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STATE OF HAWAI'I
DEPARTMENT OF LAND AND NATURAL RESOURCES
Office of Conservation and Coastal Lands
POST OFFICE BOX 621
HONOLULU, HAWAI'I 96809

FILE NO.: KA-3586

180-Day Expiration Date: August 13, 2011

RECEIVED
FEB 23 2011

MEMORANDUM

To: Gary Hooser, Director
Office of Environmental Quality Control

From: Samuel J. Lemmo, Administrator
Office of Conservation and Coastal Lands

Subject: Draft Environmental Assessment (DEA) for Conservation District Use Application (CDUA) KA-3586 for an After-The-Fact Approval for Two Miles of Lateral Trails, and Two Mauka-Makai Trails, and Landscaping, and Erosion Control

The Department of Land and Natural Resources has reviewed the draft EA for the subject project, and anticipates a Finding of No Significant Impact (FONSI) determination. Please publish notice of availability for this project in the next issue of the *Environmental Notice*. We have enclosed four hard copies of the draft EA document and one copy of the CDUA. We will follow this with an electronic copy of the applicant's project summary and the OEQC Bulletin Publication Form.

Should you wish to provide comments regarding this project, please respond by the suspense date noted above. If no response is received by the suspense date, we will assume there are no comments. Please contact Michael Cain of our Office of Conservation and Coastal Lands staff at 587-0048 should you have any questions.

C: Dean Uchida
Enclosures: *Conservation District Use Application*
Draft Environmental Assessment
OEQC Pub Form
1 CD with above

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DEPT. OF ENVIRONMENTAL QUALITY CONTROL

Draft Environmental Assessment

Prepared For Secret Beach Properties, LLC
January 2011

Prepared By

SSFM INTERNATIONAL

501 Sumner Street, Suite 620
Honolulu, Hawai'i 96817

Project Summary

Project Name:	Secret Beach Properties, LLC
Project Location:	The project is located on a 23.803 acres parcel off Kauapea Road in Kīlauea on the North Shore of Kauaʻi.
Tax Map Key:	5-2-05:036
Existing Uses:	19.3 acres of coastal forest on a steep basaltic bluff. The remaining 4.5 acres of the property is in active agricultural use.
State Land Use District:	Agricultural (4.5 acres) and Conservation (19.3 acres)
Conservation District Subzone:	Limited
Community Plan:	Agricultural (4.5 acres) and Open Space (19.3 acres)
Zoning:	Agricultural (4.5 acres) and Not Zoned (19.3 acres)
Special Management Area:	Yes
Proposed Action:	Secret Beach Properties, LLC will obtain a number of after-the-fact permits for approximately two (2) miles of trails and associated improvements across the width of the 23.803-acre property as well as two mauka-makai trails from the top of the coastal bluff to the shoreline area. These trails are required to access and maintain the property. They will seek approval for the removal of unwanted vegetation, including trees, subject to plans to be submitted to and approved by the Department of Lands and Natural Resources Office of Conservation and Coastal Lands. Lastly, Secret Beach Properties, LLC will also seek approval for the installation of a mauka boundary fence should illegal activities continue to occur on the Property.
Anticipated Impacts:	There will be a positive impact to emergency responders by providing an alternative and faster access to Kauapea Beach. There may be a temporary increase in ambient noise and fugitive dust associated with the trail and landscape maintenance as well as the installation of the fence.
Proposing Entity:	Secret Beach Properties, LLC
Accepting Authority:	State of Hawaiʻi Department of Land and Natural Resources Office of Conservation and Coastal Lands
Anticipated Determination:	Findings of No Significant Impact (FONSI)
Permits/Approvals Required:	• Conservation District Use Permit • Special Management Area Use Minor Permit • Shoreline Setback Determination
EA Preparer:	SSFM International, Inc. 501 Sumner Street, Suite 620, Honolulu Hawaiʻi 96817 Contact: Ms. Robyn Loudermilk (Phone: 808-531-1308)

Table of Contents

List of Tables

List of Figures

CHAPTER 1: INTRODUCTION

1.1: Project Purpose and Need

Secret Beach Properties, LLC is applying for a number of after-the-fact permits to allow for existing trails, safety improvements, and landscape maintenance located on lands located in the State Conservation and Agricultural Districts. Additionally these permits will request the installation of fencing along the mauka border of the property. These improvements are needed to provide access to and management of these lands.

1.2: Project Background

In November 2005, Secret Beach Properties, LLC (Applicant) purchased lands identified as Tax Map Key 5-2-05:036 (Property) and comprised of 23.803 acres. In 2006, agricultural activities commenced on the portion of the Property located within the State Agricultural District commenced. To assist in the agricultural operations, several mauka-makai trails were established for the planting, maintenance, and harvesting of tropical flowers and other ornamental plants. The mauka access of these trails commences on TMK 5-2-005:032.

In 2007, the Department of Land and Natural Resources, Office of Conservation and Coastal Lands (DLNR-OCCL) investigated a complaint for the cutting of trees on the Property. This cutting occurred on the mauka border of the Property, adjacent to TMK 5-2-005:029, and was not initiated by the Applicant. Although DLNR-OCCL personnel determined that a violation occurred, DLNR-OCCL was not able to determine if the Applicant authorized the work or if a neighboring property initiated the work without the Applicant's authorization. The DLNR-OCCL did not pursue the case further while advising the Applicant to clean up the green waste generated by the unauthorized work.

Subsequently the Applicant retained Paradise Grounds Care to clean up the Property. During this clean up, more tree cuttings and green waste was discovered on other portions of the Property. In order to reach these areas of the Property, the pre-existing lateral trail was re-established.

In September 2008, DLNR-OCCL received a complaint that the Applicant was installing steps on the Property. Upon further investigation by DLNR-OCCL Staff, a Notice of Alleged Violation & Order dated July 30, 2009 was issued to the Applicant regarding the Property.

On March 11, 2010, the Board of Land and Natural Resources (BLNR) found the Applicant in violation of Chapter 183C, Hawai'i Revised Statues (HRS), and Title 13-5, Hawai'i Administrative Rules (HAR) by landscaping in the Limited subzone without a Conservation District Use Permit (Enforcement File: KA-08-06).

The general location of the project is shown in Figure 1.

FIGURE 1

PROJECT LOCATION

Secret Beach Properties, LLC

Source: DeLorne

0 1,050 2,100 4,200 Feet

N

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1.3: Project Description

This proposed action is for a number of after-the-fact permits for approximately two (2) miles of trails across the width of the 23.803-acre property and two mauka-makai trails from the top of the bluff to the shoreline area. The existing lateral improvements cover approximately 0.6 acres and are located along a natural shelf on the side of a coastal bluff at an elevation of approximately 150 feet mean sea level (msl). The mauka access for one of the mauka-makai trails is on TMK 5-2-005:032, an adjacent parcel owned by the Applicant. For the second mauka-makai trail, the mauka access is from two (2) adjacent parcels: TMK 5-2-005:027 and 028, owned by Sophia Farm and David Smith, respectively. A third mauka-makai trail was permitted by the Board of Land and Natural Resources in 2000 (CDUP KA-2966).

Trail improvements include narrow swaths cleared of vegetation; Trex and wooden planks to shore up earthen steps; rebars that have been driven into the soil to hold these planks in place; and hog wire fencing with metal T-posts along the more hazardous portions of the trails to ensure that persons walking along the trails do not slip and fall down the pali.

Lateral trails are needed primarily for property maintenance and control. Mauka-makai trails afford the mauka landowners pedestrian access to Kauapea Beach. The trail that begins on Applicant's adjoining property also is used in connection with the agricultural activities (planting, maintenance and harvesting of tropical flowers and other ornamental plants) conducted on the portion of the Property located within the State Agricultural District.

More importantly, the mauka-makai trails provide emergency personnel (fire, rescue, police and DOCARE) with alternative access to the shoreline area, which oftentimes means a faster response in emergency situations.

In addition to requesting approval for the existing trail, including trail maintenance, these applications seek approval for future removal of unwanted vegetation, including trees, subject to plans submitted to and approved by DLNR/OCCL. Tree cutting activities, including the 2007 incident that culminated in the Board finding the

Applicant in violation of HRS Chapter 183C, tend to be for the purpose of preserving ocean views for the adjacent mauka landowners.

As was recognized in the 2007 incident, tree-cutting is often done by adjacent landowners without the Applicant's knowledge or consent. Such practices have continued and are likely to continue, notwithstanding the Applicant's increased vigilance. A possible solution would be to replace the non-native ironwood trees that are primarily responsible for blocking views with other (preferably native) lower-growing vegetation. Applicant proposes that should it desire to remove unwanted vegetation from time to time, plans would be submitted to DLNR/OCCL for review and approval. Such plans would address erosion and replacement vegetation.

Lastly, approval will also be a requested to allow for future fencing along the mauka property boundary to prevent unauthorized use of the property. This fence will only be constructed if unauthorized use of the property by adjoining landowners persists.

Additional photographs are located in Appendix A.

1.4: Chapter 343, Hawai'i Revised Statutes

Chapter 343, *Environmental Impact Statements*, Hawai'i Statutes (HRS) established a system of environmental review in order that environmental concerns are considered as part of the decision making process. Additionally, Chapter 343, HRS identifies the types of programs or actions required to undergo and comply with an environmental review. Programs or actions utilizing land in the State Conservation District require compliance with Chapter 343, HRS. This action utilizes land in the State Conservation District.

This Draft Environmental Assessment (Draft EA) addresses the potential impacts on the surrounding environment resulting from the repair and maintenance of existing trails. This Draft EA was prepared in conformance to the regulatory and documentation requirements prescribed under Chapter 343, *Environmental Impact Statements*, Hawai'i Revised Statutes otherwise referred to as the "Hawai'i Environmental Impact Statement Law" and Title 11, Chapter 200 (Environmental Impact Statement Rules) of the State Department of Health's Administrative Rules (HAR).

CHAPTER 2: EXISTING PHYSICAL & BIOLOGICAL ENVIRONMENT AND POTENTIAL IMPACTS

2.1: Project Location and Surrounding Uses

2.1.1: Existing Conditions

The Hawaiian Archipelago is comprised of more than 100 islands spanning a distance of more than 1,500 miles. These islands are emerged summits of volcanoes on a great submarine ridge that moves in a northwest direction. Known as the Pacific lithospheric plate, the islands were formed by the plate's movement over a hot spot fixed in the earth's mantle. The sequential formation of the archipelago is indicated by the occurrence of submerged older islands in the northwest portion of the chain and by the relative youth and current volcanic activity of the islands of the State of Hawai'i at the southeast end.

Kaua'i is the oldest and fourth (4^{th}) largest of the eight (8) major islands in the State of Hawai'i. It is circular in shape with a land area approximately 555 square miles. Additionally, the Island has a maximum length of 33 miles and maximum width of 25 miles. The proposed action is located along a coastal bluff northwest of Kīlauea Town on Kauai's North shore. It was once part of the Kīlauea Sugar Plantation which ceased operations in 1972. An aerial photograph of the Property is shown on Figure 2.

The Property is approximately one half mile in length with a width ranging from 100 to 700 feet. It is approximately 23.803 acres and is bordered by Kauapea Beach and agricultural lands. Approximately 4.5 acres along the western portion of the Property is in active agricultural. The remainder of the Property is steeply sloped with heavy vegetation. A 14,167 square feet pedestrian easement to Kauapea Beach traverses the western portion of the Property. This easement connects to an adjacent parcel. A map of the Property's tax map key is provided in Figure 3. Figures 4 through 6 are topographic maps of the Property that delineates the location of the existing trails.

Land use to the north of the Property is beach. Land uses to the east are comprised of beach, vegetated coastal bluffs, and the Kīlauea Point National Wildlife Refuge. Land uses to the south are Kauapea Road, agricultural lands with existing farm dwellings and Kūhiō Highway. Land uses to the west are beach, vegetated coastal bluffs, and agricultural lands.

2.2: Land Use Designations

2.2.1: Existing Conditions

State Land Use District

Chapter 205, Hawai'i Revised Statutes (HRS), also known as the State Land Use Law, designates all lands within the State of Hawai'i into one of four categories: Agricultural, Conservation, Rural, and Urban. Permissible uses and standards are identified for each district. The Property is located on lands designated both Agricultural (4.5 acres) and Conservation (19.3 acres) by State Land Use Commission Maps K-5, Hanalei and K-9, Anahola. Uses within the Agricultural District are regulated and enforced by the respective counties. Uses within the Conservation District are regulated and enforced by the DLNR.

FIGURE 2

AERIAL PHOTO

Secret Beach Properties, LLC

Sources: State of Hawaii GIS Website and ESRI

N

0 480 960 1,920 Feet

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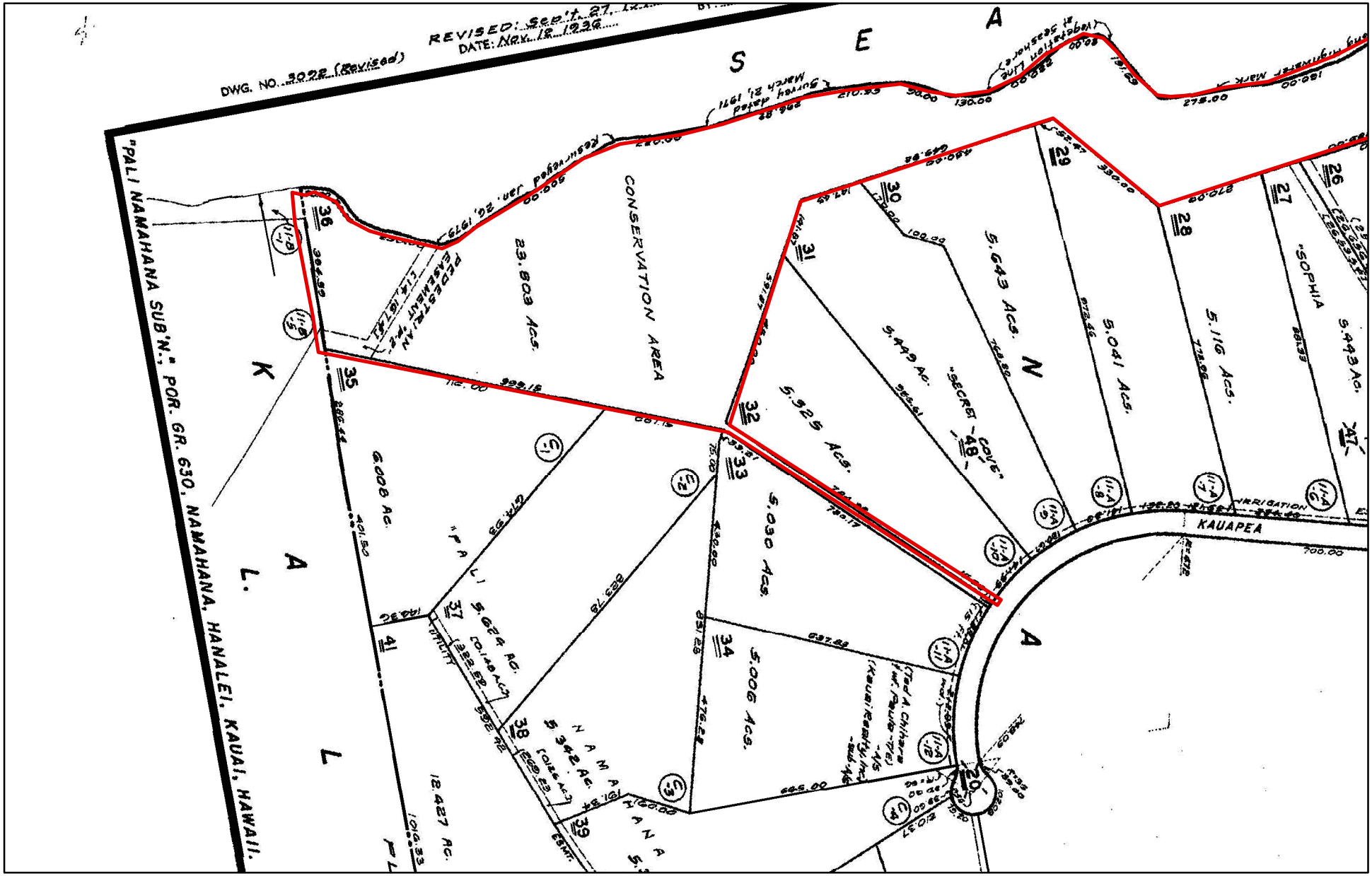

FIGURE 3

TMK MAP 5-2-5:036

Secret Beach Properties, LLC
Source: State of Hawaii GIS Website

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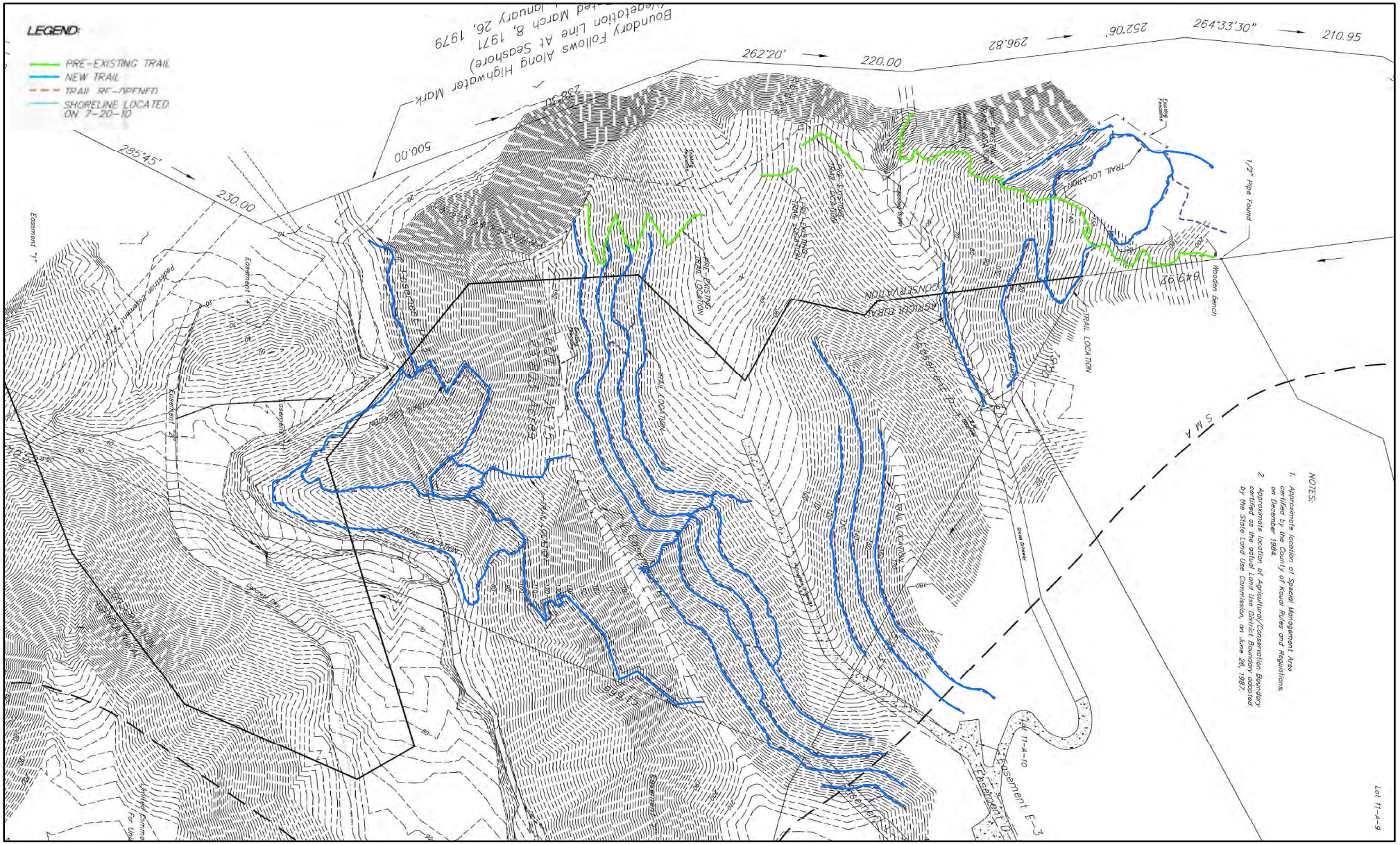

