithaupt

Puu Lani Ranch  
Big Island Resident



# PBR HAWAII

& ASSOCIATES, INC.

June 14, 2011

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Ms. Debralyn Breithaupt

**SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE  
(EISPN)  
KAHUKU VILLAGE  
KA'Ū, ISLAND OF HAWAII  
TAX MAP KEY (3) 9-2-001:072**

Dear Ms. Breithaupt:

Thank you for your letter dated October 1, 2009 regarding the Environmental Impact Statement Preparation Notice (EISPN) for Kahuku Village, a master-planned mixed-use community in the Ka'ū district of the County of Hawaii. As the planning consultant for the landowner, Nani Kahuku Aina, LLC, we are responding to your comments.

Since the EISPN was published, the plan for Kahuku Village has been significantly scaled back, both in terms of acreage and in terms of proposed uses. The Mauka Village that was planned near Mamalahoa Highway is no longer proposed and the proposed airport and agricultural/energy lots are no longer under consideration. Of the property's approximately 16,457 acres, only about 1,600 acres are proposed to be reclassified for Rural and Urban uses. The vast majority, over 90 percent of the property, will be undeveloped. Development will occur only on the makai portion of the property, which is nearly six-miles from Mamalahoa Highway, thereby preserving the rural character of the mauka area and scenic views for travelers on Mamalahoa Highway.

The Applicant and landowner, Nani Kahuku Aina, recognizes the importance of the natural and cultural resources on the property. The vision for Kahuku Village calls for development that balances revenue-generating land uses with resource stewardship and preservation efforts. Preservation of the property's natural and cultural resources requires an active stewardship role. Significant financial resources are required to collect litter, prevent trespassing and vandalism, remove invasive species, and monitor activities that may impair resources. Presently, stewardship activities are limited since the property has little revenue-generating uses. Development of Kahuku Village will provide revenue that will enable stewardship efforts to be expanded, formalized and perpetuated.

We acknowledge your concerns relating to coastal development and potential impact to the endangered Hawksbill turtle. For the past several years, Nani Kahuku Aina has partnered with the U.S. Fish and Wildlife Service on the Hawaii Island Hawksbill Turtle Recovery Project and intends to continue with this partnership. We note that an assessment of the marine environment and anchialine pools on the property has been prepared and the assessment determined that no adverse impact to the marine environment or anchialine pools will occur so long as sufficient Best Management Practices are implemented. Measures to be implemented to prevent or mitigate impacts to coastal and marine resources include, but are not limited to, establishing a shoreline conservation zone, implementation of a konohiki-inspired Integrated Natural and Cultural Resources Management Plan, educating shoreline users about significant resource and

Mr. Debralyn Breithaupt

SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE (EISPN),  
KAHUKU VILLAGE, KA'Ū, ISLAND OF HAWAI'I, TAX MAP KEY (3) 9-2-001:072

June 14, 2011

Page 2 of 2

habitats, and prohibiting activities that may impair the coastal environment and habitats. The Draft EIS will specify mitigation measures to be implemented to prevent impacts to the marine and anchialine pool communities.

We concur with your assessment that the property contains numerous archaeological and cultural sites. An extensive archaeological inventory survey and a cultural impact assessment have been prepared. Areas proposed for development were designed to avoid culturally and environmentally sensitive areas. The archaeological inventory survey and cultural impact assessment will be summarized in the Draft EIS and attached as appendices.

We appreciate your participation in the environmental review process.

Sincerely,

PBR HAWAII

A handwritten signature in black ink, appearing to read "Dean Minakami".

Dean Minakami, AICP  
Planner

cc: Valentine Peroff, Nani Kahuku Aina, LLC  
Bobby Jean Leithead-Todd, Hawaii County Planning Department

PLANNING DEPARTMENT  
COUNTY OF HAWAII

2009 SEP 21 PM 2:27

**Dacayanan, Melissa**

**From:** Dennis Elwell [delwell@hawaii.rr.com]  
**Sent:** Sunday, September 20, 2009 5:17 PM  
**To:** planning@co.hawaii.hi.us  
**Subject:** Kahuku Village EIS

Here are a few comments on the EISPN prepared by Nani Kahuku Aina LLC. A copy was sent to PBR Hawaii and the stste office of Environmental Control:

**Comments on Kahuku Village EIS Preparation Notice**

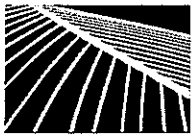
1. We don't need population as a means to justify better services, the price is too high (congestion etc).
2. We do need jobs but job creation should come first. It needs to be a higher priority in the EIS.
3. Ka'u doesn't need another golf course. All the courses on the island lose money, why add to the problem? 36 hole is ridiculous. Why not some alternative idea, e.g. a shooting range.
4. Agriculture is hard and the site has poor soil and inadequate rainfall. WHAT agriculture needs to be thought out and documented in the EIS.
5. 'Urban' designation of any land in Ka'u will be strongly opposed.
6. 'Industrial' is also a challenge. WHAT industry? We have ridiculously high electricity rates. Water sources have to be developed. A light industrial park might work.
7. A Heritage Center is a good idea. Where would it be located?
8. A private energy utility seems a good idea, but using what fuel source? Best to avoid HELCO, they charge dearly for connection. How does the Hamakua energy project work?
9. I am concerned that the authors are not aware of the book "Hawaiian petroglyphs" by Cox and Strasack, which talks about the site as the most important in the state.

In general, I could support a resort, some upscale homes, worker housing, airport, and a "Village" near the highway with retail, light industrial park, some services. The question of what a significant new population would do for employment is not addressed in the EIS proposal. Just saying 'industry' and 'agriculture' does not make these happen and both would face huge challenges in this part of Kahuku ahupua'a. Proximity to the SW rift zone must be a concern. I wish Nani Kahuku Aina LLC were proposing their development at Punalu'u!

Dennis F Elwell

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**SCANNED**  
SEP 22 2009  
By: 056668



# PBR HAWAII

& ASSOCIATES, INC.

June 14, 2011

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DACHENG DONG, LEED® AP  
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1001 Kamokila Boulevard  
Kapolei Building, Suite 313  
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Fax: (808) 535-3163

To: delwell@hawaii.rr.com

**SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE  
(EISPN)  
KAHUKU VILLAGE  
KA'Ū, ISLAND OF HAWAI'I  
TAX MAP KEY (3) 9-2-001:072**

Dear Mr. Elwell:

Thank you for your email dated September 20, 2009 regarding the Environmental Impact Statement Preparation Notice (EISPN) for Kahuku Village, a master-planned mixed-use community in the Ka'ū district of the County of Hawaii. As the planning consultant for the landowner, Nani Kahuku Aina, LLC, we are responding to your comments.

Since the EISPN was published, the plan for Kahuku Village has been significantly scaled back, both in terms of acreage and in terms of proposed uses. The Mauka Village that was planned near Mamalahoa Highway is no longer proposed and the proposed airport and agricultural/energy lots are no longer under consideration. Of the property's approximately 16,457 acres, only about 1,600 acres are proposed to be reclassified for Rural and Urban uses. The vast majority, over 90 percent of the property, will be undeveloped. Development will occur only on the makai portion of the property, which is nearly six-miles from Mamalahoa Highway, thereby preserving the rural character of the mauka area and scenic views for travelers on Mamalahoa Highway.

The Applicant and landowner, Nani Kahuku Aina, recognizes the importance of the natural and cultural resources on the property. The vision for Kahuku Village calls for development that balances revenue-generating land uses with resource stewardship and preservation efforts. Preservation of the property's natural and cultural resources requires an active stewardship role. Significant financial resources are required to collect litter, prevent trespassing and vandalism, remove invasive species, and monitor activities that may impair resources. Presently, stewardship activities are limited since the property has little revenue-generating uses. Development of Kahuku Village will provide revenue that will enable stewardship efforts to be expanded, formalized and perpetuated.

We offer the following responses in the respective order of your comments:

1. We acknowledge your comment that additional population is not needed to justify better services. Approximately 100 acres near Mamalahoa Highway is proposed to be dedicated to the State and County for civic facilities such as an elementary school, police sub-station, fire station, emergency medical facility, and district park. These facilities would serve the greater Kau district.

Mr. Dennis Elwell

SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE (EISPN),  
KAHUKU VILLAGE, KA'Ū, ISLAND OF HAWAII, TAX MAP KEY (3) 9-2-001:072

June 14, 2011

Page 2 of 2

2. Your desire for more job creation is acknowledged. An economic and fiscal impact assessment has been prepared for Kahuku Village. Findings of the assessment, including the forecast jobs that will be created, will be included in the Draft EIS.
3. Only one 18-hole golf course is now proposed. Nani Kahuku Aina feels that the golf course will be a financially sound and attractive amenity for residents and visitors to Kahuku Village, as are many other golf courses on Hawaii island.
4. The agricultural lots that had been proposed in the EISPN are no longer under consideration.
5. State land use "Urban" designation is being requested only for the proposed commercial and hospitality sites at Kahuku Village. Creation of the commercial and hospitality sites is essential to promote job creation at Kahuku Village. The majority of Kahuku Village, including the residential sites, parks, and golf course, are proposed to be designated as "Rural"
6. The light industrial area that was to be located in the Mauka Village is no longer being proposed.
7. The proposed Hawaiian Heritage Center will encompass about 500 acres of land near the coast in the vicinity of Pohue Bay.
8. Several alternatives for supplying electrical power to Kahuku Village are being explored. The potential for obtaining power from the Kamaoa Wind Farm will be discussed in the Draft EIS.
9. An extensive archaeological inventory survey and a cultural impact assessment have been prepared for the project. Findings of the reports will be summarized in the Draft EIS.

We appreciate your participation in the environmental review process.

Sincerely,

PBR HAWAII



Dean Minakami, AICP  
Planner

cc: Valentine Peroff, Nani Kahuku Aina, LLC  
Bobby Jean Leithead-Todd, Hawaii County Planning Department





Society,

I'm not against the development and general but feel that there is far to be gained from ideas from looking at how been attempted & times before

① First establish the infrastructure, huge needs improvement already for roads, turn lanes, lights etc. fire dept, police medical, stores

② Then proceed with hotel, golf course etc.

U.S. Dept. of Housing  
808 939 910  
PO Box 1001  
Washington

6

⑦ Solar & wind energy - great ideas - however with the wind mills generating a very level stream - where are they planned to be set up?

⑧ Airport - Private airport for seats only & slots & other sites from the "wild land" environmentally friendly area.

What about helicopters? No mention of the airport on the traffic department's website, although it's there in a very tentative way. Also, are there any systems and so being in disruption? Relatively easily disrupted the bus system not so mention, light sound, in a dark pass

4

⑨ (cont'd) - Roads leading down to the new area, who will pay for maintenance

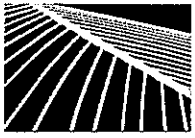
- Who will have access to these areas?

⑩ Taxes: Will there affect property taxes from agriculture or residential?

⑪ Police force: - Fire Station with increase of population additional need for police, fire station etc. There are already under-staffed and inadequate for the area.

⑫ "The Village" along Mamachukungwe

2



# PBR HAWAII & ASSOCIATES, INC.

June 14, 2011

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*Principal*

W. FRANK BRANDY, FASLA  
*Chairman Emeritus*

Ms. Donna Ashenmacher  
P.O. Box 165  
Naalehu, Hawaii 96772

**SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE  
(EISPN)  
KAHUKU VILLAGE  
KA'Ū, ISLAND OF HAWAI'I  
TAX MAP KEY (3) 9-2-001:072**

Dear Ms. Ashenmacher:

Thank you for your letter dated October 6, 2009 regarding the Environmental Impact Statement Preparation Notice (EISPN) for Kahuku Village, a master-planned mixed-use community in the Ka'ū district of the County of Hawaii. As the planning consultant for the landowner, Nani Kahuku Aina, LLC, we are responding to your comments.

Since the EISPN was published, the plan for Kahuku Village has been significantly scaled back, both in terms of acreage and in terms of proposed uses. The Mauka Village that was planned near Mamalahoa Highway is no longer proposed and the proposed airport and agricultural/energy lots are no longer under consideration. Of the property's approximately 16,457 acres, only about 1,600 acres are proposed to be reclassified for Rural and Urban uses. The vast majority, over 90 percent of the property, will be undeveloped. Development will occur only on the makai portion of the property, which is nearly six-miles from Mamalahoa Highway, thereby preserving the rural character of the mauka area and scenic views for travelers on Mamalahoa Highway.

The Applicant and landowner, Nani Kahuku Aina, recognizes the importance of the natural and cultural resources on the property. The vision for Kahuku Village calls for development that balances revenue-generating land uses with resource stewardship and preservation efforts. Preservation of the property's natural and cultural resources requires an active stewardship role. Significant financial resources are required to collect litter, prevent trespassing and vandalism, remove invasive species, and monitor activities that may impair resources. Presently, stewardship activities are limited since the property has little revenue-generating uses. Development of Kahuku Village will provide revenue that will enable stewardship efforts to be expanded, formalized and perpetuated.

We offer the following responses in the respective order of your comments:

1. Kahuku Village's water requirements and proposed water system will be described in the Draft EIS. Findings of Kahuku Village's water resources assessment report will also be summarized in the Draft EIS and the report will be provided as an appendix.

**ASSOCIATES**

TOM SCHNELL, AICP  
*Senior Associate*

RAYMOND T. HIGA, ASLA  
*Senior Associate*

KEVIN K. NISHIKAWA, ASLA  
*Associate*

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Ms. Donna Ashenmacher

SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE (EISPN),  
KAHUKU VILLAGE, KA 'Ū, ISLAND OF HAWAI'I, TAX MAP KEY (3) 9-2-001:072

June 14, 2011

Page 2 of 2

2. The Draft EIS will describe infrastructure to be developed at Kahuku Village, including roadways, water, sewer, and drainage systems. All infrastructure associated with Kahuku Village will be privately constructed and maintained at no cost to the County.
3. Kahuku Village's property taxes will likely be adjusted by the County after it receives all entitlements. This includes an amendment to the County General Plan, State Land Use redistricting, and zoning approval. Fiscal impacts associated with creation of Kahuku Village will be discussed in the Draft EIS.
4. Kahuku Village's potential impact on public services, such as police and fire protection, will be discussed in the Draft EIS.
5. As previously indicated, the Mauka Village is no longer being proposed. Phasing of Kahuku Village will be described in the Draft EIS.
6. The quantity of solid waste generated at Kahuku Village and options for disposal will be discussed in the Draft EIS.
7. Requirements for a connection to the existing Kamaoa wind farm to provide electrical power to Kahuku Village will be discussed in the Draft EIS.
8. As previously indicated, an airport is no longer being proposed. The proposed heliport will be used for emergency transports only and will not be used for commercial tours or private operations.
9. The impact that light pollution may have on turtles and seabirds, and mitigation measures that may be implemented to prevent and minimize such impacts, will be discussed in the Draft EIS.
10. Creation of Kahuku Village will provide the opportunity for managed public shoreline access. Shoreline access will be regulated to protect sensitive coastal habitat and prevent degradation of resources. Shoreline access will be discussed in the Draft EIS.
11. We are aware that prior development proposals at the Site have failed, but are confident that Nani Kahuku Aina has the resources to complete Kahuku Village. Much of the infrastructure required for Kahuku Village, including roads, and water, wastewater, and drainage systems, will be developed in the initial phase of development.

We appreciate your participation in the environmental review process.

Sincerely,

PBR HAWAII



Dean Minakami, AICP  
Planner

cc: Valentine Peroff, Nani Kahuku Aina, LLC  
Bobby Jean Leithead-Todd, Hawaii County Planning Department

Dacayanan, Melissa

PLANNING DEPARTMENT  
COUNTY OF HAWAII

From: Ron Whitmore [rwhitmore@co.hawaii.hi.us]  
Sent: Thursday, October 29, 2009 9:37 AM  
To: planning@co.hawaii.hi.us  
Cc: Morrison, Bethany  
Subject: FW: Nani Kahuku Aina site visit

2009 OCT 29 PM 12:32

Melissa,

Please log this as correspondence, and we'll include it in the Nani Kahuku EIS file.

