

DAVID Y. IGE  
GOVERNOR  
STATE OF HAWAII

SHAN S. TSUTSUI  
LT GOVERNOR  
STATE OF HAWAII



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MAR 08 2016

JOBIE M. K. MASAGATANI  
CHAIRMAN  
HAWAIIAN HOMES COMMISSION

WILLIAM J. AILA, JR.  
DEPUTY TO THE CHAIRMAN

STATE OF HAWAII  
DEPARTMENT OF HAWAIIAN HOME LANDS

P O BOX 1879  
HONOLULU, HAWAII 96805

February 24, 2016

Scott Glenn, Interim Director  
Office of Environmental Quality Control  
Department of Health, State of Hawai'i  
235 S. Beretania Street, Room 702  
Honolulu, Hawai'i 96813

OFFICE OF ENVIRONMENTAL  
QUALITY CONTROL

16 FEB 25 P 3:13

RECEIVED

Dear Director Glenn:

With this letter, the Department of Hawaiian Home Lands hereby transmits the draft environmental assessment and anticipated finding of no significant impact (DEA-AFONSI) for the Keaukaha Residential Lots Rehabilitation and Infill New Construction situated at various parcels within TMK plats (3) 2-1-20, -21, -22-, -23, and -24 in the South Hilo District on the island of Hawai'i, for publication in the next available edition of the Environmental Notice.

Enclosed is a completed OEQC Publication Form, two copies of the DEA-AFONSI, an Adobe Acrobat PDF file of the same, and an electronic copy of the publication form in MS Word. Simultaneous with this letter, we have submitted the summary of the action in a text file by electronic mail to your office.

If there are any questions, please contact Niniau Simmons at (808) 620-9513.

Aloha,

A handwritten signature in black ink, appearing to read "Jobie M. K. Masagatani".

Jobie M. K. Masagatani, Chairman  
Hawaiian Homes Commission

Enclosures:

- OEQC Publication Form
- DEA-AFONSI (2 copies)
- CD with an Adobe Acrobat PDF file of the DEA-AFONSI and a MS Word file of the publication form

**AGENCY  
PUBLICATION FORM**

MAR 08 2016

Project Name:	Keaukaha Residential Lots Rehabilitation And Infill New Construction
Project Short Name:	Keaukaha Residential Lots
HRS §343-5 Trigger(s):	Use of State land
Island(s):	Hawai'i
Judicial District(s):	South Hilo
TMK(s):	Various parcels within tax map plats of 3rd/2-1-20, -21, -22-, -23, and -24
Permit(s)/Approval(s):	Subdivision, SMA Exemption, Grubbing/Grading, Individual Wastewater System Approval, Building Permit
Proposing/Determining Agency:	Department of Hawaiian Home Lands
Contact Name, Email, Telephone, Address	Department of Hawaiian Home Lands ATTN: Niniau Simmons 91-5420 Kapolei Parkway Kapolei, Hawai'i 96707 Phone: (808) 620-9513 Fax: (808) 620-9529
Accepting Authority:	(for EIS submittals only)
Contact Name, Email, Telephone, Address	
Consultant:	PBR HAWAI'I & Associates, Inc.
Contact Name, Email, Telephone, Address	PBR HAWAI'I & Associates, Inc. ATTN: Roy Takemoto 1001 Bishop Street, Suite 650 Honolulu, Hawai'i 96813 Telephone: (808) 521-5631 Fax: (808) 523-1402

**Status (select one)** DEA-AFNSI FEA-FONSI FEA-EISPN Act 172-12 EISPN  
("Direct to EIS") DEIS FEIS**Submittal Requirements**

Submit 1) the proposing agency notice of determination/transmittal letter on agency letterhead, 2) this completed OEQC publication form as a Word file, 3) a hard copy of the DEA, and 4) a searchable PDF of the DEA; a 30-day comment period follows from the date of publication in the Notice.

Submit 1) the proposing agency notice of determination/transmittal letter on agency letterhead, 2) this completed OEQC publication form as a Word file, 3) a hard copy of the FEA, and 4) a searchable PDF of the FEA; no comment period follows from publication in the Notice.

Submit 1) the proposing agency notice of determination/transmittal letter on agency letterhead, 2) this completed OEQC publication form as a Word file, 3) a hard copy of the FEA, and 4) a searchable PDF of the FEA; a 30-day comment period follows from the date of publication in the Notice.

Submit 1) the proposing agency notice of determination letter on agency letterhead and 2) this completed OEQC publication form as a Word file; no EA is required and a 30-day comment period follows from the date of publication in the Notice.

Submit 1) a transmittal letter to the OEQC and to the accepting authority, 2) this completed OEQC publication form as a Word file, 3) a hard copy of the DEIS, 4) a searchable PDF of the DEIS, and 5) a searchable PDF of the distribution list; a 45-day comment period follows from the date of publication in the Notice.

Submit 1) a transmittal letter to the OEQC and to the accepting authority, 2) this completed OEQC publication form as a Word file, 3) a hard copy of the FEIS, 4) a searchable PDF of the FEIS, and 5) a searchable PDF of the distribution list; no comment period follows from publication in the Notice.

- FEIS Acceptance Determination      The accepting authority simultaneously transmits to both the OEQC and the proposing agency a letter of its determination of acceptance or nonacceptance (pursuant to Section 11-200-23, HAR) of the FEIS; no comment period ensues upon publication in the Notice.
- FEIS Statutory Acceptance      Timely statutory acceptance of the FEIS under Section 343-5(c), HRS, is not applicable to agency actions.
- Supplemental EIS Determination      The accepting authority simultaneously transmits its notice to both the proposing agency and the OEQC that it has reviewed (pursuant to Section 11-200-27, HAR) the previously accepted FEIS and determines that a supplemental EIS is or is not required; no EA is required and no comment period ensues upon publication in the Notice.
- Withdrawal      Identify the specific document(s) to withdraw and explain in the project summary section.
- Other      Contact the OEQC if your action is not one of the above items.

**Project Summary**

Provide a description of the proposed action and purpose and need in 200 words or less.

The objective of the Project is to use Native Hawaiian Housing Block Grant funds to provide infill and rehabilitation housing opportunities within the established Keaukaha neighborhood. The housing projects to be undertaken as separate applications or projects over the next five years include:

- Vacant awarded lots-- to encourage existing lessees to build on vacant lots through package home loans or self-help housing (or other programs);
- Vacant available lots in DHHL inventory-- to improve as necessary (e.g., install water meter, turnkey home) and award any available lots, and to increase density where possible through subdivision of larger parcels, to enable leasing to additional beneficiaries on the wait list; additional density created by subdivision would be limited to lots within DHHL's inventory with minimum resulting lot size of 10,000 s.f.;
- Older existing homes-- to rehabilitate older homes for qualified lessees (i.e., household income less than 80% of median); rehabilitation would include interior and exterior modifications (e.g., reroofing, repainting), as necessary. For those older homes that do not meet HUD's requirements for safe/decent housing, the project would involve demolition and replacement with new construction approximately within the same footprint.

Initial plans include five larger lots to be subdivided into two lots each, four new construction on vacant lots, and four package home loans.

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 OFFICE OF ENVIRONMENTAL  
 QUALITY CONTROL

# Keaukaha Residential Lots Rehabilitation And Infill New Construction

Draft Environmental Assessment –  
Anticipated Finding of No Significant Impacts

(HRS 343)



Prepared for

Department of Hawaiian Home Lands

Prepared by



**PBR HAWAII**  
& ASSOCIATES, INC.

February 2016



## SUMMARY

<b>Project Name:</b>	Keaukaha Residential Lots Rehabilitation And Infill New Construction
<b>Location:</b>	Keaukaha, South Hilo, Island and County of Hawai'i
<b>Judicial District:</b>	South Hilo
<b>Tax Map Key (TMK):</b>	Various parcels within tax map plats of 3 <sup>rd</sup> /2-1-20, -21, -22-, -23, and -24
<b>Land Area:</b>	There are approximately 420 existing residential lots within the Site totaling approximately 285 acres (excluding road lots and community facility lots), with lots ranging in size from 0.3692 to 1.214 acres. The potential vacant lots for new construction total 49 lots. Other existing homes in poor condition where the household income is less than 80% of the median household income could be eligible for rehabilitation grants.
<b>Proposing/Determining Agency:</b>	Department of Hawaiian Home Lands
<b>Landowner:</b>	Department of Hawaiian Home Lands
<b>Existing Use:</b>	New construction of single-family dwellings would occur on vacant lots previously graded and overgrown with introduced vegetation. The rehabilitation sites are existing homes that would be repaired, repainted, and/or reroofed.
<b>Proposed Action:</b>	<p>The objective of the Project is to use NHHBG funds to provide infill and rehabilitation housing opportunities within this established neighborhood. The housing projects to be undertaken as separate applications or projects over the next five years include:</p> <ul style="list-style-type: none"> <li>• Vacant awarded lots-- to encourage existing lessees to build where the lot has sat vacant all these years through package home loans or self-help housing (or other programs);</li> <li>• Vacant available lots in DHHL inventory-- to improve as necessary (e.g., install water meter, turnkey home) and award any available lots, and to increase density where possible through subdivision of larger parcels, to enable leasing to additional beneficiaries on the wait list; additional density created by subdivision would be limited to lots within DHHL's inventory with minimum resulting lot size of 10,000 s.f.;</li> <li>• Older existing homes-- to rehabilitate older homes for qualified lessees (i.e., household income less than 80% of median); rehabilitation would include interior and exterior modifications (e.g., reroofing, repainting), as necessary. For those older homes that do not meet HUD's requirements for safe/decent housing, the project would involve</li> </ul>

	demolition and replacement with new construction approximately within the same footprint.
<b>Current Land Use Designations:</b>	<p><i>State Land Use:</i> Urban  <i>County General Plan LUPAG:</i> Low Density Urban  <i>County Zoning:</i> Residential (RS-10)  <i>Special Management Area (SMA):</i> Portion of the Site in SMA  <i>DHHL Land Designation (Hawai'i Island Plan 2002):</i> Residential Homestead</p>
<b>Alternatives Considered:</b>	<p>Three alternatives were considered:</p> <ul style="list-style-type: none"> <li>• No action</li> <li>• No increase in density</li> <li>• Alternative site boundary</li> </ul>
<b>Potential Impacts and Mitigation Measures:</b>	<p>Beneficial impact by providing affordable housing opportunity for native Hawaiians within the urban core in proximity to jobs, schools, and shopping.</p> <p>Mitigation measures include:  <i>Threatened or endangered species.</i> DHHL to provide notice to lessees:</p> <ul style="list-style-type: none"> <li>• To protect night-flying seabirds, outdoor illumination be shielded so that the bulb is not visible at or above bulb-height.</li> <li>• To protect the low-flying, foraging Hawaiian hoary bat, barbed wire not be used for fencing.</li> </ul> <p>Construction scheduling and documents will incorporate the following recommendations of the USFW, as applicable:</p> <ul style="list-style-type: none"> <li>• Hawaiian hawk. If construction occurs during the hawk's breeding season (March through September), the contractor will retain a qualified ornithologist to conduct a nest search of the area of the proposed construction site and surrounding area prior to the advent of construction activities. Surveys should ensure that construction activity will not occur within 1,600 feet of any Hawaiian hawk nest.</li> <li>• Hawaiian hoary bat. It is recommended that woody plants greater than 15 feet tall should not be removed or trimmed during the Hawaiian hoary bat breeding season (June 1 to September 15).</li> <li>• Seabirds. If night work must be conducted, it should take place outside the sea bird fledging season (September 15 through December 15) and should utilize shielded lighting.</li> <li>• Nene. If a nene appears within 100' of ongoing work, all activity shall be temporarily suspended until the animal leaves the area of its own accord. If any number of nene</li> </ul>

	<p>are observed loafing or foraging within the project area during the nene breeding season (October through March), a biologist familiar with the nesting behavior will survey in and around the project area prior to the resumption of any work, or after any subsequent delay of work of three or more days. If a nest is discovered within a radius of 150' of proposed work, or a previously undiscovered nest is found within said radius after work begins, all work will cease immediately and USFW will be contracted for further guidance.</p> <p><i>Air quality, noise, water quality.</i> Construction documents will include:</p> <ul style="list-style-type: none"> <li>• Standard dust control measures</li> <li>• Standard noise control measures</li> <li>• Best management practices for erosion and sedimentation control in accordance with approved Grading and NPDES permits</li> </ul> <p><i>Wastewater.</i> Hook-up to sewer system where available; where not available, anticipate future sewer extension with appropriate location of individual septic system to enable cost-effective sewer hookup.</p> <p><i>Toxics and Hazardous Waste.</i> Conduct risk assessment for lead-based paint and asbestos for older homes to be rehabilitated.</p> <p><i>Historic preservation.</i> Construction documents will include a condition that should burials or other traditional deposits be identified during intrusive activities, all work in the area will cease and the appropriate agencies will be contacted.</p> <p><i>Coordination with DOT Airports.</i> DHHL notify DOT when initiating projects within the 65 Ldn noise contour and runway protection zone.</p>
<b>Approvals and Permits Required:</b>	Subdivision, SMA Exemption, Grubbing/Grading, Individual Wastewater System Approval, Building Permit
<b>Determination:</b>	Anticipated Finding of No Significant Impact

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## ACRONYMS

AFONSI	Anticipated Finding of No Significant Impact
AIS	Archaeological Inventory Survey
ALISH	Agricultural Lands of Importance to the State of Hawai'i
BMP	Best Management Practices
CIA	Cultural Impact Assessment
CWRM	State of Hawai'i Commission on Water Resource Management
CZM	Coastal Zone Management
DBEDT	State of Hawai'i Department of Business, Economic Development, and Tourism
DHHL	Department of Hawaiian Home Lands
DLNR	State of Hawai'i Department of Land and Natural Resources
DOE	State of Hawai'i Department of Education
DOH	State of Hawai'i Department of Health
DOT	State of Hawai'i Department of Transportation
DPR	County of Hawai'i Department of Parks and Recreation
DWS	County of Hawai'i Department of Water Supply
EA	Environmental Assessment
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FONSI	Finding of No Significant Impact
gpd	Gallons per day
HAR	Hawai'i Administrative Rules
HELCO	Hawai'i Electric Light Company, Inc.
HRS	Hawai'i Revised Statutes
LEED	Leadership in Energy and Environmental Design
LID	Low Impact Development
LSB	Land Study Bureau
LUC	State of Hawai'i Land Use Commission
LUPAG	County of Hawai'i General Plan Land Use Pattern Allocation Guide
MGD	Million gallons per day
NAHASDA	Native American Housing Assistance and Self-Determination Act
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination Systems
NRCS	Natural Resources Conservation Service
NPS	National Park Service
OEQC	State of Hawai'i Office of Environmental Quality Control
ROW	Right-of-way
SCS	Scientific Consultant Services, Inc.
SHPD	State of Hawai'i Historic Preservation Division
SMA	Special Management Area

TMK	Tax map key
UIC	Underground Injection Control
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UXO	Unexploded ordnance

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# 1 INTRODUCTION

The State Department of Hawaiian Home Lands (DHHL) is proposing to infill and rehabilitate single-family dwellings within the Keaukaha Residential Lots (“Project”). The proposed use of State lands triggers the preparation of an Environmental Assessment (EA) in compliance with Chapter 343, HRS.

## 1.1 LANDOWNER

The DHHL is the fee simple landowner, and will or has leased, the lots to qualified native Hawaiians.

## 1.2 PROPOSING/ DETERMINING AGENCY

DHHL is the proposing/determining agency.

**Contact:** Department of Hawaiian Home Lands  
ATTN: Niniou Simmons  
91-5420 Kapolei Parkway  
Kapolei, Hawai'i 96707  
Phone: (808) 620-9513  
Fax: (808) 620-9529

## 1.3 ENVIRONMENTAL CONSULTANT

PBR HAWAI'I is the environmental planning consultant.

**Contact:** PBR HAWAI'I & Associates, Inc.  
ATTN: Roy Takemoto  
1001 Bishop Street, Suite 650  
Honolulu, Hawai'i 96813  
Telephone: (808) 521-5631  
Fax: (808) 523-1402

## 1.4 COMPLIANCE WITH STATE OF HAWAI'I ENVIRONMENTAL LAWS

Preparation of this document is in accordance with the provisions of Chapter 343, HRS and Title 11, Chapter 200, Hawai'i Administrative Rules (HAR) pertaining to Environmental Impact Statements. Section 343-5, HRS established nine “triggers” that require either an EA or an Environmental Impact Statement (EIS). The use of State or County lands or funds is one of these “triggers.” The Project will also use federal funds. DHHL will comply with the requirements of the National Environmental Policy Act by a separate document.

## 1.5 STUDIES CONTRIBUTING TO THIS EA

The information contained in this report has been developed from site visits, generally available information regarding the site and surrounding areas, and preliminary engineering. Site reports are attached.

## 2 PROJECT DESCRIPTION

### 2.1 BACKGROUND INFORMATION

#### 2.1.1 Location and Property Description

The Project is located in Keaukaha, South Hilo District, Island and County of Hawai'i (see Figure 1). The Hawaiian Homes Commission (HHC) created the Keaukaha Residence Lots, Tracts 1 and 2, in 1940 pursuant to the Hawaiian Homes Act, as amended, when Hawai'i was a Territory (see Figure 2). Tract 2 is known as King's Landing and is not part of this Project. In subsequent years, the Hilo Airport encroached upon Tract 1 (see Figure 3). The current Tract 1 encompasses the tax map plats of 2-1-20, -21, -22-, -23, and -24 (see Figure 4) ("Site"). The Site excludes any lot within the 100-year special flood hazard zone as delineated in the existing and proposed Flood Insurance Rate Map, the Kamehameha Hall National Register site, and lots designated as Community Use by the DHHL Hawai'i Island Plan. Separate environmental reviews will be conducted on a case by case basis for lots within the special flood hazard zone if they apply for federal assistance.

#### 2.1.2 Existing and Surrounding Land Uses

The Site is an established residential community. Besides single-family residences, there are schools, a park, churches, and social services.

Surrounding uses include (see Figure 5):

**North.** North of the Site are Keaukaha Beach Park and the UH-Hilo Aquaculture Facility fronting Puhi Bay. Kalaniana'ole Avenue and the lots within the FIRM zone A define the northern boundary of the Site.

**South.** The Hilo International Airport is to the south. Runway 8/26, which all passenger planes use, parallels the Site's southern boundary.

**East.** Kamehameha Schools owns a large parcel (TMK (3)2-1-013:146) that borders nearly the entire length of the Site's eastern boundary. This parcel separates the Site from King's Landing.

**West.** The Hilo International Airport's Runway 3/21, which is used by smaller planes and military touch and go, extends toward the Site.

### 2.2 PURPOSE AND NEED

Keaukaha has existing infrastructure and public facilities (e.g., school, community center, park, gymnasium) in close proximity to jobs and shopping areas to evolve into a higher density viable community that would benefit existing homesteaders and those on the wait list.

## 2.3 PROJECT DESCRIPTION

The objective of the Project is to use federal housing funds to provide infill and rehabilitation housing opportunities within this established neighborhood. The housing projects to be undertaken as separate applications or projects over the next five years include (see Figure 6):

- Vacant awarded lots-- to encourage existing lessees to build where the lot has sat vacant all these years through package home loans or self-help housing (or other programs);
- Vacant available lots in DHHL inventory-- to improve as necessary (e.g., install water meter, turnkey home) and award any available lots, and to increase density where possible through subdivision of larger parcels, to enable leasing to additional beneficiaries on the wait list; additional density created by subdivision would be limited to lots within DHHL's inventory with minimum resulting lot size of 10,000 s.f.;
- Older existing homes-- to rehabilitate older homes for qualified lessees (i.e., household income less than 80% of median); rehabilitation would include interior and exterior modifications (e.g., reroofing, repainting), as necessary. For those older homes that do not meet HUD's requirements for safe/decent housing, the project would involve demolition and replacement with new construction approximately within the same footprint.

The lots initially proposed to be subdivided from one large lot to two smaller lots include: TMK 321020101 (Lot 108-B, 0.4713 acre); TMK 321021010 (Lot 131, 0.9713 acre); TMK 321021072 (Lot 58-B, 0.4915 acre); TMK 321021029 (Lot 59-B, 0.5 acre); TMK 321023071 (Lot 279, 0.5 acre) (see Appendix C for proposed subdivision maps). Two of these lots have existing homes that DHHL will improve (Lots 279 and 58-B). DHHL may build a new home on the newly created vacant lot to award to a beneficiary-renter who will have first rights to purchase (rent to own), or award a vacant lot and provide a package home loan to assist with new construction. These lots are prototypes for infill subdivision of other lots within the Site that DHHL could undertake as opportunities arise.

## 2.4 DEVELOPMENT TIMETABLE AND PRELIMINARY COSTS

The estimated total construction cost is \$15 million. Federal (Native American Housing Assistance and Self-Determination Act (NAHASDA) funds) and possibly State funds will be used. Individual projects within the Site will commence by summer 2016 and will persist as long as funds and eligible applicants are available over the next 5 to 10 years.

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

This section describes existing conditions of the natural environment, potential impacts related to the Project, and mitigation measures to minimize impacts.

### **3.1 CLIMATE**

Hawai'i Island's geological features heavily influence its climate. Mauna Loa (13,679 foot summit elevation) and Mauna Kea (13,796 foot summit elevation) dominate ground-based atmospheric influences. Northeast trade winds typically occur during the day, while winds from the southwest typically occur during the night due to cold air drainage from the mountains. The mean annual wind speed at the airport is about 8 miles per hour (mph), and usually varies between about 4 and 12 mph during the day.

Regional temperatures are generally cool due to the trade winds. Average annual temperatures range from 66-82 degrees Fahrenheit (County of Hawai'i Data Book).

According to *The Rainfall Atlas of Hawai'i*, the property receives an average annual rainfall of approximately 150" inches (Giambelluca, et al., 2012). Hilo's rainfall pattern is characterized by windward-leeward differences due to the orographic effect of the mountains and trade winds.

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

No significant impact. The Project will do its part to minimize climate change impacts by encouraging homestead lessees to install renewable sources and passive energy-conserving measures such as natural ventilation, solar water heating, and photovoltaic energy.

### **3.2 GEOLOGY AND TOPOGRAPHY**

Of the five volcanoes that formed the island of Hawai'i—Kohala, 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 southeastern flank of Mauna Kea:

The topography is relatively level. The elevation within the Site ranges from 10' to 30' above mean sea level.

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

No significant impact. The vacant lots have been previously graded and will require primarily grubbing and minimal grading.

### **3.3 SOILS**

Within the Site the soil type is predominantly Opihikao-Urban land complex (map unit 640). This soil type is well drained, high runoff, depth to underlying lithic bedrock is 2 to 10 inches, depth

to water table is more than 80" (Natural Resources Conservation Service, United States Department of Agriculture, Accessed April 2015).

Erosion control measures and best management practices will be required during construction to prevent soil loss and erosion. All grading operations shall be conducted in compliance with appropriate State and County regulations.

Three soil suitability studies prepared for lands in Hawai'i 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 Resource Conservation Services (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) system. None of these surveys rate the soils within the Site as important for agriculture.

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

No significant impact. The Project will not reduce the inventory of agriculturally important land. Impacts to the soils include the potential for soil erosion and the generation of dust during grading and construction. All construction activities will comply with all applicable Federal, State, and County regulations and rules for erosion control. Since few of the lots exceed one acre, a National Pollutant Discharge Elimination System (NPDES) Notice of General Permit Coverage (NGPC) for Storm Water Associated with Construction Activity will be necessary on a limited basis.

## **3.4 HYDROLOGY**

The Site is located within the Hilo Watershed, which measures 470 square miles and encompasses seven sub-watershed areas including two large (Wailuku, Wailoa), one medium (Honoli'i), and four small (Mali'i, Pauka, Pukihae, Wainaku) sub-watersheds. A watershed area captures rainfall and atmospheric moisture from the air and allows the water to drip slowly into underground aquifers or enter stream channels and eventually to the ocean. The Hilo watershed includes the combined eastern slopes of Mauna Kea and Mauna Loa reaching maximum elevations of 13,796 and 13,679 feet, respectively. The saddle between the two mountains drains mostly through Hilo into Hilo Bay.

### **Surface Water**

There are no streams, unique natural or water features on the Site. According to the National Wetlands Inventory, there are no wetlands within the Site but there are wetlands in the vicinity of the Site (U.S. Environmental Protection Agency, accessed May 2015) (see Figure 7). The proposed activities will not encroach upon or otherwise impact these wetlands.

### **Ground Water**

Due to the relatively young and porous geology of Hawai'i island, most of the rainfall infiltrates to groundwater. Groundwater has been classified under an aquifer coding system to identify and

describe these aquifers. The Site overlies the Hilo Aquifer System, a subset of the N.E. Mauna Loa Aquifer Sector. The geology of the Hilo Aquifer System is dominated by the Ka'ū volcanic series of Mauna Loa volcano, and extends from the coast to the inland boundary at the crest of Mauna Loa. Groundwater within this aquifer exists primarily as basal groundwater.

Sustainable yield is the amount of groundwater that can be pumped without depleting the source. The sustainable yield of the Hilo Aquifer System is 349 MGD, and existing water use is 42.228 MGD (Wilson Okamoto Corporation, 2008).

### **Marine Waters**

The Site is across from Keaukaha Beach Park, which fronts Puhi Bay. Near shore marine waters off the coast of Hilo Bay are classified as class "A" by the State Department of Health (2012).

According to DOH Water Quality Standards, "It is the objective of class A waters that their use for recreational purposes and aesthetic enjoyment be permitted as long as it is compatible with the protection and propagation of fish, shellfish, and wildlife, and with recreation in and on these waters" (HAR §11-54-03).

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

No significant impact. The Project is not anticipated to have any significant adverse impact on groundwater or surface water resources due to the small scale of the individual projects and the substantial setback from the ocean for even the lots nearest to the shoreline.

## **3.5 NATURAL HAZARDS**

Hawai'i island is susceptible to potential natural hazards, such as flooding, hurricanes, volcanic hazards, earthquakes, and wildfires. This section provides an analysis of the Site's vulnerability to such hazards.

### **3.5.1.1 Flood**

The Federal Emergency Management Agency (FEMA) publishes flood information in the form of Flood Insurance Rate Maps (FIRM) used by government and insurance agencies to determine the relative potential for damage during flood events. According to the FIRM, the Site is in Zone X, which is outside the special flood hazard area and not subject to flood control regulation. The Site excludes lots within special flood hazard zone A based on the existing and proposed FIRM (see Figure 8). These excluded lots will be assessed on a case by case basis as these lessees consider applying for federal assistance.

### **3.5.1.2 Tsunami**

A portion of the Site is within the tsunami evacuation zone (see Figure 9). There are evacuation routes established and signed within the Site.

### 3.5.1.3 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 (Associated Press, 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.

### 3.5.1.4 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. 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. 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'ū. 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 the Kona area and a magnitude of 6.9 also resulted in extensive damage. A 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).

### 3.5.1.5 Volcanic Hazards

Volcanic hazards include lava flows and emission of volcanic gases (vog).

#### Lava Flows

The volcanic hazard zone map for Hawai'i Island divides the island into zones ranked from one through nine, with one being the area of greatest hazard and nine being the area of least hazard. The zones are based chiefly on the location of active vents, frequency of past lava coverage, and topography. According to this map, the project area is within Zone 3, meaning only one to five percent of the area has been covered by lava since 1800 and 15-75 percent within the last 750 years (USGS, 1997). The Site is approximately 26 miles from Kīlauea, the nearest active vent.

#### Vog

Volcanic gases, which are visible as fog called vog, are emitted during all types of eruptions. Halema'uma'u, the crater located at the summit of Kīlauea is erupting large amounts of volcanic

gas. Any hazard posed by volcanic gases is greatest immediately downwind from active vents; the concentration of the gases quickly diminishes as the gases mix with air and are carried by winds away from the source (USGS, 1997).

The Site is located 26 miles northeast of Kīlauea Volcano. The prevailing northeasterly trade wind flow tends to push vog and any airborne particulates away from the property. However, the amount of vog and other airborne particulates can significantly increase during periods when the winds are from the southwest.

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

Mitigable impact. To mitigate the potential hazard from earthquakes and hurricanes, new homes must be designed in accordance with the latest building code which is the 2006 International Building Code (IBC) as amended by State of Hawai'i Building Code. The 2006 IBC provides minimum design criteria to address the potential for damage due to seismic and wind disturbances.

There are adequate emergency warning sirens, evacuation shelters, and tsunami evacuation routes. The State of Hawai'i Department of Defense, Office of Civil Defense operates a system of civil defense sirens throughout the State to alert the public of emergencies and natural hazards, particularly tsunamis and hurricanes. The State has plans to modernize the system by replacing or adding new sirens. There is an existing siren (HA 102) within the Site located on Baker Avenue (State of Hawaii, accessed January 2016).

The nearest emergency evacuation shelters for hurricane are Waiakea and Waiakea-Waena Elementary Schools. Waiakea Elementary is designated as a Special Needs Shelter to provide limited support to persons with special health needs who are capable of taking care of their own needs or accompanied by a caregiver (State of Hawaii, accessed January 2016).

Evacuation routes provide mauka escape through the airport (see section 3.5.1.2).

## **3.6 FLORA AND FAUNA**

**Flora** - The vegetation on the vacant lots is dominated by non-native grasses, vines, ferns, shrubs and trees. The area has been heavily altered by previous grading and continues to be invaded by aggressive weed species. No Federally listed Threatened or Endangered plant species were found on the property, nor were any found that are candidates for such status. No special native plant habitats were found.

**Fauna** – According to consultation with U.S. Fish and Wildlife, precautions should be taken for the Hawaiian hoary bat ('ōpe'ape'a), Hawaiian seabirds, Hawaiian hawk, and Hawaiian goose (nene).

The 'ōpe'ape'a carries federal protections where it occurs. It occurs on at least five of the major Hawaiian islands and has its largest population on Hawai'i island. These bats are highly mobile and are known to occur in a variety of habitats from nearly 10,000 feet down to sea level. These

movements are likely driven by food source availability and seasonal temperatures. Mitigation measures are set forth in the section below.

Hawaiian petrels (*Pterodroma phaeopygia sandwichensis*) and Newell's shearwaters (*Puffinus auricularis newellii*), (collectively known as seabirds) may transit over the project area when flying between the ocean and nesting sites in the mountains during their breeding season (March through November). Fatalities to these seabirds resulting from collisions with artificial structures that extend above the surrounding vegetation have been documented in Hawai'i where high densities of transiting seabirds occur. Additionally, artificial lighting such as floodlighting for construction work can adversely impact seabirds by causing disorientation which may result in collision with utility lines, buildings, fences and vehicles. Fledgling seabirds are especially affected by artificial lighting and have a tendency to exhaust themselves while circling the light sources and become grounded. Too weak to fly, these birds become vulnerable to predation by predators such as mongoose (*Herpestes auropunctatus*), cats (*Felis catus*) and dogs (*Canis familiaris*). These threats can be minimized by the shielding of any outdoor lighting so that the light is visible only from below.

The Blackburn's sphinx moth was not found in the project area. None of the specific host plants that the larvae feed upon were present on or around the project area, and none of the nectar producing plants that the adult moths feed upon were found here either.

Nene may be present within the project area.

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

Mitigable impact. Mitigation measures include:

DHHL to provide notice to lessees:

- To protect night-flying seabirds, outdoors illumination be shielded so that the bulb is not visible at or above bulb-height.
- To protect the low-flying, foraging Hawaiian hoary bat, barbed wire not be used for fencing.

Construction scheduling and documents will incorporate the following applicable recommendations of the USFW:

- Hawaiian hawk. If construction occurs during the hawk's breeding season (March through September), the contractor will retain a qualified ornithologist to conduct a nest search of the area of the proposed construction site and surrounding area prior to the advent of construction activities. Surveys should ensure that construction activity will not occur within 1,600 feet of any Hawaiian hawk nest.
- Hawaiian hoary bat. It is recommended that woody plants greater than 15 feet tall should not be removed or trimmed during the Hawaiian hoary bat breeding season (June 1 to September 15).

- Seabirds. If night work must be conducted, it should take place outside the sea bird fledging season (September 15 through December 15) and should utilize shielded lighting.
- If a nene appears within 100 feet (30.5 meters) of ongoing work, all activity will be temporarily suspended until the animal leaves the area of its own accord. Moreover, if any number of nene are observed loafing or foraging within the project area during the nene breeding season (October through March), a biologist familiar with the nesting behavior will survey in and around the project area prior to the resumption of any work, or after any subsequent delay or work of three or more days (during which the birds may attempt to nest). If a nest is discovered within a radius of 150 feet of proposed work, or a previously undiscovered nest is found within said radius after work begins, all work will cease immediately and the Service will be contacted for further guidance.

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

This section describes the existing conditions of the human environment, preliminary potential impacts of the Project, and preliminary mitigation measures to minimize any impacts.

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

DHHL determined the Area of Potential Effect (APE) to be the Site based on the localized low-scale nature of the proposed residential construction activity. There is a National Register Site, Kamehameha Hall, in the vicinity but excluded from the Site. The National Register documentation describes the property as follows:

*Kamehameha Hall is a vernacular one story wooden building with a corrugated metal double pitched hipped roof. The square building is of single wall construction with interior girts. The hall is on Kalanianaʻole Avenue, facing Puhi Bay at Keaukaha near Hilo on the Island of Hawaii. Its placement on a high rock mound in the center of the parcel gives the building prominence. (National Park Service, U.S. Department of the Interior, 1993)*

There are no known archaeological resources within the Site. Consultation letters were sent to the Office of Hawaiian Affairs, Hawaiʻi Island Burial Council, and Native Hawaiian organizations to confirm the APE and absence of archaeological or historic resources. No comments or additional information was received relating to the APE or presence/absence of historic or archaeological resources.

#### **Historic Background**

Keaukaha, located in the Waiākea ahupuaʻa along the lava shoreline of Hilo Bay, literally means “the passing current.” Historically, Hilo has been known for the royal fishponds in Waiākea and the areas surrounding the Waiolama River.

Hilo itself has always been a center of political activity for the ruling chiefs since the time of ʻUmi-a-Liloa, the first to unite the Big Island in the 16th century. Prior to King Kamehameha beginning his quest to unite the Hawaiian Islands, Hilo served as the royal seat of power for Kalaniʻōpuʻu, When Kalaniʻōpuʻu died in 1782, Kamehameha eventually usurped power from Kalaniʻōpuʻu’s son Kiwalaʻō that same year.