FIGURE 4

EXISTING TRAILS PART 1: Western (Gulch) Portion of Property

Not to Scale

Secret Beach Properties, LLC
Source: Alan Hiranaka

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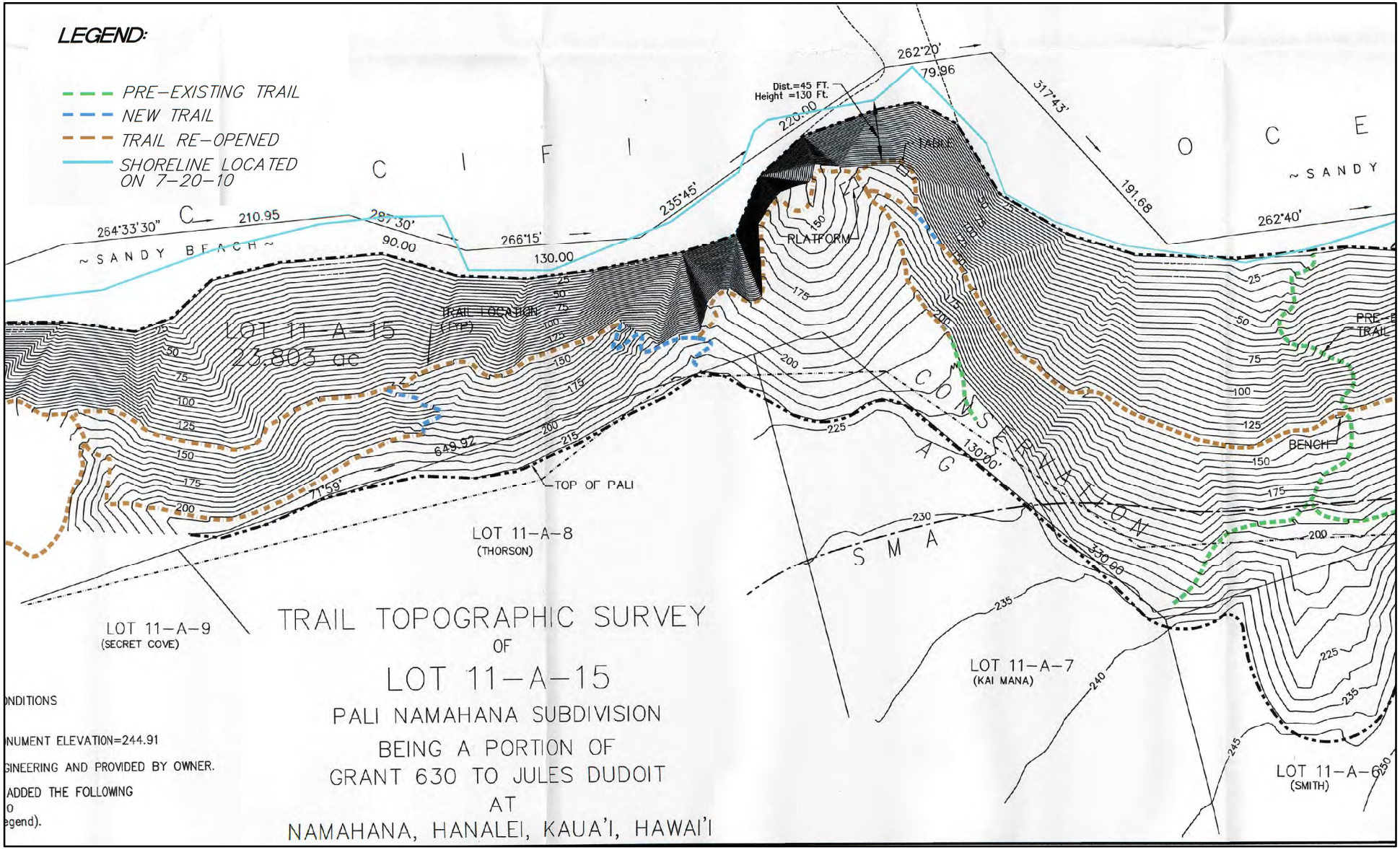

FIGURE 5

EXISTING TRAILS PART 2: Middle Portion of Property

Secret Beach Properties, LLC

Source: Trail Topogrpahic Survey Map dated September 2, 2010 by Hiranaka Survey and Mapping

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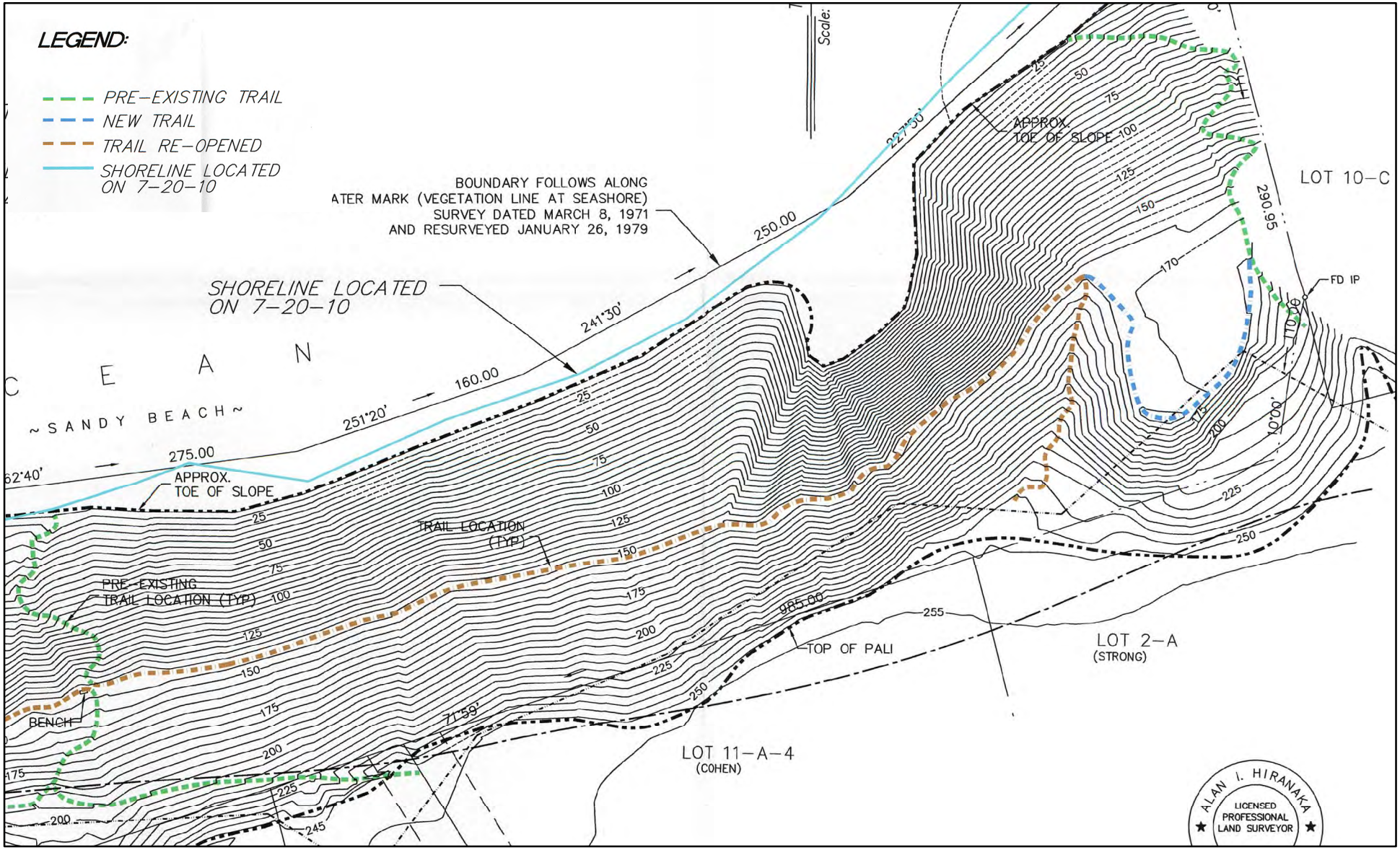

FIGURE 6

EXISTING TRAILS PART 3: Eastern Portion of Property

Secret Beach Properties, LLC

Source: Trail Topogrpahic Survey Map dated September 2, 2010 by Hiranaka Survey and Mapping

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Not To Scale

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There have been no changes to these designations since the adoption of the State Land Use District maps in the 1960's. The State Land Use District Boundaries are shown on Figure 7.

Lands within the Conservation District contain important natural resources essential to the preservation of the State's fragile natural ecosystems and the sustainability of the State's water supply. These lands are to be conserved, protected, and preserved to promote their long-term sustainability and the public health, safety, and welfare. Chapter 183C, HRS allows for the establishment of zones to govern uses of these lands. All Conservation District lands are categorized into one of the following subzones: Protective, Limited, Resource, General, and Special. The portion of the Property located within the Conservation District is in the Limited subzone.

Pursuant to §13-5-12, Hawai'i Administrative Rules (HAR), the objective of the limited (L) subzone is to limit uses where natural conditions suggest constraints on human activities. Lands in this subzone are susceptible to floods and soil erosion, or major erosion damage requiring corrective attention by the county, state, or federal governments. Also in this subzone are lands necessary for the protection of the health, safety, and welfare of the public due to susceptibility to inundation by tsunami, flooding, volcanic activity, landslide, or have a general slope of forty percent or more. A Conservation District Use Permit Application will be submitted to the DLNR for review and action.

There have been no changes to the subzone designation since the adoption of the Conservation District Subzone Maps. The Conservation District subzones are shown on Figure 8.

County Development Plan

There are five (5) development plan districts for the County of Kaua'i. The Property is located within the North Shore Planning District. The portion of the Property located within the State Conservation District is designated as Open with the remaining portion is designated Agricultural on the North Shore Planning District Land Use Map. The North Shore Planning District land use designations are shown on Figure 9.

County Zoning Districts

Zoning in the County of Kaua'i is regulated by Chapter 8, *Comprehensive Zoning Ordinance,* Kauai County Code. The portion of the Property located within the State Conservation District is not zoned. The remaining portion of the Property in the State Agricultural District is zoned Agricultural. There have been no changes to the zoning since the adoption of the Comprehensive Zoning Ordinance in 1973. Zoning districts are shown on Figure 10.

Special Management Area

A large portion of the Property is located within the Special Management Area as adopted by the Kauai Planning Commission. A Special Management Area Minor Permit application will be submitted to the Kaua'i Planning Department for review and action. There have been no changes to these boundaries since being adopted in the 1970's. The Special Management Area boundaries are shown on Figure 11.

Shoreline Setbacks

The Property is also a shoreline property. As such, portions of the proposed action may be located within the Shoreline Setback Area. A Shoreline Setback Determination application will be submitted to the Kaua'i Planning Department for review and action.

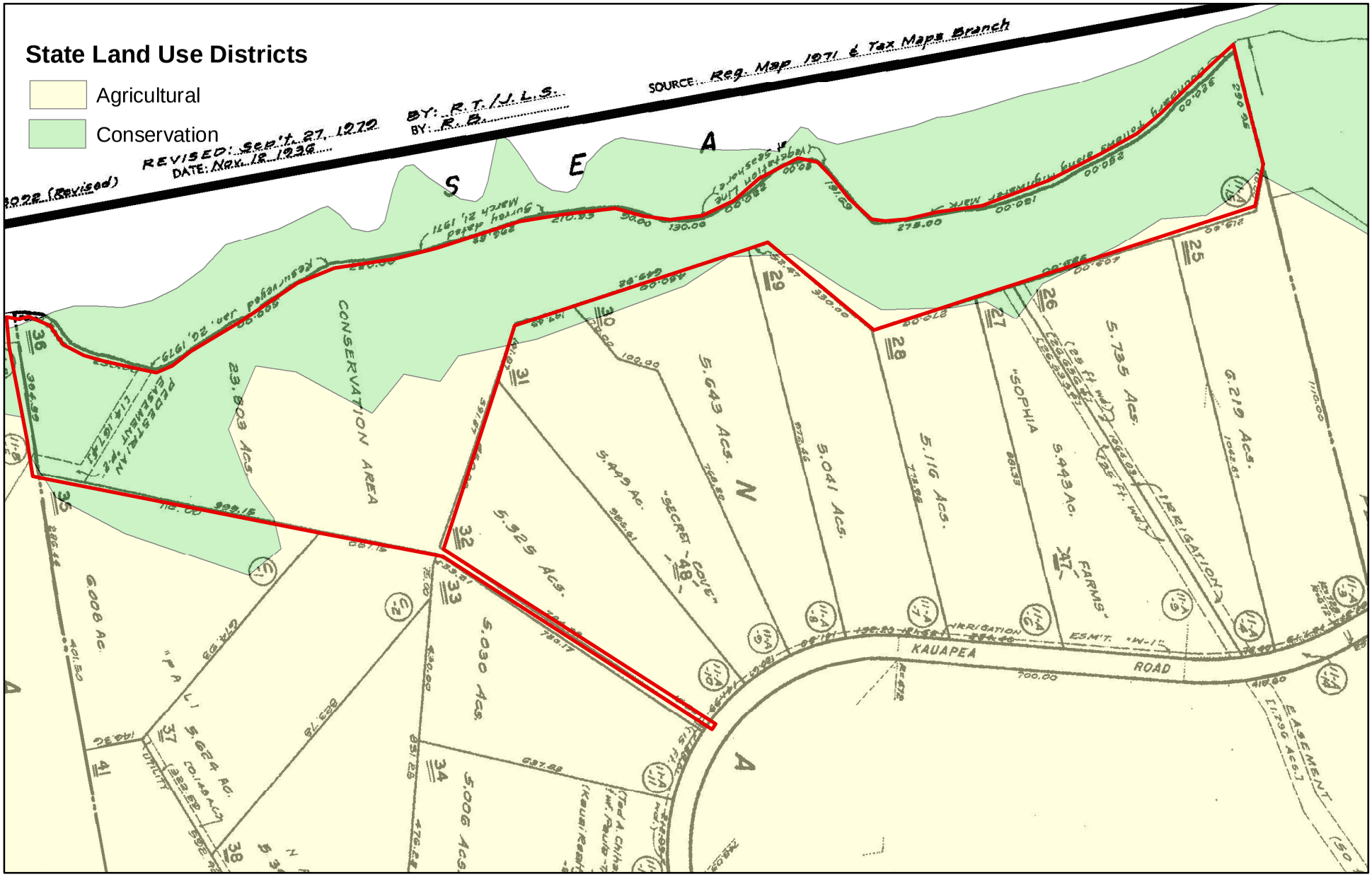

FIGURE 7

STATE LAND USE DISTRICTS

Secret Beach Properties, LLC
Source: State of Hawaii GIS Website

0 140 280 560 Feet

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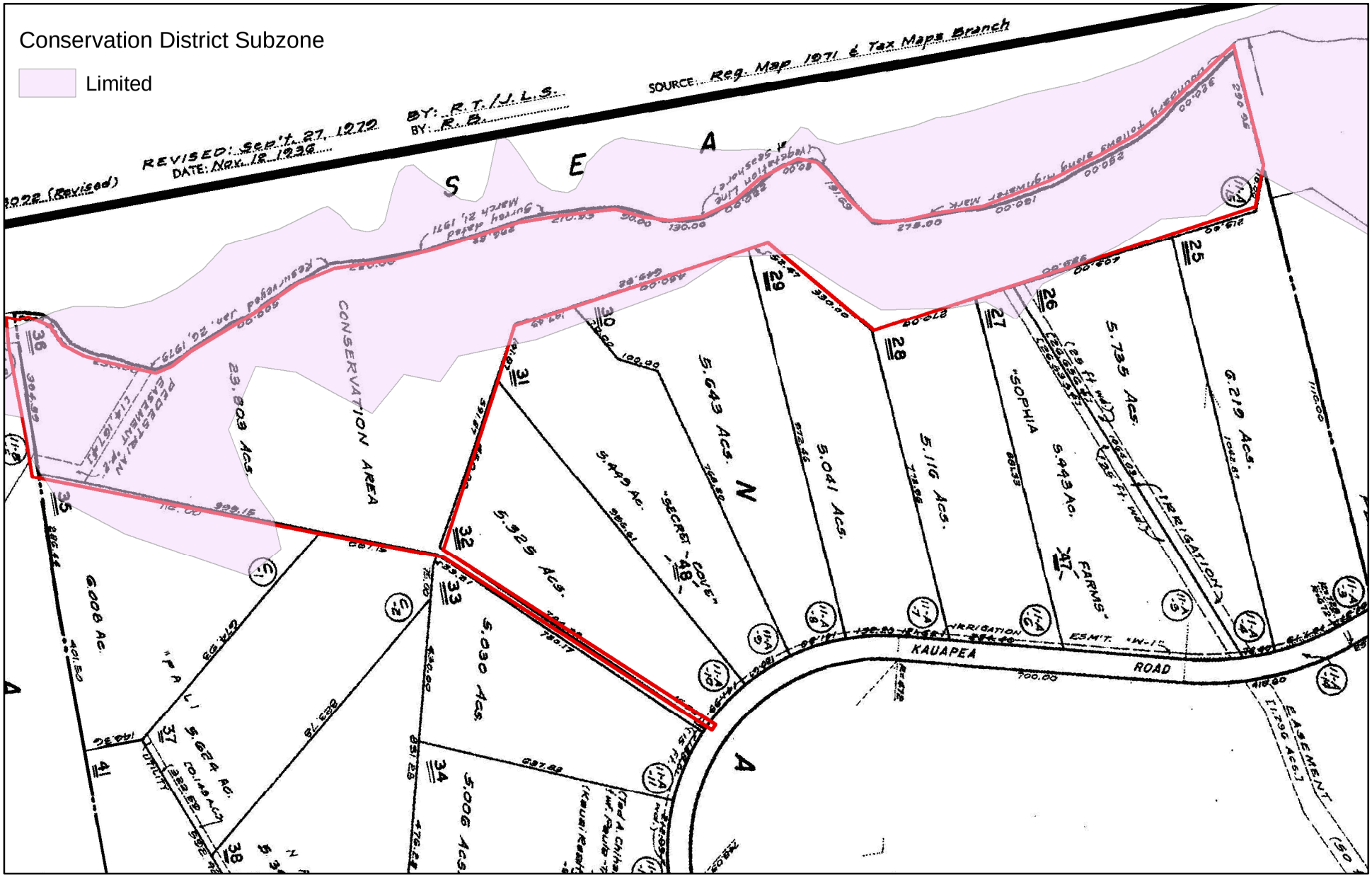

FIGURE 8

CONSERVATION DISTRICT SUBZONES

Secret Beach Properties, LLC
Source: State of Hawaii GIS Website

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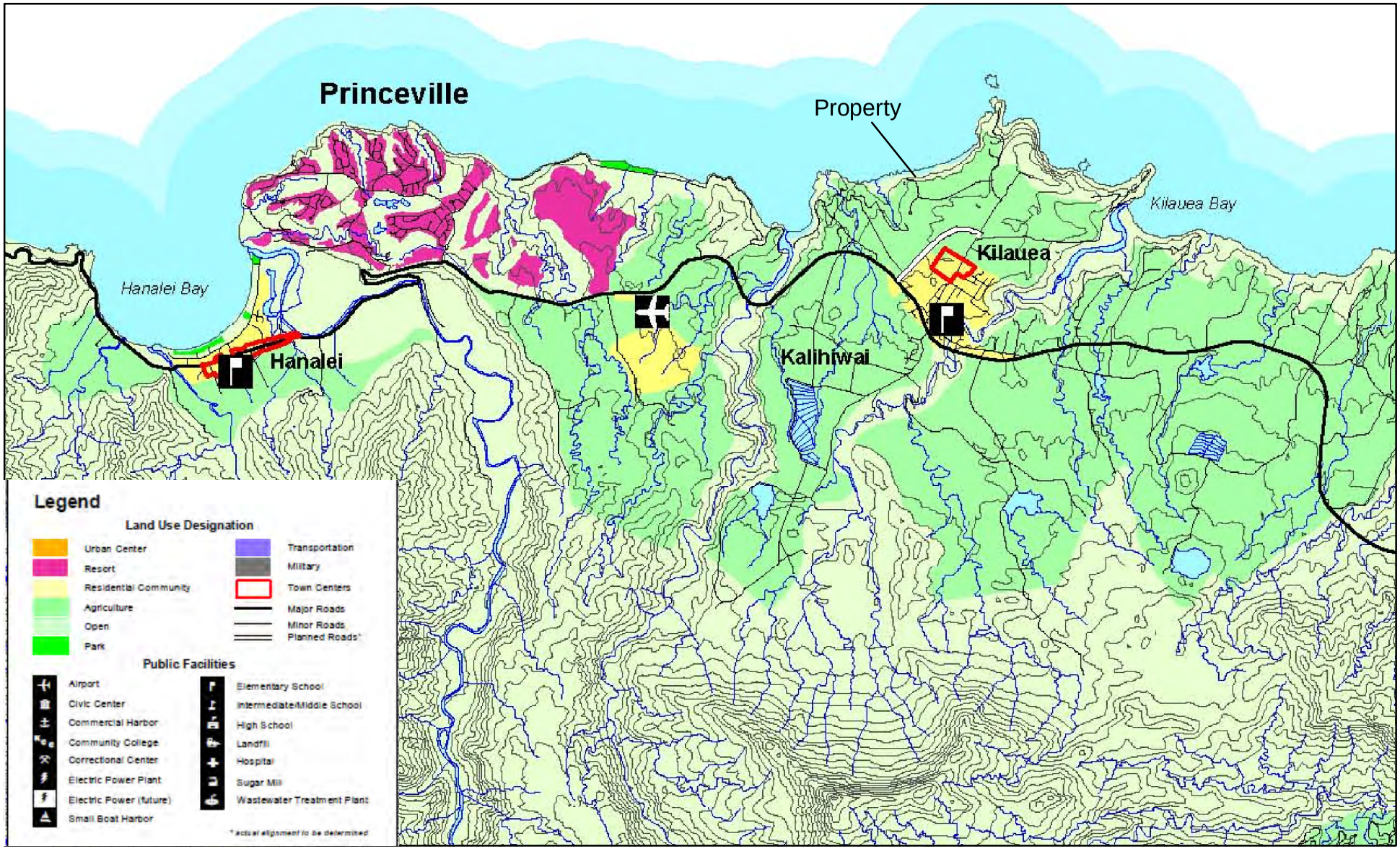