Thanks,  
Ron

-----Original Message-----

From: Eldridge Naboa [mailto:enaboa@TNC.ORG]  
Sent: Thursday, October 29, 2009 8:53 AM  
To: Katherine Peroff; aeberhardt@hawaiiwdg.com  
Cc: karen@steeltechinc.biz; Leithead-Todd, Bobby Jean; Correia, Cathy; Caleb Yamanaka; Ron Whitmore; Leinaala Enos  
Subject: RE: Nani Kahuku Aina site visit

Aloha Katherine and Aaron! Thanks for the site visit yesterday - it was awesome being down there again since my hawksbill turtle days. I had time to soak in my thoughts about the project and wanted the opportunity to share my mana'o with you folks. I'm sure most of the points will be addressed in the EIS.

- 1) Mitigate factors for cultural and natural (including marine) resources
  - Hawksbill turtles not only nest at Pohue but have been documented at Kahakahakea as well. The turtles that have been tagged along the Ka'u coast have showed to nest within the vicinity of 20 miles. Thus a turtle that was tagged/nested at Pohue also nested at Kahakahakea. You mentioned that Kahakahakea and Kaki'o was potentially going to be public access points, so I am concerned about that. I'm sure they have been cases of monk seals basking along those pockets of beaches as well.
  - In the rare species database there are points along the coast that denote endangered plants - how are these coastal strands going to be protected? There is also an abundance of the endangered Hawaiian hoary bat, which may be affected by artificial lights.
  - From speaking with the Cave Conservancy, there are a number of cave systems within the area. These caves are home to endemic - ONLY FOUND IN HAWAII - species of crickets.
  - Those anchialine pools are really unique and special and home to our opae'ula. If people dip into those pools with sunscreen, it changes the composition of the system.
  - The Nature Conservancy and the Department of Aquatic Resources was able to run a biological analysis using several target criteria on Hawai'i Island using:
    - 1) Percent coral cover
    - 2) Fish abundance
    - 3) Presence of turtles, monk seals, and dolphins
    - 4) Wave exposure models
    - 5) Land based threats and reef health
    - 6) Estuary habitats

From this analysis, the Mololi'i to Ka Lae coast showed superb resources! One of the reasons why this coastline is rich is because of the Hala 'ea current which bring nutrients into this sheltered area between Miloli'i and Ka Lae. Thus, any golf course run-off would be detrimental to the marine ecosystem, including an increase in ciguatera poisoning.

- From literature, the petroglyphs are not only within Pohue but extend from Kahakahakea to Kaki'o.

SCANNED

OCT 29 2009  
057648

2)Community Input

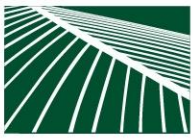
-Per our discussion yesterday, I was a bit alarmed that there will be no community meetings. The groups you have mentioned that you spoke to, including, Ka'u Preservation, Hawaiian Civic Club, ect. - But, what about the next generation (the 20-35 age group)? I think there input is valueable as "we" are the ones going to be living here.

3)Airport

-Though, we didn't get a chance to see the exact location of the airport and while the EISPN states "an airport and/or heliport" without proposing one or the other - it's a big difference, small scale vs large scale. Also, the fact that a wilderness area is right across the street (Hawai'i Volcanoes National Park - Kahuku Unit), would defeat the purpose of being in a remote setting. You can't go anywhere now-a-days without hearing a plane or helicopter flying by.

All for now, I appreciate you "hearing" my concerns.

Mahalo Nui Loa!  
Eldridge



June 14, 2011

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*Associate*

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Kapolei, Hawaii 96707-2005  
Tel: (808) 521-5631  
Fax: (808) 535-3163

Sent to: enaboa@tnc.org

**SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE  
(EISPN)  
KAHUKU VILLAGE  
KA'Ū, ISLAND OF HAWAII  
TAX MAP KEY (3) 9-2-001:072**

Dear Mr. Naboa:

Thank you for your email dated October 29, 2009 regarding the Environmental Impact Statement Preparation Notice (EISPN) for Kahuku Village, a master-planned mixed-use community in the Ka'ū district of the County of Hawaii. As the planning consultant for the landowner, Nani Kahuku Aina, LLC, we are responding to your comments.

Since the EISPN was published, the plan for Kahuku Village has been significantly scaled back, both in terms of acreage and in terms of proposed uses. The Mauka Village that was planned near Mamalahoa Highway is no longer proposed and the proposed airport and agricultural/energy lots are no longer under consideration. Of the property's approximately 16,457 acres, only about 1,600 acres are proposed to be reclassified for Rural and Urban uses. The vast majority, over 90 percent of the property, will be undeveloped. Development will occur only on the makai portion of the property, which is nearly six-miles from Mamalahoa Highway, thereby preserving the rural character of the mauka area and scenic views for travelers on Mamalahoa Highway.

The Applicant and landowner, Nani Kahuku Aina, recognizes the importance of the natural and cultural resources on the property. The vision for Kahuku Village calls for development that balances revenue-generating land uses with resource stewardship and preservation efforts. Preservation of the property's natural and cultural resources requires an active stewardship role. Significant financial resources are required to collect litter, prevent trespassing and vandalism, remove invasive species, and monitor activities that may impair resources. Presently, stewardship activities are limited since the property has little revenue-generating uses. Development of Kahuku Village will provide revenue that will enable stewardship efforts to be expanded, formalized and perpetuated.

The Draft EIS will discuss measures to protect cultural and natural resources, including marine resources. Mitigation measures to protect habitat for the Hawksbill turtle, Hawaiian monk seal, and opae'ula, will be described in the Draft EIS. An assessment of the property's near-shore and anchialine pond environment determined that Kahuku Village will have no impact on marine and anchialine pond communities if appropriate Best Management Practices (BMPs) are implemented. A discussion of BMPs to be implemented will be discussed in the Draft EIS.

Mr. Eldridge Naboa

SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE (EISPN),  
KAHUKU VILLAGE, KA'Ū, ISLAND OF HAWAI'I, TAX MAP KEY (3) 9-2-001:072

June 14, 2011

Page 2 of 2

The terrestrial wildlife survey prepared for Kahuku Village included a survey of lava tubes to determine whether any cave-adapted species may be present. None were found during the survey and the survey notes that the lava tubes on the property generally do not provide the proper habitat (long dark zone, adequate moisture, food source) needed for such species.

We concur that the near-shore marine environment in the vicinity of the property is of high quality, and protection of the marine environment is a priority of Nani Kahuku Aina. A water resource assessment has been prepared to determine the impact that development of Kahuku Village will have on ground and marine water quality. The assessment included analysis of impact from the project's wastewater treatment plant. No significant impact to nutrient levels or to marine or anchialine-pond water quality is expected to occur. Findings of the water resource assessment will be summarized in the Draft EIS and the water resource assessment will be attached as an appendix.

An archaeological inventory survey for the property has been prepared and findings of the survey and its recommendations will be summarized in the Draft EIS, and the full report will be included as an appendix. All areas recommended for preservation by the survey will not be disturbed.

We acknowledge that input from the "next" generation of residents to live in Kau is important. Since the EISPN was published, a number of meetings have been held, including meetings with community organizations, special interest groups, and open community meetings.

We appreciate your participation in the environmental review process.

Sincerely,

PBR HAWAII



Dean Minakami, AICP  
Planner

cc: Valentine Peroff, Nani Kahuku Aina, LLC  
Bobby Jean Leithead-Todd, Hawaii County Planning Department



**Fleur Weymouth**  
**Box 190554**  
**Hawi, Hawai'i 96719**  
**Phone/Fax (808) 889-0808**

September 8 2009

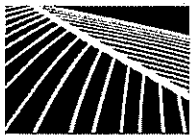
Mr. Vincent Shigekuni  
PBR Hawai'i  
1001 Bishop Street  
ASB Tower, Ste 650  
Honolulu HI 96813

Dear Mr. Shigekuni,

I live on the Big Island, and wish to state that I am  
opposed to Nani Kahuku 'Aina's proposed development at Poehue Bay.

Sincerely,

A handwritten signature in cursive script, appearing to read "Fleur Weymouth".



June 14, 2011

**PRINCIPALS**

THOMAS S. WITTEN, ASLA  
*President*

R. STAN DUNCAN, ASLA  
*Executive Vice-President*

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*Associate*

KIMI MIKAMI YUEN, LEED® AP  
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SCOTT ALIKA ABRIGO, LEED® AP  
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DACHENG DONG, LEED® AP  
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**HONOLULU OFFICE**  
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**KAPOLEI OFFICE**  
1001 Kamokila Boulevard  
Kapolei Building, Suite 313  
Kapolei, Hawai'i 96707-2005  
Tel: (808) 521-5631  
Fax: (808) 535-3163

Mr. Fleur Weymouth  
Box 190554  
Hawi, Hawaii 96719

**SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE  
(EISPN)  
KAHUKU VILLAGE  
KA'Ū, ISLAND OF HAWAI'I  
TAX MAP KEY (3) 9-2-001:072**

Dear Mr. Weymouth:

Thank you for your letter dated September 8, 2009 regarding the Environmental Impact Statement Preparation Notice (EISPN) for Kahuku Village, a master-planned mixed-use community in the Ka'ū district of the County of Hawaii. As the planning consultant for the landowner, Nani Kahuku Aina, LLC, we are responding to your comments.

Since the EISPN was published, the plan for Kahuku Village has been significantly scaled back, both in terms of acreage and in terms of proposed uses. The Mauka Village that was planned near Mamalahoa Highway is no longer proposed and the proposed airport and agricultural/energy lots are no longer under consideration. Of the property's approximately 16,457 acres, only about 1,600 acres are proposed to be reclassified for Rural and Urban uses. The vast majority, over 90 percent of the property, will be undeveloped. Development will occur only on the makai portion of the property, which is nearly six-miles from Mamalahoa Highway, thereby preserving the rural character of the mauka area and scenic views for travelers on Mamalahoa Highway.

The Applicant and landowner, Nani Kahuku Aina, recognizes the importance of the natural and cultural resources on the property. The vision for Kahuku Village calls for development that balances revenue-generating land uses with resource stewardship and preservation efforts. Preservation of the property's natural and cultural resources requires an active stewardship role. Significant financial resources are required to collect litter, prevent trespassing and vandalism, remove invasive species, and monitor activities that may impair resources. Presently, stewardship activities are limited since the property has little revenue-generating uses. Development of Kahuku Village will provide revenue that will enable stewardship efforts to be expanded, formalized and perpetuated.

We appreciate your participation in the environmental review process.

Sincerely,

PBR HAWAII

Dean Minakami, AICP  
Planner

cc: Valentine Peroff, Nani Kahuku Aina, LLC  
Bobby Jean Leithead-Todd, Hawaii County Planning Department

**Dacayanan, Melissa**

---

**From:** geomike5@att.net  
**Sent:** Wednesday, September 09, 2009 7:09 AM  
**To:** Planning@co.hawaii.hi.us  
**Cc:** cohmayor@co.hawaii.hi.us  
**Subject:** EIS preparation for Kahuku Villages

PLANNING DEPARTMENT  
COUNTY OF HAWAII

2009 SEP -9 PM 3:09

Dear Ms Leithead-Todd,

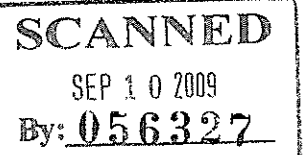
The announcement of the preparation of an EIS of the Kahuku Villages Project in Ka'u is a great time for the County to take an introspective look at its abilities and capabilities.

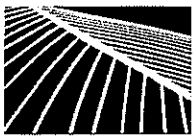
You can talk about infrastructure and jobs all you want but the bottom line is that the County does not have the suprastructure to support a development of this magnitude.

This is a planned community and as such, the developer must provide it all. In fact, perhaps this is the time the developer should seek amendments to the State and County charters to incorporate this project as a municipality.

The EIS announcement included the line on p. 53, "The Draft EIS will address whether the County prefers that the Project provide new medical, police, and fire facilities within the Kahuku Village or to contribute to the enhancement of existing facilities."

I trust the County will prefer to provide nothing. If the developer later walks or balks as has been the practice on the Big Island, the County does not have enough revenue to remedy the missing infrastructure. In fact, I doubt it would have the revenue to demolish skeletal structures if the project is abandoned.





# PBR HAWAII

& ASSOCIATES, INC.

June 14, 2011

**PRINCIPALS**

THOMAS S. WITTEN, ASLA  
*President*

R. STAN DUNCAN, ASLA  
*Executive Vice-President*

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Sent to: geomike5@att.net

**SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE  
(EISPN)  
KAHUKU VILLAGE  
KA'Ū, ISLAND OF HAWAI'I  
TAX MAP KEY (3) 9-2-001:072**

Dear Sir or Madam:

Thank you for your email dated September 9, 2009 regarding the Environmental Impact Statement Preparation Notice (EISPN) for Kahuku Village, a master-planned mixed-use community in the Ka'ū district of the County of Hawaii. As the planning consultant for the landowner, Nani Kahuku Aina, LLC, we are responding to your comments.

Since the EISPN was published, the plan for Kahuku Village has been significantly scaled back, both in terms of acreage and in terms of proposed uses. The Mauka Village that was planned near Mamalahoa Highway is no longer proposed and the proposed airport and agricultural/energy lots are no longer under consideration. Of the property's approximately 16,457 acres, only about 1,600 acres are proposed to be reclassified for Rural and Urban uses. The vast majority, over 90 percent of the property, will be undeveloped. Development will occur only on the makai portion of the property, which is nearly six-miles from Mamalahoa Highway, thereby preserving the rural character of the mauka area and scenic views for travelers on Mamalahoa Highway.

The Applicant and landowner, Nani Kahuku Aina, recognizes the importance of the natural and cultural resources on the property. The vision for Kahuku Village calls for development that balances revenue-generating land uses with resource stewardship and preservation efforts. Preservation of the property's natural and cultural resources requires an active stewardship role. Significant financial resources are required to collect litter, prevent trespassing and vandalism, remove invasive species, and monitor activities that may impair resources. Presently, stewardship activities are limited since the property has little revenue-generating uses. Development of Kahuku Village will provide revenue that will enable stewardship efforts to be expanded, formalized and perpetuated.

We acknowledge your concerns regarding the fiscal impact of Kahuku Village. All infrastructure, including roads, water, wastewater, and drainage systems, will be privately constructed and maintained, with no cost to the County. In addition, a fiscal impact analysis prepared for Kahuku Village determined that creation of the project will have a net fiscal benefit to the County and State since additional revenues in the form of property taxes, general excise taxes, transient accommodation taxes, and income taxes will exceed costs to the State and County.

SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE (EISPN),  
KAHUKU VILLAGE, KA'Ū, ISLAND OF HAWAI'I, TAX MAP KEY (3) 9-2-001:072

June 14, 2011

Page 2 of 2

Please be aware that Nani Kahuku Aina is seeking amendments to the County General Plan and State Land Use District Boundaries, and not the State and County charters. Also, Kahuku Village will not be a municipality.

We appreciate your participation in the environmental review process.

Sincerely,

PBR HAWAII

A handwritten signature in cursive script, appearing to read "Dean Minakami".