After Captain Cook’s arrival in Hawaiʻi in 1778, Hilo became a major port for foreign ships to refuel and seek shelter after a long journey across the Pacific Ocean. When sandalwood was discovered in the forests of Hawaiʻi, Hilo, like many coastal areas served as a central location for the loading of this valuable timber product onto China-bound schooners. Once Hawaiʻi’s sandalwood stock was decimated by excessive harvesting in the 1830’s, attention was focused on whaling and sugar.

In an effort to address the indignities faced by the native Hawaiian population after the overthrow of the monarchy in 1893, Prince Jonah Kūhiō Kalanianaʻole, in the capacity of U.S. senator, passed legislation for the Hawaiian Homes Commission Act of 1921 which set aside lands for native Hawaiians. Keaukaha was one of the first tracts opened for settlement under the Hawaiian Homes Commission Act. However, the community would undergo considerable change due to growth issues with the growing airport.

Since its inception in 1925, Hilo International Airport, or then known as General Lyman Field, grew in size and slowly encroached upon Keaukaha's boundaries. With the outbreak of World War II increased passenger traffic, Keaukaha sacrificed a considerable amount of housing lots. Based on maps of the original homestead tract, there were approximately 600 parcels of land. South of the present parcels, there were over two hundred individual half-acre lots spaced along a grid pattern. Further airport expansion in the 1950's resulted in approximately 200 parcels south of the then existing Kamehameha Avenue to be eliminated.

In addition, approximately another one hundred parcels north of Kamehameha Avenue and west of Kauhane Avenue were removed or had their property lines redrawn. Homesteaders that lost their lots were given parcels in the newly developed Pana'ewa lots in 1962. Over time, many of the remaining lots were subdivided and thus the overall number of lots in Keaukaha has since increased. Two five acre parcels of land between Parker and Pua Avenues were converted into the existing Keaukaha Elementary School and Hualani Park.

Keaukaha Tract II, which is not part of the Site, is also known as King's Landing. King's Landing was a name given to a little fishing village known as Pāpa'i. This was the location where King Kamehameha I landed in 1792 during a raid to take over the island of Hawai'i. In search of human sacrifice (an offering for his newly built heiau), Kamehameha and his warriors stumbled upon two fishermen. The fishermen fled when they realized they were being pursued. Just as they were about to be captured, Kamehameha's foot was caught in a lava fissure. One of the fishermen beat Kamehameha over the head with his paddle with a blow so hard causing the paddle to splinter. The men spared Kamehameha's life despite nearly being killed themselves.

Kamehameha knew that that the fishermen could have easily killed him and because of their gracious act and value of life, Kamehameha put an end to human sacrifice, proclaiming a new law, the Kānāwai Mamala Hoe, otherwise known as the Law of the Splintered Paddle.

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

No significant impact. No archaeological or historical properties are anticipated to be affected. Review comments and concurrence from SHPD has been requested.

The construction documents will include a provision that should historic sites such as walls, platforms, pavements and mounds, or remains such as artifacts, burials, concentrations of shell or charcoal or artifacts be inadvertently encountered during construction activities, work will cease immediately in the immediate vicinity of the find and the find will be protected. The contractor will immediately contact the State Historic Preservation Division, which will assess the significance of the find and recommend appropriate mitigation measures, if necessary.

## 4.2 CULTURAL RESOURCES

Consultation with Native Hawaiian organizations, including the Office of Hawaiian Affairs and Keaukaha-Pana'ewa Farmers Association, have not identified any cultural resources that would be impacted by the Project.

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

No significant impact. The Hawaiian Homes Commission Act set aside the Site for residential homesteads. Towards that end, the Site has been previously graded and developed to be used for the beneficiaries defined by the Hawaiian Homes Commission Act.

## 4.3 ROADWAYS AND TRAFFIC

Regional access to the Site is provided by Kalaniana'ole Avenue (Route 19), a two-lane State highway. From Kalaniana'ole Avenue, local access is provided by Kauhane, Pua, Baker, and Andrews Avenues running north to south (mauka-makai), and Nahale'a, Desha, Pakele, Lauae Yung, Todd, King, Lyman, Krausse, and Ewaliko Avenues running west to east. The local roads within the Site are maintained by the County.

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

No significant impact. The roadways have adequate capacity to accommodate the Project residents.

## 4.4 NOISE

The Site is exposed to noise from the airport. The State Department of Transportation conducted a FAR Part 150 Noise Compatibility Study, which is a plan initiated by airports to develop and recommend actions to help reduce the impact of aircraft noise in neighborhoods surrounding airports. Although airports are not required to conduct FAR Part 150 Studies, voluntary participation in the Study entitles Hilo International Airport to receive federal funding to implement FAA-approved airport noise programs (State of Hawaii Department of Transportation, undated pamphlet).

Under this program, a noise study mapped noise contours (see Figure 10). A noise contour is a line on a map that defines levels of aircraft noise exposure. The DNL is the FAA's standard measure to quantify aircraft noise exposure in the vicinity of an airport. The DNL represents the average sound exposure measured in decibels during a 24-hour period (with extra emphasis on impacts of nighttime noise) and does not represent the sound level for a specific noise event. The 65 dB DNL contour is generally identified by federal guidelines as the "threshold of significance" for aviation and other sources of community noise.

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

Mitigable impact. Residential lots within the 65 Ldn will require mitigation under HUD guidelines. The State Department of Transportation (DOT) Airport Division recommends mitigation for lots

within 60 Ldn. To the extent funds are available, DOT will pay for the required mitigation within 65 Ldn. If DOT funding is not available, DHHL will determine another source of funding (e.g., NHHBG or Trust funds) to subsidize the mitigation cost.

Sound mitigation treatments include:

- Acoustically rated windows
- Secondary roof and/or ceiling applications
- Weatherstripping around doors
- Attic insulation
- Mechanical & electrical upgrades, where needed
- Improvements to provide adequate interior ventilation.

#### 4.5 AIR QUALITY

Air quality in the Hilo area is believed to be relatively good, except for occasional impacts from localized traffic congestion. The prevailing northeasterly trade wind flow tends to push any human-made or natural pollutants away. However, the amount of particulates and other air pollutants can significantly increase during periods when the winds shift to a southwesterly direction. Air flow from this direction carrying volcanic smog (more commonly referred to as vog), can lead to an increase in pollution and a decrease in visibility.

The State Department of Health (DOH) maintains a limited network of air monitoring stations around the State to gather data on certain regulated pollutants. Currently, no routine ambient air monitoring is conducted by DOH in the Hilo area. Historical monitoring during the 1970's and 1980's indicated very low pollutant levels in Hilo. The entire state has been an attainment area for the last several decades. There is little reason to believe this has changed significantly.

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

No significant impact. Although construction activity will be the principal source of short-term air quality impact, construction will be dispersed on scattered individual lots at different times. Site preparation, earth moving, and building construction will create localized particulate emissions during the short term.

Although the potential for fugitive dust is low due to the wet climate and low wind speeds of Hilo, adequate dust control measures will be employed, particularly during construction during low-rainfall periods.

#### 4.6 VISUAL RESOURCES

The Site does not have any trees designated as Exceptional Trees by county code (HCC chapter 14, article 10). The General Plan does not identify natural beauty sites in the vicinity of the Project.

## **POTENTIAL IMPACTS AND MITIGATION MEASURES**

No significant impact. There are no significant visual resources within the Site.

### **4.7 Toxics and Hazardous Waste**

Due to the industrial uses near Hilo Harbor, there are several Toxic Release and RCRA sites within a mile of the Site (U.S. Environmental Protection Agency, accessed May 2015)). These industrial uses would not affect the construction or reconstruction of residential homes within the Site any differently than the existing homes. For homes built before 1978, a risk assessment will determine whether lead-based paint is present and mitigation measures would be followed as a condition of any rehabilitation financial assistance.

## **POTENTIAL IMPACTS AND MITIGATION MEASURES**

Mitigable impacts. For rehabilitation of homes built before 1978, DHHL will conduct a risk assessment study as part of the grant application process and follow recommendations, as applicable, to mitigate lead-based paint and/or other hazards.

### **4.8 INFRASTRUCTURE AND UTILITIES**

#### **4.8.1 Water System**

Water can be made available from existing County waterlines within the Site (see Figure 11). The required water system improvements, designed to deliver water at adequate pressure and volume under peak-flow and fire-flow conditions in accordance with the County of Hawai'i, Water System Standards 2002, as amended, and the Rules and Regulations of the Department of Water Supply, include, but not be limited to, mains (minimum 6 inches in diameter), service laterals to front each lot, and fire hydrants at the appropriate spacing. All construction plans, calculations, and specifications must be submitted by a professional engineer, registered in the State of Hawai'i, to DWS for review and approval. In addition to the above water system improvements, DHHL must also pay the prevailing facilities charge, which is subject to change, of \$5,500.00 for each additional lot created. Payment is due and payable upon completion of the required water system improvements.

## **POTENTIAL IMPACTS AND MITIGATION MEASURES**

No significant impact. The County water system has adequate capacity to serve the Project. DHHL must construct and dedicate the water system improvements to the County and pay the prevailing facilities charge upon completion of the required improvements.

#### **4.8.2 Wastewater System**

There are sewer lines within a portion of the Site (see Figure 11). Cesspools will not be allowed since the Site is in the Critical Wastewater Disposal Area pursuant to the Department of Health's wastewater systems rules (Hawai'i Administrative Rules chapter 11-62). DHHL will ensure

installation of septic systems approved by the Department of Health (DOH) in a location that could readily hookup to a future extension of the sewer system.

**POTENTIAL IMPACTS AND MITIGATION MEASURES**

Mitigable impact. Where available, DHHL will ensure hookup to the County sewer system. Where not available, DOH requires a licensed engineer to design and inspect the completed septic system (Hawai'i Administrative Rules section 11-62-31.1).

**4.8.3 Drainage System**

Drainage from the individual lots within the Site will be contained onsite. Offsite drainage is handled by existing drywells within the roadways.

**POTENTIAL IMPACTS AND MITIGATION MEASURES**

No significant impact. Runoff generated by the individual lots will be contained onsite.

**4.8.4 Solid Waste**

The County of Hawai'i Solid Waste Division operates and maintains, either by County personnel or by contracted services, two landfills and twenty-one transfer stations. The South Hilo Sanitary Landfill, transfer station, and green waste processing site are located within 15 minutes' drive of the Site.

**POTENTIAL IMPACTS AND MITIGATION MEASURES**

Mitigatable impact. The contractors will be responsible to legally dispose grubbed material and construction waste.

**4.8.5 Utilities**

The Hawai'i Electric Light Company, Inc. (HELCO), a privately-owned utility company regulated by the State Public Utilities Commission, provides electrical power to the island of Hawai'i. The HELCO network of power plants serving Hilo includes the Kanoelehua Power Plant, Puna Power Plant, Wailuku Hydro Power Plant, Hilo Coast Power Plant, and Shipman Power Plant.

Sandwich Isles Communication is the sole provider of fiber optic telecommunications serving DHHL properties.

**POTENTIAL IMPACTS AND MITIGATION MEASURES**

No significant impact. Electrical and telephone services are currently sized, adequate, and available to supply the Project.

## 4.9 SOCIO-ECONOMIC CHARACTERISTICS

The overall population of Hawai'i County has exhibited relatively stable growth over the past decade. The County of Hawai'i Department of Research and Development reported that the population of Hawai'i County was 186,738 people in 2011, a 25.6 percent increase from the 2000 population of 148,677 people.

The South Hilo district had a population of 48,786 in 2010 which represented approximately 26 percent of the total population for Hawai'i Island. *The City of Hilo contains the main offices of the County government, branch offices of federal and state agencies. The island's major deep draft harbor and international airport are also located in Hilo. In addition to industrial, commercial and social service activities, the University of Hawai'i at Hilo and Hawai'i Community College and affiliated research programs play an important role in Hilo's economy. The Site is currently underutilized. The Project would enable commercial or subsistence agriculture by the lessees.*

As of February 2014, Hawai'i County's unemployment rate was 6.1 percent, compared to the State's overall rate of 4.6 percent, and it was decreased by .9 percent from February 2013 from the Hawai'i County's unemployment rate of 7.0 percent (State of Hawai'i Department of Labor and Industrial Relations, 2014).

The Census Bureau collects and provides data for American Indian, Alaska Native, Native Hawaiian legal entities. The legal entity for Native Hawaiians for which the Census Bureau collects data is the Hawaiian Home Lands. According to the Census Bureau, "Hawaiian home lands (HHLs) are areas held in trust for Native Hawaiians by the state of Hawai'i, pursuant to the Hawaiian Homes Commission Act of 1920, as amended. The Census Bureau obtains the names and boundaries for HHLs from state officials." (U.S. Census Bureau, accessed August 2015). The HHL census geographic unit named Keaukaha includes the Site, King's Landing, and other lands owned by DHHL within the vicinity of the Site (see Figure 12). Since the Site is the predominantly populated area of all areas included within the Keaukaha census geographic unit, the census data for Keaukaha is applicable almost exclusively to the Site.

With a total of 1,494 residents according to the 2010 Census, Keaukaha represents 3.5 percent of Hilo's population. The 1,494 residents reside in a total of 378 units with an average population of 4.27 persons per housing unit. Children comprise 23 percent of the homestead's overall population. With 83.8 percent of residents that have completed at least a high school degree, Keaukaha residents' education level is on par with the County and the State. Keaukaha's median household income of residents' of \$40,865 is higher than both Hilo and County numbers (\$39,213 and \$39,805, respectively). When compared to Hilo residents, twice as many Keaukaha homesteaders spend thirty minutes or more on their daily commute to work. Though the percentage of households that live below the poverty line is on par with the rest of Hilo, in comparison to the rest of the state, Keaukaha's population living in poverty is over 50 percent higher.

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

Beneficial impact. The Project will provide affordable housing opportunities close to employment and services.

#### **4.9.1 Environmental Justice**

On February 11, 1994, President Clinton signed Executive Order (E.O.) 12898. This E.O. directs federal agencies to make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high adverse human health or environmental effects of its activities on minority and low-income populations.

Each Federal agency must make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health, environmental, economic, and social effects of its programs, policies, and activities on minority and low-income populations. Since this Project will use Federal funds, it is subject to the Federal review process.

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

Beneficial impact. The Project will provide homestead awards, loans, and grants to native Hawaiians, many of whom are low-income families. Therefore, the Project will benefit rather than expose or disproportionately adversely affect minority or low-income persons in comparison to the rest of the population, and thereby is in compliance with E.O. 12898.

Mitigable impact. The airport noise and harbor traffic disproportionately impact the Site's minority and low-income residents. Federal agencies providing funds to the Department of Transportation should consider mitigation for these impacts.

## **4.10 PUBLIC SERVICES AND FACILITIES**

### **4.10.1 Schools**

There are four schools that provide pre-school and elementary school options for the community. Keaukaha Elementary School, consisting of 5.5 acres of land, was founded in 1930 and has educated most of the community's children. The school currently shares classroom space with Ka 'Umeke Kā'eo Public Charter School, a Hawaiian language immersion school that focuses on language and culture. Kamehameha Schools currently operates a pre-school on the southern portion of the Hualani Park Complex. Beginning in 2008, Ke Ana La'ahana Public Charter School began offering enrollment for 7th and 8th grade students. The addition of middle school options allows Keaukaha residents the option to enroll their children from pre-Kindergarten to eighth grade within the community. For other upper grade options, Keaukaha is within the public school complex of Waiakea Intermediate and Waiakea High School.

The Keaukaha Technology and Resource Center (KTRC) is a program funded by the USDA and in partnership with the Keaukaha Community Association (KCA), University of Hawai'i at Mānoa's College of Tropical Agricultural and Human Resources (CTAHR), DHHL, and Queen Liliu'okalani Children's Center (QLCC). The purpose of the program is to create positive change for at-risk youth and their families. College preparatory courses, summer enrichment, and computer literacy are some of the various programs available through KTRC.

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

No significant impact. Although the Project has the potential to increase the school-age population, the schools should have adequate capacity to accommodate the increase.

#### **4.10.2 Police, Fire and Medical Services**

##### **Police Protection**

The Site is located in South Hilo, Patrol District 1. The district extends from Hakalau in the north, to the mid-point of Kanoelehua Avenue between Hilo and Kea'au in the south, to the Saddle Road in the west. The district includes the main police station, located at 349 Kapi'olani Street, approximately 2 miles from the Auwae Lots and 3 miles from the Mahiai Lot.

##### **Fire Protection**

The Site is within the 5-mile response zones of Kawaiiani, Waiakea, Kaumana, and Central Fire Stations. The Hawai'i County Fire Department Kawaiiani Fire Station is an Engine Company with one engine, a tanker and a medic unit. Central Fire Station is an Engine Company and an ALS medic unit. Kaumana Fire Station is an Engine Company and HAZMAT Response capabilities. Waiakea Fire Station in Keaukaha is a Rescue Company providing firefighting response with an Engine, Light and Heavy Rescue, including helicopter response and ocean rescue response capabilities. Recently, Waiakea received a new 79' Ladder Truck. At this time, no tanker vehicles are assigned to the Hilo area due to the adequate hydrant system and all of the Engines (also referred to as Pumpers) each carry 1,000 gallons of water.

##### **Medical Services**

Hilo Medical Center (HMC) is the primary health care facility serving the South Hilo district. HMC is located approximately 4 miles from the Site at 1190 Waiānuenu Avenue. Ambulance service is provided by the Hawai'i Fire Department. Kawaiiani and Central Fire Stations have emergency medical service (EMS) capabilities.

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

No significant impact. The Site has fire hydrants. The Site is within adequate response zones of several fire stations.

### 4.10.3 Recreational Facilities

The entire South Hilo District contains 54 parks totaling 590 acres. In the vicinity of the Site, there is the Hualani Park and Keaukaha Beach Park (see Figure 11). The 4.8 acre Hualani Park includes Kawānanakoa Gym, a 20,000 sq. ft. multi-purpose recreational facility that provides a variety of recreational and educational activities for the community. Other facilities within the park include playground equipment and a 3.7 acre play field with two baseball diamonds. Additional playground space is available on the adjoining Keaukaha Elementary School field.

Other recreational facilities, parks, and open spaces in the Hilo area include Hilo Municipal Golf Course, Kūhiō-Kalanianaʻole Park, Honoliʻi Beach Park, Liliʻuokalani Gardens, Reeds Bay, Onekahakaha Beach Park, Kealoha Beach Park, Carlsmith Beach Park and Richardson Ocean Park.

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

No significant impact. There are a variety of recreational facilities to serve the Project within reasonable distance with adequate capacity to accommodate the future Project residents.

### 4.10.4 Airport

The Hilo International Airport provides interisland service, cargo, commuter, and tour services. It is also used by the military. The airport's primary runway (8-26) is 9,800 feet long and is used principally for air carrier operations. Crosswind Runway 3-21 is 5,600 feet long and is used mainly for general aviation operations.

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

Mitigable impacts. A portion of the Site is within the Airport Runway Protection Zone for Crosswind Runway 3-21 that is primarily used for general aviation operations (see Figure 13). If any of the affected lessees qualify for loans or grants funded by NHHBG, a notice will be provided disclosing that the property is within a higher risk area for aircraft accidents. DOT also expressed concern with photovoltaic systems if the lot is located in or near the approach path of aircraft into the airport; however, since the Site is not within the approach path of the primary runway (8-26), there will be no restrictions to install PV systems.

## 5 LAND USE CONFORMANCE

State of Hawai'i and Hawai'i County land use plans, policies, and ordinances relevant to the Project 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 1.4.

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

The State Land Use Law (Chapter 205, HRS), establishes the State Land Use Commission (LUC) and authorizes this body to designate all lands in the State into one of four Districts: Urban, Rural, Agricultural, or Conservation. The Site is in the Urban District (see Figure 14).

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

The State of Hawai'i has designated a Special Management Area (SMA) to protect lands adjacent to the shoreline. Although a portion of the Site is within the SMA (see Figure 15), residential construction or reconstruction is exempt from SMA permit requirements (HRS §205A-22). Nevertheless, the entire state is defined to be within the Coastal Zone Management Area, pursuant to Hawai'i Revised Statutes (HRS) 205A-1, (definition of "coastal zone management area") that is subject to the objectives and policies of the Coastal Zone Management Act. The Project's relationship to the objectives and policies set forth in HRS 205A-2, is discussed below.

##### 5.1.3.1 Recreational Resources

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

##### **Policies**

- (A) *Improve coordination and funding of coastal recreational planning and management; and*
- (B) *Provide adequate, accessible, and diverse recreational opportunities in the coastal zone management area by:*
  - (i) *Protecting coastal resources uniquely suited for recreational activities that cannot be provided in other areas;*
  - (ii) *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;*
  - (iii) *Providing and managing adequate public access, consistent with conservation of natural resources, to and along shorelines with recreational value;*

- (iv) *Providing an adequate supply of shoreline parks and other recreational facilities suitable for public recreation;*
- (v) *Ensuring public recreational uses of County, state, and federally owned or controlled shoreline lands and waters having recreational value consistent with public safety standards and conservation of natural resources;*
- (vi) *Adopting water quality standards and regulating point and nonpoint sources of pollution to protect, and where feasible, restore the recreational value of coastal waters;*
- (vii) *Developing new shoreline recreational opportunities, where appropriate, such as artificial lagoons, artificial beaches, and artificial reefs for surfing and fishing; and*
- (viii) *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;*

**Discussion:** The Project is across from Keaukaha Beach Park and does not impact access to that park.

#### 5.1.3.2 Historic Resources

**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.*

#### Policies

- (A) *Identify and analyze significant archaeological resources;*
- (B) *Maximize information retention through preservation of remains and artifacts or salvage operations; and*
- (C) *Support state goals for protection, restoration, interpretation, and display of historic resources;*

**Discussion:** There are no known historic properties that will be affected by this Project. This determination has been submitted to the State Historic Preservation Division for review and concurrence. DHHL will require its contractors to comply with all State and County laws and rules regarding the preservation of archaeological and historic sites. The construction documents will include a provision that should historic sites such as walls, platforms, pavements and mounds, or remains such as artifacts, burials, concentrations of shell or charcoal or artifacts be inadvertently encountered during construction activities, work will cease immediately in the immediate vicinity of the find and the find will be protected. The contractor will immediately contact the State Historic Preservation Division, which will assess the significance of the find and recommend appropriate mitigation measures, if necessary.

### 5.1.3.3 Scenic and Open Space Resources

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

#### **Policies**

- (A) *Identify valued scenic resources in the coastal zone management area;*
- (B) *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;*
- (C) *Preserve, maintain, and, where desirable, improve and restore shoreline open space and scenic resources; and*
- (D) *Encourage those developments that are not coastal dependent to locate in inland areas;*

**Discussion:** The Project will be located inland, away from the shoreline; therefore, it is anticipated that there will be no effect on the quality of the coastal scenic resources.

### 5.1.3.4 Coastal Ecosystems

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

**Policy A:** *Exercise an overall conservation ethic, and practice stewardship in the protection, use, and development of marine and coastal resources;*

**Policy B:** *Improve the technical basis for natural resource management;*

**Policy C:** *Preserve valuable coastal ecosystems, including reefs, of significant biological or economic importance;*

**Policy 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*

**Policy 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.*

**Discussion:** The Project will be located inland from the coastline. Therefore, it is anticipated that there will be no effect on the quality of the coastal ecosystems.

### 5.1.3.5 Economic Uses

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

*Policy A: Concentrate coastal dependent development in appropriate areas;*

*Policy 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*

*Policy 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:*

*(i) Use of presently designated locations is not feasible;*

*(ii) Adverse environmental effects are minimized; and*

*(iii) The development is important to the State's economy.*

**Discussion:** The Project is not a coastal dependent development and is not located on the shoreline.

#### **5.1.3.6 Coastal Hazards**

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

*Policy A: Develop and communicate adequate information about storm wave, tsunami, flood, erosion, subsidence, and point and non-point source pollution hazards;*

*Policy B: Control development in areas subject to storm wave, tsunami, flood, erosion, hurricane, wind, subsidence, and point and non-point source pollution hazards;*

*Policy C: Ensure that developments comply with requirements of the Federal Flood Insurance Program; and*

*Policy D: Prevent coastal flooding from inland projects.*

**Discussion:** The Project excludes lots within the 100-year special hazard zones (FIRM V and A zones). There are signed evacuation routes through Project and an existing emergency siren (see section 4.5).

#### **5.1.3.7 Managing Development**

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

*Policy A: Use, implement, and enforce existing law effectively to the maximum extent possible in managing present and future coastal zone development;*

*Policy B: Facilitate timely processing of applications for development permits and resolve overlapping or conflicting permit requirements; and*

*Policy 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.*

**Discussion:** This EA provides opportunity for public input. Pre-assessment consultation comments were obtained and are reproduced in Appendix B.

#### 5.1.3.8 Public Participation

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

*Policy A: Promote public involvement in coastal zone management processes;*

*Policy 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*

*Policy C: Organize workshops, policy dialogues, and site-specific mediations to respond to coastal issues and conflicts.*

**Discussion:** This EA provides opportunity for public input. Pre-assessment consultation comments were obtained and are reproduced in Appendix B.

#### 5.1.3.9 Beach Protection

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

*Policy A: 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;*

*Policy B: 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*

*Policy C: Minimize the construction of public erosion-protection structures seaward of the shoreline.*

**Discussion:** The Project is not a coastal dependent development, and is not located on the shoreline; therefore, these policies are not applicable.

#### 5.1.3.10 Marine Resources

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

*Policy A: Ensure that the use and development of marine and coastal resources are ecologically and environmentally sound and economically beneficial;*

*Policy B: Coordinate the management of marine and coastal resources and activities to improve effectiveness and efficiency;*

*Policy C: 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;*

*Policy D: 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*

*Policy E: Encourage research and development of new, innovative technologies for exploring, using, or protecting marine and coastal resources.*

**Discussion:** To protect marine water quality, the Project will be designed and built in compliance with all applicable Federal, State, and County regulations pertaining to storm water management including Chapter 10 (Erosion and Sedimentation Control) of the Hawai'i County Code and the DOH NPDES permit program, as applicable.

#### 5.1.4 Hawai'i State Plan

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. Objectives and policies pertinent to the proposed project are as follows:

***Section 226-5 Objective and policies for population:***

*(a) 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.*

*(b) To achieve the population objective, it shall be the policy of this State to:*

*(1) 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.*

*(3) Promote increased opportunities for Hawaii's people to pursue their socio-economic aspirations throughout the islands.*

*(7) 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.

**Discussion:** The Project is consistent with these objectives and policies by providing native Hawaiians with affordable housing opportunities.

**Section 226-10 Objective and policies for the economy – potential growth activities:**

(a) 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.

(b) To achieve the potential growth activity objective, it shall be the policy of this State to:

(10) 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.

**Discussion:** This Project will receive Federal and State funding to provide native Hawaiians with enhanced socio-economic opportunities through home ownership in proximity to urban services.

**Section 226-11 Objectives and policies for the physical environment – land-based, shoreline, and marine resources:**

(a) Planning for the State's physical environment with regard to land-based, shoreline, and marine resources shall be directed towards achievement of the following objectives.

(2) Effective protection of Hawaii's unique and fragile environmental resources.

(b) To achieve the land-based, shoreline, and marine resources objectives, it shall be the policy of this State to:

(3) Take into account the physical attributes of areas when planning and designing activities and facilities.

(6) Encourage the protection of rare or endangered plant and animal species and habitats native to Hawaii.

**Discussion:** DHHL consulted with various agencies such as SHPD and the U.S. Fish and & Wildlife Services. DHHL is committed to implement the mitigation measures identified in this environmental assessment to protect endangered species and other sensitive resources.

**§226-19 Objectives and policies for socio-cultural advancement--housing.**

(a) Planning for the State's socio-cultural advancement with regard to housing shall be directed toward the achievement of the following objectives:

(1) 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.

(2) The orderly development of residential areas sensitive to community needs and other land uses.

(b) To achieve the housing objectives, it shall be the policy of this State to:

(1) Effectively accommodate the housing needs of Hawaii's people.

(2) Stimulate and promote feasible approaches that increase housing choices for low-income, moderate-income, and gap-group households.

(3) Increase homeownership and rental opportunities and choices in terms of quality, location, cost, densities, style, and size of housing.

(4) Promote appropriate improvement, rehabilitation, and maintenance of existing housing units and residential areas.

(5) 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.

(6) Facilitate the use of available vacant, developable, and underutilized urban lands for housing.

(7) Foster a variety of lifestyles traditional to Hawaii through the design and maintenance of neighborhoods that reflect the culture and values of the community.

**Priority Guidelines: §226-106 Affordable housing.** Priority guidelines for the provision of affordable housing:

(1) Seek to use marginal or nonessential agricultural land and public land to meet housing needs of low- and moderate-income and gap-group households.

(2) Encourage the use of alternative construction and development methods as a means of reducing production costs.

(4) 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.

(5) 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.

(7) Encourage improved coordination between various agencies and levels of government to deal with housing policies and regulations.

(8) 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 Hawai'i.

**Discussion:** This Project directly implements affordable housing policies. DHHL offers a diversity of programs to enable low- to moderate-income native Hawaiian families to lease, construct, or rehabilitate a home on their awarded homestead lot (e.g., self-help, package home loans, down payment assistance, rehabilitation grants).

### 5.1.5 DHHL Island and Regional Plans

The Hawaiian Homes Commission adopted the Hawai'i Island Plan in 2002. The Plan "provides summary description and evaluation of current Department of Hawaiian Home Lands (DHHL) holdings on Hawai'i Island, and presents land use plans developed to meet DHHL beneficiary needs. These are necessary components of the DHHL Hawai'i Island Plan, developed to guide award of lands to native Hawaiian beneficiaries on the Big Island. The project was undertaken per Section 213(e) of the Hawaiian Homes Commission Act (HHCA), which authorizes planning studies to provide the basis for identifying preferred DHHL land uses and appropriate management strategies for those lands" (PBR HAWAII, 2002, p. 1). In addition to administering the homesteading program, DHHL is authorized to lease and issue revocable permits, licenses, and rights-of-entry for lands not in current homestead use. Revenues from lands used for commercial, industrial, and other income-producing purposes support administration of the homestead program.

The Plan designated the Site for Residential Homestead use (see Figure 16). The Project's objective is to optimally utilize these lands for its intended residential use.

The Hawaiian Homes Commission adopted the Keaukaha Regional Plan in 2010. This Regional Plan was "...prepared to facilitate the work of such partnerships as DHHL and others develop lands in Keaukaha. Specifically, this report is intended to:

- Help identify opportunities for partnerships with DHHL in the development of its Keaukaha lands;
- Provide information essential to the planning of projects, services, and entrepreneurial ventures;
- Identify key issues, opportunities, and constraints affecting regional development and area improvements;
- Assist in the efficient allocation of resources by DHHL and its partners; and
- Identify priority projects that are essential to moving development and community improvement projects forward." (PBR HAWAII, December 2010)

The Regional Plan identified a list of priority projects. One of the listed projects was to streamline the use of NAHASDA funds for rehabilitation, which is a component of this Project.

## 5.2 COUNTY OF HAWAI'I

County-specific land use plans and ordinances pertaining to the Project include the General Plan and the Zoning Code.

### 5.2.1 County of Hawai'i General Plan

The County of Hawai'i General Plan is the policy document for the long-range comprehensive development of the Island of Hawai'i. Among the purposes of the General Plan are to guide the pattern of development in Hawai'i County and to provide the framework for regulatory decisions and capital improvement projects. The General Plan undergoes a comprehensive review every ten years, with the last review being completed in 2005.

The policy land use map, referred to as the Land Use Pattern Allocation Guide (LUPAG) Map, is intended to guide the direction and quality of future developments in a coordinated and rational manner. The LUPAG Map designates the Site as "Low Density Urban" (see Figure 17).

Low Density: Residential, with ancillary community and public uses, and neighborhood and convenience-type commercial uses; overall residential density may be up to six units per acre. (General Plan, §14.1.1)

Specific General Plan goals, policies, and courses of action most applicable to the Project are discussed below.

## Housing

### 9.2 GOALS

- (a) Attain safe, sanitary, and livable housing for the residents of the County of Hawai'i.*
- (b) Attain a diversity of socio-economic housing mix throughout the different parts of the County.*
- (c) Maintain a housing supply that allows a variety of choices.*
- (d) Create viable communities with affordable housing and suitable living environments.*
- (e) Improve and maintain the quality and affordability of the existing housing inventory.*
- (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.*
- (g) Ensure that housing is available to all persons regardless of age, sex, marital status, ethnic background, and income.*
- (h) Make affordable housing available in reasonable proximity to employment centers.*

*(i) Encourage and expand home ownership opportunities for residents.*

### **9.3 POLICIES**

*(a) Encourage a volume of construction and rehabilitation of housing sufficient to meet growth needs and correct existing deficiencies.*

*(d) Support the construction of housing for minimum wage and agricultural workers.*

*(n) Investigate, develop, and promote the creation of new innovative and timely financing techniques and programs to reduce the cost of housing.*

*(o) Encourage the use of suitable public lands for housing purposes in fee or lease.*

*(p) Encourage the construction of homes for lease or lease with option to purchase.*

*(t) Ensure that adequate infrastructure is available in appropriate locations to support the timely development of affordable housing.*

*(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.*

**Discussion:** DHHL offers a diversity of programs to enable low- to moderate-income native Hawaiian families to construct a home on their awarded homestead lot (e.g., self-help, package home loans, down payment assistance). DHHL is also innovating with a rent to own program.

## **Land Use**

### **14.1.2 Goals**

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

**(b)** Protect and encourage the intensive and extensive utilization of the County's important agricultural lands.

**(c)** Protect and preserve forest, water, natural and scientific reserves and open areas.

### **14.1.3 Policies**

**(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.

**(b)** Promote and encourage the rehabilitation and use of urban areas that are serviced by basic community facilities and utilities.

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

**Discussion:** The Project encourages rehabilitation and infill of an urban area that is serviced by community facilities and utilities, along with access to the Hilo employment center.

### 5.2.2 County of Hawai'i Zoning

The County zoning is Residential (RS-10) (see Figure 18). The Project is consistent with this zoning since any new lots will have a minimum lot size of 10,000 s.f. Setbacks and height limits will also comply with County zoning.

## 5.3 APPROVALS AND PERMITS

A listing of anticipated permits and approvals required for the Project is presented below:

**Table 1: Anticipated Approvals and Permits**

<b>Permit/Approval</b>	<b>Responsible Agency</b>
Chapter 343, HRS Compliance	Department of Hawaiian Home Lands Office of Environmental Quality Control
Subdivision	Hawai'i County Planning Department
SMA exemption	Hawai'i County Planning Department
National Pollutant Discharge Elimination System (NPDES) Permit	State Department of Health
Grubbing/Grading	Hawai'i Department of Public Works
Individual Wastewater System Approval	State Department of Health
Building Permit	Hawai'i County Department of Public Works

## **6 ALTERNATIVES**

This section identifies and evaluates a range of alternatives in addition to the preferred alternative (i.e., the Project) that could meet the purpose and need and possibly avoid, reduce, or minimize adverse environmental effects. The reference point to compare alternatives is the “no action” alternative.