FIGURE 9

NORTH SHORE PLANNING DISTRICT LAND USE MAP

Secret Beach Properties, LLC
Source: Kauai General Plan, November 2000

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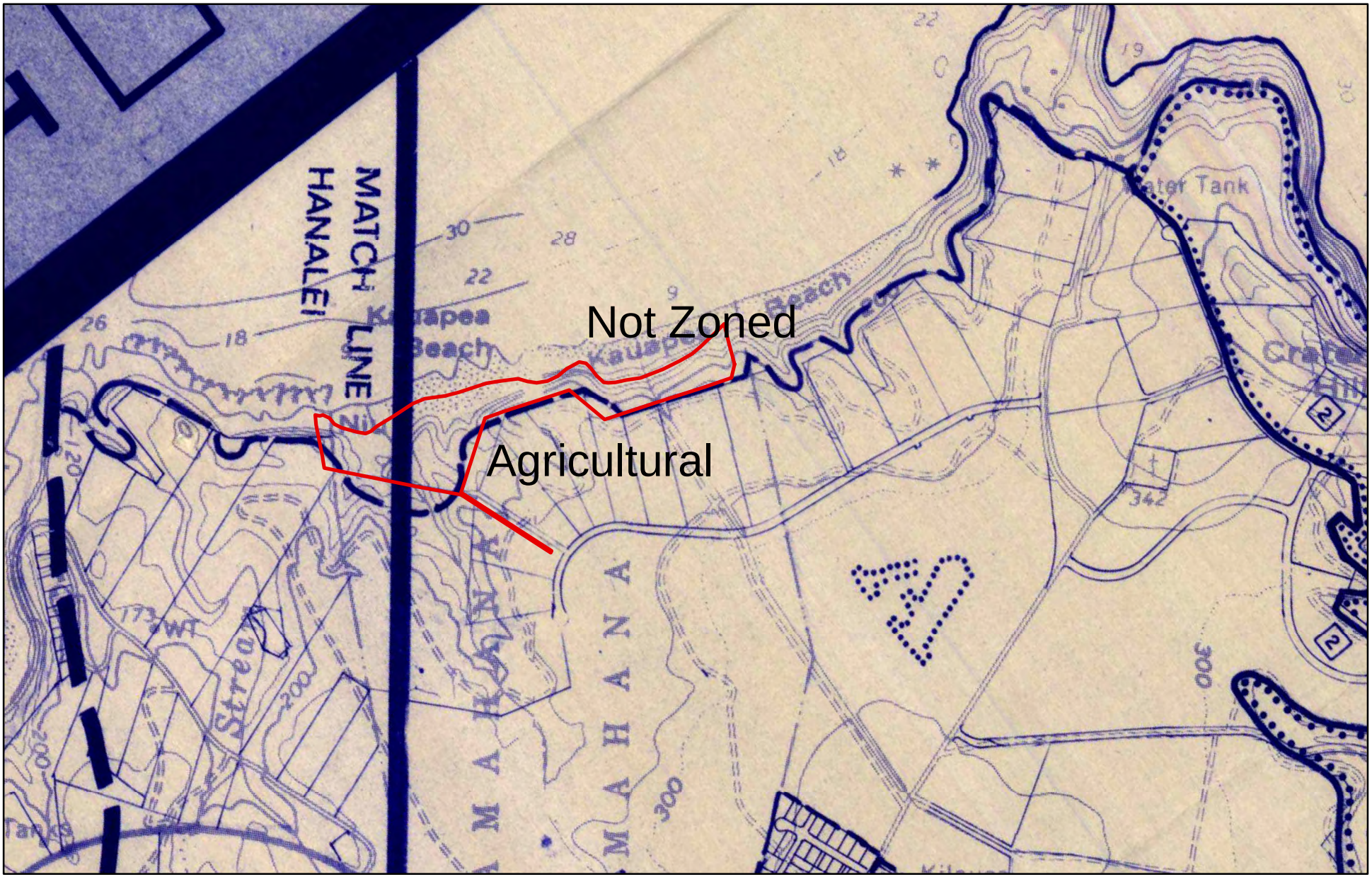

FIGURE 10

ZONING MAP

Secret Beach Properties, LLC
Source: State of Hawaii GIS Website, County of Kauai Kilauea Zoning Map

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Not to Scale

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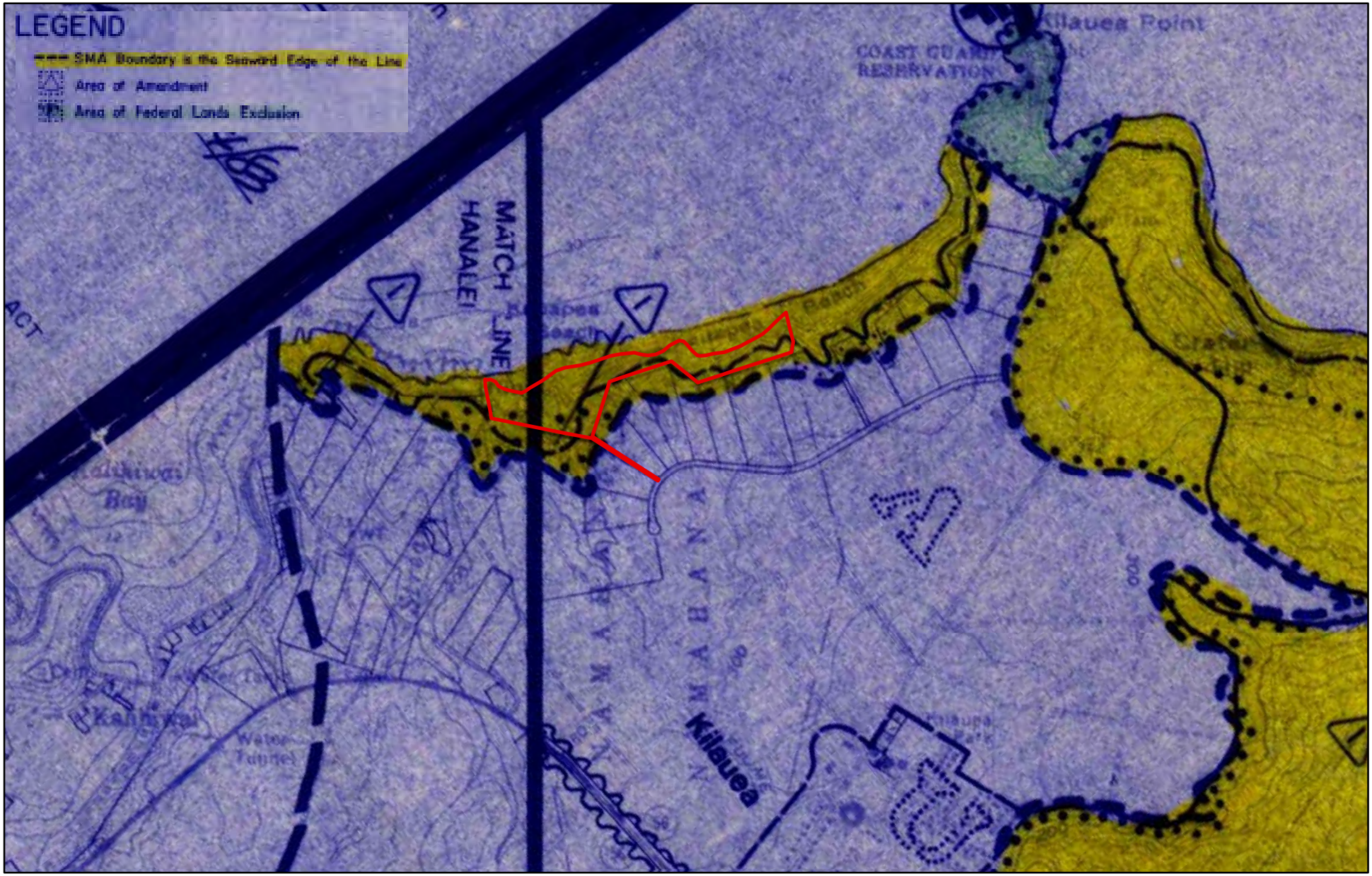

FIGURE 11

SPECIAL MANAGEMENT AREA

Secret Beach Properties, LLC
Source: State of Hawaii GIS Website, County of Kauai Kilauea Special Management Area Map

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The County of Kauaʻi Planning Department utilize two methods to determine the shoreline setback area: annual coastal erosion rates and average lot depth. Coastal erosion rate maps have been established for a number of coastal areas of Kauaʻi.

2.2.2: Potential Impacts Land Use

Minimal impacts to existing land uses are anticipated as a result of the proposed action. A Conservation District Use Permit and Special Management Area Minor Permit applications will be submitted to allow for the existing uses and future construction of a fence along the mauka boundary of the Property. Further, a Shoreline Setback Determination will be submitted to identify what portions of the proposed action are located in the Shoreline Setback Area.

2.3: Climate

2.3.1: Existing Conditions

Native Hawaiians identified two (2) seasons in Hawaiʻi, Kau and Hoo-ilo. Kau is the warm fruitful season with steady trade winds extending from May through October. The sun is mostly directly overhead in the sky. Hoo-ilo is the cool season with interruption of trade winds extending from November to April. The sun is located more towards the south in the sky.

Climate in the State of Hawaiʻi as well as on the island of Kauaʻi is characterized as having low day-to-day and month-to-month variability. Differences in the climate of various areas are generally attributable to the island's geologic formation and topography. This creates miniature ecosystems ranging from tropical rain forests to the drier plains; along with corresponding differences in temperature, humidity, wind, and rainfall over short distances.

Steady temperatures as measured at the Līhuʻe Airport, are associated with the cooling effect of the Pacific Ocean and the small seasonal variation in the amount of energy received from the sun. Trade winds that blow across the island also contribute to the steady temperatures. The range in normal temperature is approximately 9.4 degrees F. This is generally reflected in the temperatures of the Kīlauea area which is located to the north of the Līhuʻe Airport and have similar climate characteristics. Average monthly temperatures recorded at Līhuʻe Airport varied between 69 and 79 degrees, and averaged 74.5 degrees in 2009.

Normal annual rainfall is over 40 inches. Trade wind showers are common with most being light and of short duration. However the frequency and intensity of the showers increase towards the mountains. Mt Waialeale has the highest annual rainfall in the world with an average of 486 inches. Annual rainfalls greater than 620 inches per year are not uncommon. At Līhuʻe Airport, average monthly rainfall varied between 0.29 to 5.55 inches, with an annual rainfall of 26.63 inches in 2009.

To the north of the Hawaiian Islands is the large Pacific semi-permanent high pressure cell that affects air circulation in the region. In the North Pacific, this cell provides the north easterly trade winds (trade winds) that traverse the Hawaiian Islands, including the Island of Kauaʻi

2.4: Geology, Topography, and Soils

2.4.1: Existing Conditions

Geology

The Hawaiian Islands are comprised of an undersea mountain range built up by volcanic activity. Each island has followed a similar pattern of development: building of the shield dome, collapse of the caldera, eruption, erosion, and then post erosion eruptions. At many locations, particularly the younger islands (Hawai'i and Maui), the near surface "soil" conditions consist of shallow basaltic rock.

Kaua'i is one of the oldest and most structurally complicated of the eight major islands and has passed through the principal stages of Hawaiian volcanism. It was built by a single shield volcano that underwent tremendous erosion prior to the commencement of post erosion eruptions. The highest point on Kaua'i is Mount Kawaikini at an elevation of 5,170 feet. It is adjacent to the more well known Mount Waialeale with an elevation of 5,080 feet.

Kaua'i was formed by the Waimea Canyon and Kōloa volcanic series. The Waimea Canyon series is the older of the two and is predominantly comprised of olivine basalts. This series is further broken down in to a number of formations. The Napali formation is a series of lava flows, which over time formed the single shield volcanic dome. Lavas that filled the caldera are known as the Olokele formation. Lavas that filled the southwestern portion of the original collapsed shield are known as the Makaweli formation. Lastly, lavas from the small caldera on the southeast of the island are called the Hā'upu formation.

The Kōloa series occurred during the post erosion eruption phase and are comprised of a range of formations from olivine basalt to nepheline basalt. These rocks filled in the valleys and covered much of the east Kaua'i.

Topography

Soils

U.S. Department of Agricultural, Natural Resources Conservation Service

The U.S. Department of Agricultural, Soil Conservation Service's *Soil Survey of Islands of Kaua'i, O'ahu, Maui, Moloka'i, and Lāna'i, State of Hawai'i* (SCS, 1973) identifies soil types, their location, and how they can be used. This report was developed by the SCS (subsequently renamed the Natural Resources Conservation Service) to provide technical assistance to the existing Soil and Water Conservation Districts located on the islands.

The Property is classified as Beaches (BS); Rock Outcrop (rRO); Rough Broken Land (rRR); Hanalei silty clay deep water table, 0 to 6 percent slope (HrB), and Līhu'e silty clay, 0 to 8 percent slope (LhB). These soils are shown in Figure 12.

Beaches (BS) occur as sand, gravelly, or cobbly areas on all the islands surveyed. Beaches are comprised of light colored sands derived from coral and seashell as well as dark colored sands derived from basalt and andesite. This soil is suitable for recreational uses and resort development. Rock Outcrop (rRO) is comprised of areas where exposed bedrock covers more than 90 percent of the surface and mainly comprised of basalt as well as andesite.

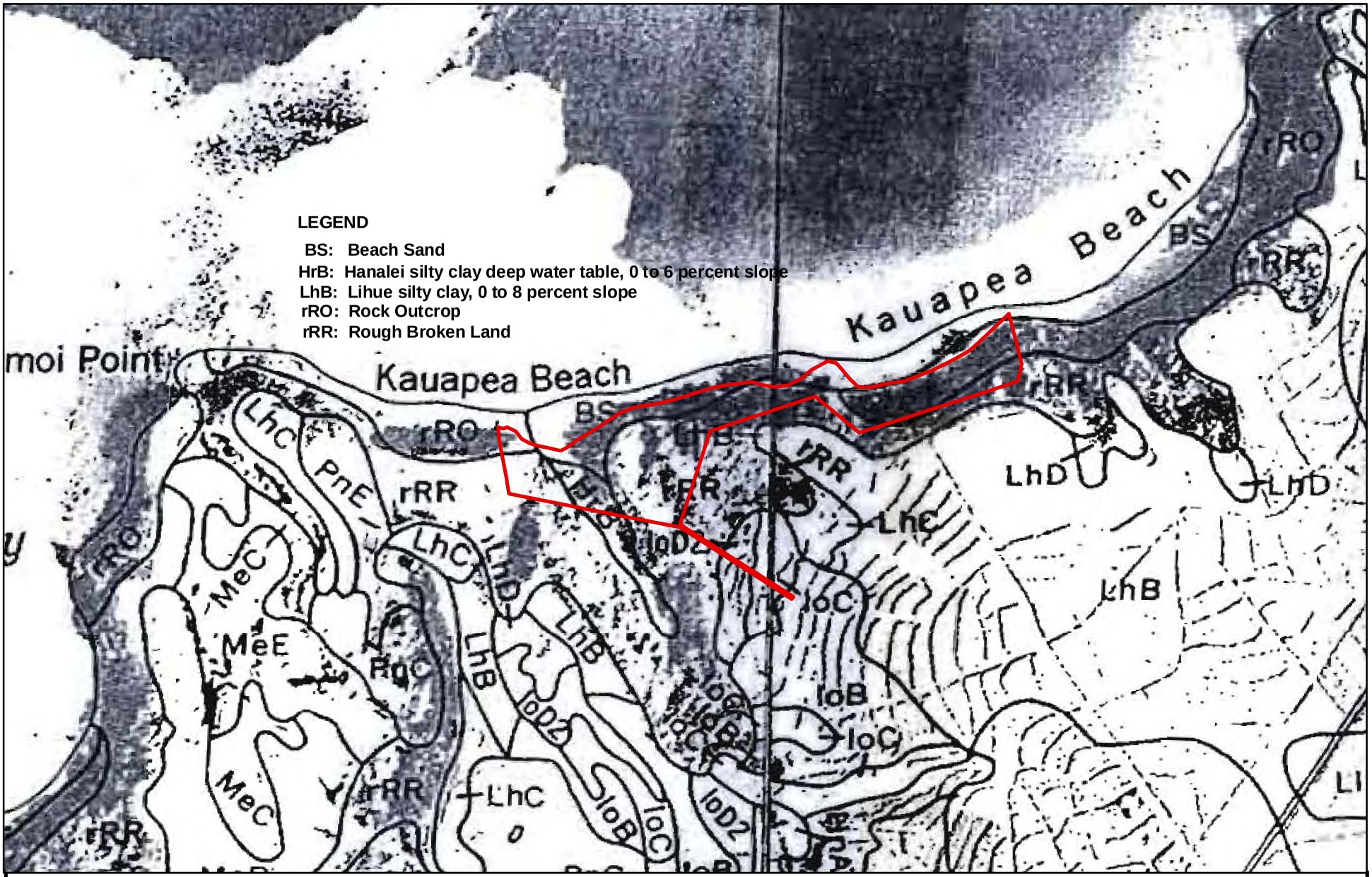

FIGURE 12

U.S. SOIL CONSERVATION SERVICE

Secret Beach Properties, LLC
Source: State of Hawaii GIS Website and US Soil Conservation Service

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Not to Scale

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Rough Broken Land (rRR) consists of very steep land broken by numerous intermittent drainage channels. This land type is not stony and occurs in gulches on mountainsides on all of the islands except for O'ahu. The slope is 40 to 70 percent with elevations ranging from nearly sea level to about 8,000 feet. This land type is used for watershed, wildlife habitat, pasture, and woodland.

Hanalei silty clay deep water table, 0 to 6 percent slope (HrB) is located on stream bottoms and flood plains. Permeability is moderate, runoff is very slow, and the erosion hazard is no more than slight. This soil is used for sugarcane, taro, pasture, and vegetables. This Hanalei Series is level to gently sloping. Elevations range from nearly sea level to 300 feet. It is used for taro, pasture, sugarcane and vegetables.

Līhu'e silty clay, 0 to 8 percent slope (LhB) is located on the broad uplands. Permeability is moderately rapid, runoff is slow, and the erosion hazard is no more than slight. This soil is used for sugarcane, pineapple, pasture, truck crops, orchards, wildlife habitat, and home sites. The Līhu'e Series is gently sloping to precipitous. Elevations range from nearly sea level to 10,000 feet. It is used for water supply, wildlife habitat, and recreation.

Rock Outcrop and Rough Broken Land are part of the Rough mountainous land-Rough broken land-Rock outcrop association which consist of well-drained land types on uplands on the island of Kaua'i. They are usually found in elevations ranging from near sea level to approximately 5,170 feet. This association is used for water supply, pasture, woodland, and wildlife habitat.

The Hanalei silty clay deep water table, 0 to 6 percent slope (HrB) soil is part of the Hanalei-Kolokolo-Pakala association which consist of poorly drained to well drained soils on bottom land on the island of Kaua'i. They are usually found in elevations from near sea level to approximately 500 feet. This association is used for irrigated sugarcane, irrigated taro, irrigated truck crops, pasture, and wildlife habitat. The Līhu'e silty clay, 0 to 8 percent slope (LhB) soil is part of the Līhu'e-Puhi association which consist of well-drained, medium textured and fine-textured soils on the uplands of South and East Kaua'i. They are usually found in elevations from near sea level to approximately 800 feet. This association is used for irrigated sugarcane, pineapple, pasture, woodland, and wildlife habitat.

Land Study Bureau

The University of Hawai'i Land Study Bureau *Detailed Land Classification-Island of Kauai* (LSB, 1967) classifies lands based upon soil productivity ratings and is utilized in conjunction with the State Land Use Law as set forth in Chapter 205, HRS. This classification system was developed in relation to overall agricultural uses as well as for select agricultural uses. Productivity ratings characterizes a soils over all agricultural suitability (master suitability) and specific crop all suitability. Master suitability ratings range from A to E: A-very good, B-good, C-fair, D-Poor, and E-very poorly suited. Lands rated U indicate that they were in an urban type use during the development of the classification system, thus not analyzed for soil productivity.

The Property is classified as E.

The State of Hawai'i Land Study Bureau boundaries are shown in Figure 13.