Dean Minakami, AICP  
Planner

cc: Valentine Peroff, Nani Kahuku Aina, LLC  
Bobby Jean Leithead-Todd, Hawaii County Planning Department

**GLEN M. WINTERBOTTOM  
POST OFFICE BOX 109  
NAALEHU, HAWAII 96772  
PH./FAX NO. (808) 929-9060**

September 19, 2009

Vincent Shigekuni, Vice-President  
PBR Hawaii  
1001 Bishop Street  
ABS Tower, Suite 650  
Honolulu, Hawaii 96813

Reference: EIS Preparation Notice: Kahuku Villages

Dear Mr. Shigekuni,

Pursuant to Chapter 343 Environmental Impact Statements, §343-5 Applicability and requirements, Hawaii Revised Statutes, I am submitting the following comments on the EIS Preparation Notice your firm has recently prepared for a proposed major destination resort called Kahuku Villages, to be located within the District of Ka'u on the Island of Hawaii:

**CURRENT RESORT INDUSTRY FUNDAMENTALS**

I would strongly suggest that your forthcoming Draft Environmental Impact Statement honestly address the current troubled state of Hawaii's visitor industry, which downturn has particularly affected a number of upscale "luxury" properties and developments on the Big Island and elsewhere including, but certainly not limited to, recent foreclosure actions against the Sheraton Keauhou Bay Resort, Fairmont Orchid Hotel at Waikoloa, and Maui Prince Hotel at Makena, the bankruptcy of the planned Royal Hualalai Gardens coffee estates subdivision near Kailua-Kona, and funding difficulties and mass employee furloughs at the Hokulia golf estates development in Kealahou. Please clearly discuss how principals of the proposed Kahuku Villages intend to avoid the financial instability that has impacted the aforementioned projects, among many others. Also, how do they plan to "weather the storm" if unstable world economic conditions continue for a prolonged period of time, and how will the current unfavorable state of affairs affect the availability of financing at feasible terms for their proposed mega-resort in view of lenders' tightened standards for commercial real estate loans? The possible adverse impacts for everyone of, in effect, cutting the West Hawaii resort industry "pie" into smaller and smaller pieces should additionally be considered in your DEIS.

**CONCURRENCE WITH SOUND STATE PLANNING**

Please carefully assess how the proposed project could possibly comport with various past state planning initiatives/studies that called for all further West Hawaii resort development to be limited to the Keauhou to Kawaihae region, where necessary support infrastructure already exists to a certain extent. Since even in that well-developed area government entities have never been able to keep pace with the needs of a spiraling population for additional roads, sewage facilities, schools, affordable housing, etc, how could they possibly be expected to handle the requirements and demands of residents of an entirely new and isolated resort/urban node? Moreover, since project principals knowingly purchased the subject 16,456 parcel for a relatively

low purchase price that reflected it's current agriculture and conservation land use classification, please state why they feel entitled to the financial windfall that would accrue with reclassification and upzoning. Do they believe that every large landowner in the state should be allowed to develop a mega-resort on their property, no matter what the ultimate costs to taxpayers might be? Also, what legally binding guarantees, if any, are the principals prepared to offer to ensure that they will actually pursue the project they have proposed, and not just "flip" the property for a quick profit once some or all of the necessary development permits are obtained?

### **GEOLOGICAL HAZARDS**

I sincerely hope that you will not attempt to gloss over the serious subject of geological hazards in this region, since the proposed project area is directly downslope of the active Southwest Rift Zone of Mauna Loa volcano and is included in the second most hazardous lava inundation zone in the latest 1987 U.S. Geological Society Hazard Zone Maps. This is the same zone in which the now-overrun Kalapana area was and is designated, which calamity should be discussed in detail in your upcoming DEIS since it took place following issuance of the Final EIS for the predecessor proposed resort projects (Hawaiian Riviera Resort, et al.). Other possible geological hazards that should be thoroughly confronted include earthquakes (South Hawaii was the site of the famously destructive 1868 magnitude 7+ earthquakes, mudslide and tsunamis), subsidence and substantial ground cracks inland of the project area's coastline. This whole region was obviously affected by cataclysmic subsidence at some point in prehistoric times, as evidenced by the massive *pali* that runs all the way from Highway 11 to Ka Lae (aka South Point). Please explain how and from where appropriate insurance to cover the proposed resort from such hazards would be obtained. Also, please state clearly why current project principals feel it is in the public interest to promote creation of a major urban/resort area in such a hazardous locality

### **WILD SHORELINE PRESERVATION**

In 2005 the South Kona-Ka'u Coastal Conservation Task Force was established by the State Legislature "to review, analyze, and report to the legislature on the impacts being made on the fragile and historically essential coastal lands and near shore marine areas of South Kona and Ka'u...and to identify issues and solutions...." The task force determined in it's 2007 report to the legislature that the approximately 80-mile-long Miloli'i to Hawaii Volcanoes National Park coastline "represents the largest area of natural and undeveloped shoreline in the State of Hawai'i" and "is largely pristine, unspoiled, uninhabited, and undeveloped." The task force recommended, among other things, creation of a special conservation zone to extend 1.5 miles inland from the subject coastline. Please clearly explain why Kahuku Villages principals feel that constructing a major destination resort, including golf courses, along this currently undeveloped coastline—in effect thumbing their noses at the sentiments and wishes of the aforesaid community task force—would be in the public interest.

### **WATER RESOURCES AND USEAGE**

Your preparation notice states that the forthcoming DEIS will identify water sources to serve the project. Such studies will only be adequate if they plainly address the region's low annual rainfall, frequent and sometimes severe droughts, possible impermeable volcanic dikes of the Southwest Rift Zone separating the proposed project area from the groundwater of wetter parts of Ka'u, and possible peak water usage should the ENTIRE 16,000+ acre parcel be developed at some point in the future.

## SEWAGE AND EFFLUENT

This subject deserves careful attention in your DEIS since the project area encompasses such fragile resources as anchialine ponds, sea turtle nesting areas and Class AA offshore waters that could be severely impacted by the seepage of sewage and/or improperly treated effluent. Regarding the offshore waters, please state whether project principals would be willing to give a legally binding guarantee that they and their successors will never attempt to develop a marina (a major facet of the previously proposed Hawaiian Riviera Resort deemed critically important to it's feasibility) on their site's shoreline.

## AIRPORT AND AIRCRAFT IMPACTS

Please discuss how anticipated resort and community air traffic from the proposed airport facility might impact the nearby Hawaii Volcanoes National Park (including it's new Kahuku division), which is already dealing with long-running problems of degradation of visitors' wilderness experiences due to frequent air tour overflights.

## SOCIO-ECONOMIC IMPACTS ON KA'U DISTRICT

The tremendous cumulative socio-economic impacts of the proposed project should be assessed based on the possible TOTAL buildout of the subject 16,000+ acre property, not just the limited phases identified in the Preparation Notice, which may well be only preliminary in nature. One of the proposed project's objectives noted in the Project Description is to create a "concentrated population mass to support services such as medical, schools, retail and emergency response." The upcoming DEIS should address the possibility that a substantial number of Ka'u residents may not WANT to live in, or near, a "concentrated population mass" (or "mess" depending on one's viewpoint), and may in fact be "refugees" from the high real estate prices, overcrowding, environmental degradation and other drawbacks associated with urban sprawl. Additionally, please state why Kahuku Villages principals feel such a massive destination resort is required to improve the economy of Ka'u, when a far smaller development could likely employ each and every current Ka'u resident wishing to work in the visitor industry.

## RELATIONSHIP(S) WITH PREVIOUS DEVELOPERS

Please be so kind as to disclose in the DEIS any relationship(s), formal or otherwise, between principals of the currently proposed Kahuku Villages and anyone related to the failed predecessor Hawaiian Riviera Resort and Hawaii Ka'u Aina projects including, but not limited to, ownership interests, investment interests, consultancies, employment, and the like.

Thanking you for this opportunity to comment on your subject Preparation Notice, I remain

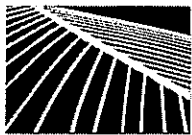
Yours Respectfully,

*Glen M. Winterbottom*

GLEN M. WINTERBOTTOM

CC: Nani Kahuku 'Aina, LLC





June 14, 2011

**PRINCIPALS**

THOMAS S. WITTEN, ASLA  
*President*

R. STAN DUNCAN, ASLA  
*Executive Vice-President*

RUSSELL Y. J. CHUNG, FASLA, LEED<sup>®</sup> AP  
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*Vice-President*

GRANT T. MURAKAMI, AICP, LEED<sup>®</sup> AP  
*Principal*

W. FRANK BRANDT, FASLA  
*Chairman Emeritus*

Mr. Glen M. Winterbottom  
P.O. Box 109  
Naalehu, Hawaii 96772

**SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE  
(EISPN)  
KAHUKU VILLAGE  
KA'Ū, ISLAND OF HAWAI'I  
TAX MAP KEY (3) 9-2-001:072**

Dear Mr. Winterbottom:

Thank you for your letter dated September 19, 2009 regarding the Environmental Impact Statement Preparation Notice (EISPN) for Kahuku Village, a master-planned mixed-use community in the Ka'ū district of the County of Hawaii. As the planning consultant for the landowner, Nani Kahuku Aina, LLC, we are responding to your comments.

Since the EISPN was published, the plan for Kahuku Village has been significantly scaled back, both in terms of acreage and in terms of proposed uses. The Mauka Village that was planned near Mamalahoa Highway is no longer proposed and the proposed airport and agricultural/energy lots are no longer under consideration. Of the property's approximately 16,457 acres, only about 1,600 acres are proposed to be reclassified for Rural and Urban uses. The vast majority, over 90 percent of the property, will be undeveloped. Development will occur only on the makai portion of the property, which is nearly six-miles from Mamalahoa Highway, thereby preserving the rural character of the mauka area and scenic views for travelers on Mamalahoa Highway.

The Applicant and landowner, Nani Kahuku Aina, recognizes the importance of the natural and cultural resources on the property. The vision for Kahuku Village calls for development that balances revenue-generating land uses with resource stewardship and preservation efforts. Preservation of the property's natural and cultural resources requires an active stewardship role. Significant financial resources are required to collect litter, prevent trespassing and vandalism, remove invasive species, and monitor activities that may impair resources. Presently, stewardship activities are limited since the property has little revenue-generating uses. Development of Kahuku Village will provide revenue that will enable stewardship efforts to be expanded, formalized and perpetuated.

We offer the following responses in the respective order of your comments:

**Current Resort Industry Fundamentals.** We acknowledge that the current economic climate is challenging for many projects, however, we are confident that Nani Kahuku Aina has the financial resources necessary to complete Kahuku Village. The market study prepared for Kahuku Village addresses the feasibility of hospitality uses. Findings of the market study will be summarized in the Draft EIS and the study will be included as an appendix.

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Mr. Glen M. Winterbottom

SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE (EISPN),  
KAHUKU VILLAGE, KA'Ū, ISLAND OF HAWAI'I, TAX MAP KEY (3) 9-2-001:072

June 14, 2011

Page 2 of 3

**Concurrence with Sound State Planning.** Kahuku Village's consistency with relevant land use plans, policies, and regulations including the Hawaii State Plan, Hawaii County General Plan, and Kau Community Development Plan, will be discussed in the Draft EIS. All infrastructure associated with Kahuku Village, including roadways, sewer, water, and drainage systems, will be privately constructed and maintained at no cost to the County. Creation of Kahuku Village is projected to have a net fiscal benefit to the County and State since additional revenues in the form of property taxes, general excise taxes, transient accommodation taxes, and income taxes will exceed costs to service Kahuku Village.

**Geological Hazards.** The Draft EIS will discuss geological hazards and mitigation measures that may be implemented to mitigate risks associated with such hazards. The purpose, need, and objectives of Kahuku Village will also be clearly stated in the Draft EIS.

**Wild Shoreline Preservation.** As indicated previously in this letter, Nani Kahuku Aina is seeking to balance natural resource protection and stewardship with development of revenue generating land uses, a portion of which will support stewardship efforts. The impact that Kahuku Village will have on open space resources must be viewed in context of the public benefits the project offers, which include active resource stewardship, provision of public shoreline access, provision of affordable housing, creation of new jobs, and increased revenue to the County and State. These impacts will be further discussed in the Draft EIS.

**Water Resources and Useage.** A water resource assessment has been prepared to determine the impact Kahuku Village's water system may have on existing water resources. Findings of the report will be summarized in the Draft EIS and the report will be included as an appendix. The water resources report does not assess water usage from development of the entire property as such a development is not being considered.

**Sewage and Effluent.** The impact that wastewater from Kahuku Village may have on coastal resources was assessed in the water resources assessment report and an assessment on the near-shore marine and anchialine pond communities. Findings of both reports will be summarized in the Draft EIS and both reports will be included as appendices. A marina is not being proposed at Kahuku Village and should such a use be proposed in the future, separate environmental review documentation and a number of permits, including those providing for public input, would be required.

**Airport and Aircraft Impacts.** As indicated previously, an airport is no longer proposed at Kahuku Village. The proposed heliport will be used for emergency transports only and will not be used for commercial tour or private operations.

**Socio-Economic Impacts on Kau District.** Potential socio-economic impacts of Kahuku Village, including impacts on nearby communities, will be assessed in the Draft EIS. Impacts associated with buildout of 16,000+ acres of the property will not be assessed as such a development is not being proposed. The marketability of homes to be created at Kahuku Village is assessed in the aforementioned market study. As indicated earlier, the scale of Kahuku Village has been reduced substantially and we are confident that the scale of the proposed hospitality uses, and the number of jobs that will be created, are consistent with the desires of the community.

Mr. Glen M. Winterbottom

SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE (EISPN),  
KAHUKU VILLAGE, KA'Ū, ISLAND OF HAWAI'I, TAX MAP KEY (3) 9-2-001:072

June 14, 2011

Page 3 of 3

Relationship with Previous Developers. The principals of Nani Kahuku Aina have no relationship with the previously proposed Hawaiian Riviera Resort or Hawaii Kau Aina projects.

We appreciate your participation in the environmental review process.

Sincerely,

PBR HAWAII

A handwritten signature in cursive script that reads "Dean Minakami".

Dean Minakami, AICP  
Planner

cc: Valentine Peroff, Nani Kahuku Aina, LLC  
Bobby Jean Leithhead-Todd, Hawaii County Planning Department

October 1, 2009

Mr. Vincent Shigekuni, Vice President  
PBR Hawaii  
1001 Bishop Street  
ASB Tower, Ste 650  
Honolulu, HI 96813

Dear Mr Vincent Shigekuni:

We are residents of Big Island, regular visitors of Ocean View, Kau District of the Big Island. We oppose the Nani Kahuku massive 16,000 plus acres development. We visit this area; we view this proposed project, the raw and wild rugged coastline. It is a pristine coastline....pristine and in conservation district due to its natural raw and wild landscape and for protection of the nesting grounds of the hawksbill turtle and home to some of the most valuable, irreplaceable archeological sites and home of the first landing of the original Polynesians over 1500 hundred years ago. Of the 16,000 plus acres being promoted for this high impact urban development, over 8,000 of this pristine, wild and rugged acres is in conservation district. The other half is zoned 20 A agriculture, meaning, 20 acres agriculture lot size minimum.

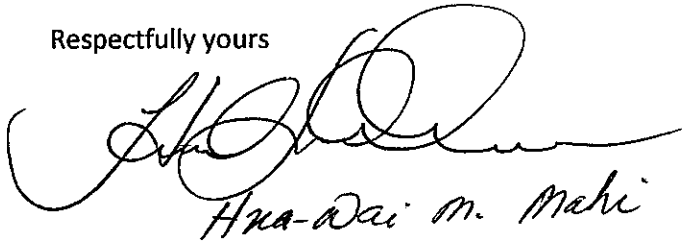
This audacious plan of Nani Kahuku developers would retain only, 720 acres of this pristine irreplaceable historical and wild coastline as conservation land. Only 720 acres for the nesting grounds of the endangered hawksbill turtle, preservation of archeological sites and retention of the expansive pristine, wild coastline.

This audacious plan requests change of both conservation land and agriculture land of 20 acre lots minimum, to be changed to URBAN district. There is no urban district in Ocean view. We in Ocean View chose Ocean View for its rugged, raw and wild lands, natural resources and coastline. Extensive surveys have been compiled in Kau for the Kau Development Plan. These results are available for all and state the people of Kau want Kau to stay wild, rugged. Its natural resources and pristine coastline and extreme rural feel are what brought people to Ocean View and what keeps them here.

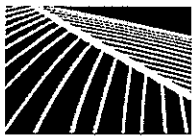
We request, demand, you leave Kau as it is. Do not even breathe urbanization. Nani Kahuku developers need to choose already developed areas for their resort, condos, hotels, airstrips, golf course, industrial complex, apartments, etc. Nani Kahuku developers are requesting thousands of acres to be turned to urban district, from conservation district. With thousands of residents, tens of thousands of tourist, this once pristine, wild rugged coastline, home of the landing site of the first Polynesians, how can this beautiful rugged, wild pristine coastline be preserved with such urbanized development?