### **6.1 NO ACTION ALTERNATIVE**

With the “no action” alternative, the Site remains underutilized and aged homes continue to deteriorate. Opportunities to award new leases to those on the wait list would not be realized.

### **6.2 NO INCREASE IN DENSITY**

DHHL’s larger vacant lots over 20,000 s.f. could be awarded to one lessee instead of subdividing. Opportunities to award new leases to those on the wait list would not be realized. The potential new lots are limited to approximately 10 lots, which would be a negligible impact on infrastructure and community services.

### **6.3 ALTERNATIVE SITE BOUNDARIES**

The current Site boundaries exclude lots within the 100-year special flood hazard zone as identified in the existing and proposed Flood Insurance Rate Map. Construction on these lots would be subject to special standards and review pursuant to the County’s Floodplain Management Code (Hawai’i County Code chapter 27) and FEMA’s 8-step review when using federal funds. The excluded lots could still apply for DHHL’s various housing assistance programs and the environmental review would be conducted separately on a case by case basis.

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## 7 FINDINGS AND DETERMINATION

To determine whether the construction of the Project may have a significant impact on the physical and human environment, all phases and expected consequences of the proposed project have been evaluated, including potential primary, secondary, short-range, long-range, and cumulative impacts. Based on this evaluation, the Proposing Agency (Department of Hawaiian Home Lands) anticipates issuing a Finding of No Significant Impact (FONSI). The supporting rationale for this finding is presented in this chapter.

### 7.1 SIGNIFICANCE CRITERIA

The discussion below evaluates the significance of the Project's impacts based upon the Significance Criteria set forth in Hawai'i Administrative Rules section 11-200-12. An action shall be determined to have a significant impact on the environment if it meets any one of the following criteria:

- (1) **Involves an irrevocable commitment to loss or destruction of any natural or cultural resource;**

**Discussion:** The lots have been previously graded or have existing homes. The Project does not involve a loss to any known threatened or endangered species habitats, wetland, historic or archaeological resource, or other natural or cultural resource.

- (2) **Curtails the range of beneficial uses of the environment;**

**Discussion:** The Project optimizes the beneficial use of underutilized vacant lots and deteriorating homes.

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

**Discussion:** The proposed Project is not in conflict with the long-term environmental policies, goals, and guidelines of the State of Hawai'i. The Project's potential adverse impacts are associated only with the short-term construction-related activities, and such impacts can be mitigated through adherence to standard construction mitigation practices.

- (4) **Substantially affects the economic or social welfare of the community or State;**

**Discussion:** The proposed project will have beneficial effects on the economy and social welfare of Hilo town or the County of Hawai'i by providing affordable housing opportunities for native Hawaiians in proximity to jobs, schools, shopping, and other urban services.

- (5) **Substantially affects public health;**

**Discussion:** Wastewater disposal will connect to the existing sewer system or utilize individual septic systems approved by the Department of Health. All construction activities will comply with

applicable regulations and will implement appropriate mitigation measures to mitigate any noise, dust, or vibration impacts.

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

**Discussion:** Although the Project will increase population in the immediate area, the surrounding roads, schools, parks, and other public facilities have the capacity to serve this increase.

**(7) Involves a substantial degradation of environmental quality;**

**Discussion:** Construction activities associated with the proposed project are anticipated to result in negligible short-term impacts to noise, air-quality, and traffic in the immediate vicinity. With the incorporation of the recommended mitigation measures during the construction period, the project will not result in degradation of environmental quality. No long term negative impacts are expected from project implementation.

**(8) Is individually limited but cumulatively has considerable effect on the environment, or involves a commitment for larger actions;**

**Discussion:** The Project involves infill or rehabilitation of existing homes within an established neighborhood designated for residential use by the County's General Plan, zoning, and DHHL's Island Plan.

**(9) Substantially affects a rare, threatened or endangered species or its habitat;**

**Discussion:** Although there are no known, threatened, or endangered species of flora, fauna, or associated habitats located on the project site, mitigation measures are included to prevent potential impacts during breeding seasons for the Hawaiian hawk, Hawaiian hoary bat, nene, and seabirds.

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

**Discussion:** Construction activities for development of the Project could potentially impact noise and air and water quality levels to adjacent lots. However, these impacts will be short-term and are not expected to be detrimental. All construction activities will comply with applicable regulations and will implement appropriate mitigation measures as necessary. After construction, the development is not expected to adversely impact ambient noise levels or water and air quality. There will be a slight increase in impervious surfaces over the site's former undeveloped use; however, any increase in runoff will be accommodated by proposed drainage improvements and will not detrimentally affect water quality. Noise levels from the airport will be mitigated to meet acceptable standards (e.g., HUD noise standards).

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

**Discussion:** The development will not affect any environmentally sensitive area. The Site is located outside a FIRM-designated flood plain and inland from the coast. Homes will be constructed in compliance with County of Hawai'i building codes. There are designated tsunami evacuation routes within the project area.

**(12) Substantially affects scenic vistas and view planes identified in County or State plans or studies; or,**

**Discussion:** The Site is not listed as a scenic view plane or area of natural beauty by the County.

**(13) Requires substantial energy consumption.**

**Discussion:** The new homes will increase energy consumption. DHHL is looking into programs to assist with financing solar or other renewable sources for homeowners as a means to reduce household utility costs.

## 7.2 ANTICIPATED DETERMINATION

Pursuant to Chapter 343, HRS, the proposing agency, the Department of Hawaiian Home Lands anticipates issuing a Finding of No Significant Impact (FONSI) for this environmental assessment. This finding is based on analysis of impacts and mitigation measures examined in this document, public comments received during the pre-assessment consultation and public comment phases, and analyzed under the above criteria.

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## 8 CONSULTATION

### 8.1 PRE-ASSESSMENT CONSULTATION

Pre-assessment consultation letters were mailed to various agencies and organizations listed below, except for the Keaukaha Homesteaders Community Association where a special meeting was held. The purpose of the pre-assessment consultation was to consult with agencies, organizations and individuals with technical expertise, or an interest or will be affected by the proposed project. Comments and input received during this period were used to identify environmental issues and concerns to be addressed in the Draft EA, which in turn will undergo a 30-day public comment period.

Those that provided written comments (either by hardcopy or email) are highlighted in *italics*. Copies of the written comments and responses are reproduced in Appendix B.

#### 8.1.1.1 State of Hawai‘i

- DLNR - State Historic Preservation Division
- *Department of Transportation*
- Office of Hawaiian Affairs

#### 8.1.1.2 Federal

- U.S. Federal Aviation Administration
- *U.S. Fish and Wildlife Service*

#### 8.1.1.3 County of Hawai‘i

- Department of Environmental Management
- Department of Public Works

#### 8.1.1.4 Private Organizations & Individuals

- Native Hawaiian organizations on U.S. Department of Interior’s list
- Keaukaha Homesteaders Association
- Keaukaha Pana‘ewa Farmers Association.

### 8.2 PUBLIC REVIEW

This Draft EA was published in the OEQC Environmental Notice on February 23, 2016 initiating a 30-day public comment period scheduled to end on March 24, 2016. The Draft EA was mailed to the agencies and organizations listed below.

#### 8.2.1.1 State of Hawai‘i

- Department of Accounting and General Services

- Department of Agriculture
- Department of Business, Economic Development & Tourism (DBEDT)
- DBEDT – Energy Division
- DBEDT – Hawai‘i Housing Finance and Development Corporation
- DBEDT – Office of Planning
- Department of Defense
- Department of Education
- Department of Health
- Department of Health—Wastewater Division
- Department of Human Services
- Department of Labor and Industrial Relations
- Department of Land and Natural Resources (DLNR)
- DLNR - State Historic Preservation Division
- Department of Transportation
- Office of Environmental Quality Control
- Office of Hawaiian Affairs
- University of Hawai‘i Water Resources Research Center
- State Representative R. Onishi
- State Senator Kahele

#### 8.2.1.2 Federal

- U.S. Army Corps of Engineers – Regulatory Branch
- U.S. Federal Aviation Administration
- U.S. Federal Emergency Management Agency
- U.S. Fish and Wildlife Service

#### 8.2.1.3 County of Hawai‘i

- Department of Environmental Management
- Department of Parks & Recreation
- Department of Research & Development
- Department of Water Supply
- Fire Department
- Office of Housing and Community Development
- Planning Department
- Police Department
- Department of Public Works
- County Councilmember D. Onishi

#### 8.2.1.4 Private Organizations & Individuals

- Oceanic Time Warner

- Hawaiian Electric Light Co.
- Hawaiian Telecom

## 9 REFERENCES

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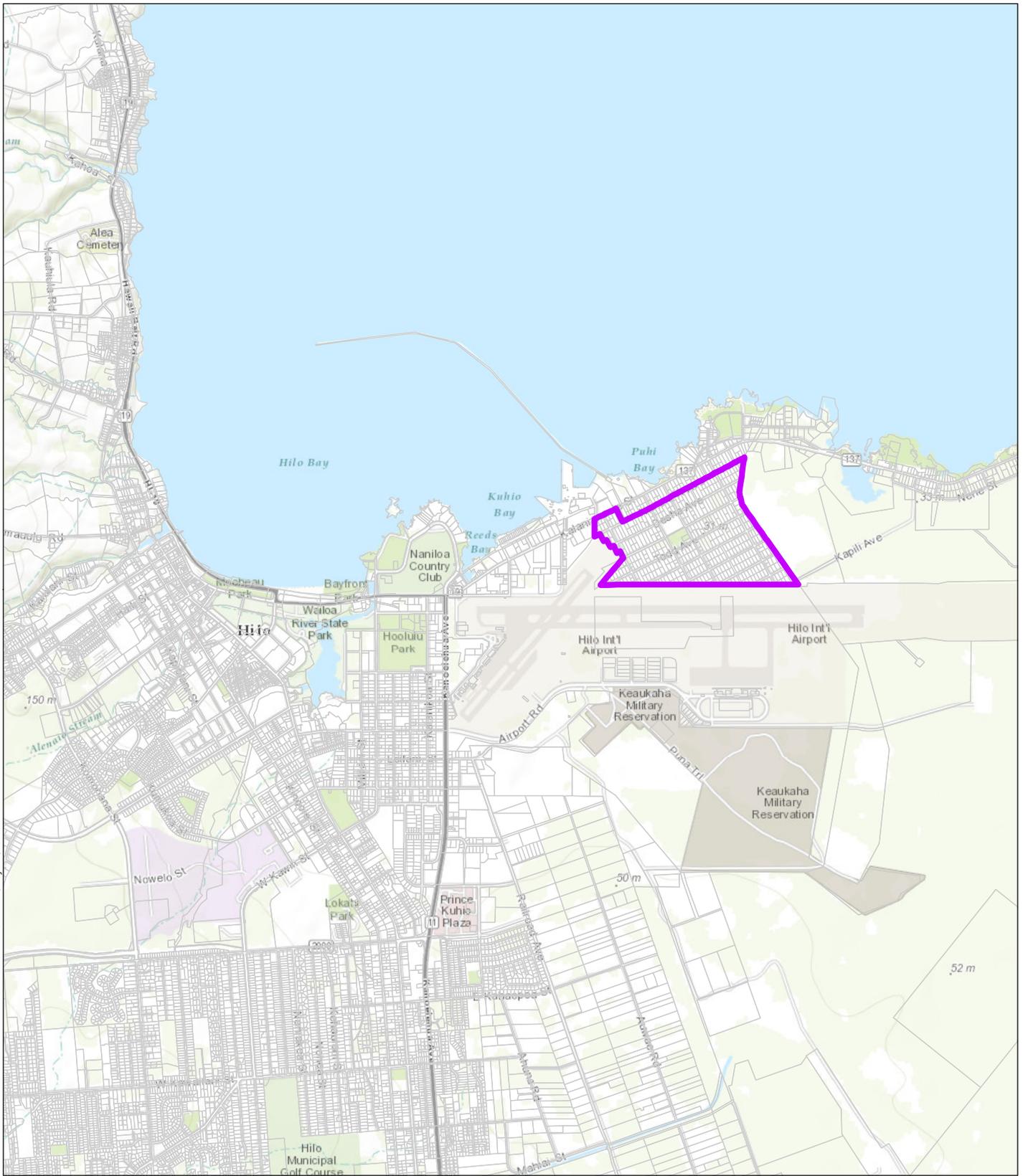
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# Appendix **A**

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## **FIGURES**

- Figure 1. Regional Location Map**
- Figure 2. Keaukaha Tracts Map**
- Figure 3. Original Keaukaha Subdivision Map**
- Figure 4. Tax Map**
- Figure 5. Surrounding Uses**
- Figure 6. Candidate Projects**
- Figure 7. Rainfall, Streams, and Wetlands Map**
- Figure 8. Flood Insurance Rate Map**
- Figure 9. Tsunami Evacuation Map**
- Figure 10. Airport Noise Contour Map**
- Figure 11. Public Facilities and Infrastructure Map**
- Figure 12. Census Geography Map**
- Figure 13. Airport Runway Protection Zone Map**
- Figure 14. State Land Use Districts**
- Figure 15. Special Management Area (SMA) Map**
- Figure 16. DHHL Hawai'i Island Plan Land Use Designation**
- Figure 17. County General Plan**
- Figure 18. County Zoning**



DATE: 11/16/2015

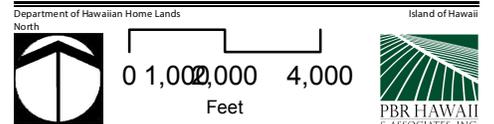
**LEGEND**

 Keaukaha EA Site



Figure 1

**Location Map  
Keaukaha Residential Lots**

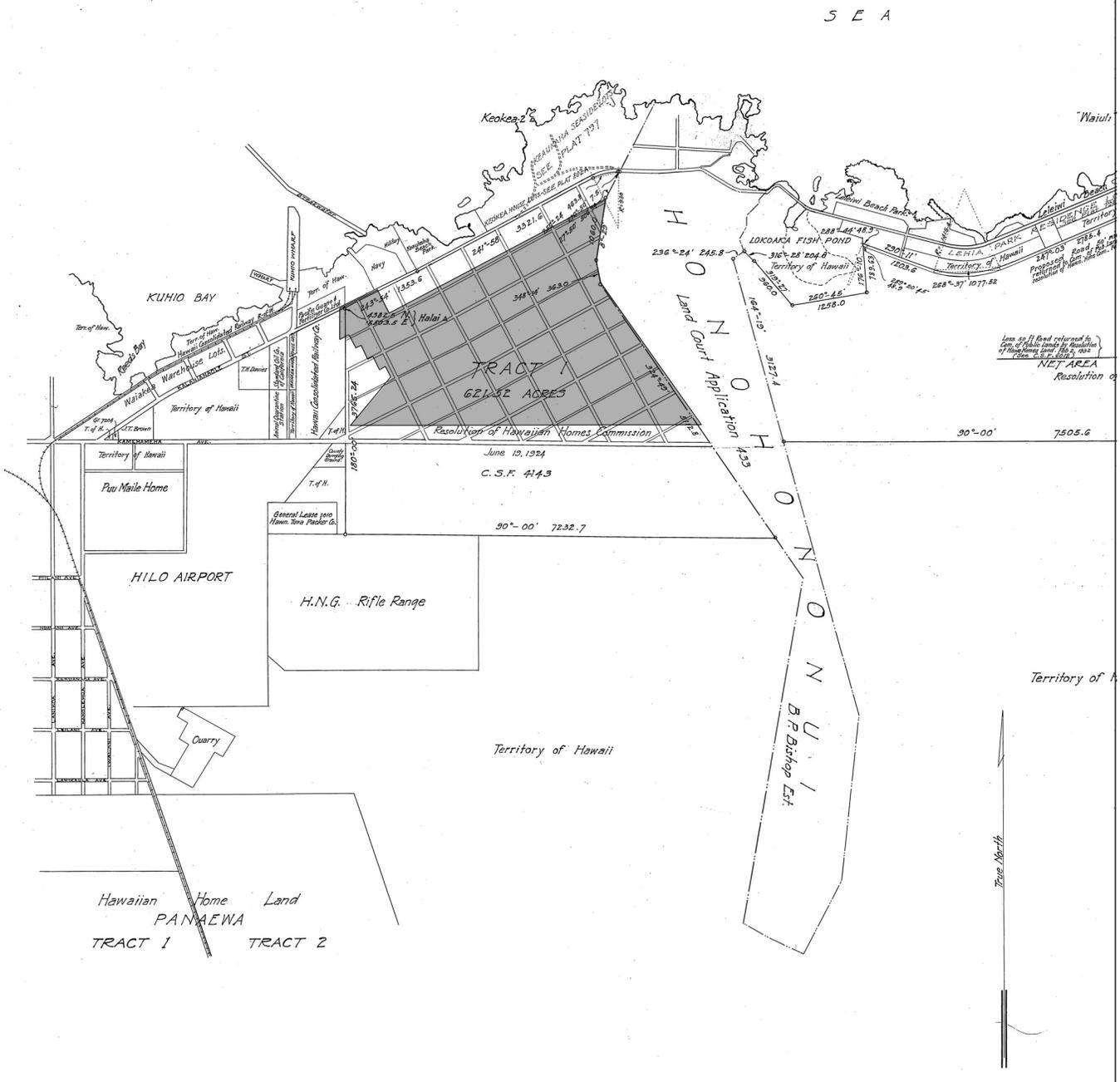


Source: ESRI Online Basemaps.

Disclaimer: This graphic has been prepared for general planning purposes only and should not be used for boundary interpretations or other spatial analysis.

HAWAII TERRITORY SURVEY  
 Robert D. King, Surveyor.  
**HAWAIIAN HOME LAND OF  
 KEAUKAHA, TRACTS 1 AND 2**  
 Waikeka, South Hilo, Hawaii.  
 Scale 1 inch = 1000 feet.  
 Compiled by J.S. Lee - Aug. 1971

Plat 2.0-H.H.



Path: Q:\Statewide\DHHL\ERR\PSD\Hawaii

**LEGEND**

 Project Area

DATE: 11/18/2015

**FIGURE # 2:**

**Keaukaha Tracts Map  
 KEAUKAHA RESIDENCE LOTS**

Department of Hawaiian Home Lands  
 North

Island of Hawaii

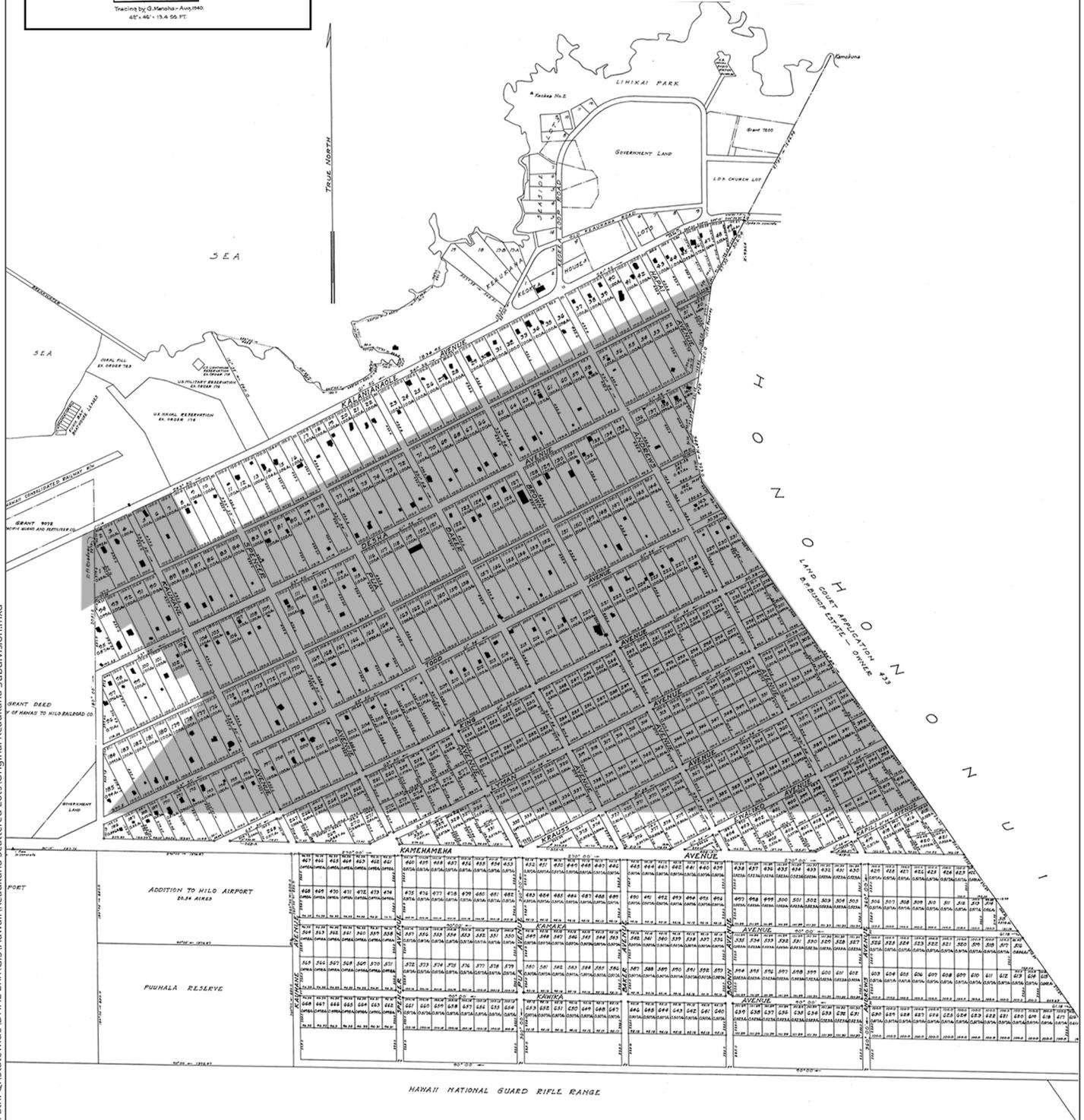


(Not to scale)



Disclaimer: This graphic has been prepared for general planning purposes only and should not be used for boundary interpretations or other spatial analysis.

HAWAIIAN HOMES COMMISSION  
 TERRITORY OF HAWAII  
**KEAUKAHA RESIDENCE LOTS**  
 KEAUKAHA TRACT 1, WAIAKEA, SOUTH HILO, HAWAII  
 Scale 1 Inch = 200 Feet  
 Traced from Government Survey Registered Maps 2723 and 307  
**Plat 21&22-H.H.**  
 Tracing by G. Manohar - Aug 1960  
 457' x 134.56 FT.



PDF - Q:\Statewide\DHHL ERR\PDF\Hawaii Path - Q:\Statewide\DHHL ERR\GIS\Hawaii\Keaukaha Scattered Lots Original Keaukaha Subdivision.mxd

DATE: 11/20/2015

**LEGEND**  
 Project Area

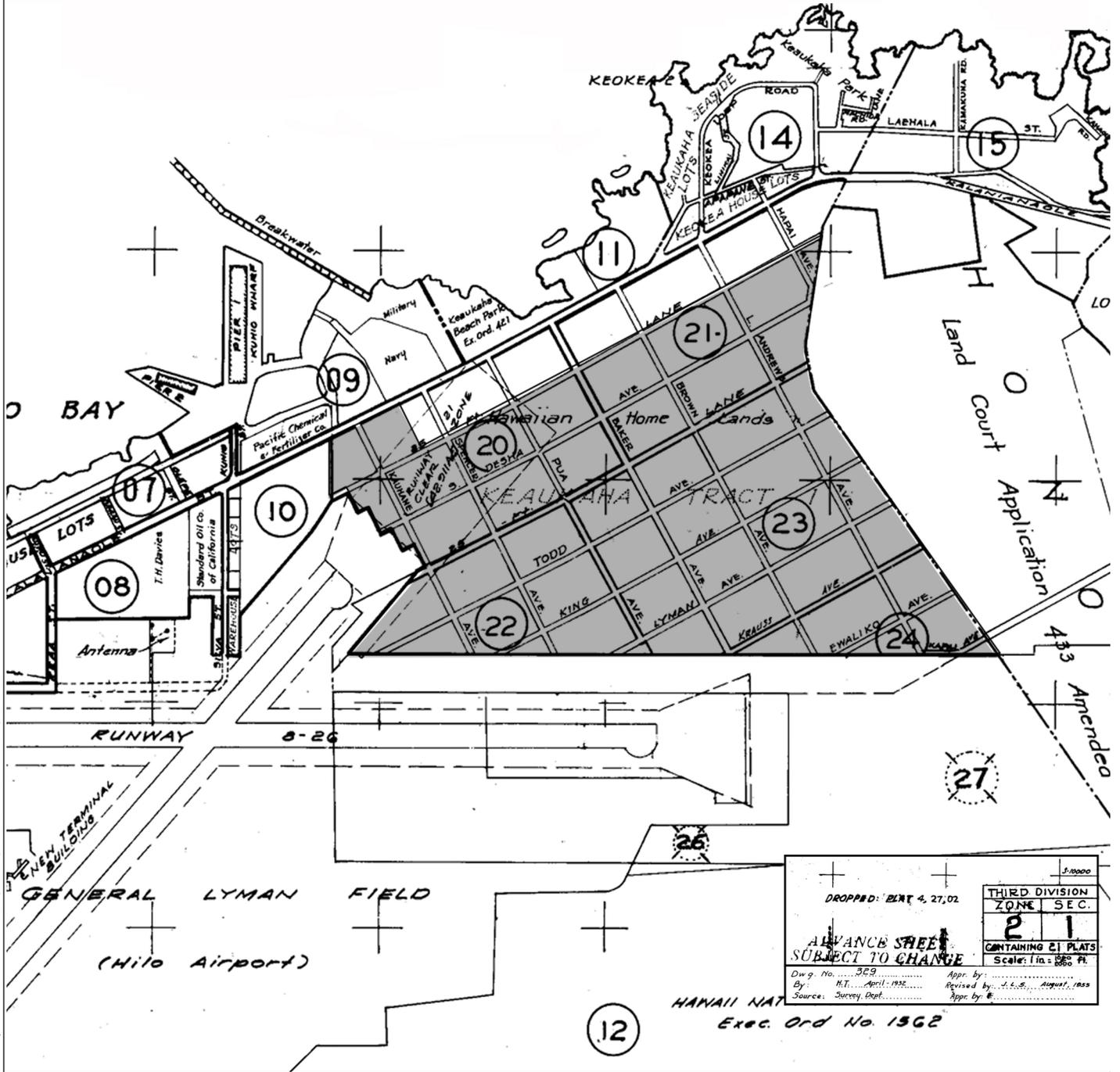
**FIGURE # 3:**  
**Original Keaukaha Subdivision Map**  
**KEAUKAHA RESIDENCE LOTS**

Department of Hawaiian Home Lands  
 North  
  
 (Not to scale)

Island of Hawaii  
  
**PBR HAWAII**  
 & ASSOCIATES, INC.

Disclaimer: This graphic has been prepared for general planning purposes only and should not be used for boundary interpretations or other spatial analysis.

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5,0000  
 DROPPED: BLK 4, 27, 02  
**ADVANCE SHEET**  
**SUBJECT TO CHANGE**  
 Dwg. No. 329  
 By: H.T. April, 1952  
 Source: Survey Dept.  
 Appr. by: [Signature]  
 Revised by: J.S.S. August, 1955  
 Appr. by: [Signature]

THIRD DIVISION	ZONE	SEC.
2	1	
CONTAINING 21 PLATS		
Scale: 1 in. = 330 Ft.		

**LEGEND**  
 Project Area

DATE: 11/20/2015

**FIGURE # 4:**

**Tax Map Key**  
**KEAUKAHA RESIDENCE LOTS**

Department of Hawaiian Home Lands  
 North

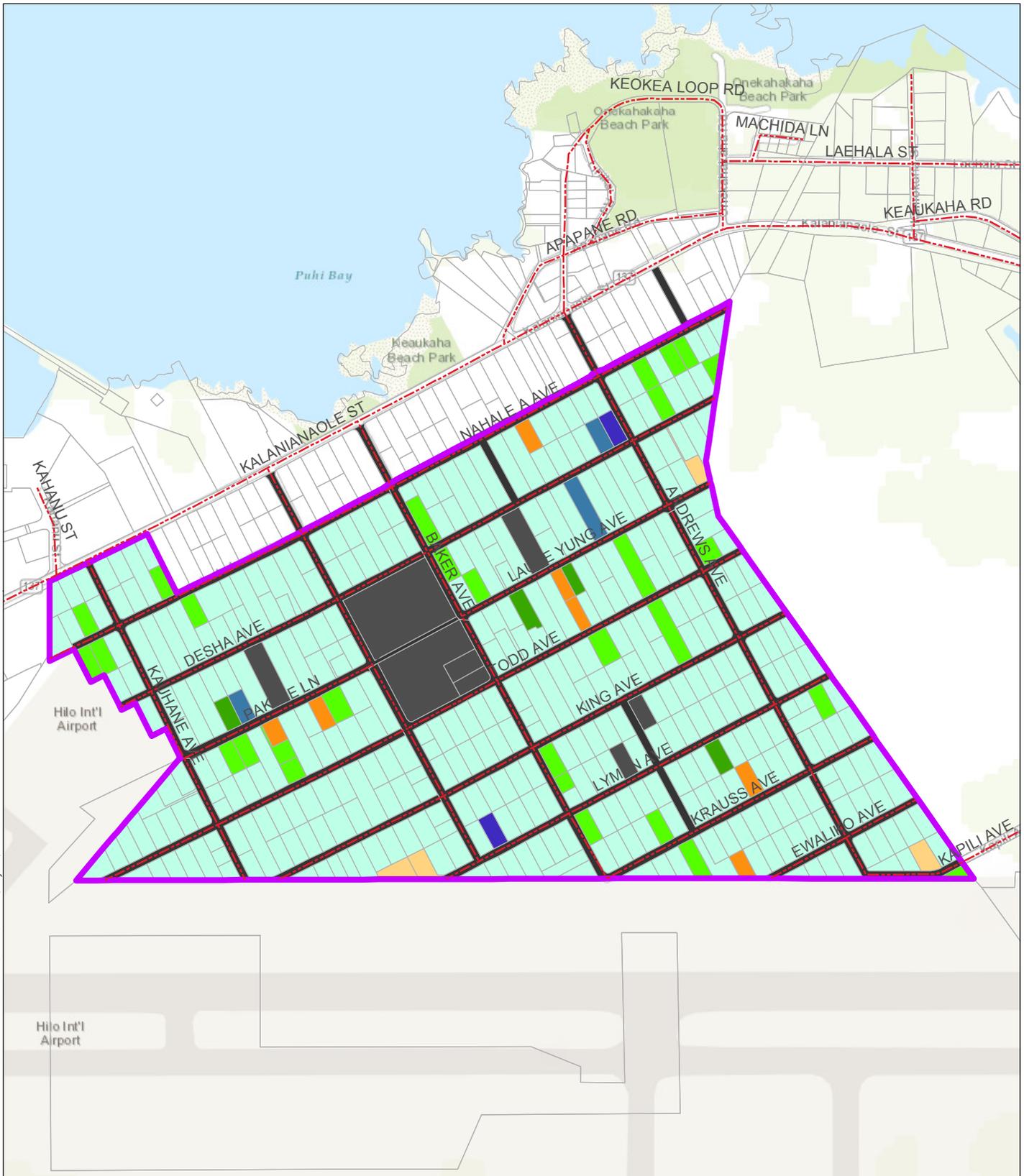
Island of Hawaii  
 PBR HAWAII & ASSOCIATES, INC.

(Not to scale)

Disclaimer: This graphic has been prepared for general planning purposes only and should not be used for boundary interpretations or other spatial analysis.



PDF - Q1  
 Path: C:\Users\rtakemoto\Documents\ArcGIS\DHHL\Hawaii\Project\Keaukaha ERR.mxd



DATE: 11/23/2015

- LEGEND**
- Keaukaha EA Site
  - Program, Status**
  - Rehab/Reconstruction, Potential
  - Package Home Loan, Approved
  - Package Home Loan, Potential
  - Rehab/Subdiv, In Process
  - Subdivision, In Process
  - Vacant lot improvement or subdivision, Potential
  - Vacant lot improvement, In Process
  - Community Facility, excluded
  - road, excluded

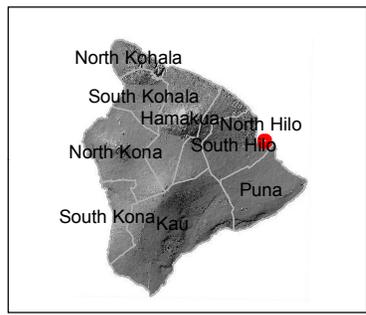
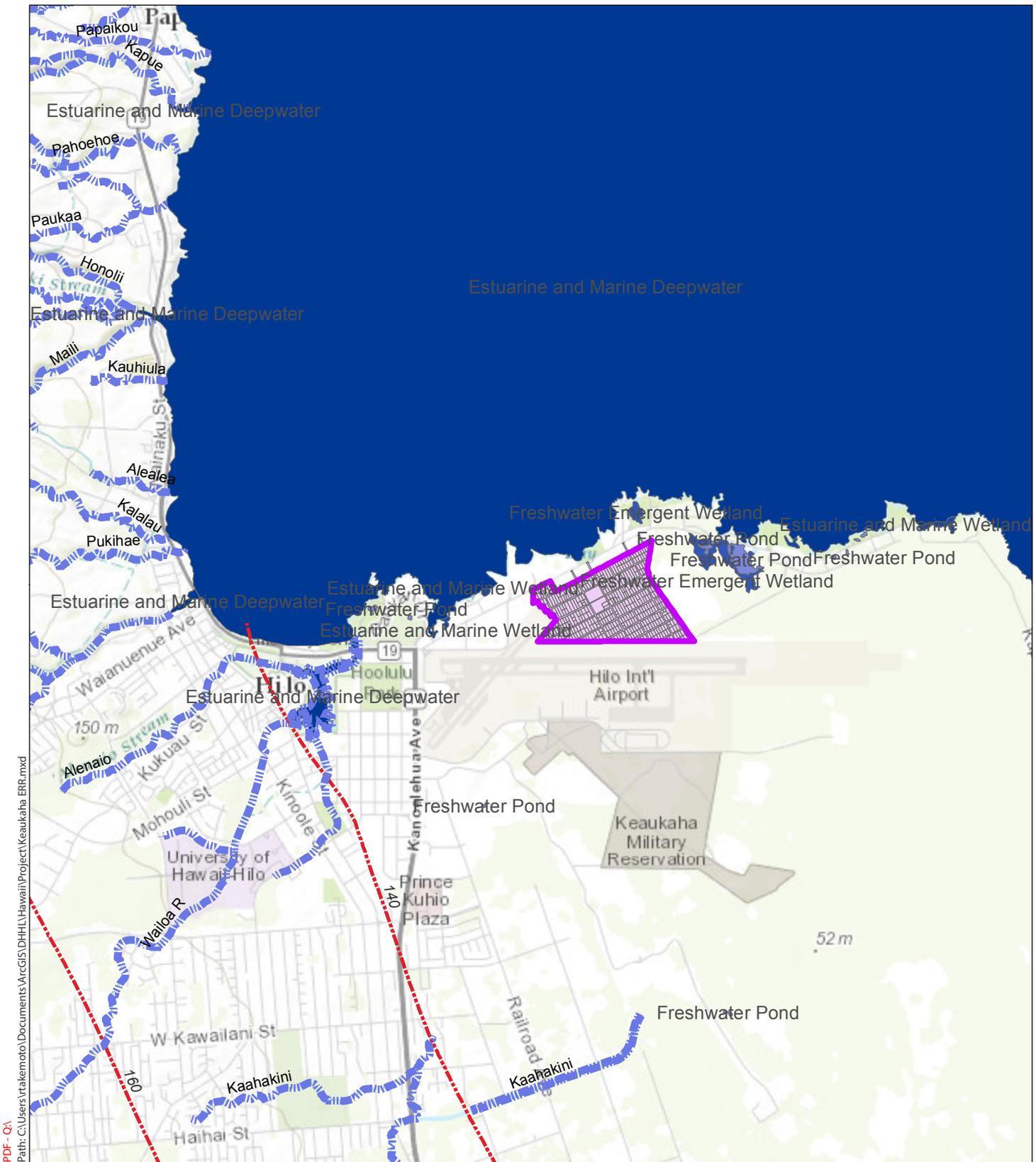


Figure 6  
**Candidate Projects**  
**Keaukaha Residential Lots**

Department of Hawaiian Home Lands  
 North

0 500 1,000  
 Feet

Disclaimer: This graphic has been prepared for general planning purposes only and should not be used for boundary interpretations or other spatial analysis.