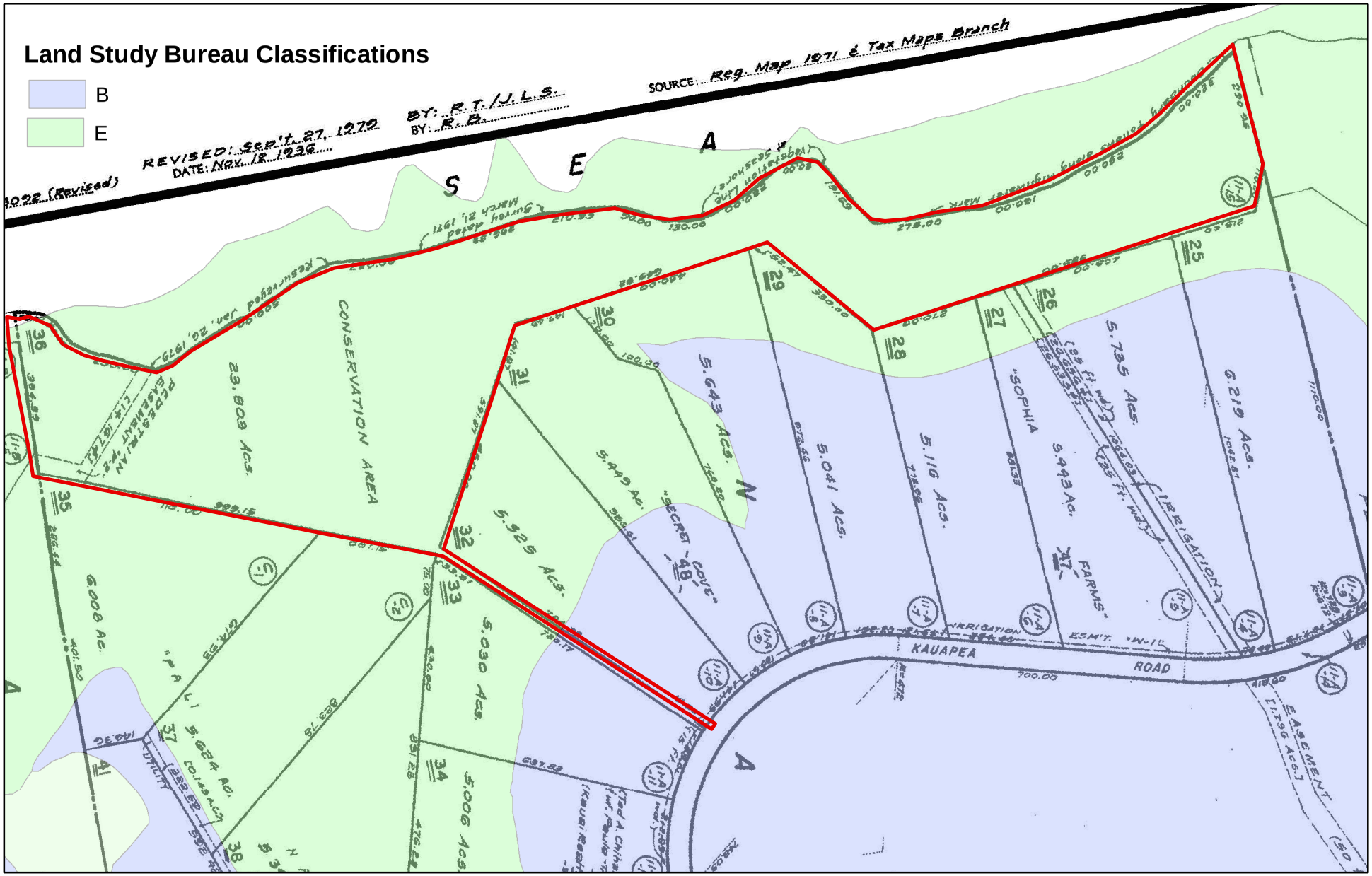

FIGURE 13

LAND STUDY BUREAU

Secret Beach Properties, LLC
Source: State of Hawaii GIS Website

N

0 140 280 560 Feet

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Agricultural Lands Important to the State of Hawai'i

The State of Hawai'i Department of Agriculture *Agricultural Lands of Importance to the State of Hawai'i for Kaua'i, O'ahu, Maui, Moloka'i, Lāna'i , and Hawai'i* (DOA, 1977) was established as part of a national effort to inventory important farm lands. In Hawai'i, these national criteria were adapted by the U.S. Department of Agriculture, University of Hawai'i College of Tropical Agricultural and Human Resources, and State Department of Agricultural. Agricultural Lands of Importance to the State of Hawai'i (ALISH) classifies lands into one of four(4) categories, "Prime", "Unique", "Other Important Agricultural Lands", and "Unclassified". "Prime" lands have soil quality, growing season, and moisture supply needed to produce sustained crops yield economically. "Unique" lands have the combination of soil quality, location, growing season, and moisture supply currently used to produce sustained yield of a specific crop. "Other" Important Agricultural Lands include lands not rated as Prime or Unique.

A small portion on the western side of the Property is classified as "Other Important Agricultural Lands" while the remainder of the Property is "Unclassified".

The ALISH boundaries are shown in Figure 14.

There is some erosion of the coastal bluff in areas previously impacted by the cutting of or removal of trees.

2.4.2: Potential Impacts

Long term positive impacts are anticipated as a result of the proposed action by allowing for the protection, conservation, and preservation of the coastal bluff. This will minimize the potential for soil erosion and landslides. Further active agriculture is occurring on approximately 4.5 acres of land classified as "E" by the LSB and "Unclassified" by ALISH.

2.5: Natural Hazards

2.5.1: Existing Conditions

This section discusses those natural hazards applicable to the project site. Of the potential hazards, coastal erosion, earthquakes, flooding hazards, high waves, hurricanes, and tsunamis are applicable and discussed below.

Coastal Erosion Hazards

According to the *Atlas of Natural Hazards in the Hawaiian Coastal Zone* , coastal erosion and beach loss are chronic and widespread problems in the Hawaiian Islands with a typical erosion rate ranging from 0.5 to 1 foot per year. Coastal lands in Hawai'i are generally composed of carbonate sand that is subject movement by wave action. Coastal erosion rate maps have been developed for Kaua'i, based upon established annual erosion rates. According to the Kauapea study area map, erosion is occurring at an average rate of -0.6 feet per year.

Earthquake Hazards

Earthquake activity in Hawai'i is generally linked to volcanic activity. Thus earthquake activity primarily occurs before or during volcanic eruptions. Additionally, earthquakes may occur as part of the underground movement of magma that travels nears the surface but does not erupt. Hawai'i Island experiences thousands of earthquakes each year however, most can only be detected by sensitive

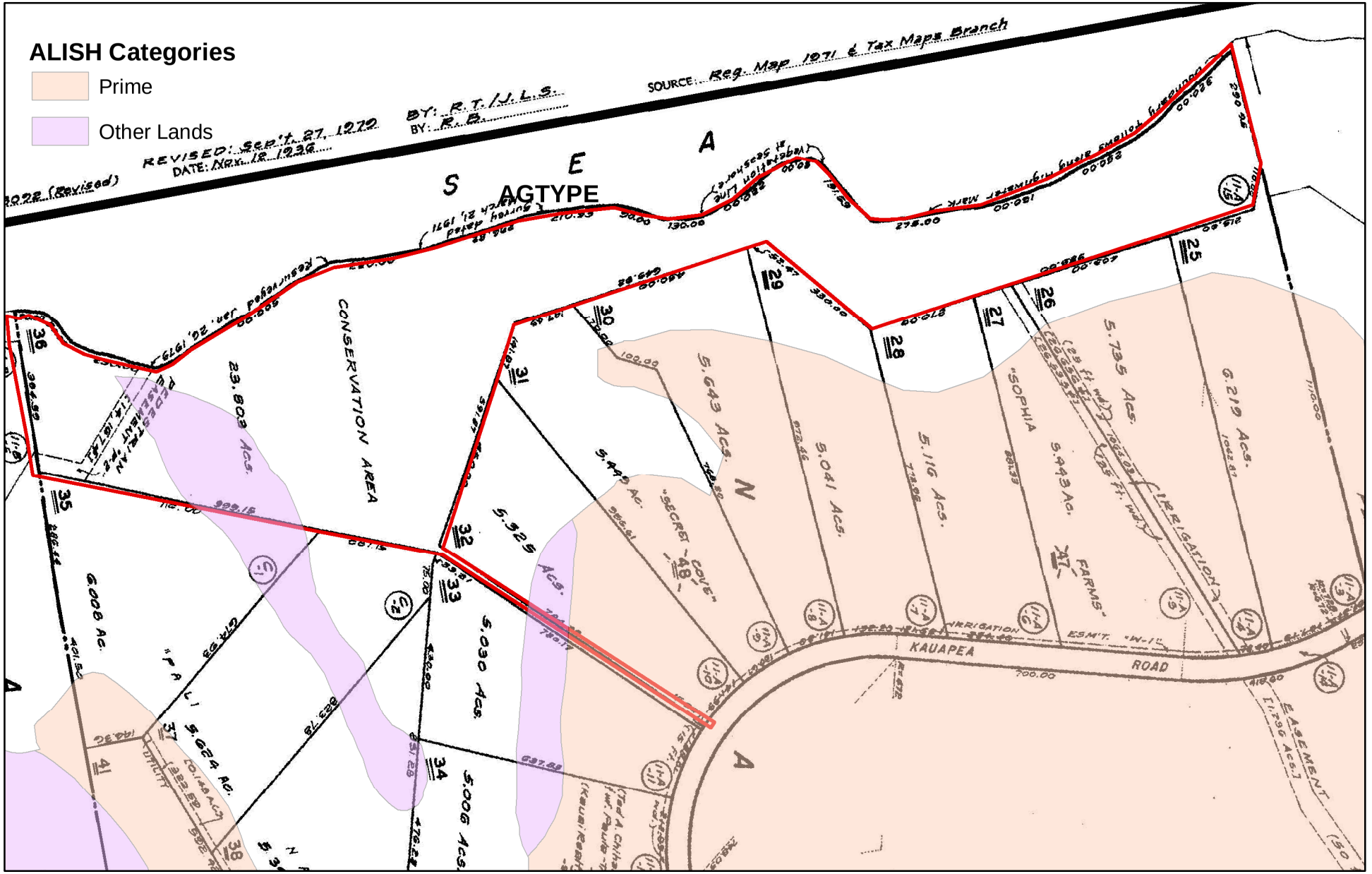

FIGURE 14

AGRICULTURAL LANDS IMPORTANT TO THE STATE OF HAWAII

Secret Beach Properties, LLC
Source: State of Hawaii GIS Website

0 140 280 560 Feet

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SSFM INTERNATIONAL

instruments. Then there are some earthquakes that can be felt and also cause minor to moderate damage.

Most of the earthquakes associated with volcanic activity in the State of Hawai'i occur on the Island of Hawai'i. Earthquakes associated with the movement of magma are concentrated beneath Kilauea and Mauna Loa volcanoes. A majority of earthquakes greater than Magnitude 5 (M5+) are concentrated on Hawai'i Island. No large earthquakes have been felt on Kaua'i.

Flooding Hazards

The Property is located in flood hazard zones VE (EL 24), VE (EL 25), VE (EL 26), VE (EL 27), VE (EL 28), VE (EL 29), and X on Flood Insurance Rate Map (FIRM) No. 1500020060E issued by the Federal Emergency Management Agency (FEMA). Zone VE indicates a coastal flood zone with a velocity hazard (wave action) in which the base flood elevation has been determined. Zone X indicates an area determined to be outside of the 0.2% annual chance floodplain. FIRM flood hazards are shown on Figure 15.

High Wave Hazards

Tied in with the flooding hazards are high wave hazards. According to the Atlas of Natural Hazards in the Hawaiian Coastal Zone, sudden high waves are the most predictable coastal hazard in the State of Hawai'i. There are four (4) primary sources of waves in Hawai'i: North Pacific swell, trade wind swells, south swells, and Kona storm swell. Occasional sources of waves are tropical storms and hurricanes.

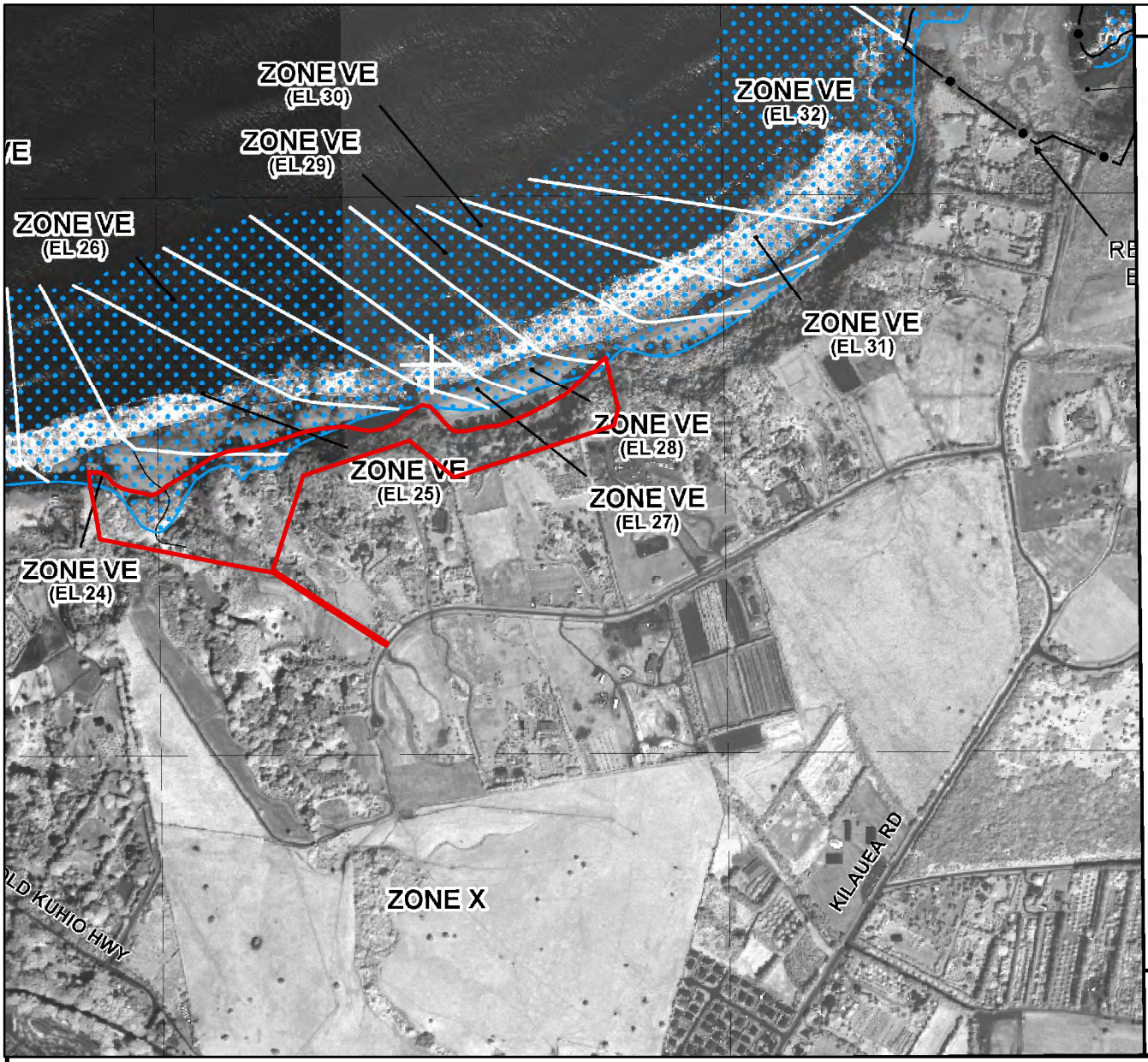
The Property is subject to the trade wind swell and the North Pacific swell due to its location on the north shore. Both types of swells occur throughout the year, however, the North Pacific swell produces the largest waves during the year from October to May. Wave heights during the winter from the North Pacific swell range between 20 to 40 feet.

Hurricane Hazards

There are three major elements that make a hurricane dangerous: strong winds and gusts; large waves and storm surge; and heavy rainfall. Although generally difficult to predict, a hurricane of significant strength passing close to the island could cause damages to the existing improvements. The proposed action could be susceptible to damage from strong winds, flooding due to heavy rainfall, impacts from large waves and storm surges.

A hazard mitigation report prepared by the Federal Emergency Management Agency (FEMA) after Hurricane Iniki in 1992 identified nine (9) hurricanes within 300 nautical miles of Hawai'i between 1970 and 1992. The significance of the 300 nautical miles is that it is about one day's travel time to the Hawaiian Islands. Most of these hurricanes are in the vicinity of the Island of Kaua'i. A review of hurricane tracking, dating back to the 1950's, has not been able to identify meteorological or geographical reasons for hurricanes to head for Kaua'i and bypass the remaining islands.

Within the past 20 years, Kaua'i has sustained extensive damages due to Hurricanes Iwa and Iniki. Much of this damage was the result of high winds and storm surges. Hurricane Iniki has been the strongest and most destructive of hurricanes in the State of Hawai'i.



NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0060E

FIRM

FLOOD INSURANCE RATE MAP

KAUAI COUNTY, HAWAII

PANEL 60 OF 356

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
KAUAI COUNTY	150002	0060	E

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
1500020060E

MAP REVISED
September 16, 2005

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on title block. For the latest product information about National Flood Insur Program flood maps check the FEMA Flood Map Store at www.msc.fe

FIGURE 15

FLOOD INSURANCE RATE MAP

Secret Beach Properties, LLC
Source: State of Hawaii GIS Website and US Soil Conservation Service

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Not to Scale

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Tsunami Hazards

A tsunami is a series of powerful waves caused by underwater earthquakes, near shore or underwater landslides, or volcanic eruptions. These waves differ from regular ocean waves which are generated from the wind. Tsunami's travel at great speeds (up to 590 mph), can have a wave length up to 120 miles, and have a long period between successive wave crests. There are instances in which the near shore water recedes and exposes the ocean floor prior to the arrival of the initial wave. A tsunami event can last over several hours.

The Aleutian earthquake of 1946 generated a tsunami in which the run up at Hanalei was recorded at three (3) feet while a few miles away at Hā'ena, the run up was recorded at 35 feet. This highlights the variability of impact on Kaua'i from a tsunami. During the early 1960's two (2) tsunami's impacted the Kaua'i coastline. The Chilean earthquake of 1960 generated a Pacific wide tsunami that tore through portions of the town of Hilo on the Big Island. A run up height of 10 feet was recorded in Hā'ena while Hanapepe recorded a run up height of 14 feet. In 1964, the Alaska earthquake generated a Pacific wide tsunami with a recorded run up of one (1) foot in Līhu'e while Hā'ena recorded a run a run up height of 10 feet.

2.5.2: Potential Impacts

Minimal impacts resulting from natural hazards are anticipated as a result of the proposed action. There is some risk associated with coastal erosion. However, coastal erosion is a direct result of the other hazards also discussed in this section. There is little risk of seismic and tsunami activity. The 1964 tsunami was the last tsunami to impact Kaua'i. Although generally difficult to predict, a hurricane of significant strength passing close to Kaua'i could damage existing improvements. Lastly, portions of the Property are located in a special flood hazard zone subject to coastal flooding through high wave action. Depending on factors such as wave height, the lower portion of the mauka-makai trails could be impacted by high wave action.

2.6: Hydrology

2.6.1: Existing Conditions

Water resources in Hawai'i are classified as either surface or ground water by the State of Hawai'i Commission on Water Resources Management (CWRM). Surface water is comprised of streams, springs, ditches and canals, as well as reservoirs. Ground water is located beneath the surface of the earth and is stored in a number of geologic settings. The CRWM has adopted a hydrologic unit approach to manage both surface and ground water resources.

Ground water hydrologic units are comprised of a series of aquifers. An Aquifer Sector Area is the largest aquifer unit: it is then further divided into sub-regional hydrologic units known as Aquifer System Areas. Surface water hydrologic units are comprised of a watershed that may contain more than one drainage basin.

The Property is located in the Hanalei Aquifer Sector (202) ground water hydrologic unit which is comprised of Kalihiwai, Hanalei, Wainiha, and Napali Aquifer System Areas. Existing improvements are

located within the Kalihiwai Aquifer System Area (20201). Additionally, the Property is located in the Kauapea (2027) surface hydrologic unit.

Groundwater Water

Groundwater resources on Kaua'i are comprised of fresh basal water, dike confined water, perched water, and flank aquifers. As discussed earlier, lands underneath the Property are comprised of the Kōloa volcanic series, the least permeable rocks on the islands. This is because the Kōloa volcanic series were usually deposited as flat layers which tend to be massive and devoid of permeability elements. The Napali formation of the Waimea Canyon volcanic series are the most permeable rocks in the island. The CRWM groundwater hydrologic units for Kaua'i island are shown in Figure 16.

The groundwater underneath the Property is identified as belonging to a basal aquifer.