Tell Nani Kahuku developers, the people of Kau and the Big Island have spoken, take your plans to urban areas and leave Kau wild, rugged, pristine, and beautiful and preserve this area for us and our future generations. We are not dictating Nani Kahuku developers can't develop in the 20 acre agriculture lots or develop the minimum allowed in the conservation district, we just want you to let Nani Kahuku developers know the people of Kau do not want the districts changed for Nani Kahuku developers nor for Nani Kahuku to make their fortunes off us and destroy this land forever. Once changed, it is changed forever.

Respectfully yours



*Hana-wai m. Mahi*



# PBR HAWAII

& ASSOCIATES, INC.

DATE

Hua-Wai M. Mahi

**SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE (EISPN)  
KAHUKU VILLAGE  
KA'Ū, ISLAND OF HAWAI'I  
TAX MAP KEY (3) 9-2-001:072**

Dear Hua-Wai Mahi:

Thank you for your letter dated October 1, 2009 regarding the Environmental Impact Statement Preparation Notice (EISPN) for Kahuku Village, a master-planned mixed-use community in the Ka'ū district of the County of Hawaii. As the planning consultant for the landowner, Nani Kahuku Aina, LLC, we are responding to your comments.

Since the EISPN was published, the plan for Kahuku Village has been significantly scaled back, both in terms of acreage and in terms of proposed uses. The Mauka Village that was planned near Mamalahoa Highway is no longer proposed and the proposed airport and agricultural/energy lots are no longer under consideration. Of the property's approximately 16,457 acres, only about 1,600 acres are proposed to be reclassified for Rural and Urban uses. The vast majority, over 90 percent of the property, will be undeveloped. Development will occur only on the makai portion of the property, which is nearly six-miles from Mamalahoa Highway, thereby preserving the rural character of the mauka area and scenic views for travelers on Mamalahoa Highway.

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We acknowledge your concerns relating to coastal development and potential impact to the endangered Hawksbill turtle. For the past several years, Nani Kahuku Aina has partnered with the U.S. Fish and Wildlife Service on the Hawaii Island Hawksbill Turtle Recovery Project and intends to continue with this partnership. We note that an assessment of the marine environment and anchialine pools on the property has been prepared and the assessment determined that no adverse impact to the marine environment or anchialine pools will occur so long as sufficient Best Management Practices are implemented. Measures to be implemented to prevent or mitigate impacts to coastal and marine resources include, but are not limited to, establishing a shoreline

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R. STAN DUNCAN, ASLA  
*Executive Vice-President*

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Hua-Wai M. Mahi

SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE (EISPN),  
KAHUKU VILLAGE, KA'Ū, ISLAND OF HAWAI'I, TAX MAP KEY (3) 9-2-001:072

June 14, 2011

Page 2 of 2

conservation zone, implementation of a konohiki-inspired Integrated Natural and Cultural Resources Management Plan, educating shoreline users about significant resource and habitats, and prohibiting activities that may impair the coastal environment and habitats. The Draft EIS will specify mitigation measures to be implemented to prevent impacts to the marine and anchialine pool communities.

We concur with your assessment that the property contains numerous archaeological and cultural sites. An extensive archaeological inventory survey and a cultural impact assessment have been prepared. Areas proposed for development were designed to avoid culturally and environmentally sensitive areas. The archaeological inventory survey and cultural impact assessment will be summarized in the Draft EIS and attached as appendices.

We appreciate your participation in the environmental review process.

Sincerely,

PBR HAWAII

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Dean Minakami, AICP  
Planner

cc: Valentine Peroff, Nani Kahuku Aina, LLC  
Bobby Jean Leithead-Todd, Hawaii County Planning Department

October 1, 2009

Mr. Vincent Shigekuni, Vice President  
PBR Hawaii  
1001 Bishop Street  
ASB Tower, Ste 650  
Honolulu, HI 96813

Dear Mr Vincent Shigekuni:

We are residents of Ocean View, Kau District of the Big Island. We oppose the Nani Kahuku massive 16,000 plus acres development. We overlook this proposed project, the raw and wild rugged coastline. It is a pristine coastline....pristine and in conservation district due to its natural raw and wild landscape and for protection of the nesting grounds of the hawksbill turtle and home to some of the most valuable, irreplaceable archeological sites and home of the first landing of the original Polynesians over 1500 hundred years ago. Of the 16,000 plus acres being promoted for this high impact urban development, over 8,000 of this pristine, wild and rugged acres is in conservation district. The other half is zoned 20 A agriculture, meaning, 20 acres agriculture lot size minimum.

This audacious plan of Nani Kahuku developers would retain only, 720 acres of this pristine irreplaceable historical and wild coastline as conservation land. Only 720 acres for the nesting grounds of the endangered hawksbill turtle, preservation of archeological sites and retention of the expansive pristine, wild coastline.

This audacious plan requests change of both conservation land and agriculture land of 20 acre lots minimum, to be changed to URBAN district. There is no urban district in Ocean view. We in Ocean View chose Ocean View for its rugged, raw and wild lands, natural resources and coastline. Extensive surveys have been compiled in Kau for the Kau Development Plan. These results are available for all and state the people of Kau want Kau to stay wild, rugged. Its natural resources and pristine coastline and extreme rural feel are what brought people to Ocean View and what keeps them here.

We request, demand, you leave Kau as it is. Do not even breathe urbanization. Nani Kahuku developers need to choose already developed areas for their resort, condos, hotels, airstrips, golf course, industrial complex, apartments, etc. Nani Kahuku developers are requesting thousands of acres to be turned to urban district, from conservation district. With thousands of residents, tens of thousands of tourist, this once pristine, wild rugged coastline, home of the landing site of the first Polynesians, how can this beautiful rugged, wild pristine coastline be preserved with such urbanized development?

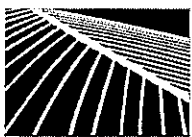
Tell Nani Kahuku developers, the people of Kau and the Big Island have spoken, take your plans to urban areas and leave Kau wild, rugged, pristine, and beautiful and preserve this area for us and our future



generations. We are not dictating Nani Kahuku developers can't develop in the 20 acre agriculture lots or develop the minimum allowed in the conservation district, we just want you to let Nani Kahuku developers know the people of Kau do not want the districts changed for Nani Kahuku developers nor for Nani Kahuku to make their fortunes off us and destroy this land forever. Once changed, it is changed forever.

Respectfully yours

James Querrens  
Resident Oceanview  
Aloha + Iolani



June 14, 2011

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Mr. James Guerreiro

**SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE  
(EISPN)  
KAHUKU VILLAGE  
KA'Ū, ISLAND OF HAWAI'I  
TAX MAP KEY (3) 9-2-001:072**

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Mr. James Guerreiro

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Resources Management Plan, educating shoreline users about significant resource and habitats, and prohibiting activities that may impair the coastal environment and habitats. The Draft EIS will specify mitigation measures to be implemented to prevent impacts to the marine and anchialine pool communities.

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We appreciate your participation in the environmental review process.

Sincerely,

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Dean Minakami, AICP  
Planner

cc: Valentine Peroff, Nani Kahuku Aina, LLC  
Bobby Jean Leithead-Todd, Hawaii County Planning Department

October 5, 2009

Ka'u Malama 'Aina  
A Free Association Fellowship  
Perpetuating the Ka'u Ohana

To: Bobby Jean Leithead-Todd, Director  
Planning Department, County of Hawaii  
Aupuni Center, 101 Pauahi Street, Suite 3  
Hilo Hawaii, 96720

Vincent Shigekuni, Vice President  
Development Consultant, PBR Hawaii  
ASB Tower, Suite 650  
1001 Bishop Street  
Honolulu, Hawaii 96813

Valentine Peroff, President  
Katherine Peroff, Vice President  
Nani Kahuku 'Aina, A Limited Liability Corp.  
99-0886 Iwaena Street  
Aiea, Hawaii 96701

Re: Nani Kahuku 'Aina's Kahuku Villages Project  
Kahuku, Ka'u, Hawaii

Dear Ladies and Gentlemen,

We find this EISPN (Environmental Impact Statement Public Statement) woefully inadequate and negligently deceptive. From the cautious responsibility of public trust, the Hawaii County Planning Department should forthrightly reject acceptance, halting further processing towards a DEIS (Draft Environmental Impact Statement). To allow the continuation in preparation of such an outlandish inappropriately proposed development project scheme at this location would set new standards in bureaucratic folly, wasting county manpower, resources and funds while embroiling the public's time pointlessly.

Disappointedly, we also consider this proposed Project on face-value devoid of principles for “smart growth” that would sustain, keeping Hawaii a nice, natural place to live, in keeping with Hawaiian cultural values for our citizenry and future generations through caring for and protecting what we have, that is still left, of our once beautiful natural environment and the few undeveloped coastal areas with their unique beaches and habitat resources. All these remaining natural resource environs are destined to be more valued and treasured in future times and their protection may prove crucial to survival.

We would hope planning criteria and priorities would be directed to controlling urban expansion, limiting it to areas that have already been altered or irrevocably compromised. Far better to devised means of increasing densities, creatively making them humanistic solutions for population growth. Plan growth around existing Urban Centers, established Villages, and Renewal for our cities’ capacities. Leave outlying places in their natural states or in agrarian usages, thus providing healthy recreation and enjoyment for urbanites, making their outings. Continuing to allow nature to be exploited and assaulted by urbanizing everywhere, we know is wrong and need to stop now, rather than later.

Unfortunately with this Proposed Project, we find ourselves facing even more serious matters of great concern to resolve; a darker alarming situation that until now, somehow managed to slip through all the cracks. Now comes a matter that the County, State and Federal Government must acknowledge and address or possibly, if mishandled then by the courts, before this or any other development can be entertained within this area’s location.

Unfortunately the County of Hawaii General Plan of February 2005 doesn’t identify any of our existing man-made hazards, such as chemical contamination locations or past Military Bombing Sites, i.e.: the Pakini Bombing Range, which must now become the concern focus for discussion in terms of this Proposed Project.

For those who may find they have been kept in the dark, there has recently been published a Final Report for this FUDS (Formerly Used Defense Site), Project No. H09H1005401. It regards numerous concerning aspects about the Pakini Bombing Range that are little known. Unfortunately the Report raises more questions than it is able to substantiate or allay. In this report as yet, the army is only identifying 7,140 acres for the FUDS, stating it was leased from Bishop Estate/Kamehameha Schools from 1943 to 1948 and when it was returned, claimed the Army issued a public warning upon closure, describing the area a “DANGER SPOT” due to the presence of unexploded ordnance. Unfortunately this report indicates that many archival records were unable to be found after comprehensive search for the historical documents needed in support for the report’s findings. Consequently documents evidencing property acquisition and termination of said Lease, which would confirm facts related to terms, scope, duration were not found in either the Bishop Estate’s files, Bureau of Conveyance files, State or Territorial archives or in any of the military’s. None the less appearing in a 1994 INPR (Inventory Project Report), there is established a Preliminary Site Boundary and was assigned the site number H09HI0054. Now we are to find in this most present Final Report this preliminary is being established as the *assumed* Actual Boundary, while the site

Identification Number increases to No. H09H1005401. The 1994 INPR (Inventory Project Report) recommended further investigation to evaluate the presence of MEC (Munitions and Explosives of concern). Subsequently, it was concluded that the area in fact was utilized as a wartime Bombing and Impact Range. Two site surveys were conducted on June 10, 1993 and again on March 31, 1994 to support the INPR (Inventory Project Report). Findings were made of numerous pieces of MD (Munitions Debris) and significant amounts of MEC (Munitions and Explosives of Concern) were found. Although no more referenced site visits were conducted again until the day of July 28, 2008 and again on July 30, 2008, some 14 years later. In this intervening 14 years there was some type of administrative action pursued. In the "chain of activity" there was an ASP (Archives Search Report) that was made in 2004, in which this MRS (Munitions Response Site) was given a score of 1, based on the Hazard Severity of "Critical" with a hazard probability of "Frequent," thus was established this important determination and things can finally proceed to other findings.

Military/Army records being what they may or may not be or findable in archival files, there still remains none-the-less existent cause and effect indications of what has taken place as well as long-time residents and people living that witnessed various branches of the military utilizing the area at-large and as far north as Manuka. The Report states the "SI (Site Inspection) collected the minimum amount of information necessary to make its determination. Authoritative and expert reports need to be taken with some grains of salt in our age of DSAA (double speak and acronyms). There may be some vested interest or manipulation going on. While necessary and helpful and important, the incompleteness of the military investigative report is highly challengeable as it contains numerous conclusion statements such as, "No surface water or sediment samples were collected because there is no permanent surface water within the MRS (Munitions Response Site)." The island's own Hydrology Report states, "The lava rock in this region is highly porous which allows the transportation of subsurface fresh water supplied from higher elevations to resurface, forming numerous wetlands whenever resurfaced water ponds behind the shoreline, found among other places at Moku Honu, Kailikii, and Kahio." This makes one wonder why the army did not want to test the water there! And how does one explain the remnants of an old Bombing Target Range Marker beyond Keawaiki off the jeep road along the rocky shoreline leading towards Kauna Point? This is over by or possibly in Manuka!

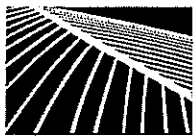
And where is the military report explaining the live ordnance or hazardous ammunition that was recovered adjacently near, just below Ranchos subdivision? None-the-less, in spite of and because of its seeming assumptions as well as its undisputable alarming facts, this Final Site Inspection report for Pakini Bombing Range prepared by Parsons for the U.S. Army Corps of Engineers, Southeast and Pacific IMA Region and known as FUDS Project No. H09H1005401 should definitely be reviewed by all stakeholders, residents, archeologists, environmentalists and governmental agencies and office holders that affect matters within the Ka'u community.

One of the most puzzling of the many concerns that need to be addressed, is how could the Riviera Resort (a previous Project Proposal in this same area) go through a full Draft Environmental Impact Statement process, without any County, State or Federal Agency raising the issue of concern over the Bombing Range, not one respondent to the DEIS, no mention, no reference alluding, nothing from any responsible agency, any regulating department or representing elected office holder or anyone having appointments. We have heard all our lives about Ostriches having their heads in the sand but now we're talking Turkeys with their heads in lava! In retrospect it is hard to believe the State Health Department response, or better the lack there of. Why didn't something trigger their HEER office to have anything to say on this matter? Certainly this time around, if there is attempted a DEIS, the HEER Office of the State Health Department will require ecological and human health risks assessment, conduct toxicological assessments for chemical threats and the required degree of clean-up level for contamination because of the concerns of Heavy Metals. And the Military and U.S. Government needs to come clean and deal with whatever actually transpired here, lift their MLB (Martial Law Blackout), reveal the whole story and fix it. Finally we have to change business as usual, the Accomplice Role of Promotion Projects in La La Land by facilitating inappropriate speculative development schemes. This needs to stop, freeing County Man-power and Departmental Funds to be spent on better needs and for better purposes. How much does the EIS for a project of this type cost the County and State in dollars and Man-hours? How much money and time is spent processing clearly speculative projects that will be packaged if the County approves their scheme and Zoning Changes? What percentage of Projects Requesting Zoning Changes are sold after Approval at a profit? The County Government and the Planning Department should not be heavily engaged in the business of trying to generate greater Property Tax Revenue through promoting Zoning Changes for PGM (Projects of Questionable Merit).

Respectfully,

A handwritten signature in black ink, appearing to read "Ralph Roland", with a large, sweeping flourish at the end.

Ralph Roland, Acting President  
Ka'u Malama 'Aina Regional Planning



June 14, 2011

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**SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION  
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The development concept for Kahuku Village and its consistency with planning principles will be described in the forthcoming Draft EIS. The Draft EIS will also discuss Kahuku Village's with the State Land Use Law, County General Plan, and Kau Community Development Plan which seek to direct and regulate urban expansion.