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 Path: C:\Users\rtakemoto\Documents\ArcGIS\DHHL\Hawaii\Project\Keaukaha ERR.mxd

DATE: 11/17/2015

**LEGEND**

- Keaukaha EA Site
- Streams
- Annual average rainfall (inches)
- Wetlands 2013**
- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Riverine

Source: ESRI Online Basemaps.

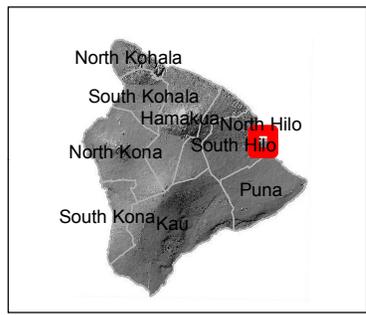
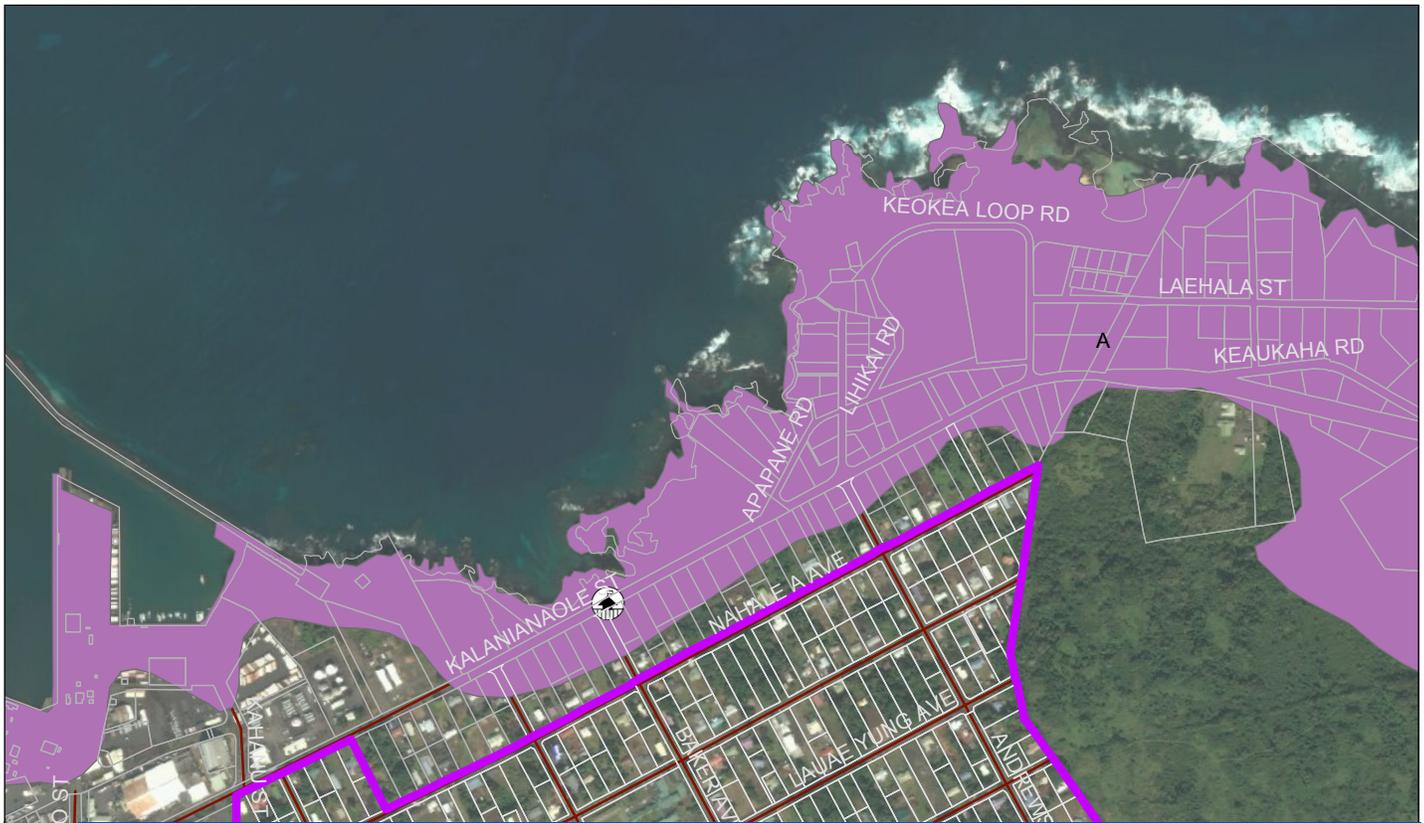


Figure 7  
**Rainfall, Streams & Wetlands**  
**Keaukaha Residential Lots**

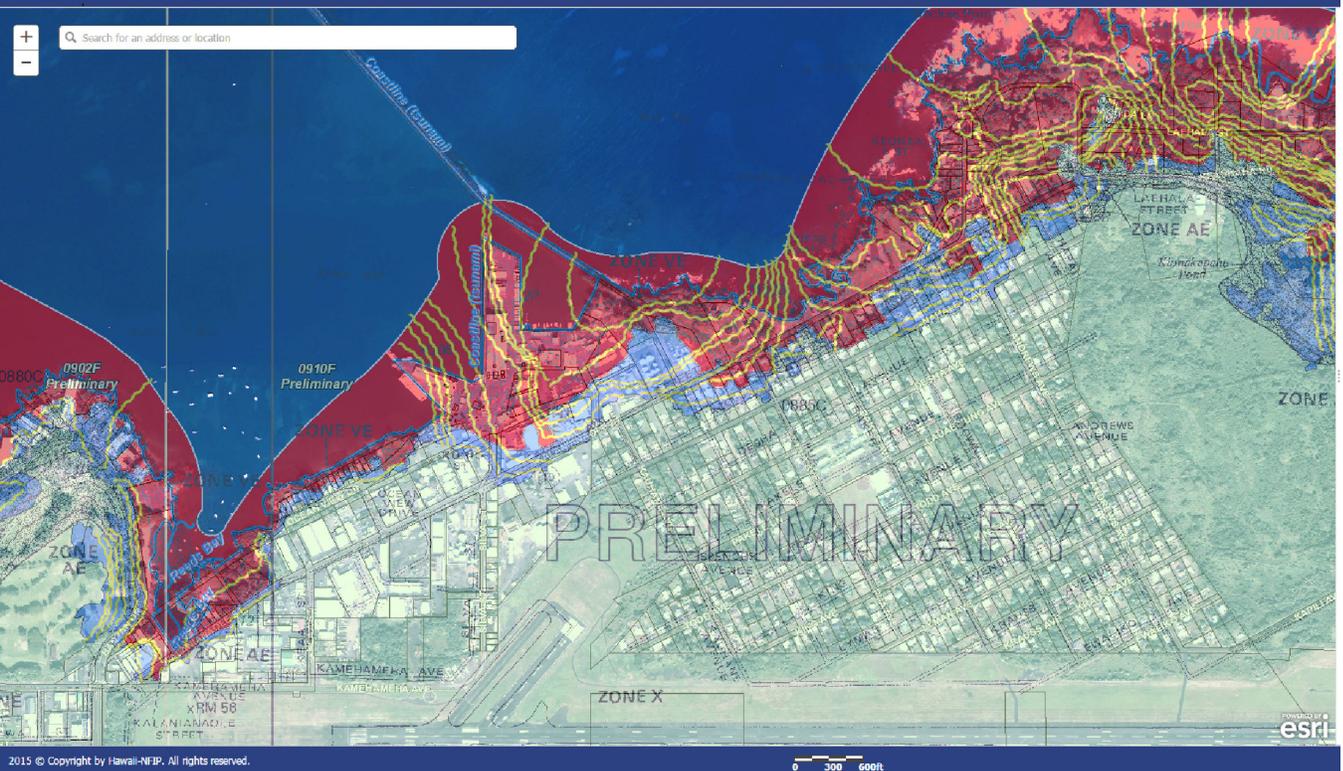
Department of Hawaiian Home Lands  
 North  
  
  
 250,000  
 Feet



Disclaimer: This graphic has been prepared for general planning purposes only and should not be used for boundary interpretations or other spatial analysis.



Slate of Hawaii, Department of Land and Natural Resources  
**Flood Hazard Assessment Tool**

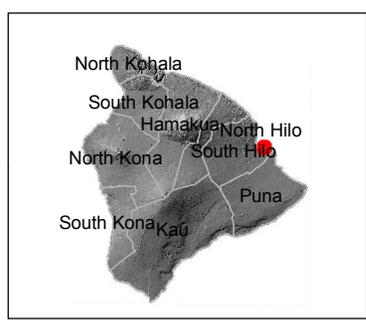


DATE: 11/18/2015

**LEGEND**

- Keaukaha EA Site
- Keaukaha\_EA\_Site
- Historic Register Site
- dfirm\_2007**
- ZONE**
- A
- AE
- AH
- AO
- D
- VE

Source: ESRI Online Basemaps.

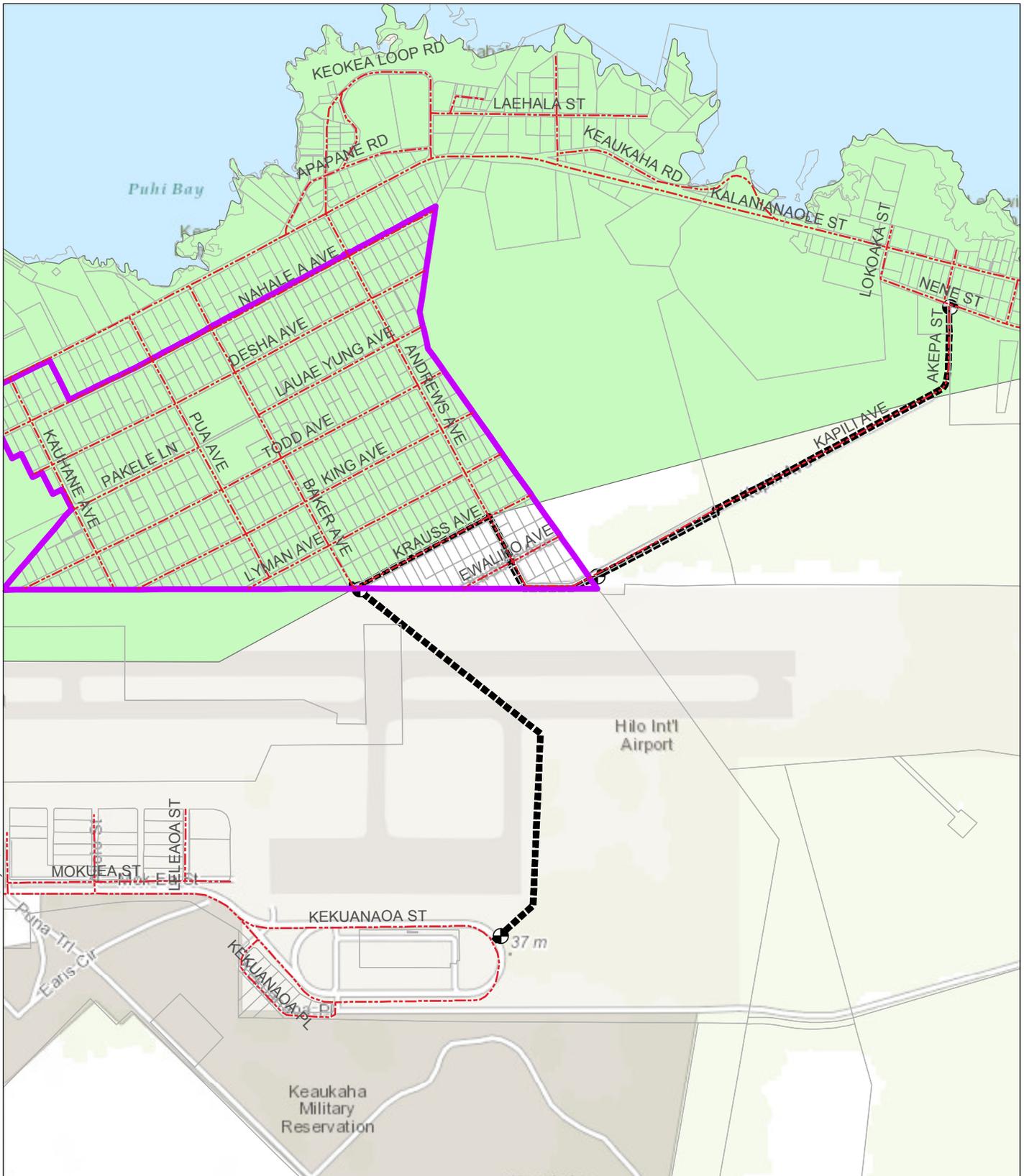


**Figure 8**  
**Existing and Preliminary DFIRM**  
**Keaukaha Residential Lots**

Department of Hawaiian Home Lands  
 North

0 500 1,000  
 Feet

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DATE: 11/18/2015

**LEGEND**

-  Keaukaha EA Site
-  Gates open during evacuation period
-  Tsunami Evacuation Route
-  Tsunami Evacuation Zone

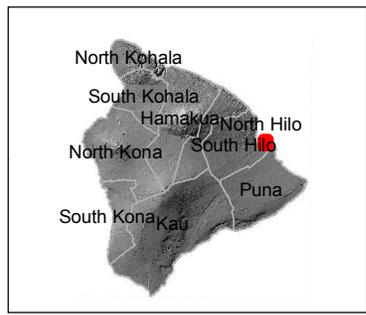


Figure 9  
**Tsunami Evacuation Zone**  
**Keaukaha Residential Lots**

Department of Hawaiian Home Lands  
 North



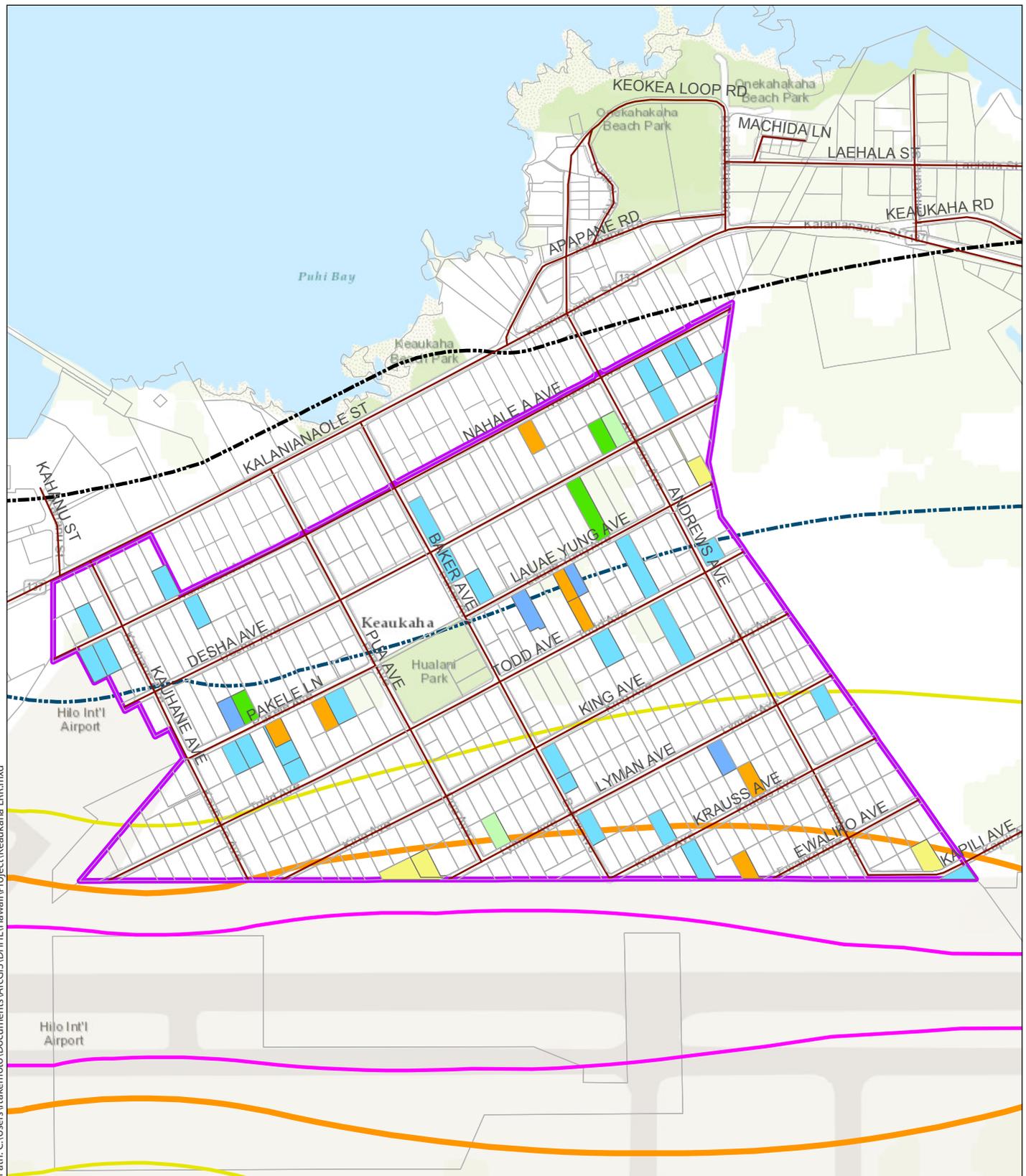
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Source: ESRI Online Basemaps.

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DATE: 11/18/2015

**LEGEND**

- |                                    |                   |
|------------------------------------|-------------------|
| Other Lots                         | Noise_Contours 55 |
| <b>Program, Status</b>             | Noise_Contours 60 |
| Package Home Loan, Approved        | Noise_Contours 65 |
| Package Home Loan, Potential       | Noise_Contours 70 |
| Rehab/Subdiv, In Process           | Noise_Contours 75 |
| Subdivision, In Process            |                   |
| Vacant lot improvement, In Process |                   |
| Vacant lot improvement, Potential  |                   |
| Keaukaha EA Site                   |                   |

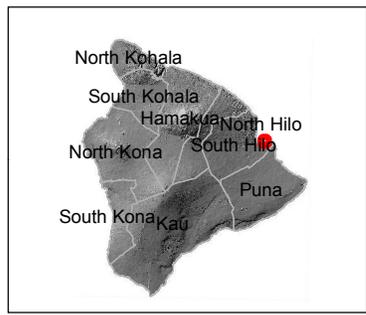


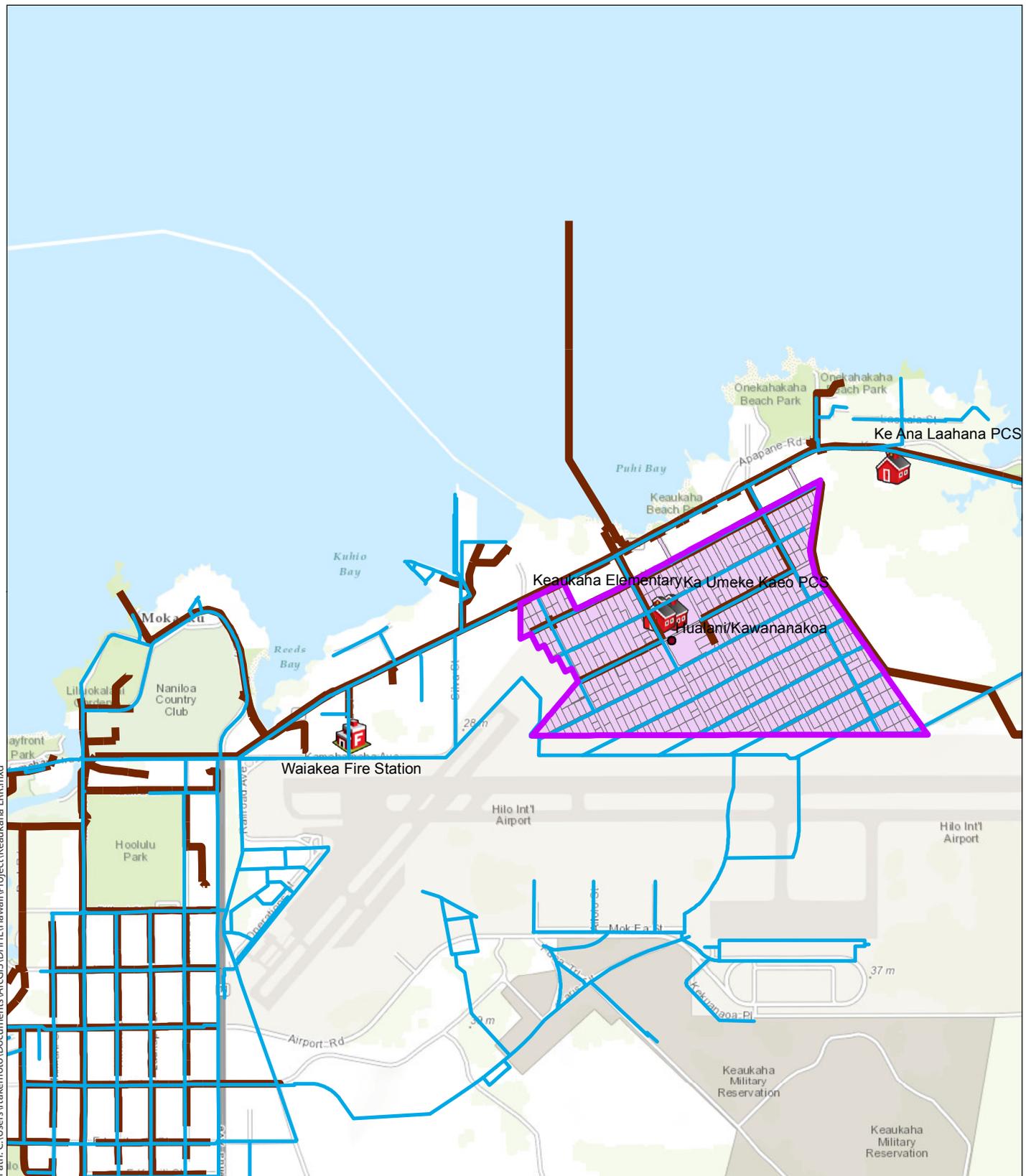
Figure 10  
**Hilo Airport Noise Exposure Map**  
**Keaukaha Residential Lots**

Department of Hawaiian Home Lands  
 North

0 500 1,000  
 Feet

Source: ESRI Online Basemaps.  
 Disclaimer: This graphic has been prepared for general planning purposes only and should not be used for boundary interpretations or other spatial analysis.

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 Path: C:\Users\vtakemoto\Documents\ArcGIS\DHHL\Hawaii\Project\Keaukaha ERR.mxd



DATE: 11/17/2015

- LEGEND**
- Keaukaha EA Site
  - Hilo-Paukaa water system
  - Hawaii Island Sewer Mains
  - Fire Stations
  - public schools

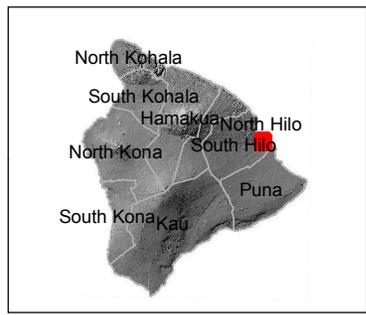


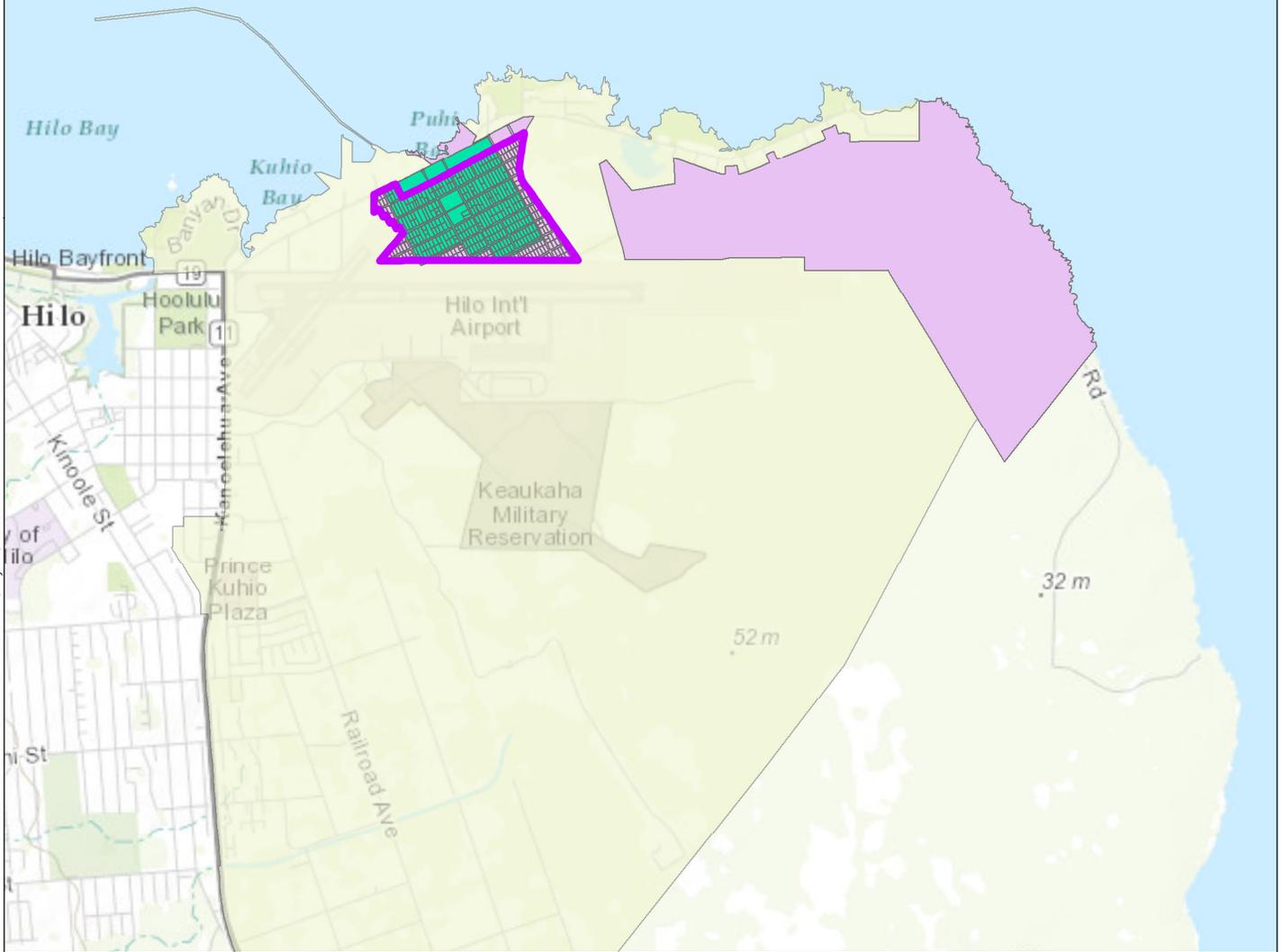
Figure 11  
**Public Facilities & Infrastructure**  
**Keaukaha Residential Lots**

Department of Hawaiian Home Lands  
 North

0256001,000  
 Feet

Source: ESRI Online Basemaps.  
 County Community Parks  
 Disclaimer: This graphic has been prepared for general planning purposes only and should not be used for boundary interpretations or other spatial analysis.

Pacific  
Ocean



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PDF - Q1

DATE: 11/17/2015

**LEGEND**

-  Keaukaha EA Site
-  Censusblock 150010206003
-  Census DHHL Keaukaha
-  Census Tract 206

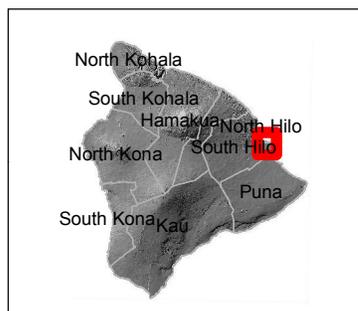
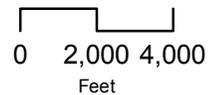


Figure 12

**Census Geography Map**  
**Keaukaha Residential Lots**

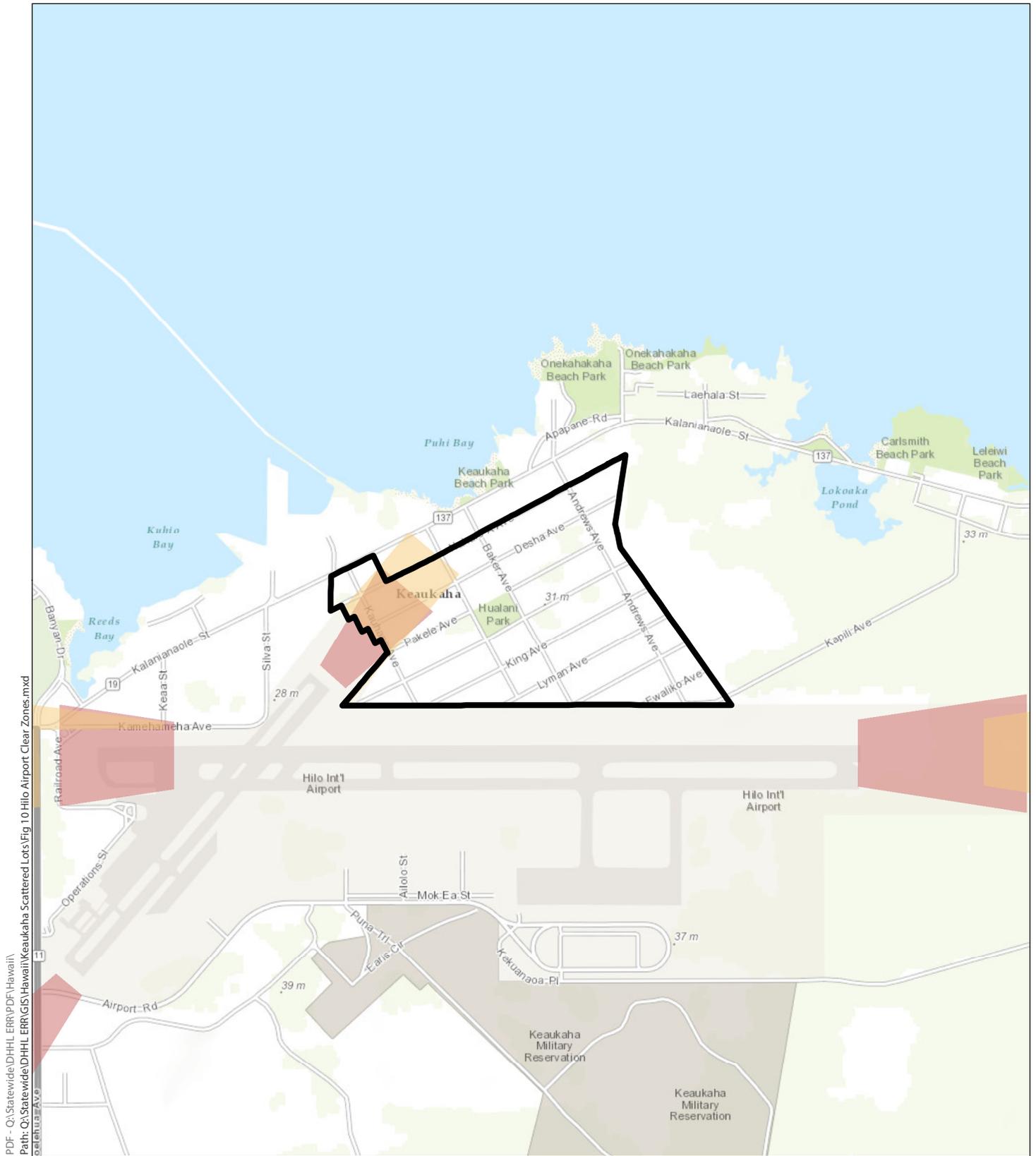
Department of Hawaiian Home Lands

Island of Hawaii



Source: ESRI Online Basemaps.