Figure 16: Groundwater Hydrologic Units

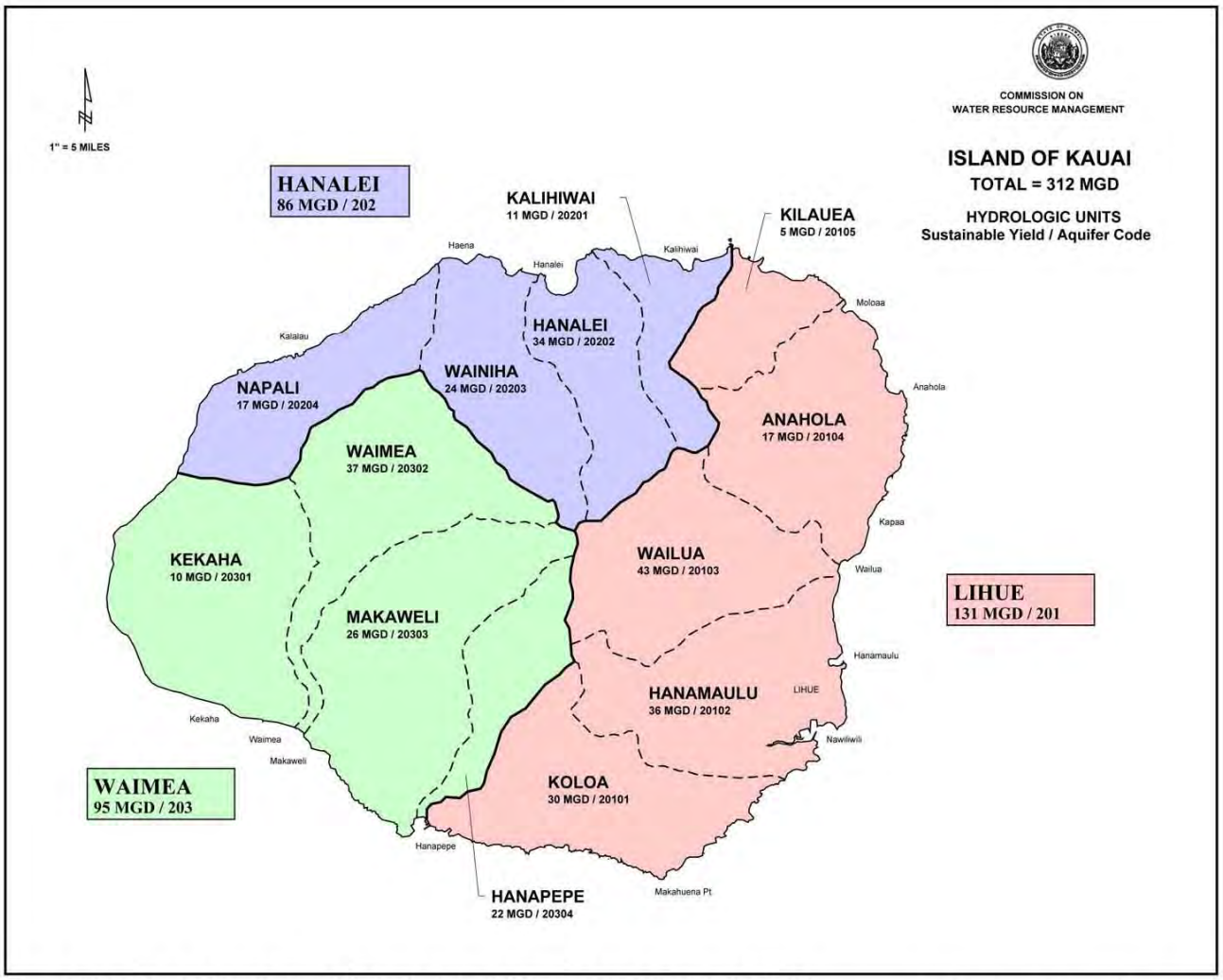

Figure 3-16: Island of Kauai Ground Water Hydrologic Units and 2008 Sustainable Yields Map Projection: Universal Transverse Mercator

Surface Water

The Kauapea surface hydrologic unit is approximately 642.782 acres in size. An unnamed, intermittent stream is located in this surface hydrologic unit, along the western portion of the Property that is part of a gulch. The location of this stream is shown in Figure 2 and Figure 19. There are no diversions or monitoring gages associated with this intermittent stream. The mouth of this stream opens up to the upper most portion of the sand of Kauapea Beach. While conducting a site visit on November 23, 2010, there was water flowing in the stream. This water puddles on the sand before being absorbed. Additional photos of the stream and gulch can be found in Appendix A.

The CWRM surface water hydrologic units for portions of Kaua'i are shown in Figure 17.

2.6.2: Potential Impacts

During pre-consultation with government agencies, the Army Corp of Engineers determined that a Department of Army (DA) permit is not required for the proposed action.

No adverse impacts to groundwater and surface water resources are anticipated as a result of the proposed action. The Property is not located in an area in which groundwater is being withdrawn. Little to no surface water reaches the ocean. Marine waters off of Kauapea Beach are not listed by the State of Hawai'i Department of Health as an impaired water body. Consultation with the appropriate governmental agencies will continue to be done to ensure that the existing improvements and maintenance, as well as the proposed fencing are in compliance with existing codes and regulations.

2.7: Air Quality

2.7.1: Existing Conditions

Air quality in the State of Hawai'i is generally characterized as clean and low in pollution. This is due to the northeast trade winds which typically carry air pollutants towards the ocean. However, large portions of the Big Island are continuously blanketed by volcanic fog (vog) due to the 20+ year eruption of Kīlauea. During periods of Kona weather, vog also reaches Kaua'i. The State of Hawai'i has adopted air quality standards equal to or exceeding National ambient air quality standards (NAAQS) established by the U.S. Environmental Protection Agency (EPA). State standards for sulfur dioxide, lead, and particulate matter of 10 microns (PM_{10}) and 2.5 microns ($PM_{2.5}$) are the same as EPA standards. State standards for carbon monoxide, nitrogen dioxide, and ozone are stricter than the EPA standards. Lastly, the State of Hawai'i has established standards for hydrogen sulfide while the EPA has not.

The State Department of Health (DOH) is in the process of establishing one (1) monitoring station on Kaua'i. This station will be located in Niumalu, along the southeastern portion of Kaua'i. It will be a Special Purpose Monitoring Station (SPM) for carbon monoxide, sulfur dioxide, particulate matter, wind speed, and wind direction to monitor cruise ships emission.

2.7.2: Potential Impacts

No adverse impacts to air quality are anticipated as a result of the proposed action. The existing improvements are located on the side of a heavily vegetated coastal bluff that directly faces the northeast trade winds.

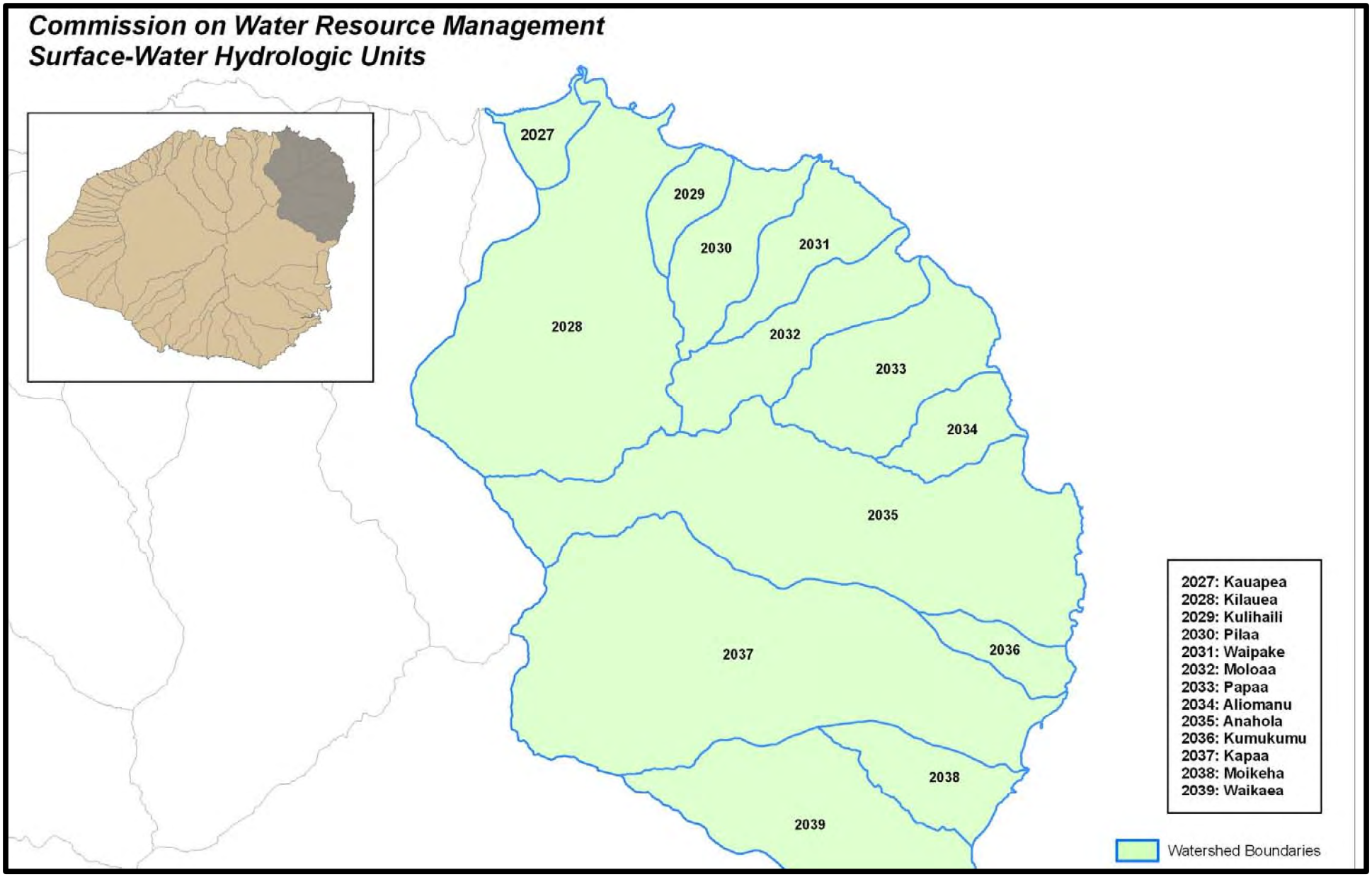

FIGURE 17

SURFACE WATER HYDROLOGIC UNITS

Secret Beach Properties, LLC
Sources: State of Hawaii Water Protection Plan

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Not to Scale

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There may be short-term impacts should construction of fencing along the mauka boundary of the Property occur. Appropriate measures will be taken to mitigate potential impacts from fugitive dust that may be generated. Overall, continued maintenance of the Property will generate little to no fugitive dust. Additionally, there may be minimal fugitive dust associated with the removal of unwanted vegetation. All activities will be done in compliance with Chapter 11-60.1 Air Pollution Control, HAR. Further, vegetation removal will be conducted in accordance with plans submitted to the DLNR-OCC for review and approval.

2.8: Noise Quality

2.8.1: Existing Conditions

Noise is defined as excessive or unwanted sound and is measured in decibels (dB). There are different frequencies of sound. When sound is described in terms of frequencies humans are capable of hearing, decibels are written as "dBA".

The State of Hawai'i regulates excessive noise associated with stationary sources, agriculture, construction, and industrial activity. Further, noise quality standards have been developed to protect public health and welfare as well as the environment. Maximum permissible noise levels are regulated by the Department of Health for any location at or beyond the property line. These noise levels shall not exceed maximum noise levels by 10% of the time during any 20-minute period. The maximum noise limits have been developed as a function of time of day and zoning; it also takes into account background noise level. They are shown in Table 1 Maximum Permissible Sound Levels in dBA.

Table 1: Maximum Permissible Sound Levels in dBA

Maximum Permissible Sound Levels in dBA			
Zoning Districts		Day Hours (7 AM – 10PM)	Night Hours (10PM – 7AM)
Class A	Residential, Conservation, Preservation, Public, and Open Space	55 dBA (exterior)	45 dBA (exterior)
Class B	Multi-Family Dwellings, Apartments, Business, Commercial, Hotel, and Resort	60 dBA (exterior)	50 dBA (exterior)
Class C	Agricultural, Country, and Industrial	70 dBA (exterior)	70 dBA (exterior)

Source: Chapter 11-46 Community Noise Control, HAR

2.8.2: Potential Impacts

No adverse impacts to noise are anticipated as a result of the proposed action. There may be short term impacts associated with trail maintenance, the removal of unwanted vegetation, and the installation of fencing along the mauka boundary of the Property. Certain swaths of the trail are covered with grasses that lend themselves to be maintained with a weed whacker. All activities will be done in compliance with Chapter 11-46 *Community Noise Control,* HAR. For the removal of unwanted vegetation, this will be conducted in accordance with plans submitted to the DLNR-OCCL for review and approval. Existing ambient noise is associated with and limited to the surrounding areas such as the existing farm

dwellings, trade winds blowing through the vegetation, the existing birds, and the breaking of the waves along Kauapea Beach.

2.9: Visual Resources

2.9.1: Existing Conditions

The Property is a coastal bluff that is identified as an Important Land Form on the North Shore Planning District Heritage Resources Map. These maps are intended to document important natural, scenic, and historic features in relation to both urban and agricultural lands. Heritage resources identified as important landforms include mountains, stream valleys, gulches, bluffs, and other small coastal features that have ecological, recreational, cultural, and scenic values. These resources are shown in Figure 18.

From Kauapea Beach, the Property rises from mean sea level (msl) to approximately 250 feet above msl. This steep rise in elevation along with the existing forest provides a unique scenic backdrop to users of Kauapea Beach. From the top of the Pali the views are a mixture of the Pacific Ocean and tree tops. In several locations on the top of the Pali, vegetation has been cleared to provide an unobstructed view of the ocean.

2.9.2: Potential Impacts

No adverse impacts to visual resources are anticipated as a result of the proposed action. However, should the installation of a fence along the mauka boundary occur, it will be designed to minimize any potential visual impacts. The existing trails and improvements are not visible from Kauapea Beach. An extensive portion of the lateral trail is located along the 150 foot elevation, approximately half way between the beach and top of the Pali, ands veiled by the coastal forest. From the Pali, portions of the existing mauka-makai trails can be seen down slope. However, a majority of these trails are also hidden by the existing vegetation.

2.10: Historic, Archaeological, and Cultural Resources

2.10.1: Existing Conditions

An archaeological field inspection and literature report was prepared by Cultural Surveys Hawai‘i, Inc. to identify potential cultural resources, historic properties, and provide recommendations related to the State of Hawai‘i historic review process. The archaeological field inspection was conducted on December 20, 2010 on the 23.8 acre Property to record and document any surface archaeological features. Additionally, the field inspection assessed the potential for impacts to such sites.

Traditional and Historic Resources

The Property is located in the Namahana Ahupua‘a. It is a small, atypical ahupua‘a which extends inland approximately 6,000 feet from the coast and is approximately 3,500 feet wide. Kauapea Beach and an intermittent stream valley are the major lands located within this ahupua‘a. Due to its unique configuration and location, it is thought that maybe Namahana may have been an ‘ili that was subsequently divided from the northwest corner of the Kīlauea Ahupua‘a.

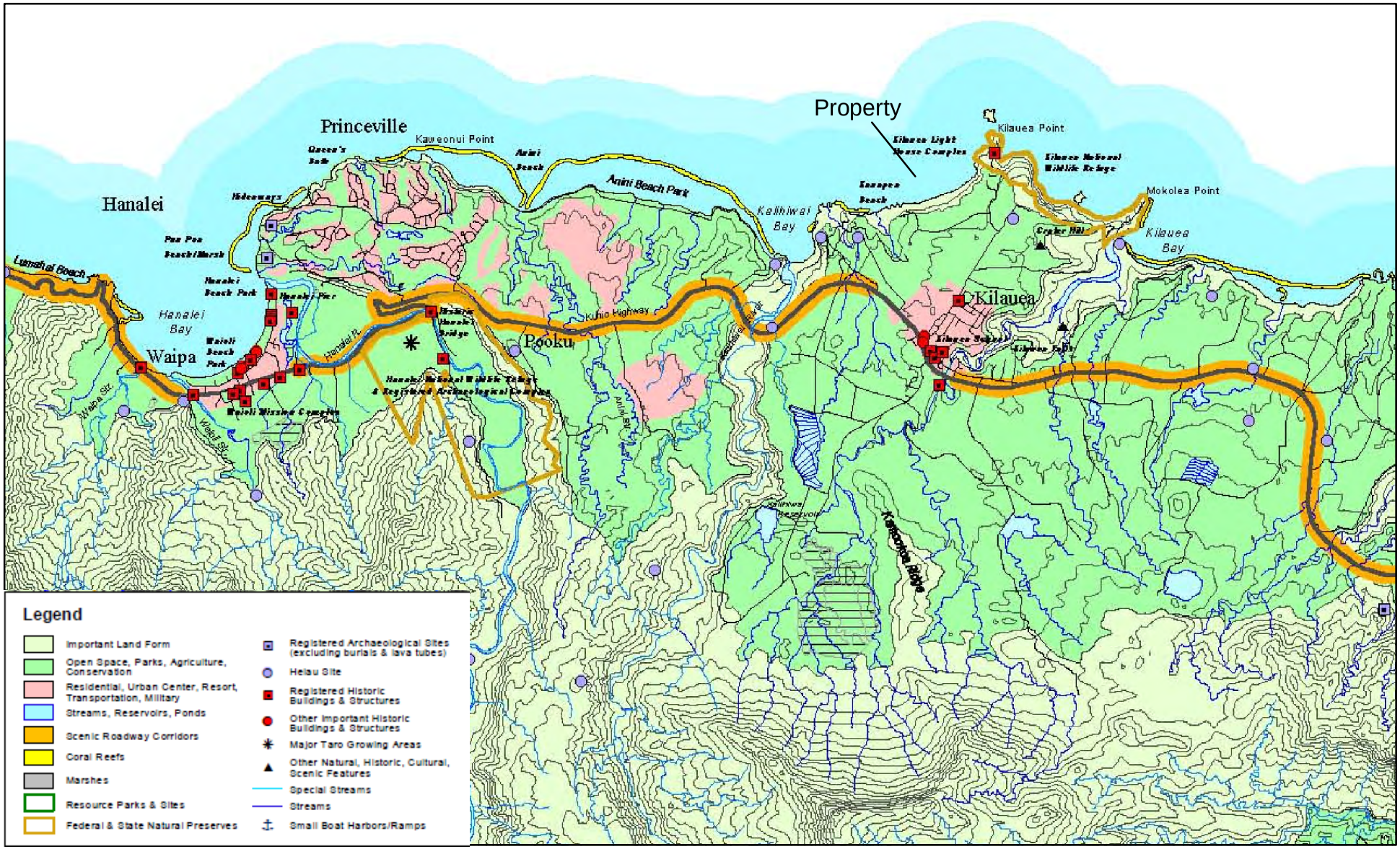

FIGURE 18

NORTH SHORE PLANNING DISTRICT HERITAGE RESOURCES MAP

Secret Beach Properties, LLC
Source: Kauai General Plan, November 2000

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Not To Scale

During the Great Māhele, the entire ahupua'a was awarded to Miriam Kekau'ōnohi, the granddaughter of Kamehameha I and the wife of Kamehameha II. No kuleana awards were granted in the ahupua'a during this time.

There are no myths and legends in print referencing Namahana Ahupua'a. There is a passing reference to Kauapea in the *Legend of Kawelo*, however, it is not clear whether this reference is to Kauapea Beach. The neighboring Kīlauea Ahupua'a has a number of myths associated with it.

According to legend there are three long, ancient, parallel irrigation ditches that are remnant claw marks of a mo'o. The mo'o, named Ka-mo'o-koa (brave lizard), was ordered by Chief Mano-ka-lani-pō to open up the regions of upper Kīlauea for agricultural. There is ridge within the Makaleha Mountains named after Ka-mo'o-koa.

Pele, the volcano goddess, also left her mark in Kīlauea. There were three stones near the top of Kīlauea Crater that represented sisters encountered by Pele. It was on Kaua'i that Pele met and fell in love with Lohi'au. She began to create a home for the both of them at Kīlauea Crater, however was thwarted by her sister, Nā-maka-o-kaha'i, goddess of the sea, who summoned the ocean to extinguish the eruption and break down the crater walls. Observing this scene and laughing were three sisters; Kalama, Pua and Lāhela. After asking their names, Pele then touched each sister and turned her into stone. These stones were a warning not to mock at Pele.

Another legend of Kīlauea is about the boulders lying in the ocean channel between the shore of Kīlauea Crater and Moku'ae'ae Island. It is said that these boulders were placed in the ocean channel by the Menehune one night. However, they abandoned this task just as they were able to touch the bottom of the channel with a paddle because morning broke.

Lastly, Fornander shares a story about the ruling chief Lonoikamakahi. He was on Kaua'i traveling with companions in Kīlauea and Kalihi (Kalihiwai, Kalihikai) as well as eating the ripe flower/fruit of the pandanus tree. The emphasis of this story was placed on the great lauhala tracts as well as the heavy and windblown rain of these areas. This story identified the wind specific to Moku'ae'ae Island as "ae-kai" while the wind of Kīlauea is known as "wai-mo".

In 1863 the entire ahupua'a of Kīlauea was purchased by Charles Titcom. This was the beginning of the Kīlauea Plantation. In 1877 Kīlauea Plantation expanded as additional lands were purchased by Charles Titcom in partnership with Captain John Ross and Edwin P. Adams. In 1881, Kīlauea Plantation began the construction and operation of a railroad to transport sugar to and from Kahili landing. This railroad had 12 ½ miles of permanent track and five miles of portable track, 200 cane cars, six sugar cars and four locomotives. Eventually it was abandoned in 1942 as trucks were used to transport the harvested sugar cane.