We are aware that lands adjacent to the Site were formerly used as a bombing range by the U.S. military. No live ordnance or hazardous munitions are known to be present on the Nani Kahuku Aina property. Portions of the property planned for development were



Mr. Mr. Ralph Roland

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We appreciate your participation in the environmental review process.

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Planner

cc: Valentine Peroff, Nani Kahuku Aina, LLC  
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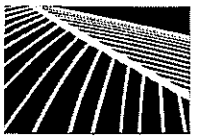
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Respectfully yours

Higāya Omereno

Ocean View Resident  
Aloha + Ielani



June 14, 2011

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Ligaya Guerrero

**SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION  
NOTICE (EISPN)  
KAHUKU VILLAGE  
KA'Ū, ISLAND OF HAWAI'I  
TAX MAP KEY (3) 9-2-001:072**

Dear Ms. Guerrero:

Thank you for your letter dated October 1, 2009 regarding the Environmental Impact Statement Preparation Notice (EISPN) for Kahuku Village, a master-planned mixed-use community in the Ka'ū district of the County of Hawaii. As the planning consultant for the landowner, Nani Kahuku Aina, LLC, we are responding to your comments.

Since the EISPN was published, the plan for Kahuku Village has been significantly scaled back, both in terms of acreage and in terms of proposed uses. The Mauka Village that was planned near Mamalahoa Highway is no longer proposed and the proposed airport and agricultural/energy lots are no longer under consideration. Of the property's approximately 16,457 acres, only about 1,600 acres are proposed to be reclassified for Rural and Urban uses. The vast majority, over 90 percent of the property, will be undeveloped. Development will occur only on the makai portion of the property, which is nearly six-miles from Mamalahoa Highway, thereby preserving the rural character of the mauka area and scenic views for travelers on Mamalahoa Highway.

The Applicant and landowner, Nani Kahuku Aina, recognizes the importance of the natural and cultural resources on the property. The vision for Kahuku Village calls for development that balances revenue-generating land uses with resource stewardship and preservation efforts. Preservation of the property's natural and cultural resources requires an active stewardship role. Significant financial resources are required to collect litter, prevent trespassing and vandalism, remove invasive species, and monitor activities that may impair resources. Presently, stewardship activities are limited since the property has little revenue-generating uses. Development of Kahuku Village will provide revenue that will enable stewardship efforts to be expanded, formalized and perpetuated.

We acknowledge your concerns relating to coastal development and potential impact to the endangered Hawksbill turtle. For the past several years, Nani Kahuku Aina has partnered with the U.S. Fish and Wildlife Service on the Hawaii Island Hawksbill Turtle Recovery Project and intends to continue with this partnership. We note that an assessment of the marine environment and anchialine pools on the property has been prepared and the assessment determined that no adverse impact to the marine environment or anchialine pools will occur so long as sufficient Best Management Practices are implemented. Measures to be implemented to prevent or mitigate impacts

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Ms. Ligaya Guerrero

SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE (EISPN),  
KAHUKU VILLAGE, KA'Ū, ISLAND OF HAWAI'I, TAX MAP KEY (3) 9-2-001:072

June 14, 2011

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to coastal and marine resources include, but are not limited to, establishing a shoreline conservation zone, implementation of a konohiki-inspired Integrated Natural and Cultural Resources Management Plan, educating shoreline users about significant resource and habitats, and prohibiting activities that may impair the coastal environment and habitats. The Draft EIS will specify mitigation measures to be implemented to prevent impacts to the marine and anchialine pool communities.

We concur with your assessment that the property contains numerous archaeological and cultural sites. An extensive archaeological inventory survey and a cultural impact assessment have been prepared. Areas proposed for development were designed to avoid culturally and environmentally sensitive areas. The archaeological inventory survey and cultural impact assessment will be summarized in the Draft EIS and attached as appendices.

We appreciate your participation in the environmental review process.

Sincerely,

PBR HAWAII

A handwritten signature in black ink, appearing to read "Dean Minakami".

Dean Minakami, AICP  
Planner

cc: Valentine Peroff, Nani Kahuku Aina, LLC  
Bobby Jean Leithead-Todd, Hawaii County Planning Department

## Comments and Questions on Kahuku Village EIS Prep Notice

In your summary you discuss the increase of basic services because of Ka`u remoteness and by increasing a centrally located population mass services will increase? I think that is putting the horse before the cart. Any services provided by the County would require their assessment of who on the entire island need them the most. For example, we wrote a grant for a Naalehu Fire House and after being awarded the grant, we saw it go to Puna because they had more need than Naalehu. It is at their discretion.

We have three golf courses in Ka`u and they all operate at a loss. How will your golf course be different...profitable and self-sustaining?

In your discussion about a Cultural Center...location and where it would fit in your time line is not disclosed. There were three other attempts to develop Cultural Centers in Ka`u and they all failed because people basically people got discouraged by He Kula na mea Hawaii; after fundraising for five years by a large number of locals the leader burned out and left the island. Ka Lae Museum was an attempt by locals to establish a museum at South Point. Some locals were jealous and burnt it down and destroyed the buildings and wells. Ma Lama by Punalu`u Preservation was supported by Hawaii County Research and Development and HACBED. All the funding disappeared and the land lease lapsed before anyone could do anything about it. Maybe, the time to discuss a new museum under lock and key and new blood...maybe.

“A small portion of SMA” (Summary)...exactly how much and where? People will not support this change of SMA...but I guess everyone has their price.

We have two helipads in the District, one in Ocean View and one in Pahala and helicopters have landed in other places in the district when needed. The majority of the people living in Ka`u do not want easy access to Ka`u, they like it rural.

I am enclosing the rest of the document with some comments throughout. I wish I had the time to write on every issue.

Thank you for the opportunity, and good luck

Marge Elwell  
P.O. Box 1043  
Naalehu, Hawaii 96772  
808-929-7236 (H)  
808-557-8100 (C)

June 14, 2011

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Ms. Marge Elwell  
P.O. Box 1043  
Naalehu, Hawaii 96772

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KA‘Ū, ISLAND OF HAWAI‘I  
TAX MAP KEY (3) 9-2-001:072**

Dear Ms. Elwell:

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The Applicant and landowner, Nani Kahuku Aina, recognizes the importance of the natural and cultural resources on the property. The vision for Kahuku Village calls for development that balances revenue-generating land uses with resource stewardship and preservation efforts. Preservation of the property’s natural and cultural resources requires an active stewardship role. Significant financial resources are required to collect litter, prevent trespassing and vandalism, remove invasive species, and monitor activities that may impair resources. Presently, stewardship activities are limited since the property has little revenue-generating uses. Development of Kahuku Village will provide revenue that will enable stewardship efforts to be expanded, formalized and perpetuated.

With regard to the proposed civic uses, we agree with your assessment that the County will need to consider island-wide priorities when constructing new facilities. Approximately 100-acres of land near Mamalahoa Highway is proposed to be dedicated to State and County of Hawaii agencies. This will enable State and County agencies to construct facilities such as an elementary school, police-substation, fire station, emergency medical center, and district park when they are needed and resources are available.

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Ms. Marge Elwell

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June 14, 2011

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We appreciate your concern regarding the viability of the proposed golf course. The golf course is expected to be a financially sound and attractive amenity for residents and visitors to Kahuku Village. Unlike other golf courses in the Kau district, Kahuku Village's golf course will be located in a planned community near a substantial number of residences, a commercial center, hotel sites, and visitor attractions, all of which will encourage play at the golf course.

Further description of the Hawaiian Heritage Center and the timing of its development will be included in the Draft EIS.

Most of Kahuku Village is situated outside of the Special Management Area (SMA). Please be aware that a change to the SMA boundary is not being proposed, rather, any uses in the SMA will require a SMA use permit. A map showing the SMA boundary will be provided in the Draft EIS.

The proposed heliport will be used only for emergency transport associated with the proposed Veterans Administration facility and other accidents requiring immediate transport. The heliport will not be used for commercial tour operations or private purposes.

We appreciate your participation in the environmental review process.

Sincerely,

PBR HAWAII



Dean Minakami, AICP  
Planner

cc: Valentine Peroff, Nani Kahuku Aina, LLC  
Bobby Jean Leithead-Todd, Hawaii County Planning Department



Ms. Bobby Jean Leithead-Todd, Planning Director

8 October 2009

PLANNING DEPARTMENT  
COUNTY OF HAWAII

County of Hawaii

Planning Department

2009 OCT -8 AM 10:18

Aupuni Center

101 Pauahi Street, Ste 3

Hilo HI 96720

Dear Ms. Leithead-Todd:

Subject: Environmental Impact Statement Preparation Notice for

I am writing about EIS Prep Notice for the proposed Ka'u development of Nani Kahuku Aina, LLC. The site, in Kahuku, is about the same as that of the ill-fated "Hawaiian Riviera" development proposal of twenty years ago. The only success of that proposal was to sell the land to other speculators, including the current developers. Farther north, at Kapua, another similar development was proposed and partially permitted in the early 1980's, and it too flopped after the initial first-step approvals were granted. It, too, is awaiting sale to other suckers.

The EIS and its supporting documents should include rational discussions (i.e., no shibai) of these other proposed developments for comparison. Those two proposals were advanced during times of pro-development sentiment at various government agencies. Just as important, those times were periods where financing was readily available for numerous developments of raw land and those in early development phases. These two past proposals should be compared with the subject proposal and the terrible economic circumstances of today. If a good economic proposal consistent within the current downturned economy cannot be reasonably justified for the Nani Kahuku Aina, LLC, then all potential approvals should be denied and the developers wait to apply when and if a much more favorable turn in the island's and country's economy occurs.

If local government officials should approve of the applicants' proposal, the EIS should explain clearly what such permissions would do to the land values after approval and before any substantive development. Do the subject lands' tax assessments or potential sale values go up relative to what they would be without any land use and zoning changes, or would they remain the same? Would the tax base for Hawaii county be elevated with such approvals? Would the tax valuations of neighboring lands, such as in the nearby subdivisions, be elevated as well? What would the County's obligation to the developers be, especially in terms of costs?

The subject lands have had essentially no development, and the archaeological resources can be expected to be relatively intact. The Kapua development referenced above was proposed in a similar historic setting. Many neighbors of the area were aware of and concerned about the fate of the rich historic resources, many within lava tubes. After the archaeological surveys were finished, many of these resources had been removed, and their fate is unknown. The reports used in the applications detailed the archaeologists' findings and interpretations, but for many of these rich and rare resources, the reports were all that was left. Concerned neighbors felt let down, and the historic integrity of the area was forever altered, even before any bulldozer

057125

was unleashed. Is this to be the fate for the subject lands as well? What is to become of the historic artifacts and their setting? Do the archaeologists haul them off? Do they wind up on eBay? Do the current landowners take them as a prize? These are questions very relevant to the fate of this historic Kahuku landscape and the feelings of concerned neighbors. The EIS needs to thoroughly address them.

The subject lands at Kahuku cannot be developed without proven sources of water. With the exception of the low and variable flow from Ha'au Springs, everybody in the Kahuku area catches water off their roofs while they pressure government agencies to find a viable well for relief from the frequent droughts. The rainfall is too unreliable for most residents to feel comfortable with the status quo, and any agriculture is risky or unfeasible as well without a secure new water source. No approvals of any sort should be granted, even provisionally, until the applicants prove that they have a drilled and tested well capacity suitable for the scale of development. Claims from hired hydrologists are no substitute, no matter how many EIS processes they have participated in. No water—no approvals. This is, after all, a very dry region that has always been plagued with water supply problems.

The subject lands are predominantly barren from another cause, not just by the natural climatic dryness. The whole landscape is dominated by the recent lava flows from this very active portion of the Mauna Loa Southwest Rift Zone (MLSWRZ), including those from the 1868, 1887 and 1907 eruptions immediately upslope. In fact, the MLSWRZ curves across the site just mauka. This is why the region is in the US Geological Survey's lava flow hazard zone 2. There are nearly 2500 house lots in Puna that have been covered by Kilauea lavas in recent decades, most of these are in the same zone 2. In 1868, there was over a month of very frequent to continuous earthquakes in the region, culminating in the largest earthquake in reported history. It was said that all or nearly all the stone structures that had been built in the district were thrown to the ground, along with much of the population. The seismic risk should also be seriously discussed, and its potential effects on structures, water and utility lines and roads. The 1868 events were also accompanied by significant land subsidence into the sea and a devastating tsunami. The latter quickly followed the largest earthquake without further warning and damaged or wiped out almost all of the coastal settlements in the district. Here we have the classic triple whammy of hazards that are associated with an area that is adjacent to the very active MLSWRZ on one of the world's most active volcanoes. Consider also that the lava output of Mauna Loa eruptive vents dwarf those of Kilauea.

The EIS should also distinguish between geologic hazards and risks. The hazards here are associated with the geographic position on this active volcano. The risks to human life and property, however, are associated with the degree of development and also the population size and distribution within this hazardous area. Currently, many thousands of house lots were permitted within the region adjacent to the MLSWRZ nearly a half century ago, when scientists and permitting officials understood very much less about the area's geologic hazards. The lots are mostly empty, but the population therein has been growing very rapidly. This means that the risk to life and property has been growing very rapidly as well. The risk is exacerbated by the potential rapidity that flows from the rift zone can reach and cut off roads and maroon areas. For example, Hawaiians living near the sea were quickly entrapped between a pair of 1868 flows and could only escape by sea.

This entrapment could happen again. The developers and the County officials should invite the USGS Geological Survey to submit their latest hazard evaluations and risk assessment for the area in the context of

the proposal. The EIS should detail evacuation plans for situations where access roads are damaged or cut. It should also explain how residents and guests would evacuate before such isolation when an eruption on the MLSWR is pending or happening above Kahuku. Even lava flows cutting the Mamalahoa Highway to either side of the development could severely curtail the operations and safety of such a large development. These discussions should also include the evacuation or other considerations of resident living on nearby subdivisions, at current numbers and at projected numbers as the subdivisions build out. All share similar risks and the single, curvy, 2-lane highway. Contingencies for dealing with lava flows should be realistic and consistent with what government geologists and Civil Defense personnel would recommend.

The EIS should cover thoroughly, and the land use decision-makers consider carefully, the geologic hazards and their implications in their deliberations. To add further risk to that already existing and growing, by means of development approvals that lead to more residential, hotel and commercial units, is actively adding to the risk that exists at this hazardous site. As mentioned, any potential residents, workers and guests could be easily entrapped and the whole development be cut off by damage to the access road(s), either from lava flow or earthquake. Is this risk something that land use permit granters would want to intentionally elevate by any approvals of the proposed development here? Given the more advanced knowledge of geologic hazard and risk today, would such approvals make them liable for future lawsuits should a significant lava or seismic event occur afterwards, or would "the government" be expected to field and pay for any suits? Is this fiscally responsible?

Lending institutions are likely to evaluate the risks as well, and would they be expected to provide development loans in this light? If securing such loans is unlikely enough in the current capital environment of today already, then how would such loan acquisition be affected by serious consideration of the geologic hazards and risks to development? If financing is not assured or likely now, this proposal should be postponed until the economic environment improves significantly and additional highway capacity to facilitate evacuation is built. These topics should be rationally discussed as well (remember now, no shibai).

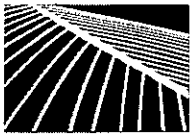
Similarly, is it fiscally responsible for government officials and commission members to recommend and grant land use approvals when there is a good chance that the development might not progress, but the county still be required to provide services implied by such approvals. Look at Puna. Well over 50,000 house lots were approved over a short time, but the County government has not kept up with expected public improvements to the area, and the result is that most of the district's residents continue to get ignored by the County, or only given lip service at best, and most are very unhappy about it. These problems are only getting worse, as Puna has the highest growth rate in the state. Is such a scenario best for Ka'u district and its residents? How can what happened to Puna be avoided in the subject proposal? The EIS should explain this well, as should the County employees, councilmen and commissioners involved in the chain of recommendations and decisions. Given all the risks involved, the EIS should explain clearly why the proposed development is good for the County government and for all its residents, especially those in Ka'u (remember, no shibai). For example, will the residents of the proposed development, its developers or the County be saddled with the maintenance costs of all the roads? Most of the roads in Puna wound up being maintained by the residents, not the developers of the County, just as most of the roads in Ka'u are today. Will the existing residents of the district continue in this scenario as-is, with the residents in the proposed development living in a privileged, County-maintained bubble within the rest of the district? The development, if approved, will definitely raise the taxes of the existing neighboring lots, but what will the residents get in return?