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PDF - C:\Statewide\DHHL ERR\PDF\Hawaii\ Path: C:\Statewide\DHHL ERR\GIS\Hawaii\Keaukaha Scattered Lots\Fig 10 Hilo Airport Clear Zones.mxd

DATE: 11/24/2015

**LEGEND**

-  Project Area
-  Clear zone
-  Existing easement/future acquisition

**FIGURE # 13:**

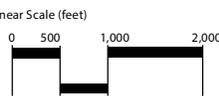
**Hilo Airport Clear Zones  
KEAUKAHA RESIDENCE LOTS**

Department of Hawaiian Home Lands Island of Hawaii

North

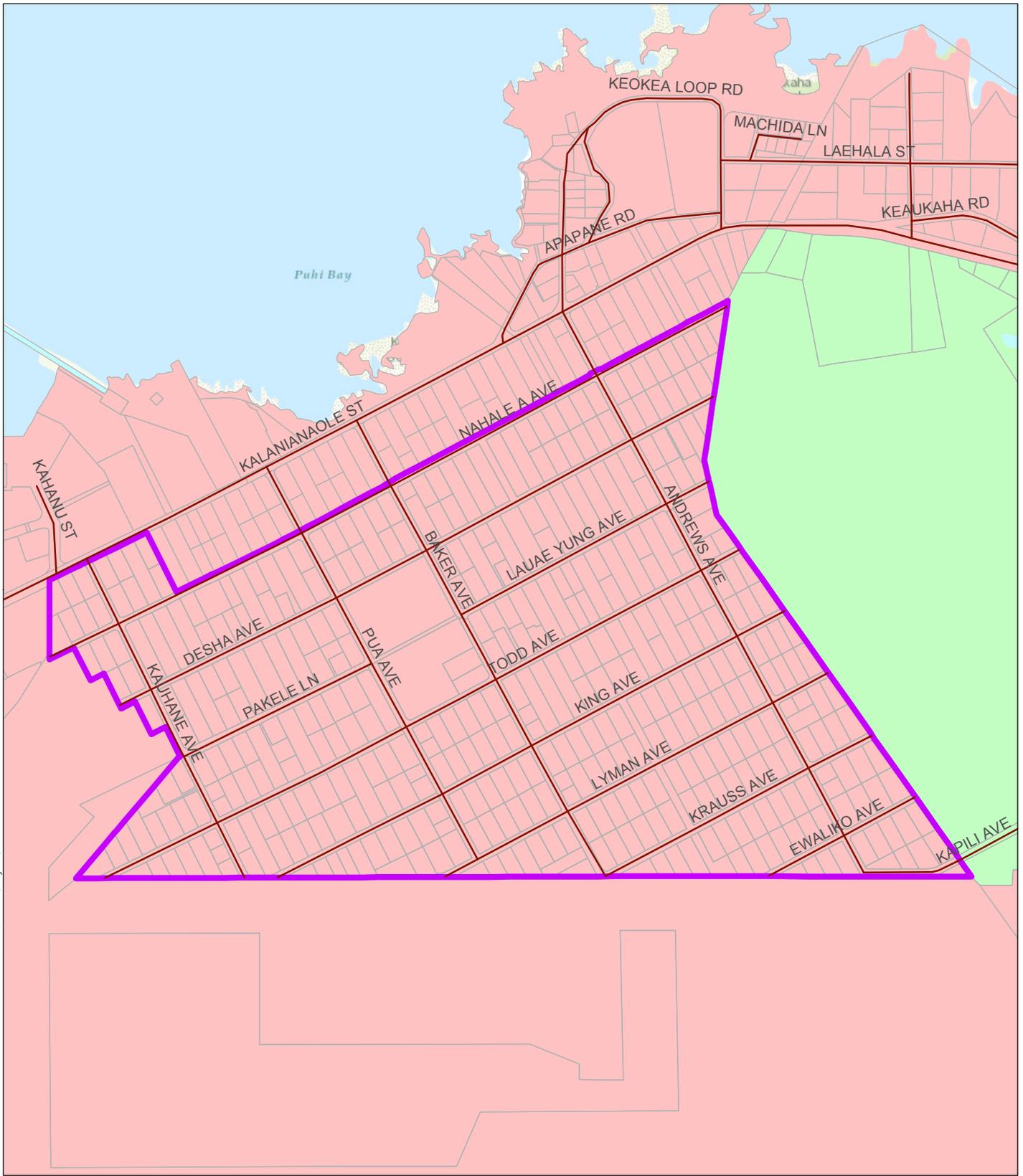


Linear Scale (feet)




Source: ESRI online basemap. Hawaii DOT, 2002.

Disclaimer: This graphic has been prepared for general planning purposes only and should not be used for boundary interpretations or other spatial analysis.



DATE: 11/18/2015

**LEGEND**

-  Keaukaha EA Site
-  Agricultural
-  Conservation
-  Rural
-  Urban

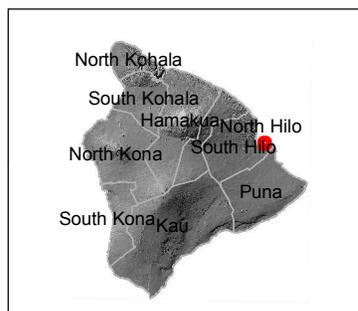


Figure 14

**State Land Use Districts**  
**Keaukaha Residential Lots**

Department of Hawaiian Home Lands

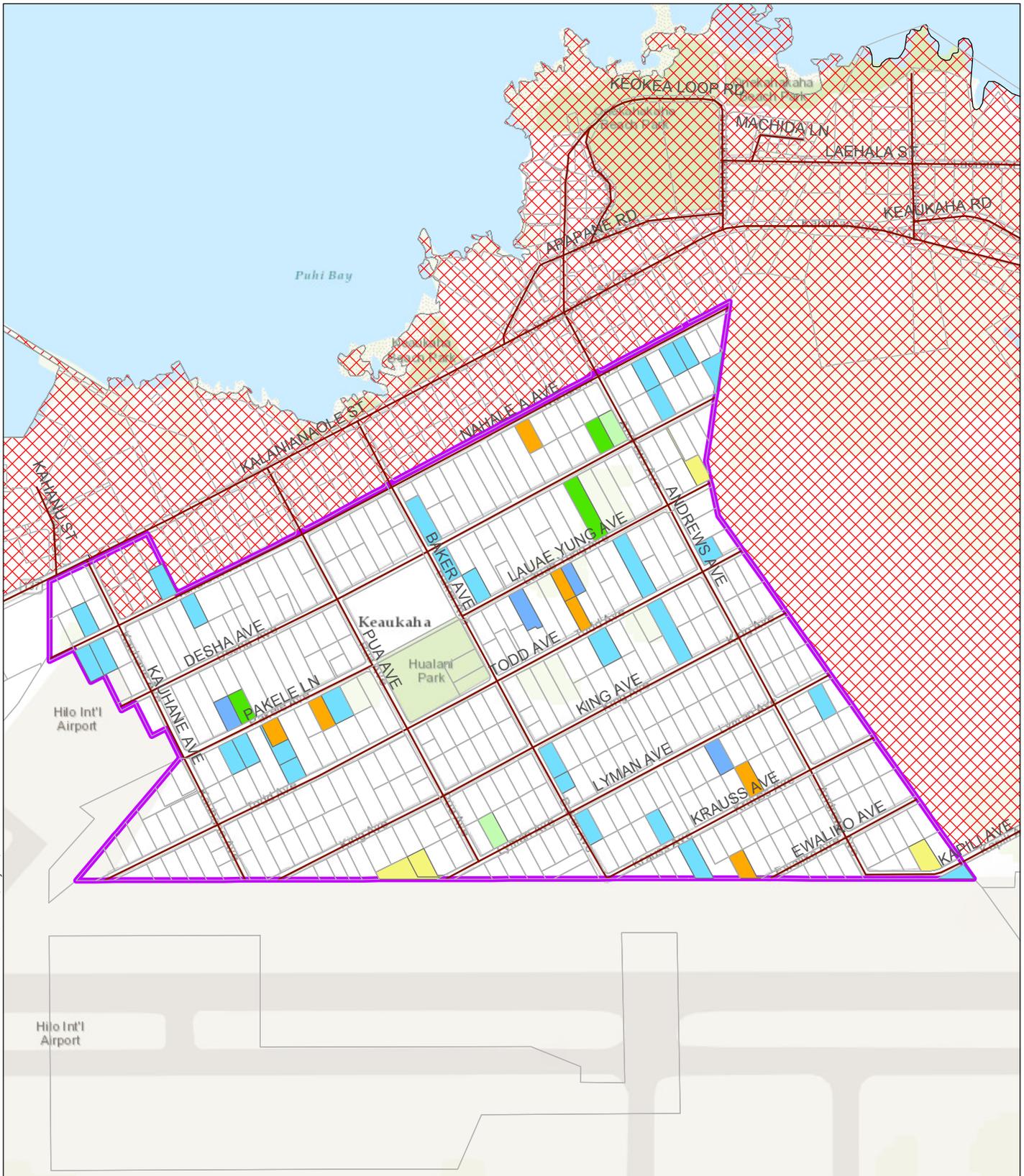


0 500 1,000  
Feet



Source: ESRI Online Basemaps.

Disclaimer: This graphic has been prepared for general planning purposes only and should not be used for boundary interpretations or other spatial analysis.



DATE: 11/18/2015

**LEGEND**

- Other Lots
- Program, Status**
- Package Home Loan, Approved
- Package Home Loan, Potential
- Rehab/Subdiv, In Process
- Subdivision, In Process
- Vacant lot improvement, In Process
- Vacant lot improvement, Potential
- Keaukaha EA Site
- Keaukaha\_EA\_Site
- SMA

Source: [ESRI Online Basemaps](#).

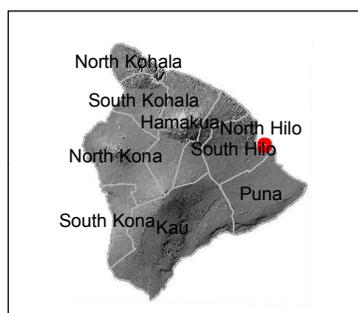
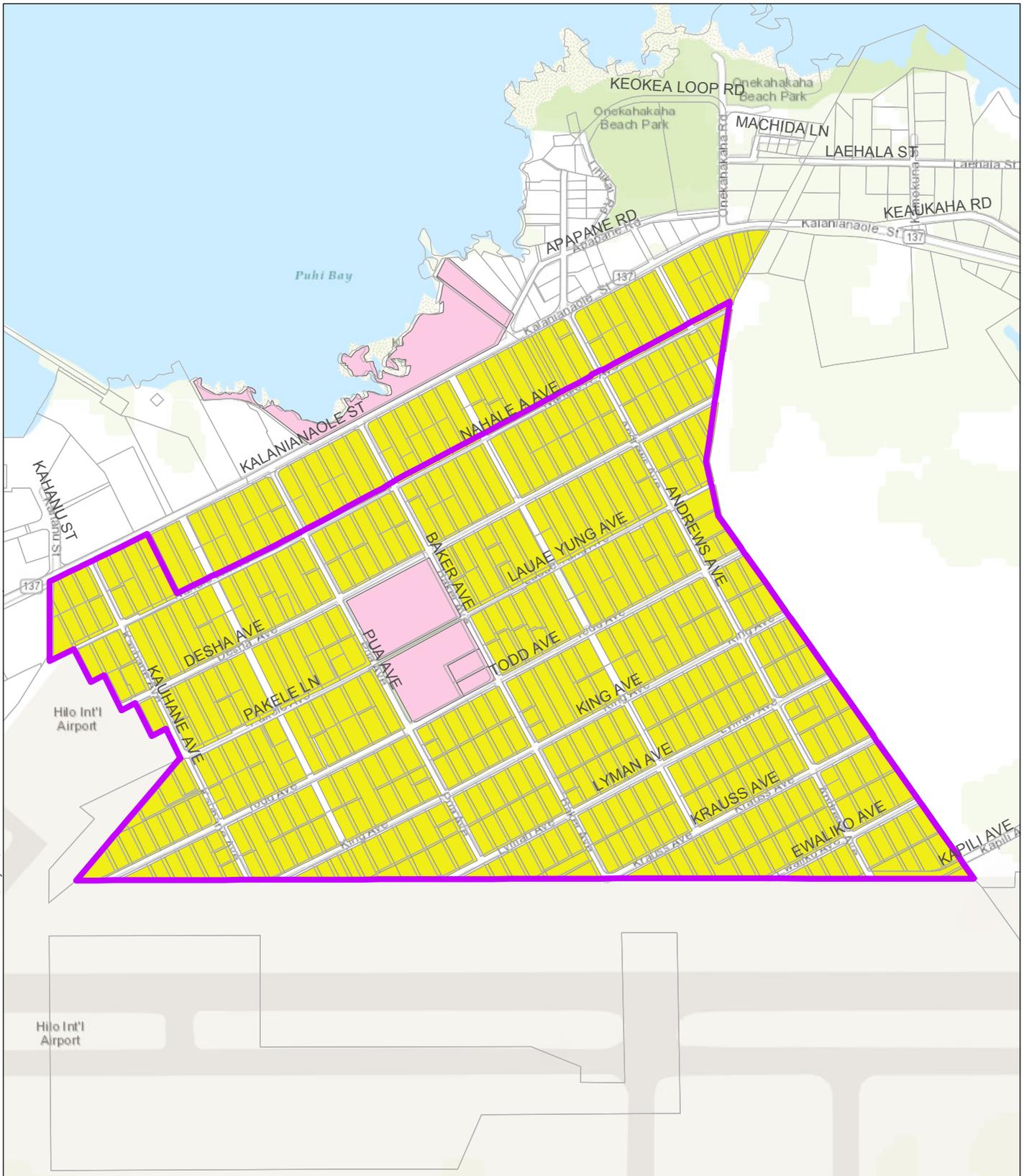


Figure 15

**Special Management Area (SMA)  
 Keaukaha Residential Lots**

Department of Hawaiian Home Lands  
 North

0 500 1,000  
 Feet



DATE: 11/18/2015

**LEGEND**

- |  |   |
|--|---|
|  Keaukaha EA Site         |  Commercial          |
| <b>DHHL Designations</b>   |  Industrial          |
|  Residential              |  General Agriculture |
|  Subsistence Agriculture  |  Special District    |
|  Supplemental Agriculture |  Conservation        |
|  Pastoral                 |  Undesignated        |
|  Community Facility       |   |

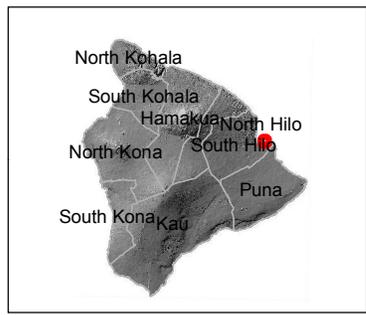


Figure 16  
**DHHL Land Use Designations  
 Keaukaha Residential Lots**

Department of Hawaiian Home Lands  
 North

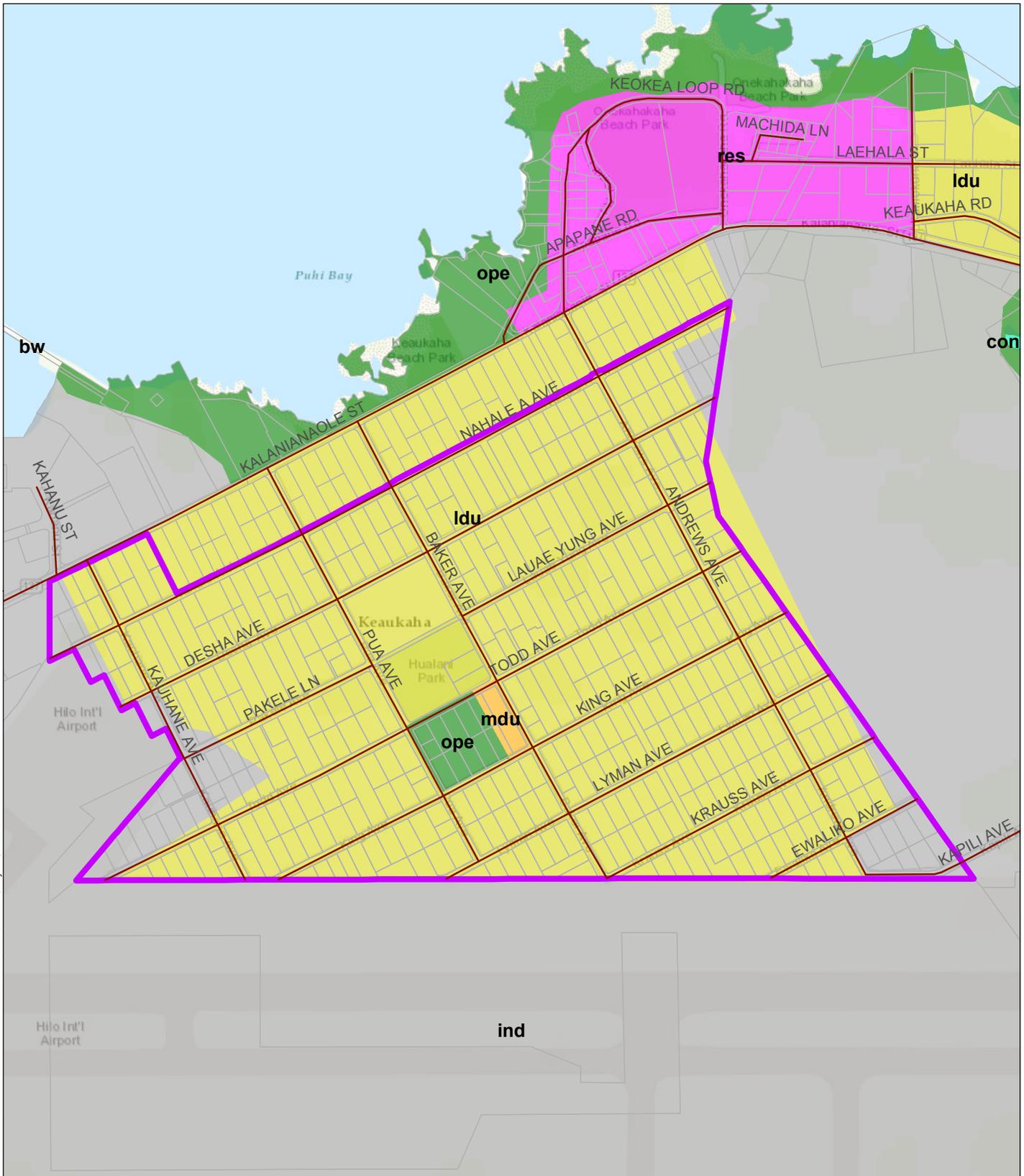


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Source: ESRI Online Basemaps.

Disclaimer: This graphic has been prepared for general planning purposes only and should not be used for boundary interpretations or other spatial analysis.



DATE: 11/18/2015

**LEGEND**

- |                       |                     |
|-----------------------|---------------------|
| Keaukaha EA Site      | Important Ag. Lands |
| (breakwater)          | (pond)              |
| Conservation          | Resort Node         |
| Extensive Agriculture | Rural               |
| High Density Urban    | Resort              |
| Industrial            | Urban Expansion     |
| Low Density Urban     | University Use      |
| Medium Density Urban  | Orchards            |
| Open Area             |                     |

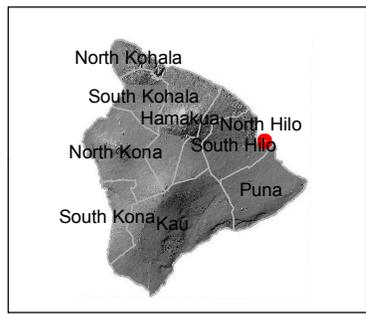


Figure 17  
**General Plan LUPAG Map**  
**Keaukaha Residential Lots**

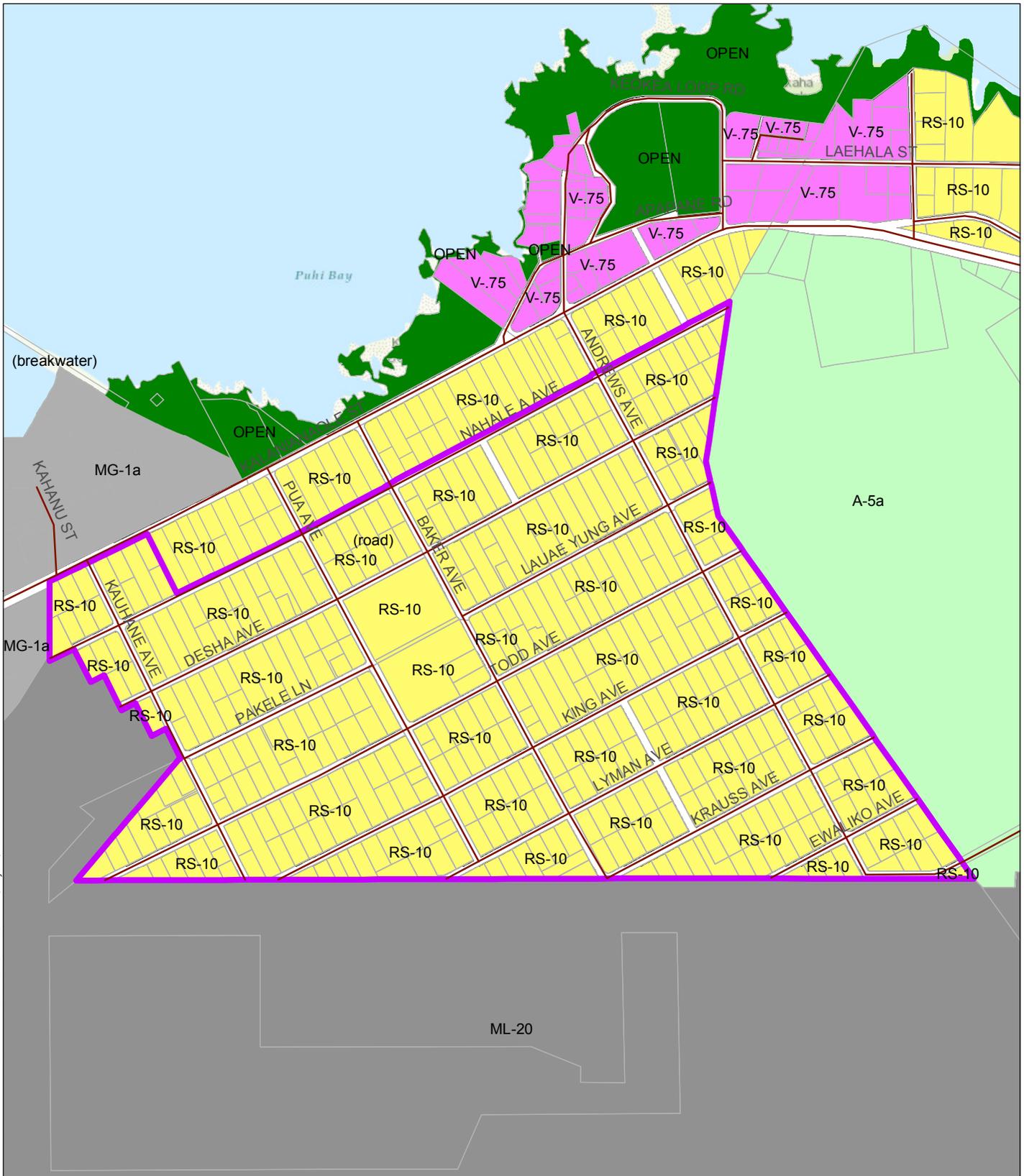
Department of Hawaiian Home Lands  
 North

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PBR HAWAII & ASSOCIATES, INC.

Source: ESRI Online Basemaps.

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DATE: 11/18/2015

- LEGEND**
- Keaukaha EA Site
  - (breakwater)
  - (road)
  - A-5a
  - MG-1a
  - ML-20
  - OPEN
  - RS-10
  - V-.75

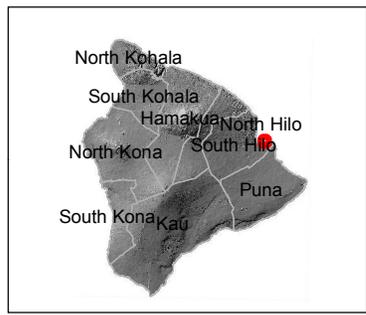


Figure 18  
**County Zoning**  
**Keaukaha Residential Lots**

Department of Hawaiian Home Lands  
 North

0 500 1,000  
 Feet

PBR HAWAII  
 & ASSOCIATES, INC.

## Appendix **B**

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### **PRE-ASSESSMENT CONSULTATION**

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**STATE OF HAWAII**  
**DEPARTMENT OF TRANSPORTATION**  
**AIRPORTS DIVISION**  
400 RODGERS BOULEVARD, SUITE 700  
HONOLULU, HAWAII 96819-1880

FORD N. FUCHIGAMI  
DIRECTOR

Deputy Directors  
JADE T. BUTAY  
ROSS M. HIGASHI  
EDWIN H. SNIFFEN  
DARRELL T. YOUNG

IN REPLY REFER TO:  
**AIR-EP**  
**15.0053**

June 29, 2015

Ms. Catie Cullison  
PBR Hawaii  
1001 Bishop Street, Suite 650  
Honolulu, Hawaii 96813

Dear Ms. Cullison:

Subject: Consultation for Single-Family Rehabilitation and New Construction Projects Located  
In Keaukaha, Island and County of Hawai'i

We have reviewed the proposed projects have the following comments:

1. In accordance with the Hilo International Airport Part 150 Noise Exposure Map Update, December 2012, Appendix A, Table A-3, State of Hawaii Department of Transportation Land Use Compatibility With Yearly Day-Night Average Sound Levels, residences located in the 60 DNL noise contour or higher based on the 2013 Noise Exposure Map (NEM) should have Noise Level Reduction (NLR) measures incorporated into building design for improvements and/or new construction to achieve interior levels of 45 DNL or less. Therefore, we recommend that lots with Tax Map Key Nos. (3) 2-1-0230040, (3) 2-1-020-081, (3) 2-1-023-171 and (3) 2-1-023-170, include noise abatement measures in design and construction.
2. The use of the Federal Aviation Administration (FAA) report, DOT/FAA/PP/92-5, Guidelines for the Sound Insulation of Residences Exposed to Aircraft Operations, may assist you when including noise abatement measures for the subject projects. This report is available from the FAA website: <http://www.faa.gov/>
3. If photovoltaic (PV) systems are being considered, then you should be aware that photovoltaic (PV) systems, located in or near the approach path of aircraft into an airport, can create a hazardous condition for a pilot due to possible glint and glare reflected from the PV array. The following website may assist with preparation of a glint and glare analysis: [www.sandia.gov/glare](http://www.sandia.gov/glare)

4. A Federal Aviation Administration (FAA) Form 7460-1 "Notice of Proposed Construction or Alteration", in accordance with Code of Federal Regulations, Title 14, Part 77.9, should be submitted if construction of alteration is within 20,000 feet of a public use or military airport which exceeds a 100:1 surface from any point on the runway of each airport with its longest runway more than 3,200 feet. In addition, a FAA Form 7460-1 should be submitted for any PV installation, or tall equipment, such as cranes, that may be used during construction. This form and criteria for submittal can be found at the following website:

<https://oeaaa.faa.gov/oeaaa/external/portal.jsp>

If a FAA Form 7460-1 is filed, we request a copy by provided to us when they receive the FAA determination.

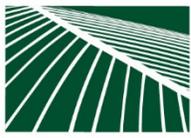
Thank you for the opportunity to provide comments. Please contact Mr. David Hein, P.E., Hawaii District Engineer at (808) 987-3191 or Ms. Lynette Kawaoka, Planner at (808) 838-8818, if you have further questions.

Sincerely,



ROSS M. HIGASHI  
Deputy Director – Airports

c: Ms. Niniau K. Simmons, DHHL  
Mr. Ronnie V. Simpson, Federal Aviation Administration



# PBR HAWAII

& ASSOCIATES, INC.

January 13, 2016

**PRINCIPALS**

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**HILO OFFICE**  
1719 Haleloke Street  
Hilo, Hawai'i 96720-1553  
Tel/Cel: (808) 315-6878

Mr. Ross Higashi, Deputy Director—Airports  
State of Hawai'i  
Department of Transportation, Airports Division  
400 Rodgers Boulevard, Suite 700  
Honolulu, HI 96819-1880

RE: Consultation for Single-Family Rehabilitation and New Construction Projects  
Located in Keaukaha, Island and County of Hawai'i—Reply to  
Correspondence AIR-EP 15.0053 dated June 29, 2015

Dear Mr. Higashi:

We request your concurrence or guidance for the following actions based on your letter on the subject project dated June 29, 2015:

1. **Noise Abatement.** We have included noise abatement measures pursuant to your recommended Guidelines for the Sound Insulation of Residences Exposed to Aircraft Operations. We understand that DOT has funding for these noise abatement measures necessitated by airport noise exposure exceeding 65 Ldn (see Exhibit A noise contour map). We believe these funds apply to existing homes, but are inquiring whether new construction also qualify since these noise abatement mandates are caused by the airport and these homestead lots were created before the airport. We hereby request guidance on how to request payment or reimbursement, or for the State to compensate in some way for the additional cost.
2. **Glint and Glare from Photovoltaic (PV) Systems.** DHHL has a standard policy to install PV systems on all homes built by DHHL. The glint/glare analysis tool you referred us to in the letter required a password and could not be accessed. However, according to FAA interim policy 78 FR 63276, "Solar energy systems located on an airport that is not federally-obligated or located outside the property of a federally-obligated airport are not subject to this policy." If this policy has been superseded by a more recent policy, please let us know if DHHL is prohibited from installing PV systems and the extent of this restricted area.
3. **Notice of Construction.** Please provide more specific guidance whether DHHL is required to file a Notice of Construction or Alteration with FAA based on the height of the proposed homes (not exceeding 20'), location relative to the runways, or PV installation. Tall cranes or other equipment will not be used during construction.

Mr. Ross Higashi, Deputy Director- Airports

January 13, 2016

Page 2

4. **Runway Clear Zone.** Please confirm whether the attached map (Exhibit B) accurately delineates the runway protection zones. The map shows that the protection zone for Runway 3/21 affects several lots within the Keaukaha subdivision. Please advise whether there are any restrictions for residential construction or rehabilitation within this zone.

If you have any questions, please contact me at [rtakemoto@pbrhawaii.com](mailto:rtakemoto@pbrhawaii.com) or 808-521-5631.

Yours truly,

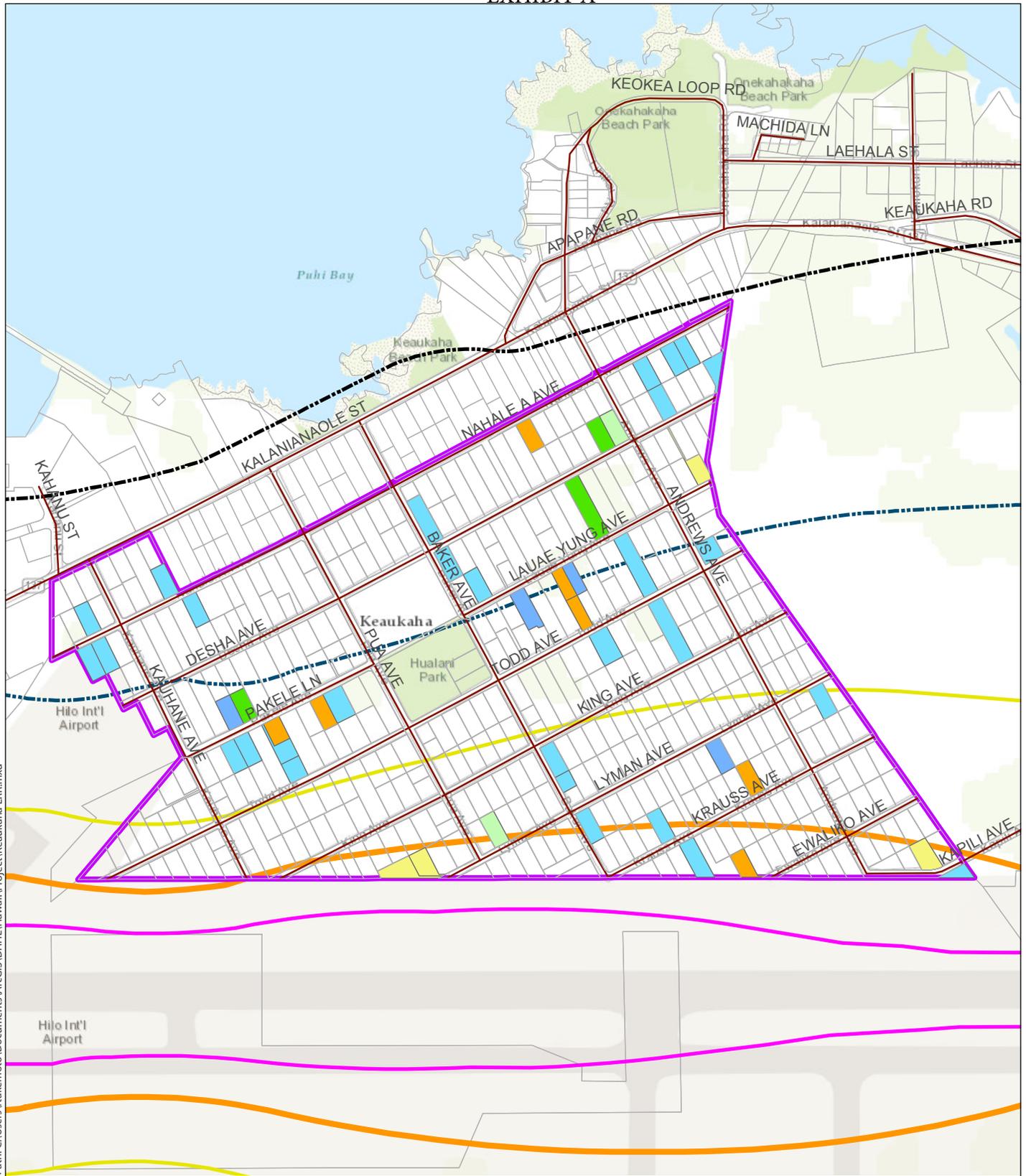


Roy Takemoto, Hilo Office

Cc: DHHL

Exhibits:

- A. Noise Contour Map
- B. Hilo Airport Runway Protection Zones

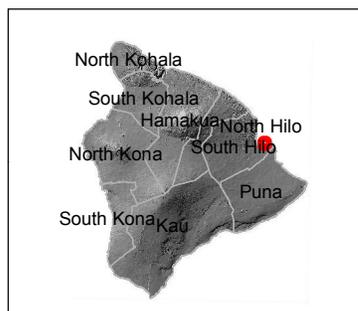


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DATE: 11/18/2015

**LEGEND**

- |                                    |                   |
|------------------------------------|-------------------|
| Other Lots                         | Noise_Contours 55 |
| <b>Program, Status</b>             | Noise_Contours 60 |
| Package Home Loan, Approved        | Noise_Contours 65 |
| Package Home Loan, Potential       | Noise_Contours 70 |
| Rehab/Subdiv, In Process           | Noise_Contours 75 |
| Subdivision, In Process            |                   |
| Vacant lot improvement, In Process |                   |
| Vacant lot improvement, Potential  |                   |
| Keaukaha EA Site                   |                   |



**Hilo Airport Noise Exposure Map  
 Keaukaha Residential Lots**

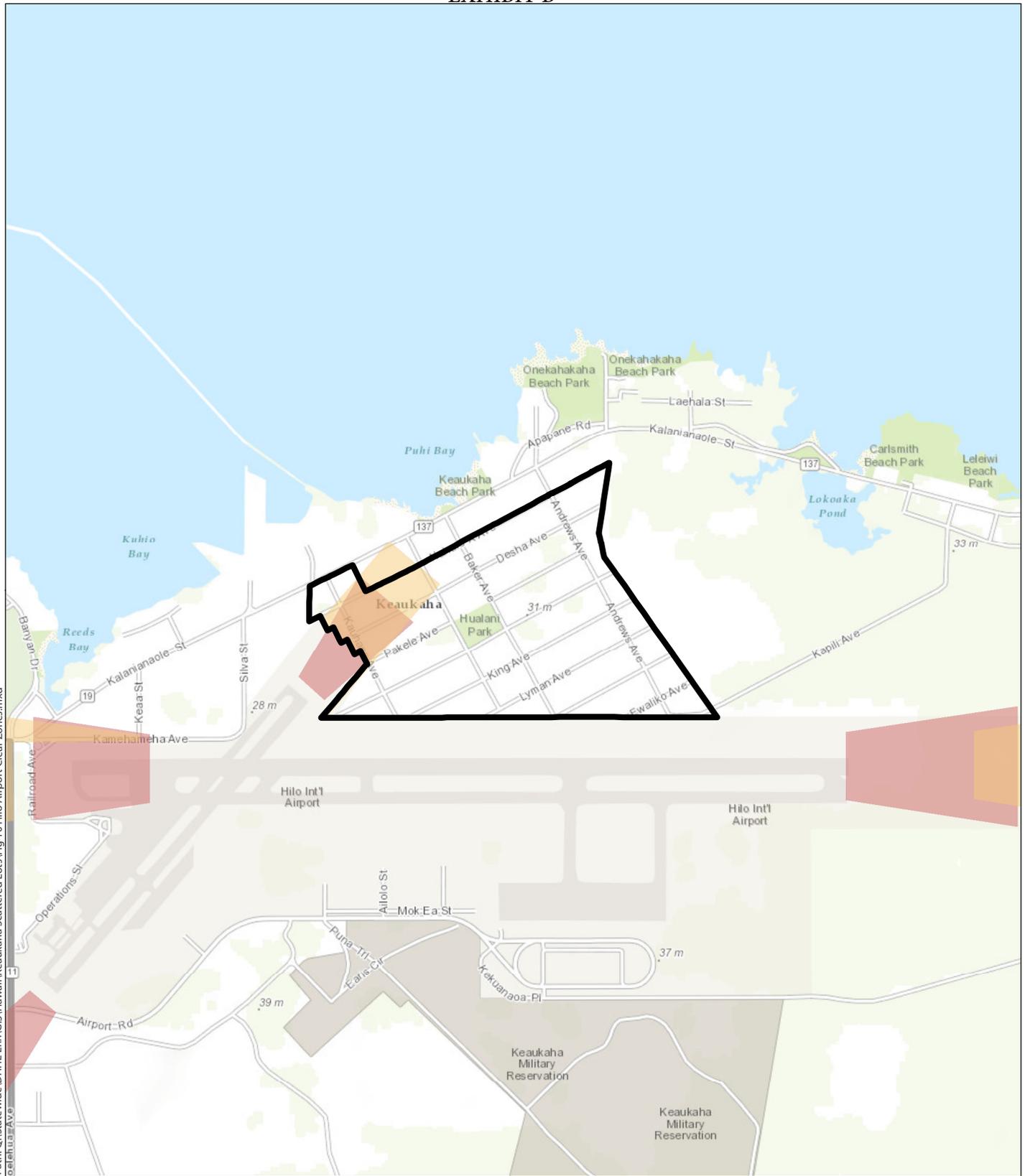
Department of Hawaiian Home Lands  
 North

0 500 1,000  
 Feet

Source: ESRI Online Basemaps.