Also in the 1880's, Kīlauea Sugar Company began the diversion of upland water. They developed their own water system utilizing a series of dams, reservoirs, flumes and ditches. C. Brewer and Company began the management of Kīlauea Plantation 1910. In 1948, they took over the controlling interest of the company. On December 31, 1971, sugar operations ceased.

Figure 19 is a 1930 map of the Kīlauea Plantation contains the sugar cane fields and associated infrastructure. Portions of the Property were utilized for sugar cane cultivation.

Figure 19: Kilauea Sugar Company Map (1930)

Map is not to Scale

Previous Archaeological Research

One previous archaeological survey has been conducted on a portion of the Property. This was the *Kīlauea Point National Wildlife Refuge Survey,* conducted by William Kikuchi in 1987. On "Figure 3 Area Surveyed" map, a large segment of the eastern portion of the Property was identified as an "Area Surveyed Outside of the Refuge Area". However, there are no specific details provided in Kikuchi's study on what was found (if anything), or why the area was studied.

There have been a total of ten archaeological studies conducted in the vicinity of the Property. Most of the finds in these studies are related to plantation agriculture. Of note are the studies conducted along the coastline as no pre-contact sites or deposits were found. Also, studies of valleys not bulldozed or less disturbed by plantation agricultural reported a number of permanent agricultural and habitation complexes.

Findings

No historic, archaeological, and cultural resources were identified during the literature review and field inspection. A majority of the Property consists of steep slope and/or cliff with little possibility for historic properties or cultural resources. No evidence of human modification or cultural material was observed. The presence of taro on steep cliffs is notable. It is thought that these may have grown from shoots washed down from above.

2.10.2: Potential Impacts

No impacts to historic, archaeological, or cultural resources are anticipated as a result of the proposed action. There have been no historic properties identified by the field inspection or literature review. Further, none are believed to be present. Further, no historic properties have been impacted by the land altering activities that have occurred. No further archaeological study is recommended.

2.11: Biological Environment

2.11.1: Existing Conditions

A biological reconnaissance survey of the Property was conducted by AECOS, Inc and Rana Consulting Biologists on August 11, 2010 to identify biological resources on the Property. Figure 20 identifies the survey areas and general vegetation zones for the Property.

This biological reconnaissance study can be found in Appendix C: Biological Reconnaissance Survey.

Flora Resources

No federally and state listed threatened or endangered plant species were observed during the survey. The survey identified 121 plant species with ten (10) being indigenous to Hawai'i. An additional seven (7) plant species are Polynesian introduced.

Vegetation along the steep eastern "panhandle" is comprised of a mixed coastal forest along with small open areas dominated by grasses and/or shrubs. Ironwood and *hala* are the dominant trees in this portion of the coastal forest. Along the base of the "panhandle", is a coastal strand comprised of tropical almond, *'aki'aki* and *naupaka kahakai*. On the western side, vegetation is comprised of floricultural areas, some coastal forest, and riparian vegetation along a small stream. Java plum, Christmas berry, tropical almond, and *hala* comprise this portion of the coastal forest.

Fauna Resources

One threatened and endangered bird and three (3) indigenous birds were observed on the Property. During the survey, two (2) Nēnēs *(Branta sandvicnesis)* were observed foraging on the Property. Nēnē, also known as the Hawaiian Goose, is listed by both the federal and state governments as threatened and endangered species. Both birds were banded. Upon further research it was discovered that these birds nest at the NWR.

The Wedge-tail Shearwater *(Puffinus pacificus)* and White-tailed Tropicbird *(Phaethon lepturus)* were observed on the Property; as well as their nests. They are indigenous seabirds that nest on the coastal bluffs and immediately inland from the bluff top. These species are abundant at the Kīlauea Point National Wildlife Refuge (NWR), their primary nesting site. Lastly, the Pacific Golden-Plover *(Pluvialis fulva)* was observed on the Property. It is an indigenous migratory shorebird that nests in the high Arctic during the late spring and summer, then returning to Hawai'i for the winter.

Mammal Resources

No federal and state listed threatened or endangered species were detected or observed during the survey. There were three mammals species detected during the survey; dog, pig, and cat.

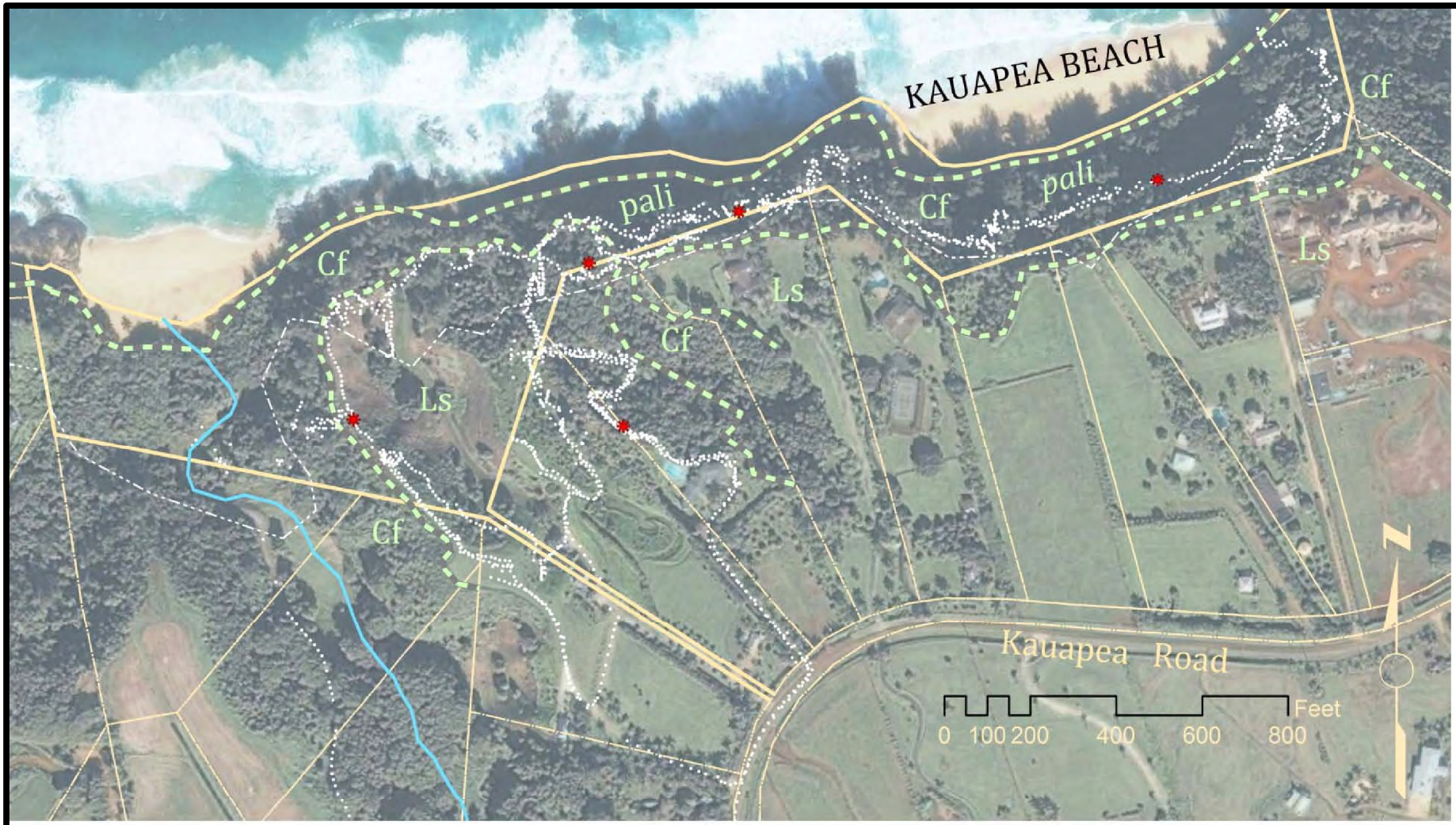

Figure 1. Map of TMK: 5-2-05: 036, Lot 11-A-15 (bold yellow outline) showing botany trek (white dots), bird count stations (red asterisks), Conservation District mauka boundary (fine white line), and general vegetation zones (green-grey lines; Cf = coastal forest, Ls = landscaped).

FIGURE 20

BIOLOGICAL SURVEY MAP

Secret Beach Properties, LLC
AECOS, HAWAII

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Not to Scale

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Abutting the Property is Kauapea Beach and the Pacific Ocean. These marine waters are part of the Hawaiian Islands Humpback Whale National Marine Sanctuary (Sanctuary). This Sanctuary was created by Congress in 1992 to protect humpback whales and their habitat in Hawai'i.

2.11.2: Potential Impacts

No adverse impacts to the biological environment are anticipated as a result of the proposed action. There are no federal and state listed threatened and endangered flora species on the Property. One federal and state listed threatened and endangered species and three (3) indigenous migratory seabirds were observed on the Property. Further, nests were discovered for both the Wedge-tail Shearwater and the White-tailed Tropicbird. There are no federal and state listed threatened and endangered mammal species detected or observed on the Property.

Located northwest of the Kīlauea Point National Wildlife Refuge (NWR), the Property has similar characteristics as the western portion of the Refuge. The NWR was established in 1985 to conserve the populations and habitat of migratory seabird and the endangered Nēnē. An adjacent 15 acre parcel, TMK 5-02-004:071, has been identified for inclusion into the NWR. It is a coastal bluff area that provides the opportunity to increase native seabird nesting habitat that can be enhanced and protected from future encroachment and disturbance.

The removal of dead and unwanted vegetation will provide an opportunity to replace alien species with native species that are appropriate for this location. This replacement of unwanted vegetation can also address illegal tree-cutting activities that have occurred on the Property. The installation of a fence along the mauka boundary is a "last resort" option should this activity as well as other illegal activities continue. It is not anticipated to impact the Nēnē, and Golden Plover foraging grounds or the nesting area for the migratory seabirds. Additionally, the removal of dead ironwood trees will be positive for the migratory seabirds as their flight pattern along the coastal bluff is currently affected by the ironwoods.

CHAPTER 3: EXISTING SOCIO-ECONOMIC ENVIRONMENT

3.1: Existing Conditions

Kaua'i County is the smallest county in the State of Hawai'i. It is comprised of four (4) islands, Lehua, Ka'ula, Ni'ihau, and Kaua'i with a combined land area of 622.2 square miles. The island of Kaua'i is the government, population, and economic center for Kaua'i County.

According to the Kaua'i Economic Outlook Summary for 2009, rising energy prices; the global financial crisis; and the departure of ATA Airlines, Aloha Airlines, and two interisland cruise ships greatly impacted the Kaua'i economy. The State of Hawai'i fiscal crisis will likely delay recovery. Further, the economic environment in the next two (2) years will be challenging, and, it is anticipated that the recovery of the U.S. and global economies will be weak.

3.1.1: Social Factors

In 1998, resident population for Kaua'i was 56,600 persons. It rose to 58,463 persons in the 2000 Census. As of July 1, 2009, the estimated population for Kaua'i County was 64,529 persons. The ADVP was 17,220 in 1998 and then rose to 18,041 in 2000. In 2008, the ADVP further rose to 18,690 persons.

As part of the Kaua'i General Plan update, the Kaua'i Planning Department (KPD) adopted planning growth ranges utilizing Average Visitor Daily Population (AVDP). This is the number of daily visitors on Kaua'i. As approximately 40 percent of the jobs on Kaua'i economy is based on the visitor industry, the AVDP was utilized as a barometer for growth. An AVDP range of 24,000 through 28,000 persons is utilized for the adopted planning growth ranges. Further, it is KPD's policy that the planning for public facilities should utilize the higher end of the planning growth ranges. These population projections and key employment sectors are shown in Table 2.

Table 2: Kauai 2020 Projection of Population and Key Employment Sectors

Kaua'i 2020 Projection of Population and Key Employment Sectors							
		General Plan 2020 Projections		Projected Growth Between 1998 - 2020			
				Low Range		High Range	
	1998 (actual)	Low	High	Absolute Change	Annual Growth	Absolute Change	Annual Growth
Average Daily Visitor Population	17,220	24,000	28,000	6,780	1.5%	10,780	2.2%
Total Jobs	32,300	40,370	45,010	8,070	1.0%	12,710	1.5%
Agriculture	1,000	2,200	3,100	1,200	3.6%	2,100	5.3%
High Technology	1,160	2,370	2,750	1,210	3.3%	1,590	4.0%
Non-Ag & Non Gov't Total	27,300	34,460,	37,750	7,160	1.1%	10,450	1.5%
Resident Population	56,000	65,260	74,320	8,660	0.6%	17,720	1.2%

Source: Kaua'i General Plan, Appendix B-2, Table B-2

3.1.2: Economic Factors

There were 24,900 wage and salary jobs in Kaua'i County in 1997. Jobs rose to 26,550 in the 2000, and in 2009, the number of jobs in Kaua'i County was 28,000. In 1997, the median household income for

Kaua‘i County was $34,890. It rose to $51,378 in 2000. In 2008 the median household income for Kaua‘i County was $62,356.

3.2: Potential Impacts

No adverse impacts are anticipated as a result of the proposed action as it does not influence the amount of visitors, jobs, and income of Kaua‘i County. These existing improvements will allow the Applicant to monitor and maintain their Property.

CHAPTER 4: PUBLIC SERVICES AND UTILITIES

4.1: Solid Waste Facilities

4.1.1: Existing Conditions

The County of Kaua'i Department of Public Works operates the Kekaha Landfill Phase II in West Kaua'i. In addition to receiving residential and commercial solid waste, it is also a drop off point for recyclable waste. Additionally, there are four (4) refuse transfer stations that accept solid waste. It is then sorted and transferred for recycling, green waste processing, or disposal at Kekaha. The nearest refuse transfer station is located in Hanalei.

Adjacent to Kekaha Landfill Phase II is the Kekaha Debris Recycling Station. Also known as Kekaha Landfill Phase I, it processes white goods and scrap metal for recycling. Additionally, it serves as a recovery facility for segregated green waste. Island wide, there are eight (8) neighborhood recycling centers that accept newspaper, glass, aluminum, and paper products. The nearest neighborhood recycling center is located in Hanalei at the Hanalei Transfer Station.

4.1.2: Potential Impacts

No adverse impacts to existing solid waste facilities are anticipated as a result of the proposed action. Trail maintenance will require the continued disposal of green waste. The location of the proposed action will not impact existing solid waste facilities or impede access to these facilities by the general public.

4.2: Recreational Facilities

4.2.1: Existing Conditions

Kauapea Beach, also known as Secret Beach, is located directly below the existing trails and is used for swimming and beachcombing. It is one of several long and wide sandy beaches along the North Shore from Kīlauea Point to Princeville.

Access to Kauapea Beach is by a pedestrian access easement that traverses the western portion of the Property. This access easement was established as a condition of approval for the Pali Namahana subdivision in 1978. It is one of is a series of access easements that begins from Kūhiō Highway and makes it way down towards Secret Beach. Additionally, access is also provided to adjoining land owners through the existing trails system that is part of this document.

There are a number of recreational facilities located in the North Shore Planning region. The nearest County Park facilities are Kīlauea Neighborhood Center and Kīlauea Park located in Kīlauea Town. These facilities provide both active and passive recreational activities. Additionally, the Kīlauea Neighborhood Center hosts the local farmers market twice a week.

The nearest State of Hawai'i recreational facility is Hā'ena State Park, a 65.7 acre scenic wild land park, located in Hā'ena. It is located at the end of Kūhiō Highway and provides a number of ocean related activities such as shore fishing and swimming at Kē'ē Beach. Hā'ena State Park is the location of the trailhead for the Kalalau Trail and the "wet caves.

Kīlauea Point National Wildlife Refuge (NWR) is a 203 acre refuge that is open to the public. Located at Kīlauea Point, it is part of the Kauaʻi National Wildlife Refuge Complex that also includes locations in Hanalei and Huleia. The NWR provides recreational opportunities such as education and interpretation programs related to the refuge such as native plants, bird watching, geology, and historic preservation.

4.2.2: Potential Impacts

No adverse impacts to existing recreational facilities are anticipated as a result of the proposed action. The location of the proposed action will not impact existing recreational facilities or impede access to these facilities by the general public.

4.3: Police Protection

4.3.1: Existing Conditions

Police protection is provided by the Kauaʻi Police Department, Hanalei District substation. It is located on Kūhiō Highway at the corner of Hanalei Plantation Road, adjacent to Prince Albert Park. The Hanalei District stretches from Olohena Road in Kapaʻa to Keʻe Beach and the beginning of the Na Pali Coast.

4.3.2: Potential Impacts

A positive impact on police protection is anticipated as a result of the proposed action. The existing trails currently provide an alternative and faster access to Kauapea Beach for the police department during emergencies. Also, the location of the proposed action will not impact the existing Hanalei District substation or impede access to this facility by the general public.

4.4: Fire Protection

4.4.1: Existing Conditions

Fire protection is provided by the Kauaʻi Fire Department whose main station and administrative headquarters are located in Līhuʻe. The nearest fire station is located in Hanalei and provides fire protection and suppression, rescue (ocean and land), hazmat and emergency medical services. This fire station is adjacent to the existing Hanalei Police Substation.

4.4.2: Potential Impacts

A positive impact on fire protection is anticipated as a result of the proposed action. The existing trails currently provide an alternative and faster access to Kauapea Beach for fire fighters during emergencies. Additionally, the location of the proposed action will not impact the existing Hanalei Fire Station or impede access to this facility by the general public.

4.5: Educational Facilities

4.5.1: Existing Conditions

The Kauaʻi School District of the State Department of Education oversees public schools on Kauaʻi. Kīlauea is serviced by Kīlauea Elementary School, Kapaʻa Middle School, and Kapaʻa High School of the Kapaʻa Complex.

The nearest private school is the Kīlauea Christian Academy located on Kīlauea Road.

4.5.2: Potential Impacts

No adverse impacts to existing educational facilities are anticipated as a result of the proposed document. Due to the nature of the proposed action, there will be no students to enroll into the existing schools. The location of the proposed action will not impact existing schools or impede access to these facilities.

4.6: Medical Facilities

4.6.1: Existing Conditions

Samuel Mahelona Memorial Hospital is an 87 bed facility providing routine, urgent, and emergency services. It is located in Kapa‘a and is part of the Hawai‘i Health Systems Corporation, a public benefit corporation, comprised of hospitals previously administered by the State of Hawai‘i. Additionally, there is Wilcox Memorial Hospital, located in Līhu‘e. It is a 110 bed facility that provides routine, urgent, and emergency services for Kaua‘i. It is part of Hawai‘i Pacific Health which also operates Kapi‘olani Medical Center, Pali Momi Medical Center, and Straub on the O‘ahu.

4.6.2: Potential Impacts

No adverse impacts to existing medical facilities are anticipated as a result of the proposed action. The Property is already being serviced by these existing medical facilities. The location of the proposed action will not impact existing medical facilities or impede access to these facilities by the general public.

4.7: Electrical and Communications Facilities

4.7.1: Existing Conditions

Electrical service is provided to the Property by Kaua‘i Island Utility Company (KIUC) through the Port Allen Generating Station and Wainiha Hydroelectric Plant. Telephone and cable television services are provided by Hawaiian Telcom and Oceanic Cable.

4.7.2: Potential Impacts

No adverse impacts to existing electrical and communication facilities are anticipated as a result of the proposed action. The Property is already being serviced by these facilities. The location of the proposed action will not impact existing electrical and communications facilities. Nor will it impede access to these facilities by the general public.

CHAPTER 5: INFRASTRUCTURE

5.1: Transportation Facilities

5.1.1: Existing Conditions

Kūhiō Highway is a State-owned, two-lane, two-way arterial highway connecting Kauaʻi s North Shore with Līhuʻe. In addition to serving regional traffic, Kūhiō Highway also serves local traffic by connecting North Shore communities from Moloaʻa to Hāʻena. Access to the Property is provided by Kauapea Place, Kīlauea Light house Road, and Kūhiō Highway.

Līhuʻe Airport is one of two airports on Kauaʻi and is located one mile north of Līhuʻe. It is a State air carrier facility providing inter-island and domestic commercial service. Additional general aviation operations include helicopter, commuter, cargo, and scenic tours. Located to the west of Kīlauea is Princeville Airport. It is a privately owned facility located in Hanalei that provides air taxi and helicopters services.

Nāwiliwili Harbor is one of two State commercial harbors facilities serving Kauaʻi and is located approximately two miles south of Līhuʻe. It is the primary commercial harbor for Kauaʻi that services cargo ships, cruise ships, charter fishing boats, and recreational boats.

The Kauaʻi Bus operates public bus services and paratransit services from Hanalei to Kekaha. These services are provided Monday through Saturday, with the exception of County holidays. Paratransit services are provided for senior citizens, residents with disabilities, individuals at the Wilcox Adult Day Care Center, and participants in certain agency programs.

5.1.2: Potential Impacts

No adverse impacts to existing transportation facilities are anticipated as a result of the proposed action. The Property is already serviced by these facilities. The location of the proposed action will not impact existing transportation facilities nor will impede access to these facilities by the general public.

5.2: Wastewater Facilities

5.2.1: Existing Conditions

The Property is not serviced by the County of Kauaʻi Division of Wastewater Management or by an individual wastewater system.

5.2.2: Potential Impacts

No adverse impacts to existing wastewater facilities are anticipated as a result of the proposed action.