I do expect that this small sample of questions and concerns is given proper consideration in the EIS and other support documents. I also expect the those involved in the recommendations and decision-making are aware of these and other issues and give them fair weight. The "provides Jobs" rationale just doesn't cut it. Just look at how many of the positions at successful resort-residential-commercial operations elsewhere in Hawaii are given to workers who come from outside Hawaii.

Thank you for the opportunity to comment. I would like to be put on the mailing list for the EIS and its drafts and support documents so that I can provide further comment in the future.

Rick Warshauer

PO Box 192, Volcano, Hawaii 96785



June 14, 2011

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Mr. Rick Warshauer  
P.O. Box 192  
Volcano, Hawaii 96785

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KAHUKU VILLAGE  
KA'Ū, ISLAND OF HAWAI'I  
TAX MAP KEY (3) 9-2-001:072**

Dear Mr. Warshauer:

Thank you for your letter dated October 8, 2009 regarding the Environmental Impact Statement Preparation Notice (EISPN) for Kahuku Village, a master-planned mixed-use community in the Ka'ū district of the County of Hawaii. As the planning consultant for the landowner, Nani Kahuku Aina, LLC, we are responding to your comments.

Since the EISPN was published, the plan for Kahuku Village has been significantly scaled back, both in terms of acreage and in terms of proposed uses. The Mauka Village that was planned near Mamalahoa Highway is no longer proposed and the proposed airport and agricultural/energy lots are no longer under consideration. Of the property's approximately 16,457 acres, only about 1,600 acres are proposed to be reclassified for Rural and Urban uses. The vast majority, over 90 percent of the property, will be undeveloped. Development will occur only on the makai portion of the property, which is nearly six-miles from Mamalahoa Highway, thereby preserving the rural character of the mauka area and scenic views for travelers on Mamalahoa Highway.

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The Draft EIS will include a discussion of the previously proposed Hawaiian Riviera project. We acknowledge that the current economic climate is challenging for many projects, however, we are confident that Nani Kahuku Aina has the financial resources necessary to complete Kahuku Village.

Mr. Rick Warshauer

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Page 2 of 2

Kahuku Village's land value, and associated property taxes, may be adjusted by the County after it receives all entitlements. This includes an amendment to the County General Plan, State Land Use redistricting, and zoning approval. Fiscal impacts associated with creation of Kahuku Village will be discussed in the Draft EIS.

An archaeological inventory survey for Kahuku Village has been prepared. Findings and recommendations of the archaeological inventory survey will be discussed in the EIS, and the survey will be appended to the EIS.

Water for Kahuku Village will be provided by desalinated basal sea water and brackish water. A description of Kahuku Village's water system will be provided in the Draft EIS.

The Draft EIS will include a discussion of natural hazards, such as lava flow hazard and seismic hazard, and measures that can be implemented to reduce risk associated with natural hazards.

The Draft EIS will discuss fiscal impacts associated with creation of Kahuku Village. Please be aware that all infrastructure associated with Kahuku Village, including roadways, sewer, water, and drainage systems, will be privately constructed and maintained at no cost to the County. Creation of Kahuku Village is projected to have a net fiscal benefit to the County and State since additional revenues in the form of property taxes, general excise taxes, transient accommodation taxes, and income taxes will exceed costs to service Kahuku Village.

We appreciate your participation in the environmental review process.

Sincerely,

PBR HAWAII



Dean Minakami, AICP  
Planner

cc: Valentine Peroff, Nani Kahuku Aina, LLC  
Bobby Jean Leithead-Todd, Hawaii County Planning Department

**Robert & Karen Guerreiro**  
**PO Box 6728**  
**Ocean View, HI 96737**  
**[kiguerreiro@gmail.com](mailto:kiguerreiro@gmail.com)**

October 1, 2009

Mr. Vincent Shigekuni, Vice President  
PBR Hawaii  
1001 Bishop Street  
ASB Tower, Ste 650  
Honolulu, HI 96813

Dear Mr Vincent Shigekuni:

We are residents of Ocean View, Kau District of the Big Island. We oppose the Nani Kahuku massive 16,000 plus acres development. We overlook this proposed project, the raw and wild rugged coastline. It is a pristine coastline....pristine and in conservation district due to its natural raw and wild landscape and for protection of the nesting grounds of the hawksbill turtle and home to some of the most valuable, irreplaceable archeological sites and home of the first landing of the original Polynesians over 1500 hundred years ago. Of the 16,000 plus acres being promoted for this high impact urban development, over 8,000 of this pristine, wild and rugged acres is in conservation district. The other half is zoned 20 A agriculture, meaning, 20 acres agriculture lot size minimum.

This audacious plan of Nani Kahuku developers would retain only, 720 acres of this pristine irreplaceable historical and wild coastline as conservation land. Only 720 acres for the nesting grounds of the endangered hawksbill turtle, preservation of archeological sites and retention of the expansive pristine, wild coastline.

This audacious plan requests change of both conservation land and agriculture land of 20 acre lots minimum, to be changed to URBAN district. There is no urban district in Ocean view. We in Ocean View chose Ocean View for its rugged, raw and wild lands, natural resources and coastline. Extensive surveys have been compiled in Kau for the Kau Development Plan. These results are available for all and state the people of Kau want Kau to stay wild, rugged. Its natural resources and pristine coastline and extreme rural feel are what brought people to Ocean View and what keeps them here.

We request, demand, you leave Kau as it is. Do not even breathe urbanization. Nani Kahuku developers need to choose already developed areas for their resort, condos, hotels, airstrips, golf course, industrial complex, apartments, etc. Nani Kahuku developers are requesting thousands of acres to be turned to urban district, from conservation district. With thousands of residents, tens of thousands of tourist, this

once pristine, wild rugged coastline, home of the landing site of the first Polynesians, how can this beautiful rugged, wild pristine coastline be preserved with such urbanized development?

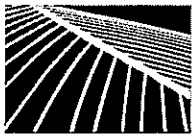
Tell Nani Kahuku developers, the people of Kau and the Big Island have spoken, take your plans to urban areas and leave Kau wild, rugged, pristine, and beautiful and preserve this area for us and our future generations. We are not dictating Nani Kahuku developers can't develop in the 20 acre agriculture lots or develop the minimum allowed in the conservation district, we just want you to let Nani Kahuku developers know the people of Kau do not want the districts changed for Nani Kahuku developers nor for Nani Kahuku to make their fortunes off us and destroy this land forever. Once changed, it is changed forever.

Respectfully yours

A large, stylized handwritten signature in black ink, appearing to read "Robert & Karen Guerreiro". The signature is written in a cursive, flowing style with a long horizontal line extending to the right.

Robert & Karen Guerreiro





June 14, 2011

**PRINCIPALS**

THOMAS S. WITTEN, ASLA  
*President*

R. STAN DUNCAN, ASLA  
*Executive Vice-President*

RUSSELL Y. J. CHUNG, FASLA, LEED<sup>®</sup> AP  
*Executive Vice-President*

VINCENT SHIGEKUNI  
*Vice-President*

GRANT T. MURAKAMI, AICP, LEED<sup>®</sup> AP  
*Principal*

W. FRANK BRANDT, FASLA  
*Chairman Emeritus*

Mr. and Mrs. Robert and Karen Guerreiro  
P.O. Box 6728  
Ocean View, Hawaii 96737

**SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE  
(EISPN)  
KAHUKU VILLAGE  
KA'Ū, ISLAND OF HAWAII  
TAX MAP KEY (3) 9-2-001:072**

Dear Mr. and Mrs. Guerreiro:

**ASSOCIATES**

TOM SCHNELL, AICP  
*Senior Associate*

RAYMOND T. HIGA, ASLA  
*Senior Associate*

KEVIN K. NISHIKAWA, ASLA  
*Associate*

KIMI MIKAMI YUEN, LEED<sup>®</sup> AP  
*Associate*

SCOTT ALIKA ABRIGO, LEED<sup>®</sup> AP  
*Associate*

SCOTT MURAKAMI, ASLA, LEED<sup>®</sup> AP  
*Associate*

DACHENG DONG, LEED<sup>®</sup> AP  
*Associate*

Thank you for your letter dated October 1, 2009 regarding the Environmental Impact Statement Preparation Notice (EISPN) for Kahuku Village, a master-planned mixed-use community in the Ka'ū district of the County of Hawaii. As the planning consultant for the landowner, Nani Kahuku Aina, LLC, we are responding to your comments.

Since the EISPN was published, the plan for Kahuku Village has been significantly scaled back, both in terms of acreage and in terms of proposed uses. The Mauka Village that was planned near Mamalahoa Highway is no longer proposed and the proposed airport and agricultural/energy lots are no longer under consideration. Of the property's approximately 16,457 acres, only about 1,600 acres are proposed to be reclassified for Rural and Urban uses. The vast majority, over 90 percent of the property, will be undeveloped. Development will occur only on the makai portion of the property, which is nearly six-miles from Mamalahoa Highway, thereby preserving the rural character of the mauka area and scenic views for travelers on Mamalahoa Highway.

The Applicant and landowner, Nani Kahuku Aina, recognizes the importance of the natural and cultural resources on the property. The vision for Kahuku Village calls for development that balances revenue-generating land uses with resource stewardship and preservation efforts. Preservation of the property's natural and cultural resources requires an active stewardship role. Significant financial resources are required to collect litter, prevent trespassing and vandalism, remove invasive species, and monitor activities that may impair resources. Presently, stewardship activities are limited since the property has little revenue-generating uses. Development of Kahuku Village will provide revenue that will enable stewardship efforts to be expanded, formalized and perpetuated.

We acknowledge your concerns relating to coastal development and potential impact to the endangered Hawksbill turtle. For the past several years, Nani Kahuku Aina has partnered with the U.S. Fish and Wildlife Service on the Hawaii Island Hawksbill Turtle Recovery Project and intends to continue with this partnership. We note that an assessment of the marine environment and anchialine pools on the property has been

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Mr. and Mrs. Robert and Karen Guerreiro

SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE (EISPN),  
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June 14, 2011

Page 2 of 2

prepared and the assessment determined that no adverse impact to the marine environment or anchialine pools will occur so long as sufficient Best Management Practices are implemented. Measures to be implemented to prevent or mitigate impacts to coastal and marine resources include, but are not limited to, establishing a shoreline conservation zone, implementation of a konohiki-inspired Integrated Natural and Cultural Resources Management Plan, educating shoreline users about significant resource and habitats, and prohibiting activities that may impair the coastal environment and habitats. The Draft EIS will specify mitigation measures to be implemented to prevent impacts to the marine and anchialine pool communities.

We concur with your assessment that the property contains numerous archaeological and cultural sites. An extensive archaeological inventory survey and a cultural impact assessment have been prepared. Areas proposed for development were designed to avoid culturally and environmentally sensitive areas. The archaeological inventory survey and cultural impact assessment will be summarized in the Draft EIS and attached as appendices.

We appreciate your participation in the environmental review process.

Sincerely,

PBR HAWAII



Dean Minakami, AICP  
Planner

cc: Valentine Peroff, Nani Kahuku Aina, LLC  
Bobby Jean Leithead-Todd, Hawaii County Planning Department

Dacayanan, Melissa

PLANNING DEPARTMENT  
COUNTY OF HAWAII

From: Robert Shallenberger [rshallenberger@TNC.ORG]  
Sent: Wednesday, October 07, 2009 3:04 PM  
To: planning@co.hawaii.hi.us; mcox@pbr.hawaii.com  
Subject: Kakuku Villages project

2009 OCT -8 AM 10:18

SUBJECT: Kahuku Villages EISPN

Aloha,

Thank you for the opportunity to comment on the EISPN for the Kahuku Villages project. This is an ambitious project with potential for significant impacts, both positive and negative.

The project description in the EISPN is comprehensive in scope, but lacks depth on many topics. I look forward to reviewing the Draft EIS to learn more about specific proposed actions, environmental impacts and mitigation strategies. It appears from review of the EISPN that many design elements remain unresolved. Examples include the details surrounding the "eco lodge", the airport vs. heliport plan, the viability of a private energy utility system, the commitment to LEED standards for construction, the preferred strategy for wastewater treatment and reuse, the viability of the project fresh water supply, etc. Even the Land Use Summary includes a broad range of data (e.g. 300-450 residential units). The proposal identifies the importance of the anchialine pond system but is vague regarding strategies to protect and interpret these areas. The proposal also refers to development of a "heritage center" but makes only passing reference to a "possible marine lab." Also, the EISPN makes several references to an "airport and/or heliport" without proposing one or the other.

I hope that the DEIS will provide substantially more data regarding agricultural uses of the property, including the opportunity for bioenergy projects. The DEIS should also provide information regarding use of the shore and nearshore waters by Hawaiian monk seals. Field survey should also be conducted to plot the location and condition of lava tubes.

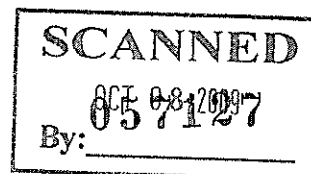
I note that the EISPN proposes to "establish an ahupua'a stewardship program that integrates land and ocean management." Those are compelling words, but the DEIS should include a more substantive discussion of strategies to achieve that objective.

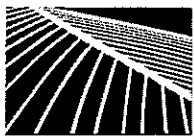
Again, I look forward to future review of the DEIS.

Mahalo,

Rob Shallenberger, Ph.D.

Hawaii Island Director  
The Nature Conservancy  
(808) 443-5404  
PO Box 6600  
Kamuela, HI 96743





June 14, 2011

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Dr. Robert Shallenberger, Ph.D., Hawaii Island Director  
The Nature Conservancy  
P.O. Box 6600  
Kamuela, Hawaii 96743

**SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION  
NOTICE (EISPN)  
KAHUKU VILLAGE  
KA'Ū, ISLAND OF HAWAI'I  
TAX MAP KEY (3) 9-2-001:072**

Dear Dr. Shallenberger:

Thank you for your email dated October 7, 2009 regarding the Environmental Impact Statement Preparation Notice (EISPN) for Kahuku Village, a master-planned mixed-use community in the Ka'ū district of the County of Hawaii. As the planning consultant for the landowner, Nani Kahuku Aina, LLC, we are responding to your comments.

Since the EISPN was published, the plan for Kahuku Village has been significantly scaled back, both in terms of acreage and in terms of proposed uses. The Mauka Village that was planned near Mamalahoa Highway is no longer proposed and the proposed airport and agricultural/energy lots are no longer under consideration. Of the property's approximately 16,457 acres, only about 1,600 acres are proposed to be reclassified for Rural and Urban uses. The vast majority, over 90 percent of the property, will be undeveloped. Development will occur only on the makai portion of the property, which is nearly six-miles from Mamalahoa Highway, thereby preserving the rural character of the mauka area and scenic views for travelers on Mamalahoa Highway.

The Applicant and landowner, Nani Kahuku Aina, recognizes the importance of the natural and cultural resources on the property. The vision for Kahuku Village calls for development that balances revenue-generating land uses with resource stewardship and preservation efforts. Preservation of the property's natural and cultural resources requires an active stewardship role. Significant financial resources are required to collect litter, prevent trespassing and vandalism, remove invasive species, and monitor activities that may impair resources. Presently, stewardship activities are limited since the property has little revenue-generating uses. Development of Kahuku Village will provide revenue that will enable stewardship efforts to be expanded, formalized and perpetuated.

Further information about the proposed plan and development program, including the proposed Hawaiian Heritage Center, will be provided in the Draft EIS. The Draft EIS will also discuss Kahuku Village's integration of "sustainability", infrastructure systems, environmental impacts, and measures to be implemented to protect resources such as the anchialine ponds and habitat for endangered species such as the Hawaiian monk seal.