Disclaimer: This graphic has been prepared for general planning purposes only and should not be used for boundary interpretations or other spatial analysis.

PDF - C:\Statewide\DHHL ERR\PDF\Hawaii\ Path - C:\Statewide\DHHL ERR\GIS\Hawaii\Keaukaha Scattered Lots\Fig 10 Hilo Airport Clear Zones.mxd



DATE: 11/24/2015

**LEGEND**

-  Project Area
-  Clear zone
-  Existing easement/future acquisition

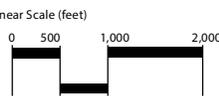
**Hilo Airport Clear Zones  
KEAUKAHA RESIDENCE LOTS**

Department of Hawaiian Home Lands Island of Hawaii

North



Linear Scale (feet)




Source: ESRI online basemap. Hawaii DOT, 2002.

Disclaimer: This graphic has been prepared for general planning purposes only and should not be used for boundary interpretations or other spatial analysis.



# United States Department of the Interior



## FISH AND WILDLIFE SERVICE

Pacific Islands Fish and Wildlife Office  
300 Ala Moana Boulevard, Room 3-122  
Honolulu, Hawaii 96850

In Reply Refer To:  
EPIF00-2015-1-0258  
EPIF00-2015-1-0261  
EPIF00-2015-1-0262

JUN 04 2015

Ms. Jobie Masagatani  
Chair, Department of Hawaiian Home Lands  
Hale Kalaniana'ole  
91-5420 Kapolei Parkway  
Kapolei, Hawaii 96707

Subject: Informal Consultation for Department of Hawaiian Home Lands Addressing  
Development and Rehabilitation of Homes at Punaewa and Keaukaha, Hawaii  
Island and New Construction at Kalamaula, Molokai

Dear Ms. Masagatani:

The U.S. Fish and Wildlife Service (Service) received letters from your Native American Housing Assistance and Self Determination Act (NAHASDA) Manager Niniau Simmons, describing an award of NAHASDA funds from the U.S. Department of Housing and Urban Development (HUD) to the State of Hawaii Department of Hawaiian Home Lands (DHHL) to develop the Punaewa Agricultural Lots, Waiakea, Hawaii Island, rehabilitation and development of homes in Keaukaha, Hilo, Hawaii Island, and New Construction at Kalamaula, Molokai. The letters were dated April 17, 2015, April 27, 2015, and May 1, 2015, respectively. Pursuant to HUD regulations, DHHL is the responsible entity for the purposes of consultation relating to section 7 of the Endangered Species Act of 1973 (ESA), as amended (16 U.S.C. 1531 *et seq.*). The letter indicated DHHL's determination that the proposed action may affect but is not likely to adversely affect adversely affect the endangered Hawaiian hoary bat (*Opepepe*, *Lasiurus cinereus semotus*), Hawaiian hawk (Io, *Buteo solitarius*), Hawaiian goose (Nene, *Branta sandwicensis*), Hawaiian petrel (Uau, *Pterodroma phaeopygia sandwichensis*) and Blackburn's sphinx moth (*Manduca blackburni*) and the threatened Newell's shearwater (Ao, *Puffinus auricularis newelli*) and it requested our concurrence with that determination pursuant to section 7 of the ESA.

### Project Description

Proposed rehabilitation work including minor interior and exterior improvements such as painting, roof repairs, electrical and plumbing work, termite treatment, repair of damage by termites or wood rot, and kitchen and bath cabinet repairs. Demolition and new construction of homes and retaining walls and construction of new homes on vacant lots is also proposed.

Construction will entail installation of water and sewer or septic systems, grading, driveway installation, drainage improvements, use of herbicide and insecticide to control weeds and fire ants, and construction of the residence buildings and fences.

The proposed subdivision and development of the Punaewa Agricultural Lots is being undertaken to enable the relocation of families and homes threatened by a lava flow at Makuu Farm Lots. The proposed subdivision would result in the development of approximately 50 acres off Mahiai Street (10 acres) and Auwae Road (40 acres) in the Punaewa Agricultural Lots, Waiakea, South Hilo, Hawaii Island. The rehabilitation and development of homes in Keaukaha, Hilo, Hawaii Island, will entail rehabilitation of three homes, and new construction on four vacant lots and two two-lot subdivisions to infill within the existing subdivision. At Kalamaula, Molokai, five vacant lots will be developed within an existing subdivision.

### Proposed Conservation Measures

In May 12 and June 1, 2015, emails, Ms. Simmons confirmed the commitments in the letters that the following measures will be implemented at all of the project sites to minimize potential adverse effects to listed species. These conservation measures are considered part of the project description. Any changes to, modifications of, or failure to implement these conservation measures may result in the need to reinitiate this consultation.

#### *Hawaiian hoary bat*

The Hawaiian hoary bat roosts in both exotic and native woody vegetation and, while foraging, leaves young unattended in “nursery” trees and shrubs. If trees or shrubs suitable for bat roosting are cleared during the bat breeding season, there is a risk that young bats could inadvertently be harmed or killed. Additionally, Hawaiian hoary bats forage for insects from as low as three feet to higher than 500 feet above the ground. When barbed wire is used in fencing, Hawaiian hoary bats can become entangled. To avoid and minimize potential project impacts to Hawaiian hoary bats, the following measures are included in the project description:

- No woody plants over 15 feet tall will be removed or pruned during the sensitive bat pup birthing and rearing season of June 1 to September 15.
- If a bat is present at the project site, the area will be avoided. If a bat arrives in the construction area after work begins, work will cease until the animal leaves on its own accord.
- The only barbed wire used for fencing for the proposed project will be within 2 inches of the ground surface.

#### *Nene*

Nene may be present within the project area. Therefore, all on-site project personnel should be apprised that Nene may be in the vicinity of the project at any time during the year. To avoid and minimize potential project impacts to Nene, the following measures are included in the project description:

- If a Nene appears within 100 feet (30.5 meters) of ongoing work, all activity will be temporarily suspended until the animal leaves the area of its own accord. Moreover, if

any number of Nene are observed loafing or foraging within the project area during the Nene breeding season (October through March), a biologist familiar with the nesting behavior of Nene will survey in and around the project area prior to the resumption of any work, or after any subsequent delay of work of three or more days (during which the birds may attempt to nest). If a nest is discovered within a radius of 150 feet of proposed work, or a previously undiscovered nest is found within said radius after work begins, all work will cease immediately and the Service will be contacted for further guidance.

### *Seabirds*

The Hawaiian petrel and the Newell's shearwater (collectively known as seabirds) may transit the project area flying to upland breeding colonies. Outdoor lighting at this project site could result in seabird disorientation, fallout, and injury or mortality. The seabirds are attracted to lights and after circling the lights they may collide with nearby wires, buildings, or other structures or they may land on the ground due to exhaustion. Downed seabirds are subject to increased mortality due to collision with automobiles, starvation, and predation by dogs, cats, and other predators. Young birds (fledglings) traversing the project area between September 15 and December 15, in their first flights from their mountain nests to the sea, are particularly vulnerable. To avoid and minimize potential project impacts to listed seabirds, the following measures are included in the project description:

- To minimize potential project impacts to seabirds during their breeding season, all outdoor lights at the subject properties will be retrofit or replaced with lighting that is fully shielded so the bulb can only be seen from below bulb height and only used when necessary.
- No nighttime construction will occur during the seabird fledging period, September 15 through December 15.
- If nighttime construction occurs during other times of the year, all lighting will be shielded and directed toward the ground to avoid attracting adult seabirds as they travel from the ocean to their breeding areas.

In her May 14, 2015, email confirmation, Ms. Simmons reconfirmed the commitment in the letters that the following measures will be implemented the Kalamaula project site on Molokai to minimize potential adverse effects to the Blackburn's sphinx moth. The Hawaiian hawk does not occur on Molokai, so hawk surveys would not be done at that project location.

### *Hawaiian hawk*

The reproductive success of the Hawaiian hawk may be reduced if they are disturbed at their nest site during the breeding season. Therefore, where noise greater than 60 dB (at five feet) or vegetation clearing is proposed during the March through September Hawaiian hawk breeding season, surveys of the trees within 328 feet (100 meters) of the project site shall be conducted and if a hawk nest is found, such work shall be delayed until the nest is no longer occupied.

### *Blackburn's sphinx moth*

The adult Blackburn's sphinx moth feeds on nectar from native plants including beach morning glory (*Ipomoea pes-caprae*), ilice (*Plumbago zeylanica*), and maiapilo (*Capparis sandwichiana*).

Blackburn's sphinx moth larvae feed upon non-native tree tobacco (*Nicotiana glauca*), which occupies disturbed areas such as open fields and roadway margins, and the native aiea (*Nothocestrum sp.*). To pupate, Blackburn's sphinx moth larvae burrow into the soil near host plants and can remain in a state of torpor for up to a year (or more) before emerging from the soil. To avoid and minimize potential project impacts to the Blackburn's sphinx moth, the following measures are included in the project description: 1) If any tree removal, brush clearing, or soil disturbance activities are anticipated, a qualified biologist will survey the project area for the presence of larval host plants; and 2) if host plants are discovered in the area affected by the activity, the plant will not be cut or removed and the soil within 10 meters (33 feet) of the plant not be disturbed.

### **Conclusion**

Based on the project's incorporation of the above avoidance and minimization measures, we concur with your determination that the proposed project may affect, but is not likely to adversely affect the Hawaiian hoary bat, Hawaiian hawk, Hawaiian goose, Hawaiian petrel, and Blackburn's sphinx moth, and the threatened Newell's shearwater. Unless the project description changes, or new information reveals that the proposed project may affect listed species in a manner or to an extent not considered, or a new species or critical habitat is designated that may be affected by the proposed action, no further action pursuant to section 7 of the ESA is necessary.

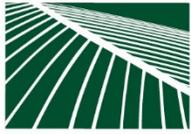
If you have any questions or concerns regarding this consultation, please contact Dawn Bruns (phone: 808-792-9469, email: dawn\_bruns@fws.gov).

Sincerely,



Kristi Young  
Acting Field Supervisor

Cc: Ms. Catie Cullison, PBR Hawaii  
Ms. Claudine Allen, U.S. Department of Housing and Urban Development



# PBR HAWAII

& ASSOCIATES, INC.

January 13, 2016

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*President*

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*Executive Vice-President*

VINCENT SHIGEKUNI  
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*Principal*

KIMI MIKAMI YUEN, LEED®AP BD+C  
*Principal*

W. FRANK BRANDT, FASLA  
*Chairman Emeritus*

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*Senior Associate*

CATIE CULLISON, AICP  
*Senior Associate*

ROY TAKEMOTO  
*Managing Director - Hilo*

SCOTT MURAKAMI, ASLA, LEED®AP  
*Associate*

DACHENG DONG, LEED®AP  
*Associate*

MARC SHIMATSU, ASLA  
*Associate*

Ms. Kristi Young, Acting Field Supervisor  
U.S. Department of the Interior  
Fish and Wildlife Service  
Pacific Islands Fish and Wildlife Office  
300 Ala Moana Boulevard, Room 3-122  
Department of Transportation, Airports Division  
Honolulu, HI 96850

RE: Consultation for Single-Family Rehabilitation and New Construction Projects  
Located in Keaukaha, Island and County of Hawai'i—Reply to Correspondence  
EPIF00-2015-1-0261 dated June 4, 2015

Dear Ms. Young:

On behalf of the Department of Hawaiian Home Lands, thank you for the subject response letter. The scope of the Keaukaha rehabilitation and development of new homes has expanded to cover vacant lots and income-eligible lessees within nearly the entire Keaukaha Residential Lots subdivision. However, the mitigation measures specified in your letter should be the same and be applicable to this expanded scope. We will incorporate these mitigation measures in the Environmental Assessment being prepared for the expanded scope. We will send the Draft EA for your review.

If you have any questions, please contact me at [rtakemoto@pbrhawaii.com](mailto:rtakemoto@pbrhawaii.com) or 808-521-5631.

Yours truly,

Roy Takemoto, Hilo Office

Cc: DHHL

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**HILO OFFICE**  
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# Keaukaha Community Association Meeting Notes

Meeting Date: February 17, 2016, 6:30 p.m.

Meeting Place: Keaukaha Cafetorium

Attendance: approximately 50 persons who are residents of Keaukaha

Handout: copy of presentation slides (attached)

1. Purpose: DHHL requested to be on the agenda of a regular monthly meeting of the Keaukaha Community Association. The purpose of the presentation was to inform the community of two upcoming EA's-- one for Keaukaha Residential Lots, and the other for Keaukaha Village.
2. Presentation. Main points covered:
  - a. Project area: Lots within the Keaukaha subdivision, EXCEPT lots within the 100-year existing or proposed flood zone, and community-use designated lots.
  - b. Proposed action:
    - i. Residential Lots-- federal funds for new construction on vacant lots and rehabilitation of existing homes; the EA clears the environmental requirements to process applications for lots covered by the EA, thereby streamlining the time to process future applications.
    - ii. Keaukaha Village-- gathering facility (pavilion) as prioritized in the Keaukaha Regional Plan.
  - c. Special considerations: airport noise abatement; airport runway protection zone; photovoltaic panels as reflective hazard to pilots; lead-based paint in older homes; tsunami evacuation; flood zone.
  - d. Process and next steps:
    - i. Residential Lots: Draft EA; public and agency review comments; incorporate comments into Final EA; HHC finding of no significant impact; request release of funding.
    - ii. Keaukaha Village: master plan by architect with community; Draft EA; Final EA; request release of funds; detailed design; bid, award, construct.
3. Discussion. Comments or questions:
  - a. Residential Lots
    - i. What does it mean to be in the runway protection zone? The Draft EA identified the situation and a letter sent to DOT-Airports. The Final EA will include DOT-A's response and alternative remedies.
    - ii. The proposed flood zone expands the existing flood zone. Is there a way to challenge this expansion? The proposed maps are by FEMA, and a 90-day comment period has just commenced.
    - iii. Can the community be informed of the comments and responses prior to filing the Final EA? DHHL will arrange a followup meeting with the community prior to presenting the Final EA to the Hawaiian Homes Commission (tentatively scheduled in April 2016).
  - b. Keaukaha Village
    - i. How will the community be involved in master planning this project? The architect is WCIT, who prepared the concept rendering shown in the presentation. WCIT will hold a workshop with the community. Prior to this workshop, WCIT will clarify with the

County Floodplain Manager what is permitted for structures located within the flood zone. The workshop will focus on the type and location of the main pavilion, extent of permitted restroom renovation, type of certified kitchen, and location(s) of smaller satellite pavilions.

- ii. Is there an exemption to the floodplain regulations for structures that are not habitable since no one will be living in the certified kitchen? WCIT will clarify the rules and requirements with the County prior to the workshop.



# Keaukaha Residential Lots & Keaukaha Village

PRESENTATION TO THE KEAUKAHA COMMUNITY ASSOCIATION  
FEBRUARY 17, 2016



## Why are we here?

- ▶ Notify the community of what is being proposed
- ▶ Invite comments or questions through environmental assessment process and section 106 historic resources consultation
- ▶ Request special knowledge of historic sites, hazards, or other concerns

# What is Proposed?

- ▶ **Keaukaha Residential Lots:** DHHL proposes to use federal NAHASDA funds for new dwellings on the vacant lots and to rehabilitate (fix) older homes that need repair
- ▶ **Keaukaha Village:** Keaukaha Village is the name of the project in Keaukaha's Regional Plan to establish a central gathering area in Keaukaha Beach Park
- ▶ Separate environmental assessments are being started for these two projects

# Where are the Residential Lots projects?

- ▶ Approximately 49 vacant lots
  - ▶ Turn-key or rent-to-own to be made available to waiting list
  - ▶ 2-lot subdivision of larger lots resulting in 10,000 sf minimum lot size
  - ▶ Package home loans or self-help offered to qualified existing lessees
- ▶ Existing homes with household income <80% qualify for rehabilitation
- ▶ Excluded:
  - ▶ Lots in flood zone
  - ▶ Community Use
  - ▶ Historic register



# Special Considerations

- ▶ Airport noise abatement for lots located within 65 Ldn
- ▶ Notice of potential risk for lots within airport runway protection zone
- ▶ Potential photovoltaic panel reflective hazard to pilots for lots in proximity of runway
- ▶ Lead-based paint and asbestos mitigation for homes built prior to 1978
- ▶ Tsunami evacuation education
- ▶ Flood zone

# Airport Noise Contour Map

- Lots along Kapili, Ewaliko, Krauss, Lyman, and portions of King Avenues require noise abatement
- Lots along portions of King, Todd, and Pakele recommended noise abatement
- No noise abatement necessary makai of Lauae Yung Avenue



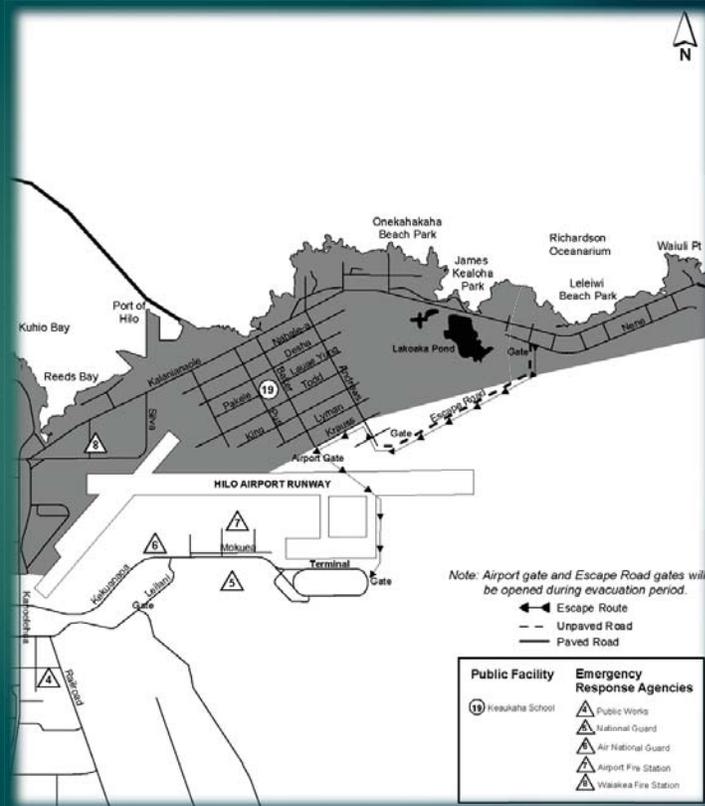
# Airport Runway Protection Zone Map

- Lots along portions of Pakele, Desha, and Nahale'a may require special notice of higher risk



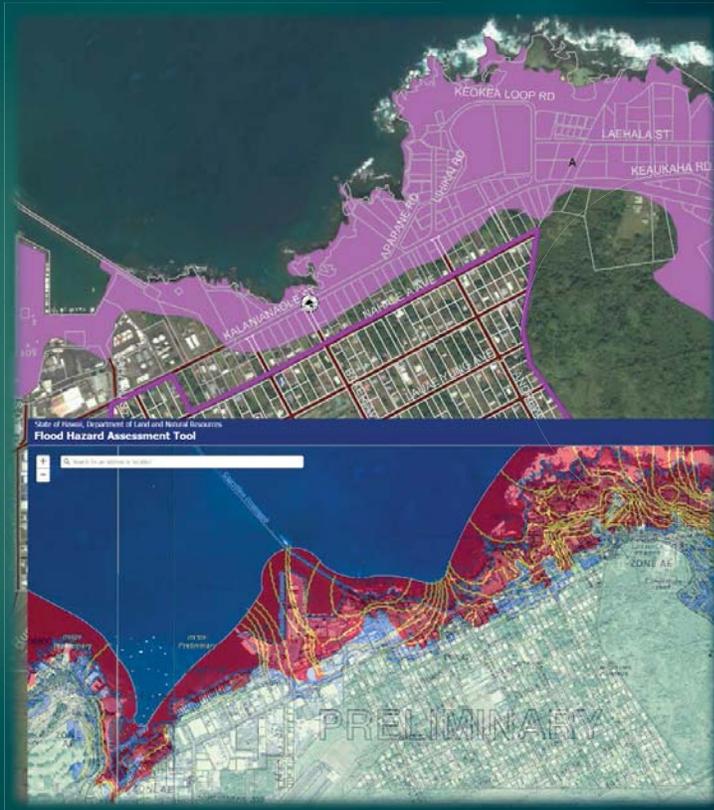
# Tsunami Evacuation Route

All lots are in the tsunami evacuation zone



# Flood Insurance Rate Map

- Preliminary flood zone map expands flood zone makai of Nahale'a Avenue
- Excluded lots within existing and preliminary flood zone
- Excluded lots may apply for NAHASDA grants/loans on a case by case basis



# Keaukaha Village

- ▶ New large pavilion
- ▶ Renovated restrooms
- ▶ Traditional food gardens
- ▶ Imu
- ▶ Certified kitchen?
- ▶ Smaller pavilions? Where? How many?

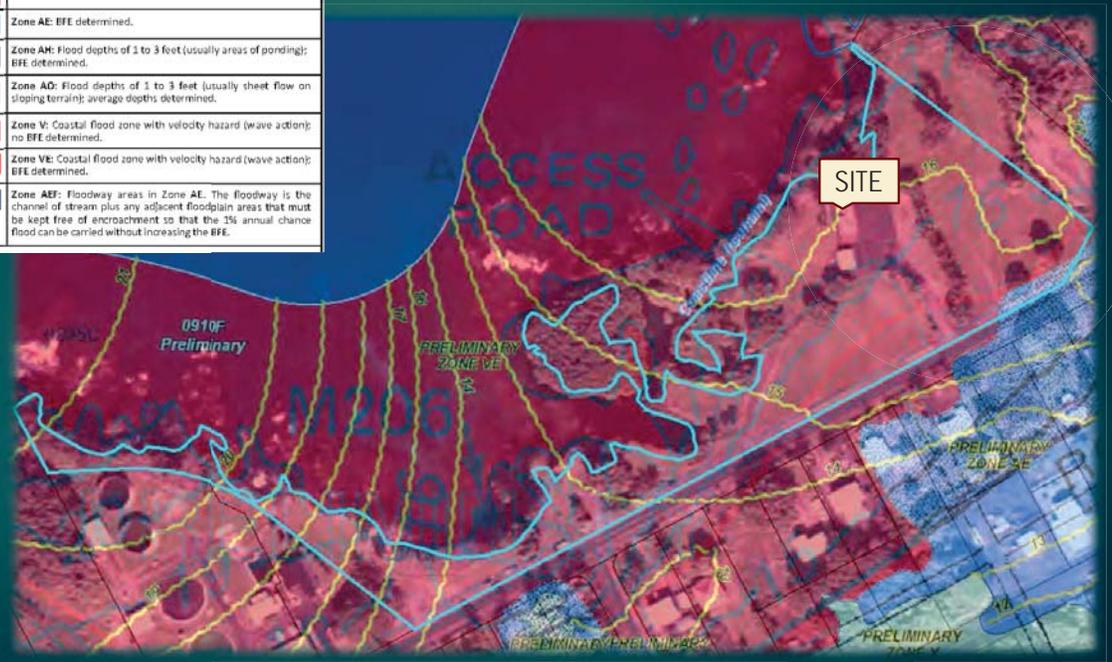


# Keaukaha Village Site



# Flood Insurance Rate Map

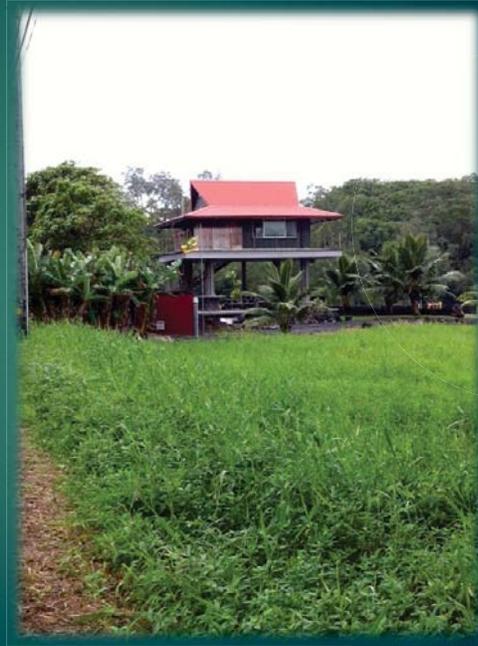
	Zone A: No BFE determined.
	Zone AE: BFE determined.
	Zone AH: Flood depths of 1 to 3 feet (usually areas of ponding); BFE determined.
	Zone AD: Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined.
	Zone V: Coastal flood zone with velocity hazard (wave action); no BFE determined.
	Zone VE: Coastal flood zone with velocity hazard (wave action); BFE determined.
	Zone AEF: Floodway areas in Zone AE. The floodway is the channel of stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without increasing the BFE.



## No Walls?



## Raised Structure with Walls?



## Next Steps

### Residential Lots

- ▶ Presentation to Hawaiian Homes Commission (HHC) (2/22-23/16)
- ▶ File Draft Environmental Assessment (EA) (3/8/16)
- ▶ HHC Finding of No Significant Impact (4/18-19/16)
- ▶ File federal EA (4/20/16)
- ▶ File Final EA (4/23/16)
- ▶ Start Request for Release of Funds (5/15/16)

### Village

- ▶ Presentation to HHC (2/22-23/16)
- ▶ Preliminary site plan (3/1/16)
- ▶ Topographic survey (4/1/16)
- ▶ Conceptual building plans (5/1/16)
- ▶ Presentation to HHC (5/23-24/16)
- ▶ File Draft EA (6/8/16)
- ▶ HHC Finding of No Significant Impact (7/18-19/16)
- ▶ File federal EA and Request for Release of Funds (7/20/16)
- ▶ File Final EA (8/8/16)
- ▶ Initiate detailed design
- ▶ Bid, award, and construct

# Questions or Comments?

▶ DHHL Contact:

Niniau Simmons  
91-5420 Kapolei Parkway  
Kapolei, Hawai'i 96707  
Niniau.Simmons@hawaii.gov

▶ Planning Consultant:

Roy Takemoto, PBR Hawai'i (Hilo Office)  
1001 Bishop St., Suite 650  
Honolulu, HI 96813-3484  
rtakemoto@pbrhawaii.com

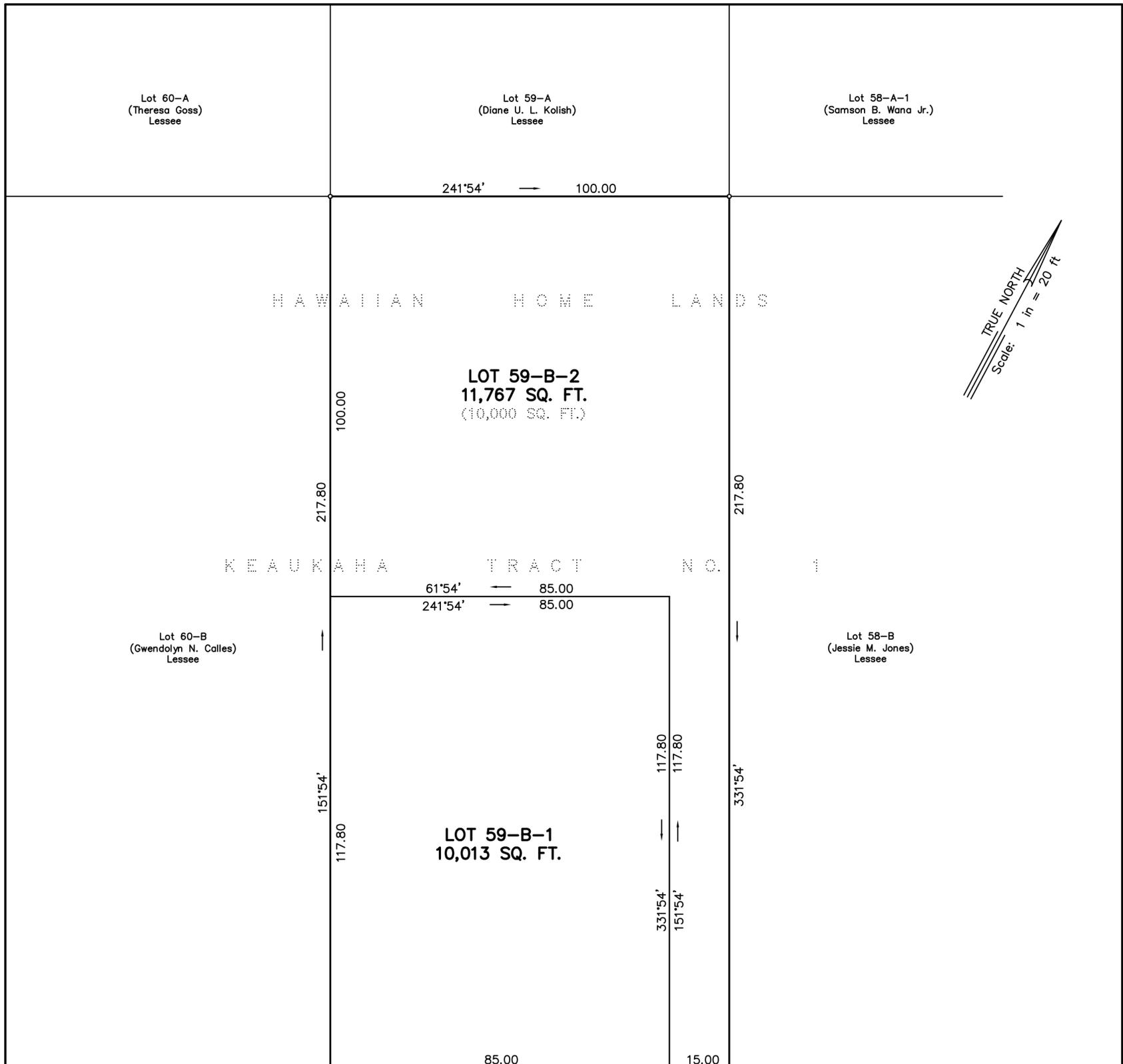


# Appendix **C**

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## **INFILL SUBDIVISION MAPS**





5,241.52 N  
19,113.87 E  
"HALAI" Δ

**D E S H A                      A V E N U E**

to Andrews Avenue —

PLAN SHOWING  
THE SUBDIVISION OF LOT 59-B INTO  
**LOTS 59-B-1 AND 59-B-2**  
BEING A PORTION OF HAWAIIAN HOME LANDS, KEAUKAHA TRACT 1  
WAIAKEA, SOUTH HILO, ISLAND OF HAWAII, HAWAII

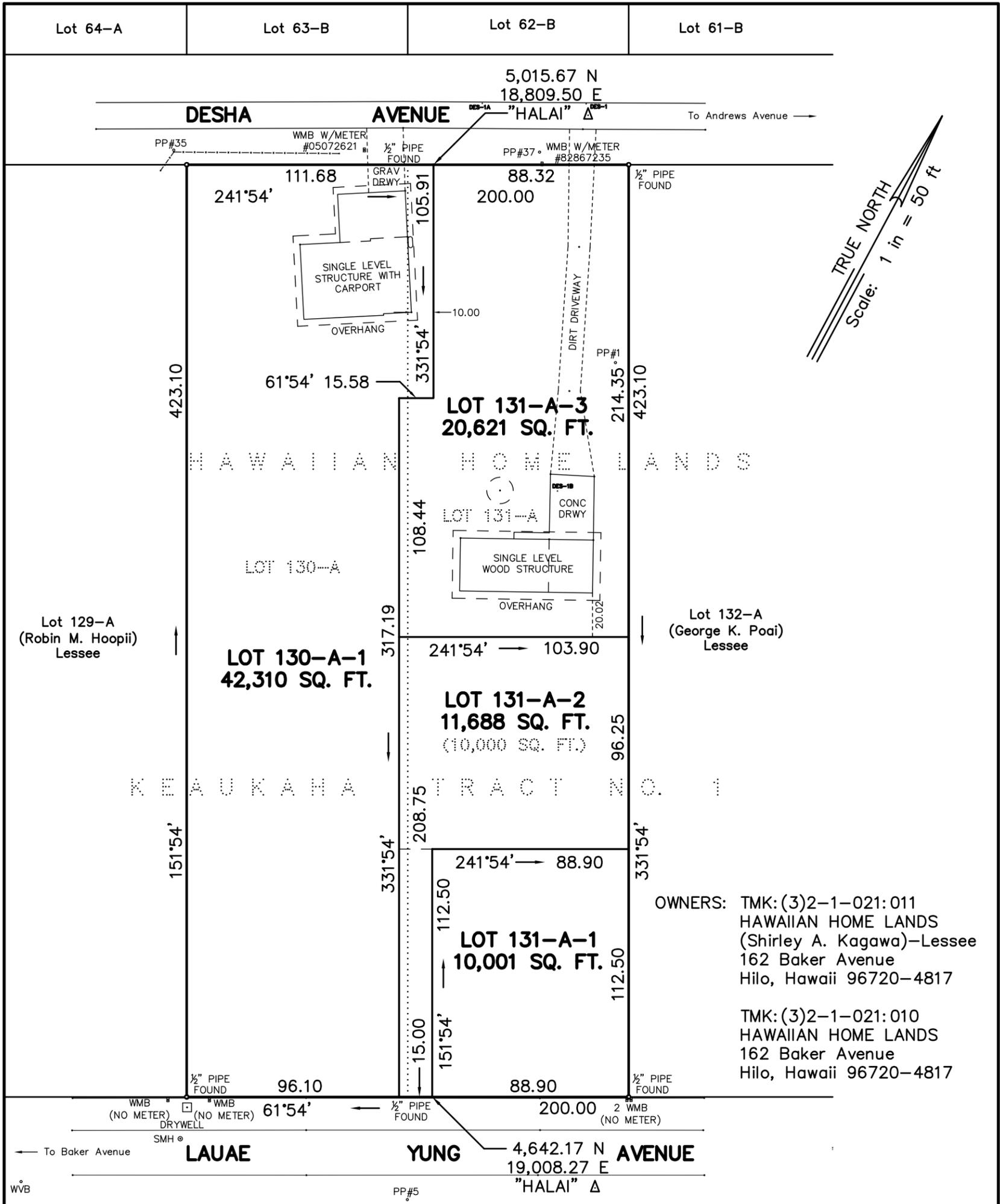
OWNER: TMK(3)2-1-021:029  
HAWAIIAN HOME LANDS  
162 Baker Avenue  
Hilo, Hawaii 96720-4817

Survey and Plan by Island Survey, Inc.  
P. O. Box 4215, Hilo, Hawaii 96720  
January 29, 2015



This work was prepared by me  
or under my supervision.