5.3: Water Facilities

5.3.1: Existing Conditions

The Property is serviced by the County of Kauaʻi Department of Water through the Kīlauea-Waipake-Kalihiwai system. This service area is comprised of Kīlauea Town and a number of agricultural

subdivisions located both mauka and makai of Kūhiō Highway. Potable water for this system is provided from groundwater pumped through Kīlauea Well No. 1 and Kīlauea Well No. 2.

5.3.2: Potential Impacts

No adverse impacts to existing potable water facilities are anticipated as a result of the proposed action. The location of the proposed action will not impact existing potable water facilities or impede access to these facilities. Additionally, no meters are being requested for the Property.

5.4: Drainage Facilities

5.4.1: Existing Conditions

There are no drainage improvements on the Property. Water sheet flows over the Property into the existing gulches or in a northerly direction, and then travels down slope to the bottom of the coastal bluff. This water is then absorbed by the sand or soils. Sediments that may have been picked up by the water are deposited on top of the sand or soils at the bottom of the bluff or gulches.

As discussed earlier in this document, there is one intermittent stream that traverses the western portion of the Property. The mouth of this unnamed stream is located inland, approximately 80 feet, from the shore break. Seasonal flooding mainly occurs in this stream, with little to no fresh water flowing into the ocean.

The coastal waters off of Kauapea Beach are classified as "Class AA" waters by the State of Hawai'i Department of Health. It is listed as an open coastal water in the State of Hawai'i Water Quality Monitoring and Assessment Report of 2006. However, there is insufficient data available to determine compliance with the State of Hawai'i water quality standards.

The Property is located in flood hazard zones VE (EL 24), VE (EL 25), VE (EL 26), VE (EL 27), VE (EL 28), VE (EL 29), and X on Flood Insurance Rate Map (FIRM) No. 1500020060E issued by the Federal Emergency Management Agency (FEMA). Zone VE indicates a coastal flood zone with a velocity hazard (wave action) in which the base flood elevation has been determined. Zone X indicates an area determined to be outside of the 0.2% annual chance floodplain.

5.4.2: Potential Impacts

No adverse impacts on drainage facilities are anticipated as a result of the proposed action. There has been no change to the existing drainage patterns on the Property. Run off and sediments are captured by sand located at the bottom of the coastal bluff or by soils in the gulches.

CHAPTER 6: CUMULATIVE AND SECONDARY IMPACTS

6.1: Secondary Impacts

Secondary impacts, or indirect effects, are those which are caused by an action and later in time or farther removed in distance, but are still reasonably foreseeable. Secondary impacts may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems.

Due to the size and location of the proposed action no adverse secondary impacts are expected.

6.2: Cumulative Impacts

Cumulative impacts are effects on the environment which result from the incremental impact of a project when added to past, present, and reasonably foreseeable future actions. The cumulative impacts associated with the project includes assessing implementation of the project to evaluate it, and incorporate other known planned improvements within the study areas that would affect or be affected by the project.

Cumulative impacts of the proposed project are neutral to positive. The existing and improvements will remain in place and continue to be compatible with the natural characteristics of the Property. Proposed improvements will also be compatible with the natural characteristics of the Property. Existing and proposed improvements will allow Secret Beach Properties, LLC to walk, police, and maintain the Property. Landscape maintenance will ensure that the vegetation on the coastal bluff is retained and maintained to minimize potential erosion of the bluff. The proposed action will also allow for replacement of noxious species with native species that may be more compatible with the coastal forest and minimize potential for erosion. Lastly, the Property does provide habitat for the Wedge-tail Shearwater and the White-tailed Tropicbird, indigenous seabirds found at the nearby Kīlauea NWR. It is also a foraging ground for the Nēnē, a federal and state listed threatened and endangered species whose habitat is also the nearby Kīlauea NWR.

CHAPTER 7: RELATIONSHIP TO GOVERNMENTAL PLANS AND POLICIES

7.1: Hawai‘i State Plan

Chapter 226, Hawai‘i State Planning Act, HRS, also known as the Hawai‘i State Plan; serves as a comprehensive guide for the future long-range development of the State. It sets forth the overall theme, goals, objective, policies, and priorities for the State. Additionally it sets forth a statewide planning system to coordinate State and County activities as well as to implement the Hawai‘i State Plan.

The proposed action is consistent with goals of the Hawai‘i State Plan:

1. *A strong, viable economy, characterized by stability, diversity, and growth, that enables the fulfillment of the needs and expectations of Hawai‘i’s present and future generations.*
2. *A desired physical environment, characterized by beauty, cleanliness, quiet, stable natural systems, and uniqueness, that enhances the mental and physical well being of the people.*
3. *Physical, social, and economic well-being, for individuals and families in Hawaii, that nourishes a sense of community responsibility, of caring, and of participation in community life.*

The proposed action is also consistent with the following objectives and policies:

Objectives and Policies for the Physical Environment – Land-based, Shoreline, and Marine Resources

Objectives:

- *Prudent use of Hawai‘i’s land-based, shoreline, and marine resources.*
- *Effective protection of Hawai‘i’s unique and fragile environmental resources.*

Policies:

- *Ensure compatibility between land-based and water-based activities and natural resources and ecological systems.*
- *Manage natural resources and environs to encourage their beneficial and multiple use without generating costly or irreparable environmental damage.*

The proposed action is consistent with these objective and policies. The coastal bluff provides habitat for indigenous migratory seabirds and are a foraging ground for the federal and state listed Nēnē. These birds are also found at the Kīlauea Point NWR which is located northeast of the Property. One of the purposes for the establishment of the Kīlauea Point NWR is to provide habitat for the Nēnē as well as a number of indigenous migratory seabirds that nest along the coastal bluffs. With the majority of the improvements located at the 150 foot elevation, there are no impacts to the shoreline and to shoreline processes. Continued maintenance of and enhancement to the existing coastal forest will further minimize the potential of erosion of the bluff.

Objectives and Policies for the Physical Environment – Land, Air, and Water Quality

Objectives:

- *Maintenance and pursuit of improved quality in Hawai‘i’s land, air, and water resources.*
- *Greater public awareness and appreciation of Hawai‘i’s environmental resources.*

Policies:

- *Promote the proper management of Hawai‘i’s land and water resources.*

The proposed action is consistent with these objective and policies. Existing improvements blend in with and utilize the topography of the Property while landscape maintenance will continue to be an integral component to minimize potential erosion of the coastal bluff. Operations associated with maintenance will be conducted to minimize impacts to land, air, and water resources.

Future proposals for the removal of unwanted and dead vegetation will address erosion as well as the maintenance and enhancement of the coastal forest, including impacts on native flora and fauna. The construction of a mauka boundary fence is a "last resort" option should unauthorized uses such as cutting and dumping of green waste continue.

7.2: State Land Use Districts

Chapter 205, HRS designates all lands in the State of Hawai'i into one (1) of four (4) districts: Agricultural, Conservation, Rural, and Urban. The Property is located within the State Agricultural and Conservation Districts. Existing floricultural uses and mauka-makai trails are permissible uses within the State Agricultural District.

7.3: State Conservation District

The Property is located within the limited (L) subzone. Secret Beach Properties, LLC has been cited by the Board of Land and Natural Resources for uses within the Limited subzone that require a permit from the Board of Land and Natural Resources.

Pursuant to Condition No. 4 of the Notice of Violation issued by the Board of Land and Natural Resources (BLNR) on March 12, 2010, the Applicant will submit a Conservation District Use Permit (CDUP) application to allow for existing trails, safety improvements, landscape maintenance, future removal of unwanted and dead vegetation, and the installation of a mauka boundary fence for the Property.

The proposed action is consistent with the following evaluation criteria set forth in Title 13-5-30, HAR:

1. *The proposed land use is consistent with the purpose of the conservation district;*
2. *The proposed land use is consistent with the objectives of the subzone of the land on which the use will occur;*
3. *The proposed land use complies with provisions an guidelines contained in chapter 205A, HRS, entitled "Coastal Zone Management" were applicable;*
4. *The proposed land use will not cause substantial adverse impact to existing natural resources within the surrounding area, community or region;*
5. *The proposed land use, including building structures and facilities, shall be compatible with the locality and surrounding areas, appropriate to the physical conditions and capabilities of the specific parcel or parcels;*
6. *The existing physical and environmental aspects of the land, such as natural beauty and open space characteristics, will be preserved or improved upon, whichever is applicable;*

7. *Subdivision of land will not be utilized to increase the intensity of land uses in the conservation district; and*

8. *The proposed land use will not be materially detrimental to the public health, safety and welfare.*

These existing improvements and proposed plan for removing unwanted vegetation and installation of a mauka boundary fence will allow Secret Beach Properties, LLC to be able to conserve, protect, and preserve the coastal bluff and to minimize the potential for natural hazards such as soil erosion and landslides. The existing trails and safety improvements are compatible with the topography of the bluff and are generally located within the coastal forest so that they are not visible from either Kauapea Beach or the pali. Lastly, when there are emergency operations on Kauapea Beach, these trails can continue to be used by the State of Hawai'i and County of Kaua'i emergency personnel as an alternative to the public access provided from Kūhiō Highway.

The proposed action is also consistent with the objective of the Limited subzone to limit uses where natural conditions suggest constraints on human activities. These improvements will allow for active maintenance as well as monitoring of activities on the property as the parcel fronts approximately 9 parcels on the mauka boundary.

It also proposes a procedure for the removal of unwanted vegetation to address illegal tree-cutting activities that have occurred on the Property. Should unauthorized activities by adjacent landowners persist, then Secret Beach Properties LLC will commence with the construction of a fence along the mauka boundary of the property.

Pursuant to Title 13-5-23, HAR, both erosion control (L-3) and Landscaping and removal of noxious plants (L-4) are identified land uses within the Limited Subzone.

7.4: Hawai'i Coastal Zone Management Program

The proposed action is located within the Coastal Zone Management Area as designated in Chapter 205A-1, HRS. The proposed action is in conformance with the following objectives and policies:

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 are 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; ore requiring reasonable monetary compensation to the State for recreation when replacement is not feasible;

iii. Providing and managing adequate public access, consistent with conservation of natural resources, to and along shoreline with recreational values;

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 of 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.

The proposed action is consistent with these objective and policies. Though adjacent to Kauapea Beach, the existing lateral improvements are located along a natural shelf, on the side of a coastal bluff, at an elevation of 150 feet msl. Should fencing be installed in the future, it will occur at an elevation of approximately 225 feet. Public access to Kauapea Beach is provided from a series of pedestrian easements that begins at Kūhiō Highway and terminates on the western portion of the Property. The proper maintenance of the existing improvements as well as the coastal forest will assist in minimizing potential soil erosion and runoff.

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.

The proposed action is consistent with these objectives and policies as there are no known historic resources on the Property. Existing improvements and future maintenance will mainly occur above ground.

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 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.

The proposed action is consistent with these objectives and policies. The Property has been identified as a heritage resource in the Kaua'i General Plan Heritage Resources Map for the North Shore Planning District. Existing trails and improvements are veiled by the coastal forest. When one looks up at the bluff from Kauapea Beach, the view is of the coastal forest. Should fencing be installed in the future, it will be shielded by the coastal forest. At the top of the pali, the main view is the coastal forest and the ocean. It is not anticipated to be impacted by the fencing. There is evidence that the preservation of the ocean view by adjacent neighbors has been the source of the illegal dumping of green waste on the Property.

4. Coastal Ecosystems

Objective:

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

Policies:

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

(B) Improve the technical basis for natural resource management;

(C) Preserve valuable coastal ecosystems, including reefs, of significant biological or economic importance;

(D) Minimize disruption or degradation of coastal water ecosystems be effective regulation of stream diversions, channelization, and similar land and water uses, recognizing competing water needs; and

(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 proposed action is consistent with these objective and policies. The Property provides habitat for the Wedge-tail Shearwater and White Tropicbird, indigenous migratory seabirds. Also observed foraging are the Golden Plover and Nēnē. The Golden Plover is also an indigenous migratory water bird while the Nēnē is a federal and state listed threatened and endangered goose. It is also the bird of the State of Hawai'i. The continued maintenance of these improvements along with landscape maintenance will manage this existing habitat.

5. Economic Uses

Objective:

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

Policies:

(A) Concentrate coastal dependent development in appropriate areas;

(B) Ensure 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

(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

The proposed action is consistent with these objective and policies as the nature and scale of the existing and proposed improvements are appropriate for the Property.

6. Coastal Hazards

Objective:

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

Policies:

(A) Develop and communicate adequate information about storm wave, tsunami, flood, erosion, subsidence, and point and nonpoint source pollution hazards;

(B) Control development in areas subject to storm wave, tsunami, flood, erosion, hurricane, wind, subsidence, and point and nonpoint source pollution hazards;

(C) Ensure that developments comply with requirements of the Federal Flood Insurance Program; and

(D) Prevent coastal flooding from inland projects.

The proposed action is consistent with these objective and policies. A majority of the improvements are located above the 150 foot elevation. However, the lower portion of the two (2) mauka-makai trails is most likely to be impacted by coastal erosion by a number of natural hazards. Lower portions of the Property are located within the special flood hazard zone with a base flood elevation ranging from 24 to 29 feet. Also as a shoreline parcel, there are potential impacts of coastal erosion. Annual erosion hazard rates have been developed for Kauapea Beach. An additional review will be conducted as part of the Conservation District Use Permit process and Special Management Area permit process. A Shoreline Setback Determination will be completed to identify applicable provisions of the Shoreline Setback Law. Lastly, applicable provisions of the county, state, and federal flood regulations will be complied with.

7. Managing Development

Objective:

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

Policies:

(A) Use, implement, and enforce existing law effectively to the maximum extent possible in managing present and future coastal zone development.

(B) Facilitate timely processing of applications for development permits and resolve overlapping or conflicting permit requirements; and

(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.

The proposed action is consistent with these objective and policies utilizing the Chapter 343, HRS process. This will allow governmental agencies, interested persons, and interested organizations to become aware of the proposed action. These reviews can then assist in the identification of outstanding or conflicting issues.

8. Public Participation

Objective:

Stimulate public awareness, education, and participation in coastal management.

Policies:

(A) Promote public involvement in coastal zone management processes;

(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;

(C) Organize workshops, policy dialogues, and site-specific mediations to respond to coastal issues and conflicts.

The proposed action is consistent with these objective and policies utilizing the Chapter 343, HRS process. Additionally, this information will be provided as part of the Conservation District Use Permit process, the Special Management Area Permit process, and the Shoreline Setback Determination process.

9. Beach Protection

Objective:

Protect beaches for public use and recreation.

Policies:

(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;

(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.

(C) Minimize the construction of public erosion-protection structures seaward of the shoreline.

The proposed action is consistent with these objective and policies as most of the improvements are located on a coastal bluff above a sandy beach. It does not interfere with the natural shoreline processes of Kauapea Beach or its use by the general public.

10. Marine Resources

Objective:

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

Policies:

(A) Ensure that the use and development of marine and coastal resources are ecologically and environmentally sound and economically beneficial;

(B) Coordinate the management of marine and coastal resources and activities to improve effectiveness and efficiency;

(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;

(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

(E) Encourage research and development of new, innovative technologies for exploring, using, or protecting marine and coastal resources.

The proposed action is consistent with these objective and policies as there has been no change to existing drainage patterns. Runoff and sediments continues to travel to the bottom of the gulches and the coastal bluff where they are absorbed and or deposited on sand or soils.

7.5: State Environmental Policy

Chapter 344, Environmental Policy, HRS sets forth the State's policy and guidelines to conserve natural resources and enhance the quality of life. The proposed action is consistent with the following policy:

Environmental Policy

1. *Conserve the natural resources, so that land, water, mineral, visual, air and other natural resources are protected by controlling pollution, by preserving or augmenting natural resource, and by safeguarding the State's unique natural environmental characteristics in a manner which will foster and promote the general welfare, create and maintain conditions under which humanity and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of the people of Hawai'i.*
2. *Enhance the quality of life by:*

a. *Setting population limits so that the interaction between the natural and artificial environments and population is mutually beneficial;*

b. *Creating opportunities for the residents of Hawai'i to improve their quality of life through diverse economic activities which are stable and in balance with the physical and social environments;*

c. *Establishing communities which provide a sense of identity, wise use of land, efficient transportation, and aesthetic and social satisfaction in harmony with the natural environment which is uniquely Hawaiian; and*

d. *Establishing a commitment on the part of each person to protects and enhance Hawai'i's environment and reduce the drain of nonrenewable resources.*

The proposed action is consistent with these policies. There will be neutral to positive impacts to natural resources and an enhanced quality of life for Kaua'i island residents. Nēnē, a federal and state listed threatened and endangered species forages on the Property. Three (3) indigenous migratory seabirds also utilize the Property: the Golden Plover for foraging, the Wedge-tailed Shearwater and White Tropicbird for nesting. All improvements and maintenance will be done in compliance with existing governmental regulations.

7.6: County General Plan

The Kaua'i County General Plan (2000) sets forth the broad policies and implementing actions in graphics and text to guide the future development of Kaua'i County. It is intended to improve the physical environment in the County as well as the health, safety, and general welfare of Kaua'i's people. Guiding the General Plan is the vision for Kaua'i in 2020 as:

- *a "garden island" of unsurpassed beauty;*
- *a rural environment of towns separated by broad open spaces;*
- *a vital modern society formed by the people and traditions of many cultures;*
- *an island of distinctly individual towns and communities, each with its own unique history and character;*
- *a community which cares for its land and waters, leading the way with best management practices in the development of roads and other public facilities and in its development and environmental regulations;*
- *an agricultural center, producing a wide range of crops, food, and forest products for local consumption and export;*
- *a resort destination where visitors are welcomed, supported with adequate facilities, and provided with a variety of cultural and recreational opportunities;*

- *a resort destination whose governmental and industry leaders respect the island's residents and their need to have a community life where visitors are not always present and who find effective ways to protect resident's customary use of special places for religious and cultural observances, fishing, gathering, hunting, and recreation; and*

- *an island whose government supports the labor force and small business owners, firmly holding to essential policies and regulations while eliminating unnecessary red tape.*

The proposed action is consistent with the following General Plan policies and implementing actions:

Agricultural Lands

Policy

- *Lands included within the Agricultural designation shall be predominantly used for or held in reserve to be used in the future for agricultural activities. These activities include the breeding, planting, nourishing and caring for, gathering, and processing of any animal or plant organism, including aquatic animals and plants, for the purpose of producing food or material for non-food products; the commercial growing of flowers or other ornamental plants, the commercial growing of forest products; and the commercial breeding and caring for domestic animals and pets.*

- *The primary intent of the Agricultural designation is to conserve land and water resources in order to:*

    - *Insure an excellent resource base for existing and potential agricultural uses;*

    - *Assure a sufficient supply of land available for sale or lease at a cost that is economically feasible for agricultural enterprise; and*

    - *Promote and preserve open agricultural lands as a key element of Kaua'i s rural character and lifestyle, essential to its image as "The Garden Island" and to the continued viability and development of Kaua'i visitor industry.*

- *In administering zoning and subdivision regulations, the County shall seek to preserve important agricultural lands. Important agricultural lands include those designated "A" or "B" by the Land study Bureau evaluation or "Prime" or "Unique" by the Agricultural Lands of Importance to the State of Hawai'i evaluation; provided that these ratings shall be superseded at such time as the State of Hawai'i officially maps and designates Important Agricultural Lands, as mandated in the State Constitution.*

- *Lands designated Agriculture shall include: important agricultural lands; lands in active agricultural use; lands with potential for agriculture, silviculture or aquaculture; and other lands not suited for urban development because of location, topography, economy of public services, or other purpose related to general health, safety and welfare.*

- *The secondary intent of the Agriculture designation is to provide an opportunity for Kaua'i citizens to reside in an agricultural community. An "agricultural community" is an area that has both agricultural uses and residences. Typically, an agricultural community is established*

through subdivision of land and provision of roads and potable water service. Agricultural communities are generally located in outlying areas, do not have convenient access to County facilities, and may not receive the full range or highest level of services such as available to residential communities, towns, and urban centers.

- *The primary intent of the Agricultural designation shall take precedence over the secondary intent.*
- *To implement the Agricultural designation, specific controls on the subdivision and alteration of designated lands shall be formulated to prevent the dissipation of agricultural potential, the loss of rural character, and the dispersal of residential and other urban uses.*
- *The following principles shall be applied in the development of an agricultural community;*
    - *Maintain irrigation works and easements where feasible and beneficial to existing or potential agricultural uses within the site or downstream; and*
    - *Preserve wetlands and streams and provide a riparian buffer area to prevent land disturbance and to filter runoff.*

The proposed action is consistent with these policies. Approximately 4.5 acres of the Property zoned Agriculture is in active agriculture use.