**ASSOCIATES**

TOM SCHNELL, AICP  
*Senior Associate*

RAYMOND T. HIGA, ASLA  
*Senior Associate*

KEVIN K. NISHIKAWA, ASLA  
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Dr. Robert Shallenberger, Ph.D.

SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE (EISPN),  
KAHUKU VILLAGE, KA'Ū, ISLAND OF HAWAI'I, TAX MAP KEY (3) 9-2-001:072

June 14, 2011

Page 2 of 2

Use of the property for agriculture, including the growth of feedstock for a bio-energy facility has been considered, however, the agricultural potential of the property is very limited. The majority of the property consists of barren lava fields with pockets of vegetation in shallow topsoil. The property's limited agricultural potential is reflected in its Land Study Bureau agricultural productivity rating of "E" (the lowest rating), and its unclassified status on the Agricultural Lands of Importance to the State of Hawaii (ALISH) map.

We appreciate your participation in the environmental review process.

Sincerely,

PBR HAWAII



Dean Minakami, AICP  
Planner

cc: Valentine Peroff, Nani Kahuku Aina, LLC  
Bobby Jean Leithead-Todd, Hawaii County Planning Department

PBR Hawaii  
1001 Bishop Street  
ASB Tower, Suite 650  
Honolulu, HI 96813

October 6, 2009

Dear PBR Hawaii,

I oppose the zoning changes sought in the Ka'ū District for the Nani Kahuku project.

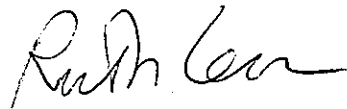
This grandiose project has been in the public eye for just a short time. Community members (island and state-wide) and public officials need more time to consider the far-reaching ramifications of such extensive proposed changes in land use, traffic, public safety, endangered species protection and many other issues.

A number of proposals have arisen in past decades that propose to include economic benefits for Ka'ū residents. I share most of the reasoning behind opposition to these past projects (prison, spaceport) and the same problems apply to the Nani Ka'ū proposal as well.

These reasons include : Keeping the country "country", preserving the last remaining undeveloped coastline in the state of Hawai'i, protecting our unique plants, animals and cultural sites and recognizing the significant geological hazards of the Ka'ū region. Public safety problems requiring evacuation in this remote region should preclude plans to add a high-end resort and residential development such as this.

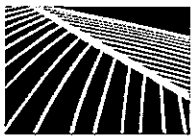
I believe the economic interests of Ka'ū are best served by supporting agriculture and tourism. Ka'ū is a pass-through wonderland for visitors traveling from one side of the island to the other. The Kahuku area is a developing gateway community for the Kahuku Unit of Hawai'i Volcanoes National Park. It is a beloved home for a self-selected community of long-time and newer residents. Existing subdivisions allow plenty of residential options for people of all economic categories. No need to rezone protected lands to add more.

Sincerely,



Ruth Levin  
P.O. Box 1118  
Volcano, HI 96785

Cc: Guy Enriques  
Hawaii County Planning Department



June 14, 2011

**PRINCIPALS**

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R. STANDUNCAN, ASLA  
*Executive Vice-President*

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*Chairman Emeritus*

Ms. Ruth Levin  
P.O. Box 1118  
Volcano, Hawaii 96785

**SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE  
(EISPN)  
KAHUKU VILLAGE  
KA'Ū, ISLAND OF HAWAII  
TAX MAP KEY (3) 9-2-001:072**

Dear Ms. Levin:

Thank you for your letter dated October 6, 2009 regarding the Environmental Impact Statement Preparation Notice (EISPN) for Kahuku Village, a master-planned mixed-use community in the Ka'ū district of the County of Hawaii. As the planning consultant for the landowner, Nani Kahuku Aina, LLC, we are responding to your comments.

Since the EISPN was published, the plan for Kahuku Village has been significantly scaled back, both in terms of acreage and in terms of proposed uses. The Mauka Village that was planned near Mamalahoa Highway is no longer proposed and the proposed airport and agricultural/energy lots are no longer under consideration. Of the property's approximately 16,457 acres, only about 1,600 acres are proposed to be reclassified for Rural and Urban uses. The vast majority, over 90 percent of the property, will be undeveloped. Development will occur only on the makai portion of the property, which is nearly six-miles from Mamalahoa Highway, thereby preserving the rural character of the mauka area and scenic views for travelers on Mamalahoa Highway.

The Applicant and landowner, Nani Kahuku Aina, recognizes the importance of the natural and cultural resources on the property. The vision for Kahuku Village calls for development that balances revenue-generating land uses with resource stewardship and preservation efforts. Preservation of the property's natural and cultural resources requires an active stewardship role. Significant financial resources are required to collect litter, prevent trespassing and vandalism, remove invasive species, and monitor activities that may impair resources. Presently, stewardship activities are limited since the property has little revenue-generating uses. Development of Kahuku Village will provide revenue that will enable stewardship efforts to be expanded, formalized and perpetuated.

The Draft EIS will include a discussion of the potential effect of Kahuku Village on traffic, public safety services, and endangered species. Discussion of geologic risks and measures to mitigate such risks will also be discussed.

**ASSOCIATES**

TOM SCHNELL, AICP  
*Senior Associate*

RAYMOND T. HIGA, ASLA  
*Senior Associate*

KEVIN K. NISHIKAWA, ASLA  
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*Associate*

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Ms. Ruth Levin

SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE (EISPN),  
KAHUKU VILLAGE, KA'Ū, ISLAND OF HAWAI'I, TAX MAP KEY (3) 9-2-001:072

June 14, 2011

Page 2 of 2

We acknowledge your desire to “keep the country, country” and to preserve the property’s coastline. A discussion of the project’s impact on the character of the region will be discussed in the Draft EIS. As indicated above, the character of the property as viewed from Mamalahoa Highway is not expected to change since development will occur primarily in the makai portion of the property, which is about 6 miles distant. In addition, we note that impacts associated with Kahuku Village should be evaluated in context of the project’s benefits, which include active stewardship of natural and cultural resources, job creation, provision of affordable housing, public shoreline access, and increased revenue to the County and State.

We appreciate your participation in the environmental review process.

Sincerely,

PBR HAWAII



Dean Minakami, AICP  
Planner

cc: Valentine Peroff, Nani Kahuku Aina, LLC  
Bobby Jean Leithead-Todd, Hawaii County Planning Department



*Ruth Marie Bass*

P.O. Box 690

Na`alehu, HI 96772

808-929-8364

[ruthmariebass@yahoo.com](mailto:ruthmariebass@yahoo.com)

Ms. Leithead-Todd  
Planning Director  
Planning Department  
Aupuni Center  
101 Puahi Street, Ste 3  
Hilo, HI 96720

Mr. Vincent Shigekuni,  
Vice President  
PBR Hawaii  
1001 Bishop Street  
ASB Tower, Ste 650  
Honolulu, HI 96813

Nani Kahuku `Aina LLC  
Mr. Valentine Peroff,  
President  
99-0880 Iwaena Steet  
Aiea, HI 96701

To whom it concerns:

Please include me as a consulted party for the EIS of the proposed Nani Kahuku `Aina project in the southern Ka`u district. . Please send a hard copy of the draft EIS and of the final EIS. I am concerned about the upzoning of the property without adequate development of water sources to meet the needs of the project

**To minimize County liabilities the County should not accept the final EIS** without a full hydrology report and description of the aquifer or hydrologic unit status that answer the following: 1.) What are the sustainable yields or other measures of water availability? 2.) What water use is authorized by the Commission on Water Resource Management? 3.) What is the pending installed capacity and/or use for the proposed well and subtotals for individual wells and/or groups of wells within the aquifer? 4.) What are current water use totals, including subtotals for individual users? 5.) What is the current installed capacity including subtotals for individual wells and/or groups of wells. 6.) What is the record of contamination problems in the aquifer or hydrologic unit including but not limited to saltwater intrusion, turbidity, heavy metals, inorganic and organic chemicals, microbiological agents, water quality parameters such

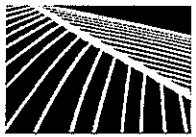
as pH, alkalinity, calcium, conductivity and temperature, and radioactivity. If contamination exists, what are the sources and duration of the contamination? 7.) What are the past and existing land uses within the wellhead protection area and the potential for future contamination from those uses? 8.) What is the description of the associated off-site watershed and recharge area? 9.) What potential effects may the well development have on the affiliated groundwater and surface water? 10.) What is the pump test data on water level, extraction rates, and water quality? 11.) What are the criteria used to determine if the well should be converted to production? 12.) What are the provisions for future use and monitoring of wells not placed into production? 13.) What will be the institutional, financial or land use arrangements or commitments related to developing the wells and delivering water to the Nani Kahuku 'Aina project? 14.) How may the proposed well development affect land and water uses on the island and in the region? 15.) What is the Hawaii State Water Plan and its component parts? 16.) What are plans for future water development within the aquifer? 17.) What are any related water, wastewater, drainage or erosion control plans? 18.) How may the well affect existing water sources? 19.) What are any secondary or cumulative impacts caused by promoting land uses that alter the hydrology of the source and/or end-use area?

Thank you,

*Ruth Marie Bass*

Ruth Marie Bass

*9-25-09*



June 14, 2011

**PRINCIPALS**

THOMAS S. WITTEN, ASLA  
*President*

R. STANDUNCAN, ASLA  
*Executive Vice-President*

RUSSELL Y. J. CHUNG, FASLA, LEED® AP  
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*Principal*

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*Chairman Emeritus*

Ms. Ruth Marie Bass  
P.O. Box 690  
Naalehu, Hawaii 96772

**SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE  
(EISPN)  
KAHUKU VILLAGE  
KA'Ū, ISLAND OF HAWAI'I  
TAX MAP KEY (3) 9-2-001:072**

Dear Ms. Bass:

**ASSOCIATES**

TOM SCHNELL, AICP  
*Senior Associate*

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*Senior Associate*

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SCOTT ALIKA ABRIGO, LEED® AP  
*Associate*

SCOTT MURAKAMI, ASLA, LEED® AP  
*Associate*

DACHENG DONG, LEED® AP  
*Associate*

Thank you for your letter dated September 25, 2009 regarding the Environmental Impact Statement Preparation Notice (EISPN) for Kahuku Village, a master-planned mixed-use community in the Ka'ū district of the County of Hawaii. As the planning consultant for the landowner, Nani Kahuku Aina, LLC, we are responding to your comments.

Since the EISPN was published, the plan for Kahuku Village has been significantly scaled back, both in terms of acreage and in terms of proposed uses. The Mauka Village that was planned near Mamalahoa Highway is no longer proposed and the proposed airport and agricultural/energy lots are no longer under consideration. Of the property's approximately 16,457 acres, only about 1,600 acres are proposed to be reclassified for Rural and Urban uses. The vast majority, over 90 percent of the property, will be undeveloped. Development will occur only on the makai portion of the property, which is nearly six-miles from Mamalahoa Highway, thereby preserving the rural character of the mauka area and scenic views for travelers on Mamalahoa Highway.

The Applicant and landowner, Nani Kahuku Aina, recognizes the importance of the natural and cultural resources on the property. The vision for Kahuku Village calls for development that balances revenue-generating land uses with resource stewardship and preservation efforts. Preservation of the property's natural and cultural resources requires an active stewardship role. Significant financial resources are required to collect litter, prevent trespassing and vandalism, remove invasive species, and monitor activities that may impair resources. Presently, stewardship activities are limited since the property has little revenue-generating uses. Development of Kahuku Village will provide revenue that will enable stewardship efforts to be expanded, formalized and perpetuated.

Your concerns relating to water resources is acknowledged. A water resources assessment report for Kahuku Village has been prepared. The report assesses the sustainable yield and water quality characteristics of basal water underlying the property and analyzes the impact that Kahuku Village's water system may have on water resources. The water resources assessment report will be summarized in the Draft EIS and included as an appendix.

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Ms. Ruth Marie Bass

SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE (EISPN),  
KAHUKU VILLAGE, KA'Ū, ISLAND OF HAWAI'I, TAX MAP KEY (3) 9-2-001:072

June 14, 2011

Page 2 of 2

A description of Kahuku Village's water, wastewater, and drainage systems will also be included in the Draft EIS.

Secondary and cumulative impacts associated with Kahuku Village will be discussed in the Draft EIS.

We appreciate your participation in the environmental review process. As requested, a copy of the Draft EIS will be provided to you when it is available.

Sincerely,

PBR HAWAII



Dean Minakami, AICP  
Planner

cc: Valentine Peroff, Nani Kahuku Aina, LLC  
Bobby Jean Leithead-Todd, Hawaii County Planning Department



**Surfrider  
Foundation.**

**Kona Kai Ea Chapter**

PO Box 895, Honaunau, Hawai'i 96726

808.328.9605 [drhbennett@konamist.net](mailto:drhbennett@konamist.net)

October 2, 2009

Via US Mail

Comments on EIS Preparation Notice: Kahuku Villages

General Comments:

The land use designation Conservation is a purpose fulfilled for the public's benefit if and only if, maintained the natural "conserved" state. That is the case, unless the intent of the policy is to conserve the land for future uses other than conservation per se.

Comments on issues or topics not covered in the "Notice"

The important matter of carbon dioxide emissions is not required in a EIS, yet remains important. Efforts to reduce the gas production and enhance carbon sequestration are more than worthy of consideration

Similarly in all land with local drainage to the ocean or freshwater bodies have the inevitable contribution of nitrogen and phosphorous to the receiving water body. Every effort to reduce N and P contributions to the waste and drainage water flows will protect the oligotrophic nature of Hawaii coastal waters. Efforts to move toward nitrogen neutrality by removing these nutrients from the watershed are necessary to protect the beneficial nature of the Class AA waters of the Kona coast.

In order of appearance in document:

1.6 Studies to be conducted in the EIS, should include:

a. Ground water

- i. The impact of project well withdrawals on upslope water supplies and quality
  - ii. The impact of the construction and long term project operation on ground water volumes and quality
    - 1. To include
      - a. Nutrients
        - i. A detail nutrient budget for N, and P
          - 1. Fertilizers
          - 2. Human waste water
      - b. Pesticides
      - c. Pathogens
        - i. Bacteria and viral loadings
      - d. Toxics per the Safe Drinking Water Act
- b. Marine water
  - i. The impact of construction and long term project operation
    - 1. Nutrient loading budgets for near shore waters
      - a. Landscaping
      - b. Golf Courses
      - c. Human Waste waters
    - 2. Sediment Transport
      - a. Quantities
        - i. Coral impacts
    - 3. Pathogen movement in subsurface flows from municipal waste systems
- c. Agricultural Potential
  - i. This term is ambiguous.
    - 1. Agricultural economic feasibility estimates
      - a. A more appropriate metric

### 3.2 Geology

- i. The Anchailine ponds
  - 1. The state of the ponds preconstruction must be determined
    - a. Chemistry
    - b. Biology
  - 2. Estimates of project impact on the quality of the ponds needs to be determined.

### 4.7.3 Wastewater Systems

- 1. all waste water systems will add nutrients to the ground water and flows to subsurface entry in the ocean
- 2. Waste water treatment whether from an central plants or individual systems may add pathogens to the ground water, unless disinfection processes are applied.
  - a. The Class AA Pristine Waters of the Kona Coast will be impacted by chlorinated waste waters.
- 3. Waste water reuse can be beneficial if nutrient and water budgets and appropriate irrigation management is applied. If this is to be the case

the plan for same should be provided in detail. Most EIS preparers gross over this complex matter very superficially.

#### 4.7.4 Drainage system

1. Drywells and infiltration basins in most of the geologic formations in the project area have an almost infinite and high flow rate capacity. Storm water will move rapidly to the fresh/brackish lens and move out to sea on the tidal cycles.

a. Storm water collection basins, lined with clays or other materials to allow onsite biological processing and very slow infiltration are more effective than drywells in this geology.

2. The BMP's for construction drainage and sediment control need to be made explicit and verifiable and metrics development to determine their efficacy

#### 4.8.2 Recreation

1. No mention is made about public coastal recreation access, parking and facilities like restrooms.

#### 5.1 State

The recent Hawaii Supreme Court Decision, Kelly v. Oceanside 1250, holds that the state and county have an affirmative duty to protect the ocean.