ROBERT T. SHIRAI, PLS  
State of Hawaii Cert. No. LS-5985  
License Expires April 30, 2016



TRUE NORTH  
Scale: 1 in = 50 ft

PLAN SHOWING  
THE CONSOLIDATION OF LOTS 130-A AND 131-A  
AND THE RESUBDIVISION OF SAID CONSOLIDATION INTO  
**LOTS 130-A-1, 131-A-1, 131-A-2 AND 131-A-3**  
BEING PORTIONS OF HAWAIIAN HOME LANDS, KEAUKAHA TRACT 1

WAIAKEA, SOUTH HILO, ISLAND OF HAWAII, HAWAII

Survey and Plan by Island Survey, Inc.  
P. O. Box 4215, Hilo, Hawaii 96720  
January 29, 2015



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TRUE NORTH  
Scale: 1 in = 40 ft

KAMAMALU STREET

KAMANAWA STREET

PUUKAPU VILLAGE HOUSE LOTS

WALL/FENCE AT CORNER OF LOT IS 0.4 WITHIN SAID LOT  
1/2" PIPE FOUND.  
PIPE FOUND TO BE 0.8 SOUTH OF RECORD PROPERTY LINE THEREFORE WALL/FENCE IS WITHIN SAID LOT

POINT WHERE WALL/FENCE ENTERS SUBJECT PROPERTY

Lot E-6

Lot E-5

Lot E-4

Lot 12

Lot 8

LOT 7A  
22,151 SQ. FT.

LOT 7B  
22,151 SQ. FT.

Lot 6

LOT 7

CONC SLAB

CONC SLAB

GATE

WMB

OVER GROWN DRWT

1" PIPE WOOD FOUND POST

PP#3

PP#2

PP#1

WVB

WVB

To Kamamalu Road

Lot 12

Lot 13-A

Lot 13-B



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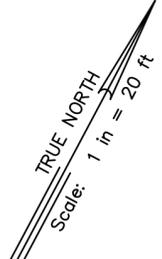
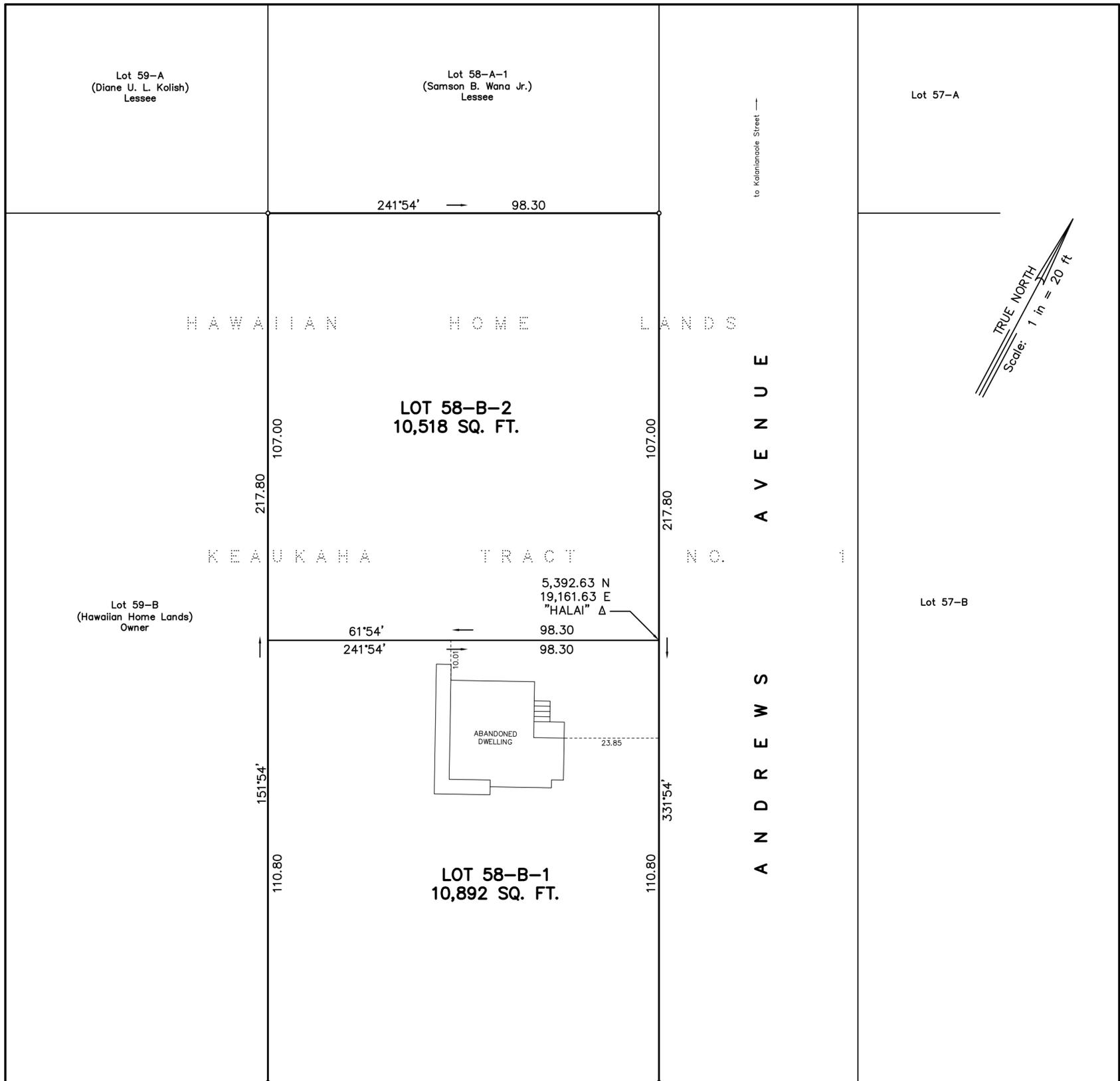
NOTES:

1. The fence along the easterly property line is an old fence which, because of its age, is not straight.
2. The wall/fence along the northerly boundary falls within subject lot as shown hereon. A study was done to locate the front boundary pins of the adjoining subdivision.

PLAN SHOWING  
SUBDIVISION OF LOT 7  
OF PUUKAPU VILLAGE HOUSE LOTS  
INTO LOTS 7-A AND 7-B  
AND ALL VISIBLE FEATURE THEREON

PUUKAPU, WAIMEA, SOUTH KOHALA,  
ISLAND OF HAWAII, HAWAII

Survey and Plan by Island Survey, Inc.  
P.O. Box 4215, Hilo, Hawaii 96720  
March 9, 2015



OWNER: TMK: (3)2-1-021:072  
HAWAIIAN HOME LANDS  
162 Baker Avenue  
Hilo, Hawaii 96720-4817

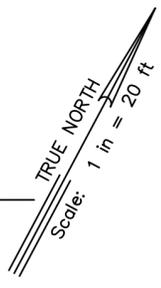
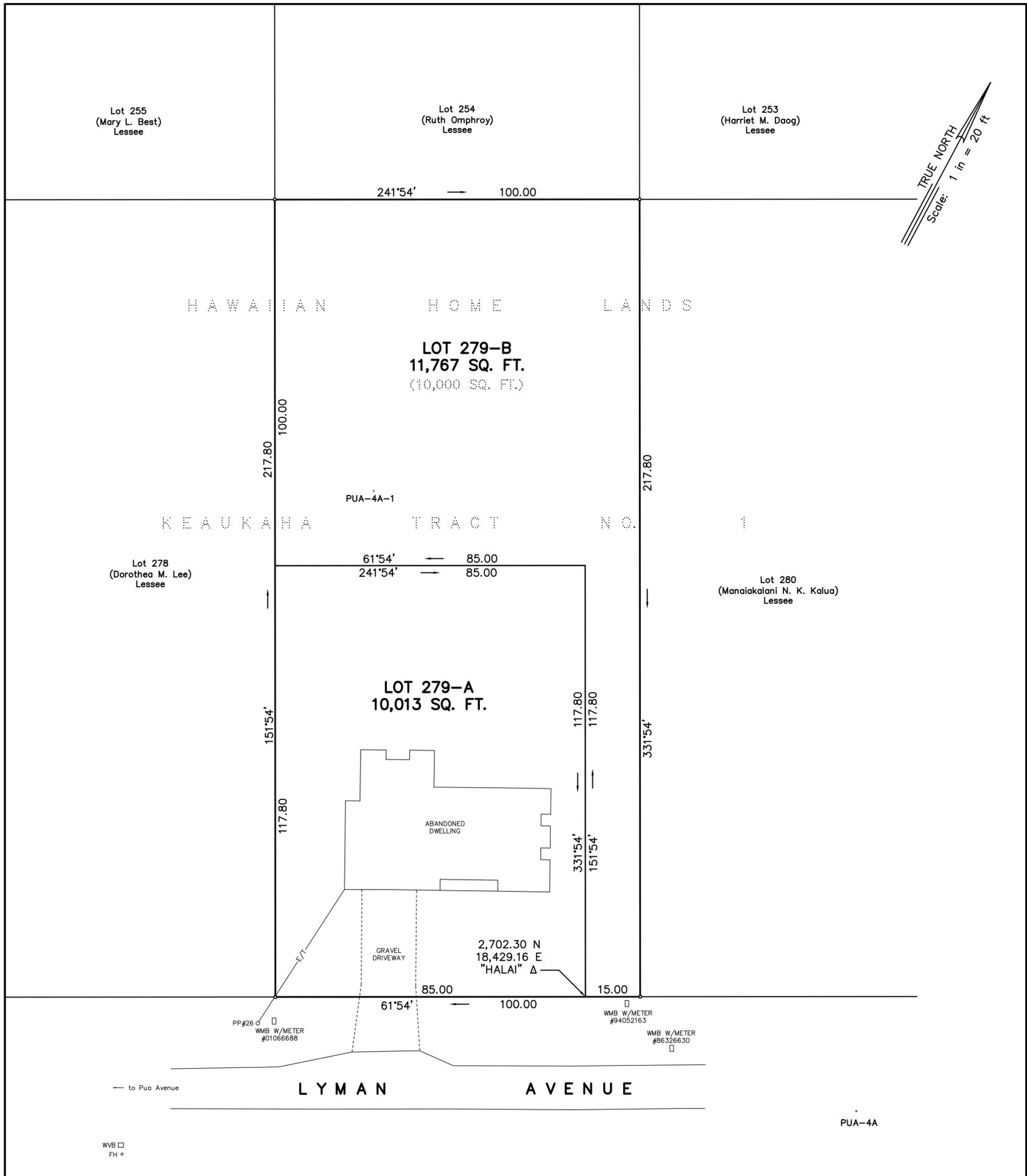
PLAN SHOWING  
THE SUBDIVISION OF LOT 58-B INTO  
LOTS 58-B-1 AND 58-B-2  
BEING A PORTION OF HAWAIIAN HOME LANDS, KEAUKAHA TRACT 1  
WAIAKEA, SOUTH HILO, ISLAND OF HAWAII, HAWAII

Survey and Plan by Island Survey, Inc.  
P. O. Box 4215, Hilo, Hawaii 96720  
January 29, 2015



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OWNER: TMK: (3)2-1-023:071  
HAWAIIAN HOME LANDS  
162 Baker Avenue  
Hilo, Hawaii 96720-4817

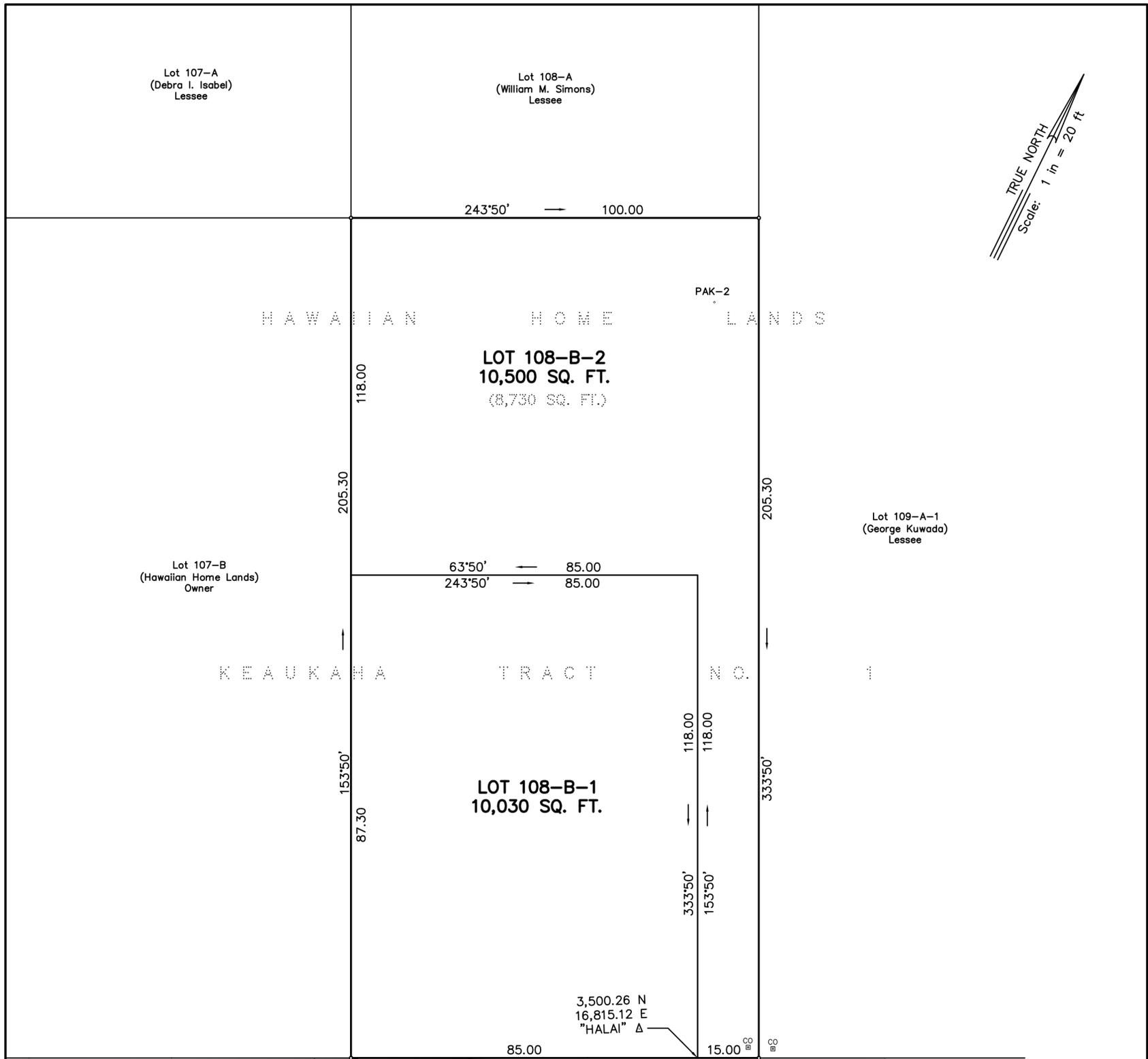
PLAN SHOWING  
THE SUBDIVISION OF LOT 279 INTO  
**LOTS 279-A AND 279-B**  
BEING A PORTION OF HAWAIIAN HOME LANDS, KEAUKAHA TRACT 1  
WAIAKEA, SOUTH HILO, ISLAND OF HAWAII, HAWAII

Survey and Plan by Island Survey, Inc.  
P. O. Box 4215, Hilo, Hawaii 96720  
January 29, 2015

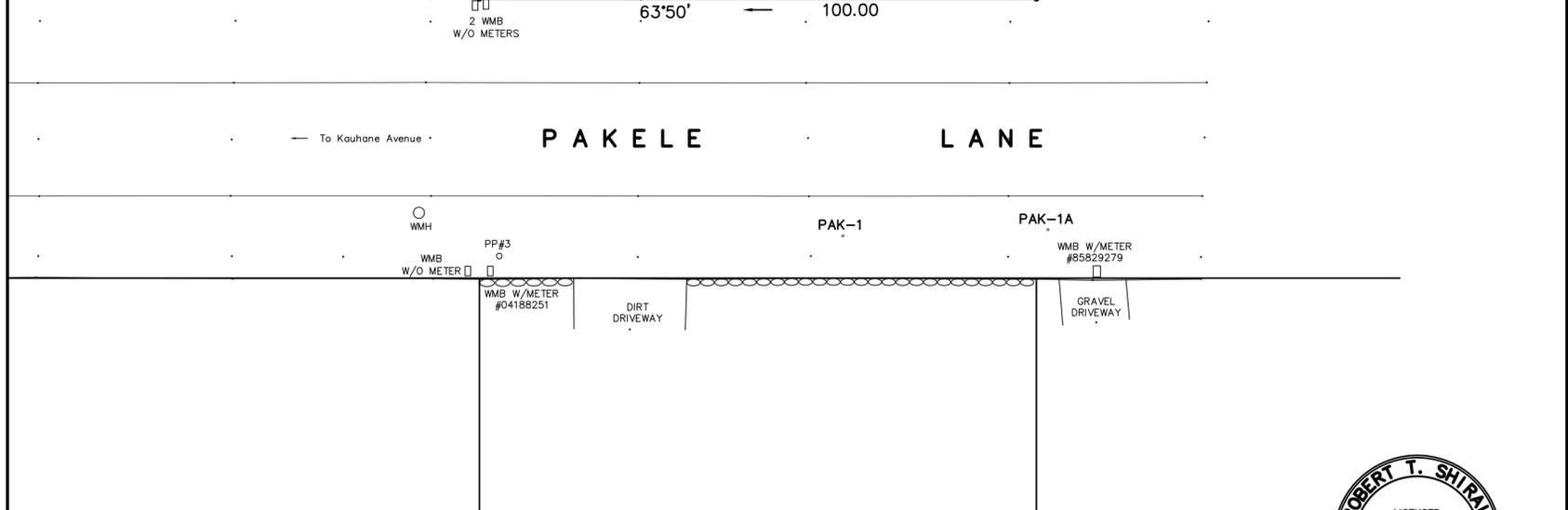


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TRUE NORTH  
Scale: 1 in = 20 ft



PLAN SHOWING  
THE SUBDIVISION OF LOT 108-B INTO  
LOTS 108-B-1 AND 108-B-2  
BEING A PORTION OF HAWAIIAN HOME LANDS, KEAUKAHA TRACT 1  
WAIAKEA, SOUTH HILO, ISLAND OF HAWAII, HAWAII

OWNER: TMK:(3)2-1-020:101  
Hawaiian Home Lands  
162 Baker Avenue  
Hilo, Hawaii 96720-4817

Survey and Plan by Island Survey, Inc.  
P. O. Box 4215, Hilo, Hawaii 96720  
January 29, 2015

ROBERT T. SHIRAI  
LICENSED PROFESSIONAL LAND SURVEYOR  
No. 5985

This work was prepared by me or under my supervision.

ROBERT T. SHIRAI, PLS  
State of Hawaii Cert. No. LS-5985  
License Expires April 30, 2016

# Appendix **D**

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## Site Reports



LOT 131-A FIELD REPORT PHOTOS (10-1-14)



Inside view of UTILITY ROOM electrical disconnect box. (See comment sheet 1) 1. (a) 1) PHOTO 3A



Outside view of UTILITY ROOM – (See comments sheet 1) 1. (a) 3) PHOTO 3B



View of water heater location UTILITY ROOM - (See comments sheet 1) 1. (a) 2) PHOTO 4

LOT 131-A FIELD REPORT PHOTOS (10-1-14)



Outside view of LAUNDRY ROOM - (See comments sheet 1) 1. (b) 1) PHOTA 5A



Closer view of LAUNDRY ROOM - (See comments sheet 1) 1. (b) 1) & 2) PHOTO 5B

LOT 131-A FIELD REPORT PHOTOS (10-1-14)



View of CARPORT AREA (ceiling) – (see comments sheet 1) 1. (c) 2 PHOTO 6A



View of CARPORT AREA (corrugated roof under 3' eave) - (See comments sheet 1) PHOTO 6B

LOT 131-A FIELD REPORT PHOTOS (10-1-14)



View of CARPORT AREA & EXTERIOR WALLS – (See comments sheet 1) 1. (c) 4)

PHOTO 7A



View of EXTERIOR WALLS – (See comments sheet 1) 1. (c) 4)

PHOTO 7B

LOT 131-A FIELD REPORT PHOTOS (10-1-14)



View of EXTERIOR WALLS (See comments sheet 1)

1. (c) 4)

PHOTO 8A



View of CARPORT & DRIVEWAY (See comments sheet 1)

1. (c) 4)

PHOTO 8B

LOT 131-A FIELD REPORT PHOTOS (10-1-14)



View of LIVING ROOM (See comments sheet 2)

2. (a) 1

PHOTO 9A



View of LIVING ROOM & KITCHEN AREA (See comments sheet 2)

2. (a) 1

PHOTO 9B

LOT 131-A FIELD REPORT PHOTOS (10-1-14)



View of KITCHEN AREA (See comments sheet 2)

2. (a) (2)

PHOTO 10A



View of KITCHEN AREA (See comments sheet 2)

2. (a) (2)

PHOTO 10B

LOT 131-A FIELD REPORT PHOTOS (10-1-14)



View of KITCHEN AREA (See comments sheet 2)

2. (a) 3)

PHOTO 11A



View of BATHROOM AREA (GUEST) (See comments sheet 2)

2. (b) 1)

PHOTO 11B

LOT 131-A FIELD REPORT PHOTOS (10-1-14)



View of BATHROOM AREA (GUEST) (See comments sheet 2)

2. (b) 1)

PHOTO 12A



View of BATHROOM AREA (GUEST) (See comments sheet 2) 2. (b) 1) PHOTO 13A

LOT 131-A FIELD REPORT PHOTOS (10-1-14)



View of MASTER BATH AREA (See comments sheet 2) 2. (c) 1 PHOTO 14A



View of MASTER BATH AREA (See comments sheet 2) 2. (c) 1 PHOTO 14B

LOT 131-A FIELD REPORT PHOTOS (10-1-14)



View of MASTER BATH AREA (See comments sheet 2) 2. (c) 1 PHOTO 15A



View of MASTER BEDROOM AND INTERIOR WALLS (See comments sheet 2) 2. (d) 1 PHOTO 15B

LOT 131-A FIELD REPORT PHOTOS (10-1-14)



View of TIN ROOFING (See comments sheet 2) 3. (a) 1)

PHOTO 16A



View of TIN ROOFING (See comments sheet 2) 3. (a) 1)

PHOTO 16B

LOT 131-A FIELD REPORT PHOTOS (10-1-14)



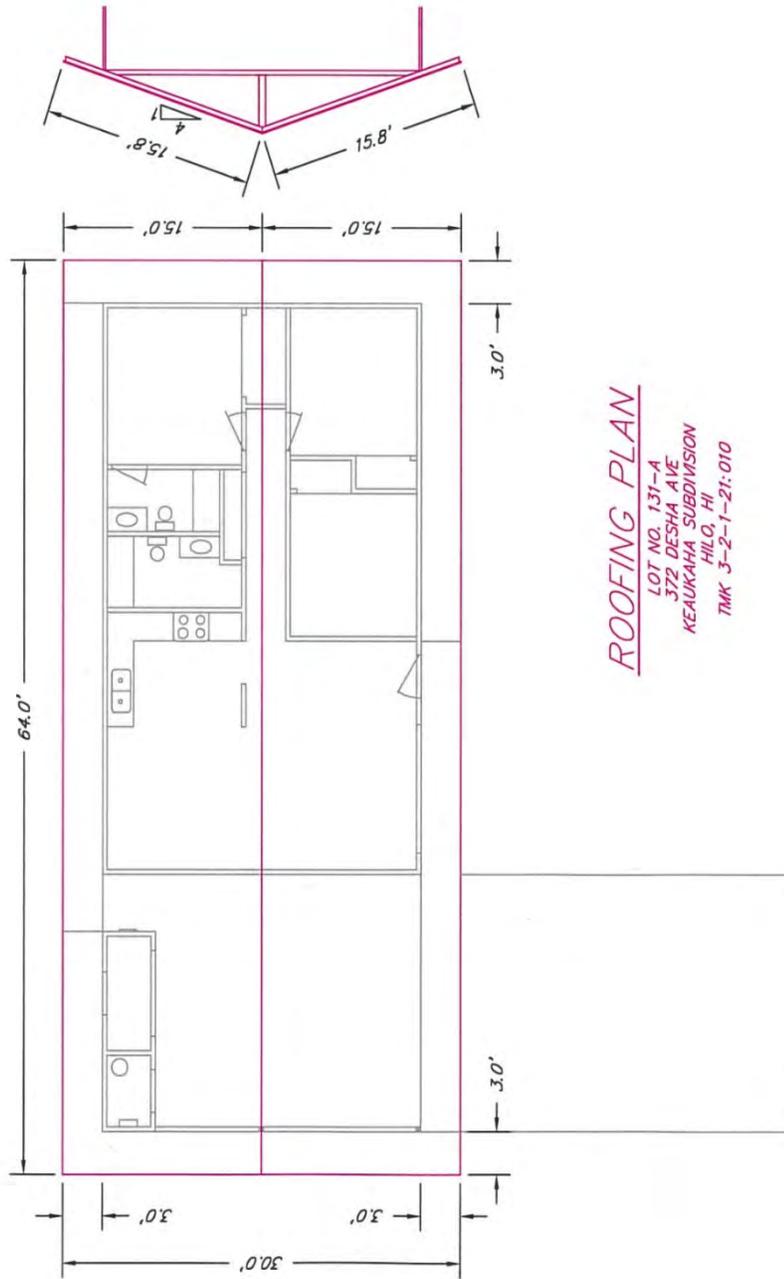
View of INTERIOR WALL COVERINGS WHICH ARE THROUGH THIS HOUSE – PHOTO 17A

(See comments sheet 2) 2. (e) 1)



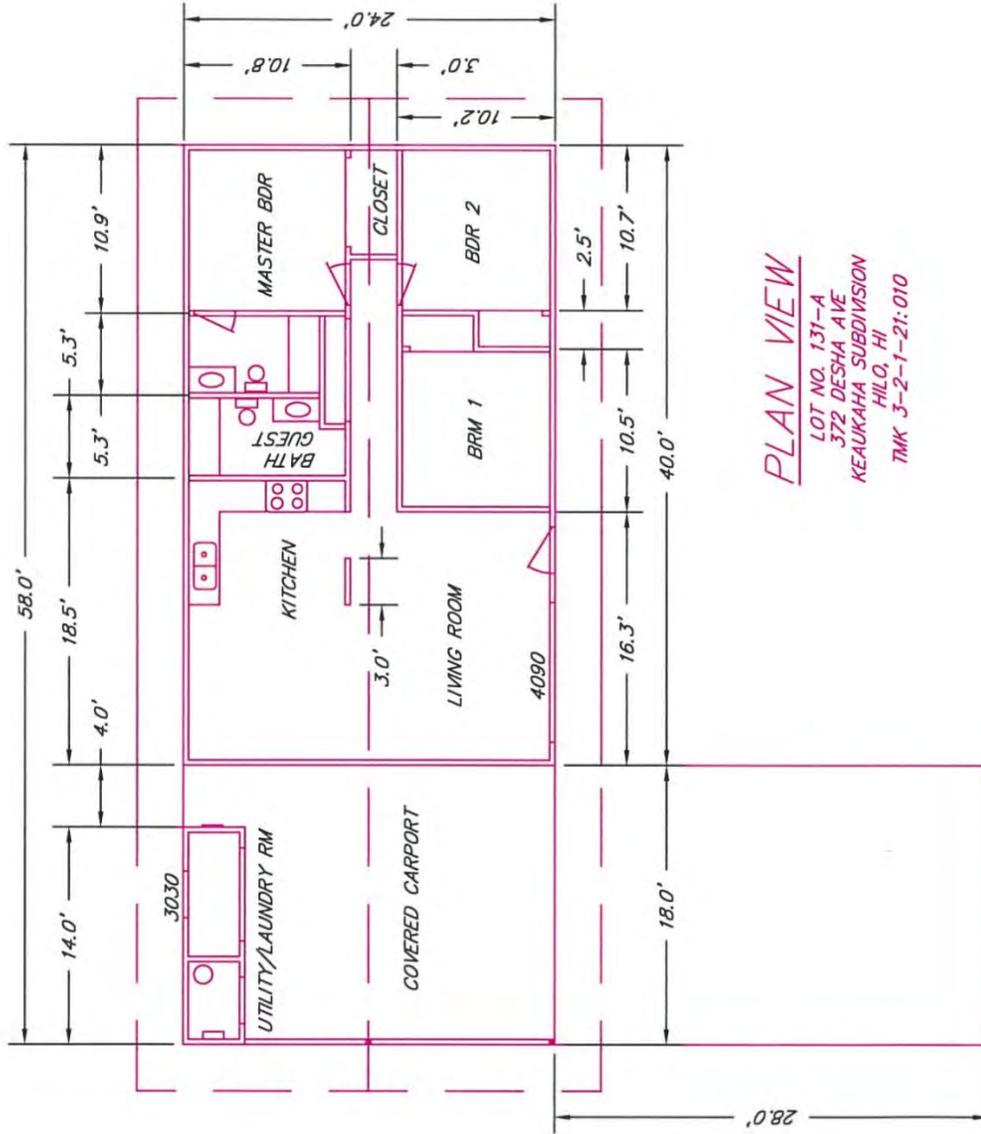
View of HOUSE CIRCUIT BREAKER BOX (See comments sheet 1) 1. (c) 1) PHOTO 17B

LOT 131-A FIELD REPORT PHOTOS (10-1-14)



**ROOFING PLAN**  
LOT NO. 131-A  
372 DESHA AVE  
KEAUKAHA SUBDIVISION  
HILO, HI  
TMK 3-2-1-21: 010

LOT 131-A FIELD REPORT PHOTOS (10-1-14)



**PLAN VIEW**

LOT NO. 131-A  
 372 DESHA AVE  
 KEAUKAHA SUBDIVISION  
 HILO, HI  
 TMK 3-2-1-21:010

LOT 58-B FIELD REPORT PHOTOS (10-2-14)



Outside view of existing walls and railing (See comments sheet 1) 1. (a) & (c) 1 PHOTO 1A



Outside view of exist walls (see comments sheet 1) 1. a) 1 PHOTO 1B



Outside view of Roof Fascia & Railing (See comments sheet 1) 1. (b) & (c) 1) PHOTO 2A

Also GARAGE ENTRANCE (See comments sheet 3) 8. (a) 1)



View of railing at entrance stairway (See comments sheet 1) 1. (c) & (d) 1) PHOTO 2B

LOT 58-B FIELD REPORT PHOTOS (10-2-14)



View of FRONT ENTRANCE & LANDING (See comments sheet 1) 1. (e) 1) PHOTO 3A



View from street edge of pavement looking at front entrance (See comments sheet 1) 1. (f) 1) PHOTO 3B

LOT 58-B FIELD REPORT PHOTOS (10-2-14)



View showing roof rust (See comments sheet 2) 2. (a) 1)

PHOTO 4A



View of interior hallway looking at front entrance (See comments sheet 2) 3. (a) 1)

PHOTO 4B

LOT 58-B FIELD REPORT PHOTOS (10-2-14)



View of bedroom No. 1 (See comments sheet 2) 4. (a) 1)

PHOTO 5A



View of bedroom No. 2 (See comments sheet 2) 5. (a) 1)

PHOTO 6A



View of BATHROOM looking from hallway (See comments sheet 2 & 3)

6. (a) 1) & (b) 2) & 3) also (c) 1)

PHOTO 7A



View of existing water closet (See comments sheet 2) 6. (b) 3) PHOTO 8A



View of tub enclosure (See comments sheet 2) 6. (b) 1)

PHOTO 9A



View of KITCHEN AREA (See comments sheet 3) 7. (a) 1) & (b) 1)

PHOTO 9B

LOT 58-B FIELD REPORT PHOTOS (10-2-14)



View of STOVE & REFRIGRATOR (See comments sheet 3) 7. (b) 1)

PHOTO 10A



View of FLOORINMG AND WALLS (See comments sheet 3) 7. (c) 1)

PHOTO 10B

LOT 58-B FIELD REPORT PHOTOS (10-2-14)



View of FLOORING, WALLS and WINDOWS (See comments sheet 3) 7. (c) 2) PHOTO 11A



View of ENCLOSED GARAGE BOTTOM FLOOR (See comments sheet 3) 8. (b) 1)

Also Garage door (See comments sheet 3) 8. (b) 2)

PHOTO 11B

LOT 58-B FIELD REPORT PHOTOS (10-2-14)



View of ENCLOSED GARAGE BOTTOM FLOOR (See comments sheet 3) 8. (b) 1 PHOTO 12A



View of ENCLOSED GARAGE BOTTOM FLOOR (See comments sheet 3) 8. (b) 1) & (c) 1) PHOTO 12B

LOT 58-B FIELD REPORT PHOTOS (10-2-14)



View of ENCLOSED GARAGE (See comments sheet 3) 8. (b) 2)

PHOTO 13A



View of UTILITY ROOM (See comments sheet 4) 8. (d) 1)

PHOTO 13B



View inside UTILITY ROOM (See comments sheet 4) 8. (d) 2) PHOTO 14A

LOT 58-B FIELD REPORT PHOTOS (10-2-14)



View of STORAGE AREA in lower level garage under bedroom No. 1

(See comments sheet 4) 9. (a) 1)

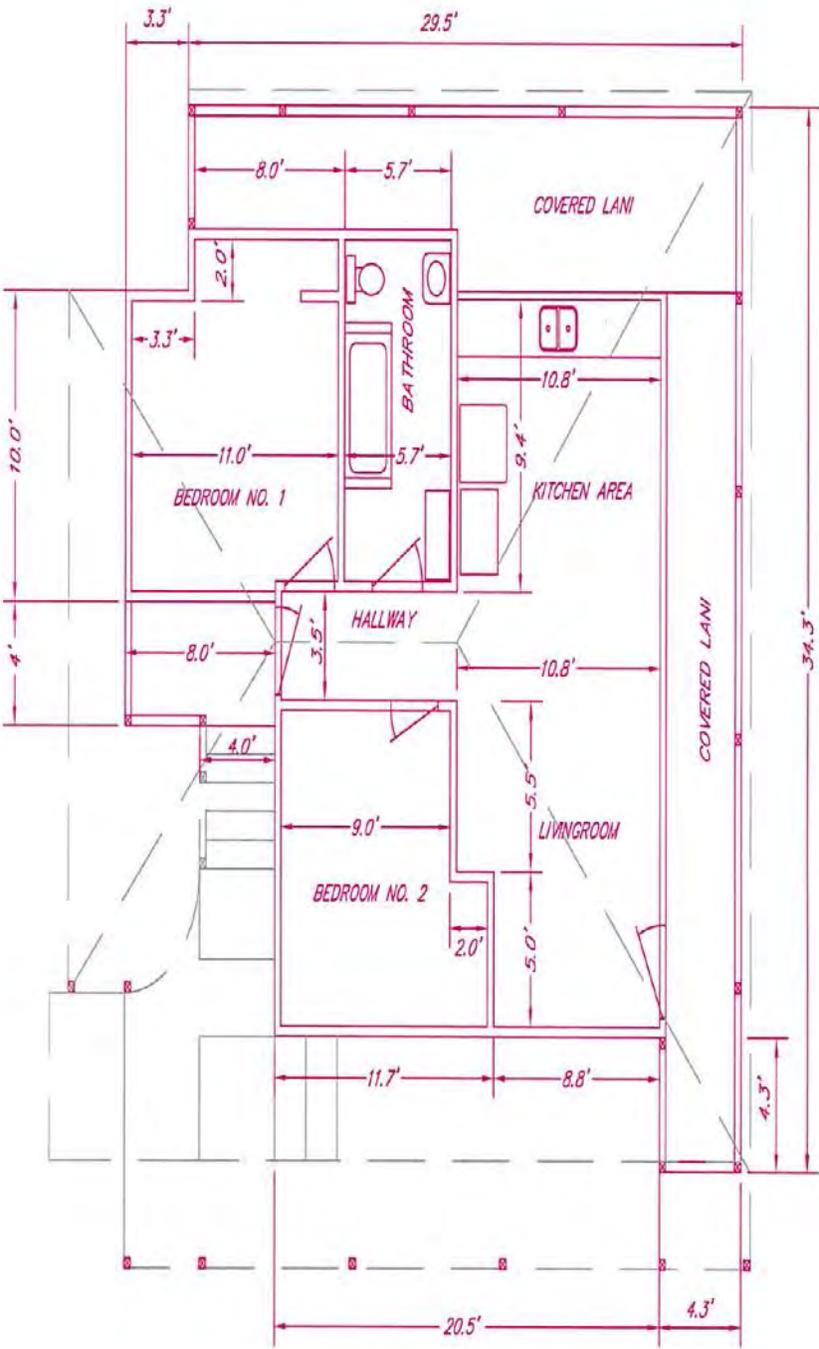
PHOTO 15A



View of CIRCUIT BREAKER BOX (See comments sheet 4) 10. (a) 1)

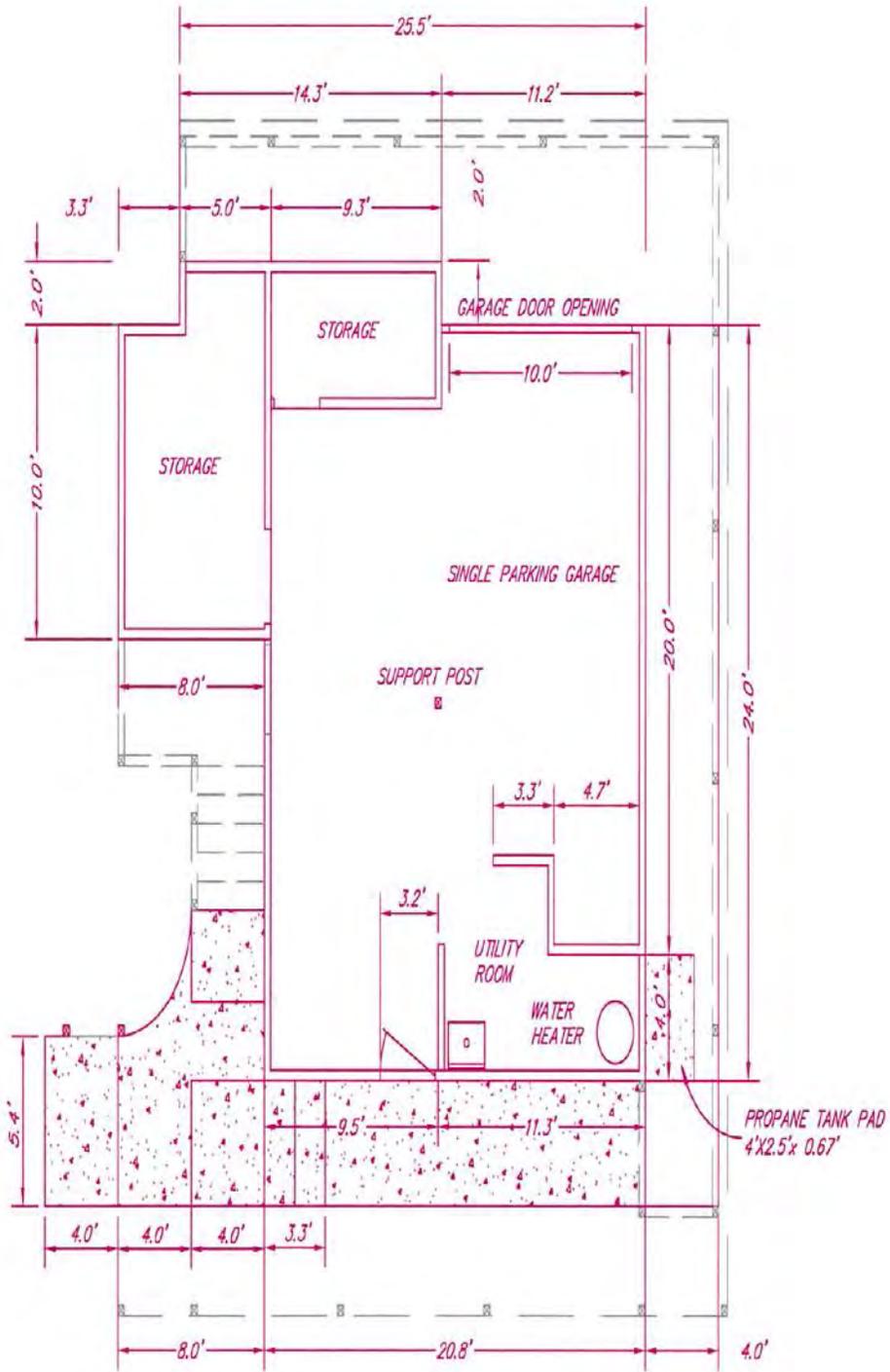
PHOTO 15B

LOT 58-B FIELD REPORT PHOTOS (10-2-14)

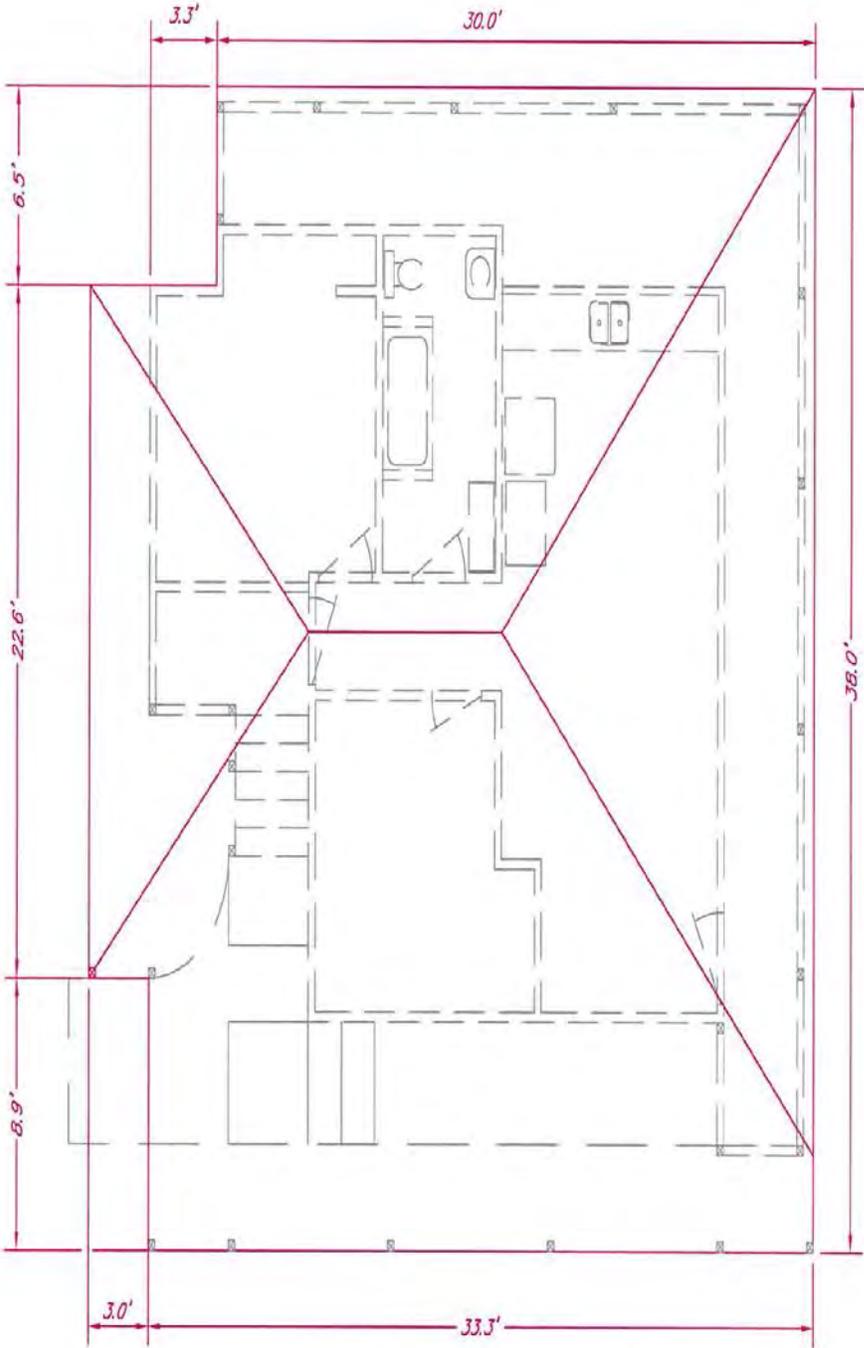


2nd FLOOR PLAN VIEW

LOT 58-B FIELD REPORT PHOTOS (10-2-14)



1st FLOOR PLAN VIEW



ROOFING PLAN

LOT 279 FIELD REPORT PHOTOS (10-7-14)



View of EXTERIOR WALLS (See comments sheet 1) 1. (a) 1)

PHOTO 1A



View of EXTERIOR WALLS (See comments sheet 1) 1. (a) 1) & 1. (a) 2)

PHOTO 1B

LOT 279 FIELD REPORT PHOTOS (10-7-14)



View of EXTERIOR WALLS (See comments sheet 1) 1. (a) 1) AND 1. (a) 2) PHOTO 2A



View of EXTERIOR WALLS (See comments sheet 1) 1. (a) 2) & 2. (c) 1) PHOTO 2B

LOT 279 FIELD REPORT PHOTOS (10-7-14)



View of INTERIOR WALLS, CONCRETE FLOOR, ENTRANCE DRIVEWAY & ROOFING PHOTO 3A

(See comments sheet 1) 2. (a) 1, 2. (b) 1, 2. (c) 1 & 3. (a) 1



View of ENTRANCE DRIVEWAY (See comments sheet 1) 2. (a) 1 PHOTO 3B

LOT 279 FIELD REPORT PHOTOS (10-7-14)



View of FRONT ENTRANCE & LIVING ROOM AREA (See comments sheet 2) 4. (a) 1 PHOTO 4A



View of FRONT ENTRANCE & LIVING ROOM AREA (See comments sheet 2) 4. (a) 1 PHOTO 4B



View of KITCHEN AREA (See comments sheet 2) 4. (b) 1)

PHOTO 5A



View of KITCHEN AREA (See comments sheet 2) 4. (b) 2 PHOTO 6A

LOT 279 FIELD REPORT PHOTOS (10-7-14)



View of HALLWAY (See comments sheet 2)

4. (c) 1)

PHOTO 7A



LOT 279 FIELD REPORT PHOTOS (10-7-14)



View of BEDROOM NO. 1 & 2 (See comments sheet 2)

4. (d) 1)

PHOTO 9A



View of BEDROOM NO. 1 & 2 (See comments sheet 2)

4. (d) 2)

PHOTO 9B

LOT 279 FIELD REPORT PHOTOS (10-7-14)



View of SHARED BATHROOM FOR BEDROOM 1 & 2 (See comments sheet 2) 4. (e) 1 PHOTO 10A



View of SHARED BATHROOM FOR BEDROOM 1 & 2 (See comments sheet 2) 4. (e) 2 PHOTO 10B



View of SHARED BATHROOM FOR BEDROOM 1 & 2 (See comments sheet 2) 4. (e) 2 PHOTO 11A

LOT 279 FIELD REPORT PHOTOS (10-7-14)



View of BEDROOM NO. 3 (See comments sheet 3) 4. (f) 1

PHOTO 12A



View of BEDROOM NO. 4 (See comments sheet 3) 4. (g) 1

PHOTO 12B



View of BATHROOM NEXT TO BEDROOM NO. 3 (See comments sheet 3) 4. (h) 1)

PHOTO 13A



View of BATHROOM NEXT TO BEDROOM NO. 3 (See comments sheet 3) 4. (h) 1) PHOTO 13A



View of BATHROOM NEXT TO BEDROOM NO. 3 (See comments sheet 3) 4. (h) 1

PHOTO 15A



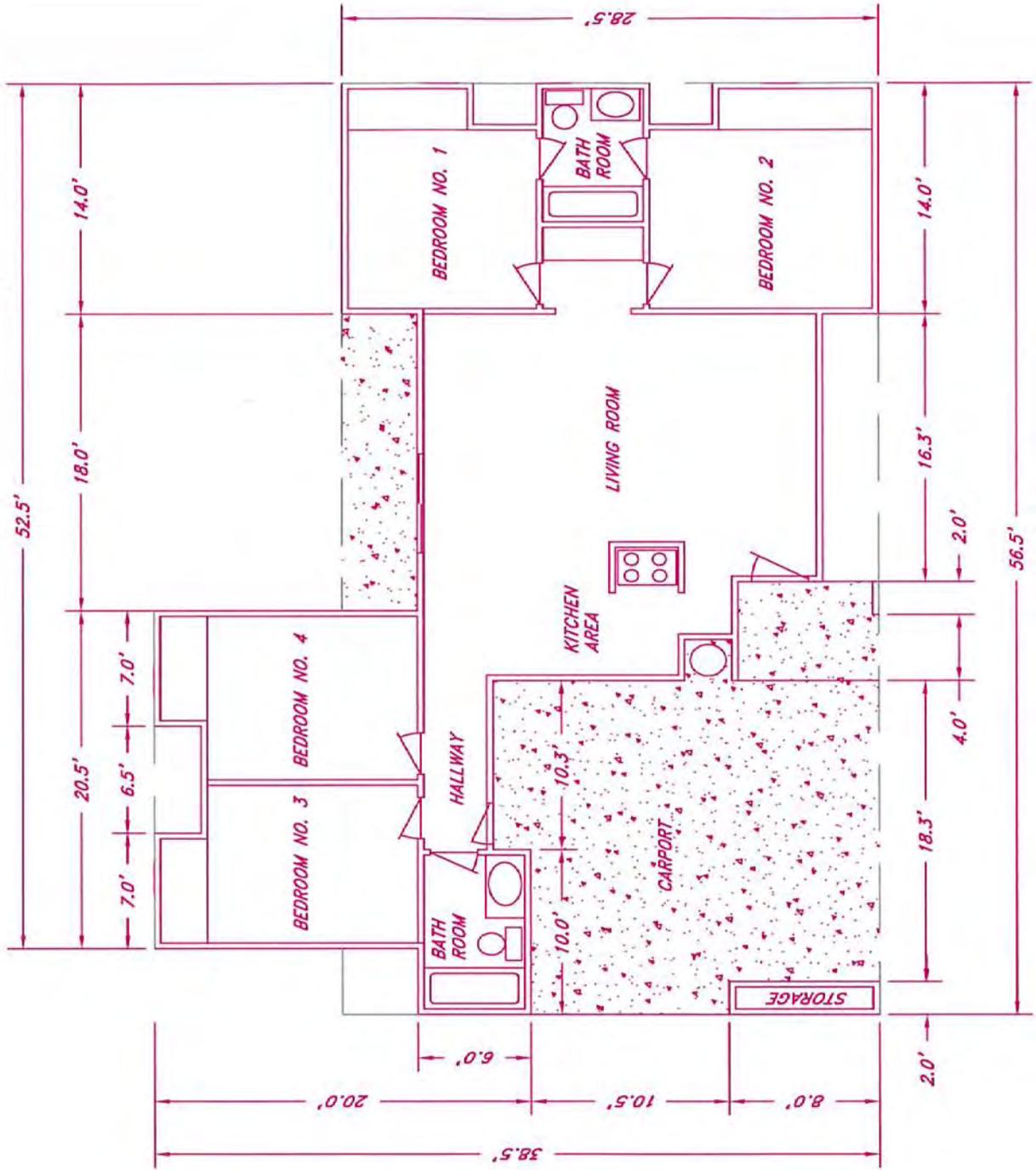
View of BATHROOM NEXT TO BEDROOM NO. 3 (See comments sheet 3)

4. (h) 1

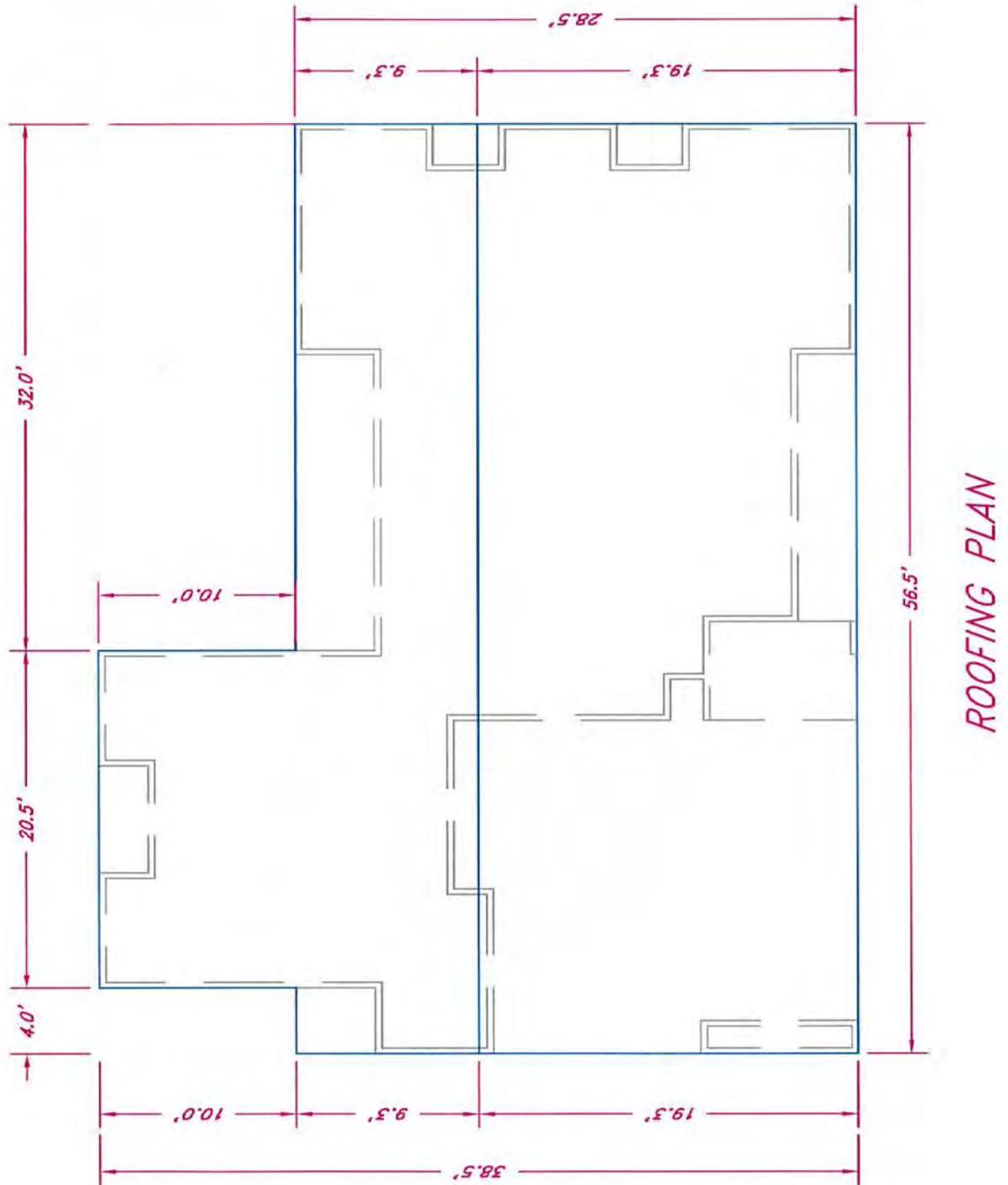
PHOTO 15B



View of ELECTRICAL HOOK UP (See comments sheet 3) 5. (a) 1) PHOTO 16A



PLAN VIEW



PBR HAWAII & Associates Inc.  
Site Visit Form

**Staff Information:**

Date & time of Inspection	7/06/15, 2:45 pm
Location of inspection	<input type="checkbox"/> on site <input checked="" type="checkbox"/> from street or adjacent property
Staffperson's Name	Roy Takemoto

**Site Information:**

Project Name	SFD Package Home Loan New Construction (Kua)
Address	260 Lyman Avenue, Hilo, HI 96720
TMK	(3) 2-1-023:040
On-site Contact Information	
Approval to enter property	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Property notes (i.e. dog, gate lock combo)	Previously graded; overgrown vegetation

**Site Conditions:**

Site Use / Activities	
Surrounding Uses / Activities	Mauka (south): overgrown residential (see aerial photo) Makai (north): residential East: vacant or overgrown residential West: residential
Description of Site Conditions <i>Note vegetation, exposed and eroding soils, surface water, buildings and structures, topography, illegal dump sites, etc. Attach photos.</i>	Non-native invasive trees, shrubs, and grass (see site photos)
Historic Properties <i>Note known or possible historic properties on site or within view of site. Attach photos as applicable.</i>	None observed
Wildlife <i>Note observed birds, mammals, reptiles; note feral cats, chickens</i>	None observed
Explosives <i>Note any above ground storage tanks on site or vicinity and photograph</i>	None observed
Toxics <i>Note any chemical storage, illegal dumping or any other potentially hazardous concerns on site or vicinity and photograph.</i>	None observed
Noise <i>Note any sources of unusually loud noise such as roads, rail, industrial uses and photograph if applicable.</i>	Quiet, only dogs barking
Water <i>Note any surface water on site or adjacent, photograph.</i>	None observed
Air <i>Note conditions; note if anything nearby might cause localized air quality concerns.</i>	None observed

Instructions:

1. Preparation
  - a. Pre-fill Staff Information and Site Information fields.
  - b. Print Pictometry or Google Earth aerial for site location and surrounding uses notation; import kml or shapefile to Pictometry or Google Earth to identify site.
  - c. Bring GPS camera (e.g., smart phone).
  - d. Arrange for permission to go onsite.
2. In the Field
  - a. Fill form fields using printed form or tablet.
  - b. Annotate aerial photo with surrounding uses and site conditions.
  - c. Take photos.
3. In the Office
  - a. Import photos to ArcGIS; print site photos key map.
  - b. Prepare site photos exhibit with selected photos keyed to map.
  - c. Finalize the form in Word with aerial, site photos, site photos key map.

LOT 310 SITE REPORT (7-06-15)





PBR HAWAII & Associates Inc.  
Site Visit Form

**Staff Information:**

Date & time of Inspection	7/06/15, 3:15 pm
Location of inspection	<input type="checkbox"/> on site <input checked="" type="checkbox"/> from street or adjacent property
Staffperson's Name	Roy Takemoto

**Site Information:**

Project Name	SFD Package Home Loan New Construction (Maikui)
Address	308 Lauae Yung Avenue, Hilo, HI 96720
TMK	(3) 2-1-023:170
On-site Contact Information	
Approval to enter property	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Property notes (i.e. dog, gate lock combo)	Recently cleared but now overgrown with guinea grass

**Site Conditions:**

Site Use / Activities	
Surrounding Uses / Activities	Mauka (south): residential (see aerial photo) Makai (north): residential East: vacant cleared residential West: residential
Description of Site Conditions <i>Note vegetation, exposed and eroding soils, surface water, buildings and structures, topography, illegal dump sites, etc. Attach photos.</i>	Overgrown with guinea grass (see site photos)
Historic Properties <i>Note known or possible historic properties on site or within view of site. Attach photos as applicable.</i>	None observed
Wildlife <i>Note observed birds, mammals, reptiles; note feral cats, chickens</i>	None observed
Explosives <i>Note any above ground storage tanks on site or vicinity and photograph</i>	None observed
Toxics <i>Note any chemical storage, illegal dumping or any other potentially hazardous concerns on site or vicinity and photograph.</i>	None observed
Noise <i>Note any sources of unusually loud noise such as roads, rail, industrial uses and photograph if applicable.</i>	Quiet, only dogs barking
Water <i>Note any surface water on site or adjacent, photograph.</i>	None observed
Air <i>Note conditions; note if anything nearby might cause localized air quality concerns.</i>	None observed

Instructions:

1. Preparation
  - a. Pre-fill Staff Information and Site Information fields.
  - b. Print Pictometry or Google Earth aerial for site location and surrounding uses notation; import kml or shapefile to Pictometry or Google Earth to identify site.
  - c. Bring GPS camera (e.g., smart phone).
  - d. Arrange for permission to go onsite.
2. In the Field
  - a. Fill form fields using printed form or tablet.
  - b. Annotate aerial photo with surrounding uses and site conditions.
  - c. Take photos.
3. In the Office
  - a. Import photos to ArcGIS; print site photos key map.
  - b. Prepare site photos exhibit with selected photos keyed to map.
  - c. Finalize the form in Word with aerial, site photos, site photos key map.

LOT 154-B SITE REPORT (7-06-15)



PBR HAWAII & Associates Inc.  
Site Visit Form

**Staff Information:**

Date & time of Inspection	7/06/15, 3:00 pm
Location of inspection	<input type="checkbox"/> on site <input checked="" type="checkbox"/> from street or adjacent property
Staffperson's Name	Roy Takemoto

**Site Information:**

Project Name	SFD Package Home Loan New Construction (Mauhili)
Address	344 Lauae Yung Avenue, Hilo, HI 96720
TMK	(3) 2-1-023:171
On-site Contact Information	
Approval to enter property	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Property notes (i.e. dog, gate lock combo)	Recently cleared

**Site Conditions:**

Site Use / Activities	
Surrounding Uses / Activities	Mauka (south): overgrown residential (see aerial photo) Makai (north): residential East: vacant cleared residential West: overgrown vacant residential
Description of Site Conditions <i>Note vegetation, exposed and eroding soils, surface water, buildings and structures, topography, illegal dump sites, etc. Attach photos.</i>	Cleared (see site photos)
Historic Properties <i>Note known or possible historic properties on site or within view of site. Attach photos as applicable.</i>	None observed
Wildlife <i>Note observed birds, mammals, reptiles; note feral cats, chickens</i>	None observed
Explosives <i>Note any above ground storage tanks on site or vicinity and photograph</i>	None observed
Toxics <i>Note any chemical storage, illegal dumping or any other potentially hazardous concerns on site or vicinity and photograph.</i>	None observed
Noise <i>Note any sources of unusually loud noise such as roads, rail, industrial uses and photograph if applicable.</i>	Quiet, only dogs barking
Water <i>Note any surface water on site or adjacent, photograph.</i>	None observed
Air <i>Note conditions; note if anything nearby might cause localized air quality concerns.</i>	None observed

Instructions:

1. Preparation
  - a. Pre-fill Staff Information and Site Information fields.
  - b. Print Pictometry or Google Earth aerial for site location and surrounding uses notation; import kml or shapefile to Pictometry or Google Earth to identify site.
  - c. Bring GPS camera (e.g., smart phone).
  - d. Arrange for permission to go onsite.
2. In the Field
  - a. Fill form fields using printed form or tablet.
  - b. Annotate aerial photo with surrounding uses and site conditions.
  - c. Take photos.
3. In the Office
  - a. Import photos to ArcGIS; print site photos key map.
  - b. Prepare site photos exhibit with selected photos keyed to map.
  - c. Finalize the form in Word with aerial, site photos, site photos key map.

LOT 151-A SITE REPORT (7-06-15)



PBR HAWAII & Associates Inc.  
Site Visit Form

**Staff Information:**

Date & time of Inspection	7/06/15, 2:45 pm
Location of inspection	<input type="checkbox"/> on site <input checked="" type="checkbox"/> from street or adjacent property
Staffperson's Name	Roy Takemoto

**Site Information:**

Project Name	SFD Package Home Loan New Construction (Nathanael)
Address	To be assigned with building permit
TMK	(3) 2-1-020:081
On-site Contact Information	
Approval to enter property	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Property notes (i.e. dog, gate lock combo)	Previously graded; overgrown vegetation

**Site Conditions:**

Site Use / Activities	
Surrounding Uses / Activities	Mauka (south): vacant overgrown residential (see aerial photo) Makai (north): residential East: vacant overgrown residential West: residential
Description of Site Conditions <i>Note vegetation, exposed and eroding soils, surface water, buildings and structures, topography, illegal dump sites, etc. Attach photos.</i>	Overgrown with non-native invasive trees, brush, vines, grass
Historic Properties <i>Note known or possible historic properties on site or within view of site. Attach photos as applicable.</i>	None observed
Wildlife <i>Note observed birds, mammals, reptiles; note feral cats, chickens</i>	None observed
Explosives <i>Note any above ground storage tanks on site or vicinity and photograph</i>	None observed
Toxics <i>Note any chemical storage, illegal dumping or any other potentially hazardous concerns on site or vicinity and photograph.</i>	None observed
Noise <i>Note any sources of unusually loud noise such as roads, rail, industrial uses and photograph if applicable.</i>	Quiet, only dogs barking
Water <i>Note any surface water on site or adjacent, photograph.</i>	None observed
Air <i>Note conditions; note if anything nearby might cause localized air quality concerns.</i>	None observed

Instructions:

1. Preparation
  - a. Pre-fill Staff Information and Site Information fields.
  - b. Print Pictometry or Google Earth aerial for site location and surrounding uses notation; import kml or shapefile to Pictometry or Google Earth to identify site.
  - c. Bring GPS camera (e.g., smart phone).
  - d. Arrange for permission to go onsite.
2. In the Field
  - a. Fill form fields using printed form or tablet.
  - b. Annotate aerial photo with surrounding uses and site conditions.
  - c. Take photos.
3. In the Office
  - a. Import photos to ArcGIS; print site photos key map.
  - b. Prepare site photos exhibit with selected photos keyed to map.
  - c. Finalize the form in Word with aerial, site photos, site photos key map.

LOT 170-B SITE REPORT (7-06-15)