Hawaii Administrative Rule 11-54 designates the entire Kona coast as class AA pristine.

The state and county must assure this EIS and project fulfill these mandates.

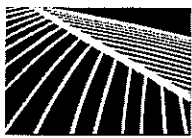
#### 5.1.2 Coastal Zone Management Act

1. Golf Courses within the Coastal Zone should be a trigger for the SMA permit process

Thank you for the opportunity to comment on this Notice of Preparation.

Sincerely yours,

/s R H Bennett Ph.D., Chairman



June 14, 2011

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Dr. R.H. Bennett, Ph.D., Chairman  
Surfrider Foundation, Kona Kai Ea Chapter  
P.O. Box 895  
Honaunau, Hawaii 96726

**SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE  
(EISPN)  
KAHUKU VILLAGE  
KA'Ū, ISLAND OF HAWAII  
TAX MAP KEY (3) 9-2-001:072**

Dear Dr. Bennett:

Thank you for your letter dated October 2, 2009 regarding the Environmental Impact Statement Preparation Notice (EISPN) for Kahuku Village, a master-planned mixed-use community in the Ka'ū district of the County of Hawaii. As the planning consultant for the landowner, Nani Kahuku Aina, LLC, we are responding to your comments.

Since the EISPN was published, the plan for Kahuku Village has been significantly scaled back, both in terms of acreage and in terms of proposed uses. The Mauka Village that was planned near Mamalahoa Highway is no longer proposed and the proposed airport and agricultural/energy lots are no longer under consideration. Of the property's approximately 16,457 acres, only about 1,600 acres are proposed to be reclassified for Rural and Urban uses. The vast majority, over 90 percent of the property, will be undeveloped. Development will occur only on the makai portion of the property, which is nearly six-miles from Mamalahoa Highway, thereby preserving the rural character of the mauka area and scenic views for travelers on Mamalahoa Highway.

The Applicant and landowner, Nani Kahuku Aina, recognizes the importance of the natural and cultural resources on the property. The vision for Kahuku Village calls for development that balances revenue-generating land uses with resource stewardship and preservation efforts. Preservation of the property's natural and cultural resources requires an active stewardship role. Significant financial resources are required to collect litter, prevent trespassing and vandalism, remove invasive species, and monitor activities that may impair resources. Presently, stewardship activities are limited since the property has little revenue-generating uses. Development of Kahuku Village will provide revenue that will enable stewardship efforts to be expanded, formalized and perpetuated.

Your concerns regarding carbon emissions are acknowledged. The Draft EIS will include a discussion of energy conserving measures to be implemented at Kahuku Village, as well as the project's consistency with "sustainability".

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*Senior Associate*

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Dr. R.H. Bennett, Ph.D.

SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE (EISPN),  
KAHUKU VILLAGE, KA'Ū, ISLAND OF HAWAI'I, TAX MAP KEY (3) 9-2-001:072

June 14, 2011

Page 2 of 2

Studies have been prepared to assess water resources, and the nearshore marine and anchialine pond environments. Findings of the studies will be summarized in the Draft EIS and the studies will be appended to the Draft EIS.

An agricultural feasibility study has not been prepared as the property is not suitable for most agricultural pursuits. The majority of the property consists of barren lava fields with pockets of vegetation in shallow topsoil. The property's limited agricultural potential is reflected in its Land Study Bureau agricultural productivity rating of "E" (the lowest rating), and its unclassified status on the Agricultural Lands of Importance to the State of Hawaii (ALISH) map.

The Draft EIS will discuss Kahuku Village's proposed wastewater system and its potential impact on groundwater resources. The aforementioned water resource assessment and nearshore marine and anchialine pond assessment assessed the impact that wastewater generated at Kahuku Village may have on water resources and the marine environment.

The Draft EIS will discuss drainage system improvements to be constructed at Kahuku Village, including Best Management Practices to be implemented during construction to accommodate stormwater flows.

The Draft EIS will discuss Kahuku Village's impact on public recreational opportunities.

The Draft EIS will discuss Kahuku Village's consistency with applicable land use laws and regulations, including the Coastal Zone Management Act.

We appreciate your participation in the environmental review process.

Sincerely,

PBR HAWAII



Dean Minakami, AICP  
Planner

cc: Valentine Peroff, Nani Kahuku Aina, LLC  
Bobby Jean Leithead-Todd, Hawaii County Planning Department

September 29, 2009

PBR HAWAII

Contact: Mr. Vincent Shigekuni, Vice President

PBR HAWAII

1001 Bishop Street

ASB Tower, Ste 650

Honolulu HI 96813

Dear Mr. Shigekuni,

I would like to voice my opposition to the proposed resort development in Ka'u by Nani Kahuku 'Aina LLC. As a Hawaiian Ocean View Ranchos property owner and resident of Hawaii I have an interest in maintaining the proposed property under its current zoning and allowed usage.

Reference the Environmental Impact Statement I would like the following items addressed:

1. Failure of the proposed plan to conform to the Ka'u Development Plan.
2. Impact on endangered species, hawksbill turtle, hoary bat and hala pepe plant.
3. Influence on the water quality of the surrounding ocean and aquifers.
4. Impact on numerous cultural sites within the area.
5. Impact on Hawaiian customary and traditional rights.
6. Impact of airport/heliport on nearby residents, environmental pollution, noise pollution and visual pollution.
7. Lack of available water resources and impact of tapping aquifers to the local community now and in the future.
8. Lack of current and future access to the ocean by the public.
9. PBR Hawaii's preparation of the Environmental Impact Statement due to serious errors in previous EISs completed for Hokuli'a and Keopuka Lands.
10. Nani Kahuku 'Aina is subject to the National Historic Preservation Act and the Section 106 process after accepting funding from the Department of the Interior for the hawksbill turtle program.
11. Nani Kahuku 'Aina proposes to cause irreparable harm to land designated/zoned Conservation Land Use.
12. Safety of developing land within a lava zone two hazard area.
13. Affects of public infrastructure deficit to the local area and the County of Hawaii.

Thank you for the opportunity to address my concerns; I can be contacted at any time via my contact information listed below.

Sincerely,

A handwritten signature in black ink, appearing to read 'Theodore H. Heath', with a long horizontal line extending to the right.

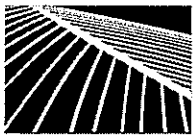
Theodore H. Heath

3454 Waha Road  
Kalaheo, Hawaii 96741

Phone: 808-652-5118  
Email: tedheath@msn.com

cc:

County of Hawaii Planning Department  
Nani Kahuku 'Aina LLC  
Steering Committee, Ka'u Community Development Plan



June 14, 2011

**PRINCIPALS**

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Mr. Theodore H. Heath  
3454 Waha Road  
Kalaheo, Hawaii 96741

**SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION  
NOTICE (EISPN)  
KAHUKU VILLAGE  
KA'Ū, ISLAND OF HAWAI'I  
TAX MAP KEY (3) 9-2-001:072**

Dear Mr. Heath:

Thank you for your letter dated September 29, 2009 regarding the Environmental Impact Statement Preparation Notice (EISPN) for Kahuku Village, a master-planned mixed-use community in the Ka'ū district of the County of Hawaii. As the planning consultant for the landowner, Nani Kahuku Aina, LLC, we are responding to your comments.

Since the EISPN was published, the plan for Kahuku Village has been significantly scaled back, both in terms of acreage and in terms of proposed uses. The Mauka Village that was planned near Mamalahoa Highway is no longer proposed and the proposed airport and agricultural/energy lots are no longer under consideration. Of the property's approximately 16,457 acres, only about 1,600 acres are proposed to be reclassified for Rural and Urban uses. The vast majority, over 90 percent of the property, will be undeveloped. Development will occur only on the makai portion of the property, which is nearly six-miles from Mamalahoa Highway, thereby preserving the rural character of the mauka area and scenic views for travelers on Mamalahoa Highway.

The Applicant and landowner, Nani Kahuku Aina, recognizes the importance of the natural and cultural resources on the property. The vision for Kahuku Village calls for development that balances revenue-generating land uses with resource stewardship and preservation efforts. Preservation of the property's natural and cultural resources requires an active stewardship role. Significant financial resources are required to collect litter, prevent trespassing and vandalism, remove invasive species, and monitor activities that may impair resources. Presently, stewardship activities are limited since the property has little revenue-generating uses. Development of Kahuku Village will provide revenue that will enable stewardship efforts to be expanded, formalized and perpetuated.

We offer the following responses in the respective order of your comments:

1. Kahuku Village's consistency with the values and vision for Kau adopted by the Kau Community Development Plan Steering Committee will be discussed in the Draft EIS.
2. No significant impact to rare, threatened, or endangered species is anticipated to occur with development of Kahuku Village. Impacts to the Hawksbill turtle, Hawaiian hoary bat, and hala pepe plant will be discussed in the Draft EIS.

Mr. Theodore Heath

SUBJECT: ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE (EISPN),  
KAHUKU VILLAGE, KA'Ū, ISLAND OF HAWAII, TAX MAP KEY (3) 9-2-001:072

June 14, 2011

Page 2 of 2

3. A water resource assessment has been prepared for Kahuku Village. Findings of the assessment will be summarized in the Draft EIS and the report will be included as an appendix.
4. An archaeological inventory survey and a cultural impact assessment have been prepared for Kahuku Village. Findings of both reports will be summarized in the Draft EIS and both reports will be included as appendices.
5. The aforementioned cultural impact assessment assessed the impact on traditional customary practices.
6. As previously indicated, an airport is no longer planned at Kahuku Village. The proposed heliport will be used only for emergency transports and will not be used for commercial tour or private operations.
7. Water for Kahuku Village will be provided by desalinated basal salt water and brackish water. Impacts associated with Kahuku Village's proposed water system were assessed in the aforementioned water resources assessment and will be summarized in the Draft EIS.
8. Kahuku Village will enhance public shoreline access as none is presently available at the property. This will be discussed in the Draft EIS.
9. PBR Hawaii strives to comply with all requirements of Hawaii's Environmental Review Law and to fully disclose development impacts that are known at the time an EIS is prepared.
10. Kahuku Village is not subject to Section 106 consultation as no federal funds will be used for its development.
11. Kahuku Village is not anticipated to significantly impact conservation district resources. Measures to be implemented to prevent and minimize environmental impacts will be discussed in the Draft EIS.
12. The Draft EIS will include discussion of natural hazards, including lava flow hazard, and measures to mitigate risks from such hazards.
13. All infrastructure associated with Kahuku Village, including roadways, sewer, water, and drainage systems, will be privately constructed and maintained at no cost to the County. Creation of Kahuku Village is projected to have a net fiscal benefit to the County and State since additional revenues in the form of property taxes, general excise taxes, transient accommodation taxes, and income taxes will exceed costs to service Kahuku Village.

We appreciate your participation in the environmental review process.

Sincerely,

PBR HAWAII



Dean Minakami, AICP  
Planner

cc: Valentine Peroff, Nani Kahuku Aina, LLC  
Bobby Jean Leithead-Todd, Hawaii County Planning Department

October 1, 2009

Mr. Vincent Shigekuni, Vice President  
PBR Hawaii  
1001 Bishop Street  
ASB Tower, Ste 650  
Honolulu, HI 96813

Dear Mr Vincent Shigekuni:

We are residents of Big Island, regular visitors of Ocean View, Kau District of the Big Island. We oppose the Nani Kahuku massive 16,000 plus acres development. We visit this area; we view this proposed project, the raw and wild rugged coastline. It is a pristine coastline....pristine and in conservation district due to its natural raw and wild landscape and for protection of the nesting grounds of the hawksbill turtle and home to some of the most valuable, irreplaceable archeological sites and home of the first landing of the original Polynesians over 1500 hundred years ago. Of the 16,000 plus acres being promoted for this high impact urban development, over 8,000 of this pristine, wild and rugged acres is in conservation district. The other half is zoned 20 A agriculture, meaning, 20 acres agriculture lot size minimum.

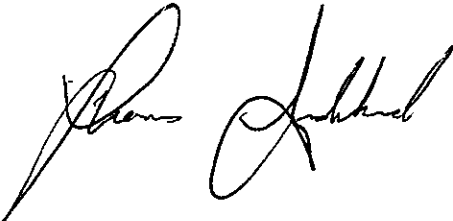
This audacious plan of Nani Kahuku developers would retain only, 720 acres of this pristine irreplaceable historical and wild coastline as conservation land. Only 720 acres for the nesting grounds of the endangered hawksbill turtle, preservation of archeological sites and retention of the expansive pristine, wild coastline.

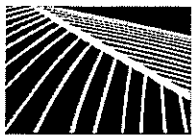
This audacious plan requests change of both conservation land and agriculture land of 20 acre lots minimum, to be changed to URBAN district. There is no urban district in Ocean view. We in Ocean View chose Ocean View for its rugged, raw and wild lands, natural resources and coastline. Extensive surveys have been compiled in Kau for the Kau Development Plan. These results are available for all and state the people of Kau want Kau to stay wild, rugged. Its natural resources and pristine coastline and extreme rural feel are what brought people to Ocean View and what keeps them here.

We request, demand, you leave Kau as it is. Do not even breathe urbanization. Nani Kahuku developers need to choose already developed areas for their resort, condos, hotels, airstrips, golf course, industrial complex, apartments, etc. Nani Kahuku developers are requesting thousands of acres to be turned to urban district, from conservation district. With thousands of residents, tens of thousands of tourist, this once pristine, wild rugged coastline, home of the landing site of the first Polynesians, how can this beautiful rugged, wild pristine coastline be preserved with such urbanized development?

Tell Nani Kahuku developers, the people of Kau and the Big Island have spoken, take your plans to urban areas and leave Kau wild, rugged, pristine, and beautiful and preserve this area for us and our future generations. We are not dictating Nani Kahuku developers can't develop in the 20 acre agriculture lots or develop the minimum allowed in the conservation district, we just want you to let Nani Kahuku developers know the people of Kau do not want the districts changed for Nani Kahuku developers nor for Nani Kahuku to make their fortunes off us and destroy this land forever. Once changed, it is changed forever.

Respectfully yours

A handwritten signature in black ink, appearing to read "Pamela Anderson", written in a cursive style.



June 14, 2011

**PRINCIPALS**

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*President*

R. STAN DUNCAN, ASLA  
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TAX MAP KEY (3) 9-2-001:072**

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We acknowledge your concerns relating to coastal development and potential impact to the endangered Hawksbill turtle. For the past several years, Nani Kahuku Aina has partnered with the U.S. Fish and Wildlife Service on the Hawaii Island Hawksbill Turtle Recovery Project and intends to continue with this partnership. We note that an assessment of the marine environment and anchialine pools on the property has been prepared and the assessment determined that no adverse impact to the marine environment or anchialine pools will occur so long as sufficient Best Management Practices are implemented. Measures to be implemented to prevent or mitigate impacts to coastal and marine resources include, but are not limited to, establishing a shoreline conservation zone, implementation of a konohiki-inspired Integrated Natural and Cultural



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KAHUKU VILLAGE, KA'Ū, ISLAND OF HAWAI'I, TAX MAP KEY (3) 9-2-001:072

June 14, 2011

Page 2 of 2

Resources Management Plan, educating shoreline users about significant resource and habitats, and prohibiting activities that may impair the coastal environment and habitats. The Draft EIS will specify mitigation measures to be implemented to prevent impacts to the marine and anchialine pool communities.

We concur with your assessment that the property contains numerous archaeological and cultural sites. An extensive archaeological inventory survey and a cultural impact assessment have been prepared. Areas proposed for development were designed to avoid culturally and environmentally sensitive areas. The archaeological inventory survey and cultural impact assessment will be summarized in the Draft EIS and attached as appendices.

We appreciate your participation in the environmental review process.

Sincerely,

PBR HAWAII

A handwritten signature in cursive script, appearing to read "Dean Minakami".

Dean Minakami, AICP  
Planner

cc: Valentine Peroff, Nani Kahuku Aina, LLC  
Bobby Jean Leithead-Todd, Hawaii County Planning Department