Scenic Views

Policy

- *In developing public facilities and in administering land use regulations, the County shall seek to preserve scenic resources and public views. Public views are those from a public place, such as a park, highway, or along the shoreline.*
- *The County shall observe the following general principles in maintaining scenic resources:*
    - *Preserve public views that exhibit a high degree of intactness or vividness.*
        - *"Intactness" refers to both the integrity of visual patterns and the extent to which the landscape is free from structures or other visually encroaching features.*
        - *"Vividness" relates to the memorability of a view, caused by contrasting landforms which create striking and distinctive patterns. (Examples are the silhouette of Mt. Hāʻupu against the horizons, views of the Nounou Mountain from the valley and the coast, and the view of Hanalei Valley from the overlook).*
- *Preserve the scenic qualities of mountains, hills and other elevated landforms, qualities such as silhouette against the horizon and the mass and shape of the landform.*
- *Preserve the scenic qualities of lowland/open space features, such as the shoreline, the edge of a coastal bluff, a march, a fishpond, or a historic or cultural property. Structures should not impede or intrude upon public views of the feature and should not alter the character of the immediate area around the land feature, historic, or cultural property.*

The proposed action is consistent with these policies. The Property is a coastal bluff that provides spectacular scenic views from Kauapea Beach. Due to the nature and scale of the improvements, a majority of these improvements are hidden by the coastal forest. Only the lower portions of the two mauka-makai trails are visible from Kauapea Beach.

Coastal Lands

Policy

- *When developing public facilities or granting zoning, land use permits, or subdivision for development along the coast, the first priority shall be to preserve and protect sandy beaches.*
    - *Strips of land along the shoreline that have been placed in the State Conservation District or in the County Open zoning district are intended to serve as a buffer from coastal erosion. Structures should be sited inland of these coastal buffers on lands that are appropriately zoned.*
    - *When development is proposed along a sandy beach, hazards of long-term coastal erosion should be assessed and used to determine appropriate setbacks.*

The proposed action is consistent with these policies. The Property is located in both the State Conservation District and zoned Open by the County of Kaua'i. A majority of the existing improvements are located at the 150 foot elevation of a coastal bluff and follows a natural shelf. However, the two (2) mauka-makai trails do meet the beach. Due to the nature and scale of the improvements, they do not affect beach processes. Should fencing occur in the future it will be located at an elevation of approximately 225 feet msl. Annual coastal erosion hazard rates have been developed for Kauapea Beach. A Shoreline Setback Determination application will be submitted to the County of Kaua'i Planning Department for review and action.

Native Hawaiian Rights

Policy

- *Under the State Constitution and the County Charter, the County of Kaua'i is empowered to promote the health, safety and welfare of all inhabitants without discrimination as to ethnic origin. As part of carrying out its responsibilities under the Constitution and the Charter, the County recognizes the rights of native Hawaiians and the laws concerning lands and waters that have been established through the State Constitution, State and Federal laws, and State and Federal court decisions. No County ordinance or rule shall modify or diminish these rights:*
    - *Native Hawaiian water rights provided under the State Water Code, HRS Chapter 174C.*
    - *Kuleana lands, water rights and access rights provided under the Kuleana Act of 1850, as recognized in current statutes, rules and court decisions.*
    - *Konohiki and hoa'aina fishing rights provided under the 1839 Law of Kamehameha, as modified by subsequent legislative acts and court decisions.*
    - *Traditional and customary rights of Native Hawaiians, such as for access and gathering, provided under the State Constitution and Hawai'i Revised Statutes, as interpreted by the courts (i.e., the PASH case).*
    - *Burial rights provided under the Hawai'i Historic Preservation Act and the federal Native American Graves Repatriation Act.*

- *Preservation of historic properties and archaeological resources provided under the federal Archaeological Resources Protection Act of 1979; the National Historic Preservation Act of 1966: and the Hawai'i Historic Preservation Act.*

The proposed action is consistent with these policies. Secret Beach Properties, LLC are aware of these rights. Further, they will be reviewed as part of Chapter 343, HRS; Conservation District Use Permit application; and Special Management Area Permit application.

Open Lands

Policy

- *The intent of the Open designation is to preserve, maintain or improve the natural characteristics of non-urban land and water areas that:*
  - *are of significant value to the public as scenic or recreation resources;*
  - *perform essential physical and ecologic functions important to the welfare of surrounding lands, waters, and biological resources;*
  - *have the potential to create or exacerbate soil erosion or flooding on adjacent lands;*
  - *are potentially susceptible to natural hazards such as flood, hurricane, tsunami, coastal erosion, landslide or subsidence; or*
  - *form a cultural, historic or archaeological resource of significant public value.*
- *Lands designated Open shall include: important landforms such as mountains, coastal bluffs, cinder cones, and stream valleys; native plant and wildlife habitat; areas of predominantly steep slopes (20 percent or greater); beaches and coastal areas susceptible to coastal erosion or hurricane, tsunami, or storm-wave inundation; wetlands and flood plains; important scenic resources; and known natural, historic and archaeological resources. Open shall also include parks, golf courses, and other areas committed to outdoor recreation*.
- *Lands designated Open shall remain predominantly free of development involving buildings, paving and other construction. With the exception of kuleanas and other small lots of record, any construction that is permitted shall be clearly incidental to the use and open character of the surrounding lands.*

The proposed action is consistent with these policies. The nature and scale of these improvements blend in with the Property. They also allow for the maintenance of the Property to ensure that the "open space" qualities remain.

7.7: Development/ Community Plan

The North Shore Planning District is one of five Planning Districts guiding the implementation of the Kaua'i General Plan. The proposed action is located on lands designated Open and Agricultural on the North Shore Planning District Land Use Map.

The proposed action is consistent with the Open designation on the North Shore Planning District Land Use Map. Land designated Open are identified as important land forms, scenic resources, and

archaeological resources for preservation and to keep "predominately free of development". Land designated Agricultural is in active agricultural use.

7.8: Zoning

The proposed action is located on lands zoned Agricultural as well as not zoned at all by the County of Kauaʻi. Approximately 4.5 acres of land located on the western portion of the Property is zoned Agriculture and is in active agriculture. In 2006, this portion of the Property was approved by the County of Kauaʻi for agricultural dedication. This dedication is consistent with permissible uses with the Agricultural Zoning District.

Lands located in the State Conservation District is not zoned.

7.9: Special Management Area

The Property is located within the Special Management Area and subject to the provisions of Chapter 205A, HRS and the Special Management Rules of the County of Kauaʻi, as amended. A Special Management Area Use Minor Permit application will be submitted with the Kauaʻi Planning Department.

Pursuant to Chapter 205A-26, HRS and Section 4.0 of the Special Management Area Rules of Kauaʻi County, no development shall be approved unless the authority has found:

- *That the development will not have any substantial adverse environmental or ecological effect, except as such adverse effect is minimized to the extent practicable and clearly outweighed by public health, safety, or compelling public interests. Such adverse effects shall include, but not be limited to, the potential cumulative impact of individual developments, each one of which taken in itself might not have a substantial adverse effect, and the elimination of planning options;*

- *That the development is consistent with the objectives, policies, and special management area guidelines of this chapter and any guidelines enacted by the legislature; and*

- *That the development is consistent with the county general plan and zoning. Such a finding of consistency does not preclude concurrent processing where a general plan or zoning amendment may also be required*

The proposed action is anticipated to have a positive environmental or ecological effect that is also in the public interest. This proposed action will allow for the active maintenance of the Property as well as provide a procedure for the removal of unwanted and noxious vegetation. Additionally, the proposed action is consistent with the objectives and policies of the Special Management Area. Lastly, is consistent with the Kauaʻi General Plan as well as the North Shore Planning District Land Use Map designations of Open Space and Agricultural. The portion of the Property zoned Agricultural is in active agricultural use. An application for a Conservation District Use Permit will be submitted to the DLNR-OCCL for the portion of the Property located in the State Conservation District.

7.10: Shoreline Setback Area

The Property is located along the shoreline. As such, portions of the proposed action may be located within the Shoreline Setback Area, thus subject to Chapter 205A, HRS and §8-27 of the Kaua'i County Code, as amended. A Shoreline Setback Determination application will be submitted to the Kaua'i Planning Department for review and action.

The major challenge in the establishment of the Shoreline Setback Area is the topography of the Property. It is comprised of sand that then transitions to basaltic coastal bluff with a change in elevation of approximately 250 feet msl.

CHAPTER 8: SUMMARY OF ADVERSE ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED

Maintenance activities associated with proposed action may result in short term impacts related to air and noise quality. Air quality will be impacted from fugitive dust during maintenance; depending on the type activity occurring. However, this will be localized and not affect surrounding properties. Noise quality will be impacted by a temporary increase in ambient noise associated with maintenance activities. Generally this will be power equipment associated with landscape maintenance. This may also include other equipment to maintain the existing trail and safety improvements. As with potential air quality impacts, this will also be localized and not affect surrounding properties. Air and noise quality will be mitigated through the use of appropriate best management practices.

The lower portion of the mauka-makai trails may be impacted by coastal hazards. This portion of the Property is located within the special flood hazard zone subject to coastal flooding through high wave action. During large storm events, this portion of the mauka-makai trails could be impacted by high wave action.

Lastly, construction activities associated with fencing on the mauka boundary of the Property in the future may also result in short term impacts related to air and noise quality. Air quality may be impacted by fugitive dust, depending on the type of construction required to install the fence. It is anticipated that fugitive dust will be localized and not affect surrounding properties. Noise quality may be impacted by a temporary increase in ambient noise during construction. It is also anticipated that this temporary increase will be localized and not affect surrounding properties. As with the ongoing maintenance activities will be mitigated through the use of appropriate best management practices.

The proposed action is not anticipated to create any long-term, adverse environmental impacts.

A summary of potential environmental impacts from the proposed action is provided in the following table.

Table 3: Summary of Potential Impacts

Summary of Potential Impacts	
Categories	**Potential Impact**
Surrounding Land Uses	Minimal impacts to surrounding land uses. The majority of the trails and improvements do not abut adjacent parcels. Installation of a fence on the mauka boundary of the Property in the future will also have minimal impacts to surrounding land uses.
Land Use Designations	Minimal impacts to existing land use. Applications for a Conservation District Use Permit and a Special Management Area Minor Permit will be submitted to allow for the existing and proposed uses.
Geology, Topography, & Soils	Minimal impacts to geology, topography, and soils. The vast majority of the lateral trail is located along a natural shelf of a

	basaltic coastal bluff. Some erosion is occurring in areas previously disturbed through tree cutting and removal.
Natural Hazards	Minimal impacts from natural hazards. The lower portion of the mauka-makai trails could be impacted by coastal erosion resulting from high wave action.
Hydrology	No adverse impacts to hydrology. Groundwater underneath the property is not being withdrawn. The one stream is intermittent in nature and is not impacted by the existing improvements.
Air Quality	No adverse impacts to air quality. Trail and landscape maintenance may produce small quantities of fugitive dust for short durations. Installation of a fence on the mauka boundary of the Property in the future may also produce small quantities of fugitive dust for short durations.
Noise Quality	No adverse impacts to noise quality. Trail and landscape maintenance may produce a temporary increase in ambient noise. Installation of a fence on the mauka boundary of the Property in the future may also produce a temporary increase in ambient noise.
Visual Resources	No adverse impact to visual resources. The existing trails and improvements are not visible from Kauapea Beach. Installation of a fence on the mauka boundary of the Property in the future will also not be visible from Kauapea Beach.
Historic, Archaeological, & Cultural Resources	No adverse impacts to historic, archaeological, and cultural resources. None where identified by a field inspection and literature review.
Biological Resources	No adverse impacts to biological resources. Trail maintenance will not interfere with Nēnē and Golden Plover foraging areas or the nesting areas of the Wedge-tail Shearwater
Socio-Economics	No adverse impacts to the socio-economic environment. The proposed action does not influence the number of visitors, jobs, or resident income of the County of Kauaʻi.
Solid Waste Facilities	No adverse impacts to solid waste facilities. Green waste will continue to be generated and disposed off.
Recreational Facilities	No adverse impacts to recreational facilities. Public access to and from Kauapea Beach will not be impeded.
Police and Fire Protection	Positive impacts to police and fire protection. The existing trails provide an alternative and faster access to Kauapea Beach during emergencies.
Educational Facilities	No adverse impacts to educational facilities. There will be no students to enroll into the existing facilities.

Medical Facilities	No adverse impacts to medical facilities. The existing medical facilities are already servicing the Property.
Electrical and Communications Facilities	No adverse impacts to electrical and communication facilities. These facilities are already servicing the Property.
Transportation Facilities	No adverse impacts to transportation facilities. The existing facilities are already servicing the Property.
Wastewater Facilities	No impacts to wastewater facilities as there are no wastewater facilities on the Property.
Water Facilities	No impacts to water facilities as there are no water improvements on the Property.
Drainage Facilities	No adverse impacts to drainage facilities as existing drainage patterns are maintained.

CHAPTER 9: ALTERNATIVES TO THE PROPOSED ACTION

This proposed action is the preferred alternative identified by Secret Beach Properties, LLC. Retaining and maintaining the existing trails and safety improvements provides Secret Beach Properties, LLC access to the entire Property. Further, it proposes a procedure for the removal of unwanted vegetation to address illegal tree-cutting activities that have occurred on the Property. What began as a cleanup of illegal dumping of green waste onto the Property turned into the need to re-establish the existing lateral trail to obtain access to this illegal green waste. Lastly, should unauthorized uses on the Property persist, then a fence will be constructed along the mauka border of the Property as a "last resort".

9.1: No Action Alternative

The "no action" alternative would maintain the status quo with the existing improvements. As the Property is the subject of an enforcement action, this is not an acceptable resolution to Secret Beach Properties, LLC.

9.2: Remediation Alternative

The "remediation alternative" would require removing all existing improvements on the Property. Removing the existing lateral trail and associated safety improvements will make it much more difficult for Secret Beach Properties, LLC to access and maintain the entire Property. Due to the size and topography of the Property, trails are essential to maneuver in a safe manner and minimize impacts to the bluff.

CHAPTER 10: AGENCY AND PUBLIC CONSULTATION

10.1 PRE-ASSESSMENT CONSULTATION

Letters providing project information along with a general location map were sent to various consulted parties on to solicit their initial comments and concerns associated with the project as part of the preparation of the Draft EA. A listing of agencies and organizations for which consultant letters were sent is provided below. Those providing written responses are identified with a "**»**" symbol. Copies of written comments received along with responses to them are included in Appendix B.

Federal Agencies

» Department of the Army, U.S. Army Engineer District, Honolulu
- Department of Environmental Protection, Honolulu
- Department of the Interior, Kaua'i National Wildlife Refuge
» Department of the Interior, Pacific Island Region Fish and Wildlife, Honolulu
- Department of the Interior, Water Resources Division, U.S. Geological Survey

State of Hawai'i Agencies

» Department of Accounting and General Services
- Department of Business, Economic Development & Tourism
- Department of Business, Economic Development & Tourism, Office of Planning
- Department of Business, Economic Development & Tourism, Energy Office
» Department of Defense
» Department of Education
- Department of Hawaiian Homelands
» Department of Health
» Department of Land and Natural Resources
- Department of Land and Natural Resources, State Historic Preservation Division
- Hawai'i Housing Finance and Development
» Office of Hawaiian Affairs
- University of Hawai'i Water Resources Research Center

Kaua'i County Agencies

- Department of Finance
- Department of Parks and Recreation
- Department of Planning
» Department of Public Works
» Department of Water
- Fire Department
- Police Department

CHAPTER 11: FINDINGS AND ANTICIPATED DETERMINATION

In determining whether a proposed action may have a significant effect on the environment, the Approving Agency needs to consider every phase of the proposed action, the expected consequences, both primary and secondary, and the cumulative as well as the short-term and long-term effects of the action. An Approving Agency's review and evaluation of the proposed actions effect on the environment would result in a determination whether: 1) the action would have a significant effect on the environment, and therefore an Environmental Impact Statement Preparation Notice should be issued, or 2) the action would not have a significant effect and therefore a Finding of No Significant Impact (FONSI) is warranted.

What follows is a discussion of the results of the environmental assessment conducted for the Secret Beach Properties, LLC Project in relation to the 13 Significance Criteria pursuant to Chapter 200-11, HAR. This discussion assesses the "significance" of potential environmental effects which includes the sum of effects on the quality of the environment along with the overall and cumulative effects. The findings of this discussion are provided below.

11.1: Preliminary Findings

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

The proposed action does not involve irrevocable commitment to loss or destruction of any natural or cultural resources. Maintenance of the Property will continue to provide habitat and foraging areas for the Nēnē, a federal and state listed threatened and endangered species and indigenous migratory seabirds.

2. *Curtail the range of beneficial uses of the environment;*

The proposed action is anticipated to benefit the environment through regular maintenance. Further, the removal of unwanted vegetation will allow for the planting of native vegetation compatible with the area.

3. *Conflicts with the state's long-term environmental policies or goals and guidelines expressed in chapter 344, Hawai'i Revised Statutes, and any revision thereof and amendment thereto, court decisions, or executive orders;*

The proposed action is consistent with the State's Environmental Policy and Guidelines set forth in Chapter 344, HRS.

4. *Substantially affects the economic welfare, social welfare, and cultural practices of the community or State;*

The proposed action is very limited in scope and scale. It is not anticipated to affect the economic welfare, social welfare, and cultural practices of the community or State.

5. *Substantially affects public health;*

The proposed action will promote the public health, safety, and welfare by providing emergency personnel (fire, rescue, police, and DOCARE) with an alternative access to Kauapea Beach for emergency response..

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

The proposed action is very specific and limited in scope and scale. It is not anticipated to generate substantial secondary impacts to existing public facilities or changes to the population of the County of Kauaʻi.

7. Involves a substantial degradation of environmental quality;

The proposed action will have a long term positive effect on environmental quality by allowing for the protection, conservation, and preservation of the coastal bluff. This will minimize the potential for soil erosion and landslides.

8. Is individually limited but cumulatively has considerable effect upon the environment or involves a commitment for larger actions;

The proposed action will have a long term positive effect on the environment that will not require larger actions in the future.

9. Substantially affects a rare, threatened, or endangered species or its habitat;

The proposed action will not substantially affect the Nēnē, a federal and state listed endangered species, which forages on the Property. Additionally, the Golden Plover, also forages on the Property. It is an indigenous migratory seabird that spends part of its time in Hawaiʻi. Lastly, there will not be a substantial affect for the Wedge-tailed Shearwater and White-tailed Tropicbird: indigenous migratory seabirds whose nests have been found on the Property.

10. Detrimentally affects air or water quality or ambient noise levels;

Trail maintenance, landscape activities, the removal of unwanted vegetation, and the installation of fencing may minimally affect air quality and ambient noise levels. These activities will be conducted in compliance with existing governmental regulations.

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

A small portion of the proposed action is located in a coastal flood hazard area as well as a high wave hazard area. All maintenance will be in compliance with all applicable governmental regulations.

12. Substantially affects scenic vistas and viewplanes identified in county or state plans or studies; or

The Property is designated as an Open Space resource on the North Shore Planning District Heritage Resources map. The proposed action will maintain the open space resource of the Property.

13. Requires substantial energy consumption.

The proposed action requires little to no energy consumption.

11.2: Determination

Based upon the information and results of the assessments conducted for the proposed action; a Finding of No Significant Impact (FONSI) determination is warranted for the Secret Beach Properties, LLC. The findings supporting this anticipated determination are based upon the previous discussion of the proposed actions affect on the environment in relation to the Significance Criteria set forth in Chapter 11-200, HAR.

CHAPTER 12: REFERENCES

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Appendix A:

Photographs of the Lateral Trail and the Intermittent Stream Gulch

Secret Beach Properties, LLC Trails

This is the western portion of Secret Beach Property. These lands are in active floriculture.

This is also the western portion of Secret Beach Property looking north, towards Kauapea Beach.

This same Property provides access to Kauapea Beach for emergency responders

Secret Beach Properties, LLC Trails

This is the beginning of the lateral trail. This is an example of the improvements made to the trail. Here we have Trex and fencing. Also note the fallen tree that is part of previous illegal cutting.

This highlights the extreme change in elevation that occurs on certain portions of the lateral trail.

Illegal tree cuttings.

Secret Beach Properties, LLC Trails

Existing trail improvements

Existing trail improvements

Trail improvements that also shows fencing that has been installed. Note the fallen tree landing on top of the fence.

Secret Beach Properties, LLC Trails

An example of fencing. The pcinic table has been at its present location for a period of time.

An example of previous illegal tree cutting and clearing on the Property.

An example of recent illegal tree cutting and clearing on the Property.

Secret Beach Properties, LLC Trails

Kauapea Beach looking towards the Kīlauea Point Light House .

Kauapea Beach looking towards Hanalei.

Coastal bluff, eastern portion of the Property, below Parcel No. 25.

Secret Beach Properties, LLC Trails

Coastal bluff, eastern portion of ther Property, below Parcel No. 26.

Coastal bluff, middle portin of the Property below Parcels No. 27 and 28.

Coastal bluff, middle portion of the Property below Parcels No. 29 and 30.

Appendix B:

Pre-Consultation Packet and Responses

501 Sumner Street
Suite 620
Honolulu, Hawaii 96817
Phone: (808) 531-1308
Fax: (808) 521-7348
www.ssfm.com

August 12, 2010 SSFM 2010_056.00

Dear

SUBJECT: Secret Beach Properties, LLC Existing Trail Improvements
Pre-Assessment Consultation for a Draft Environmental Assessment
TMK: (4) 5-2-005:036
Kīlauea, Namahama, Hanalei, Kauaʻi, Hawaiʻi

Secret Beach Properties, LLC has existing trail improvements on their lands located at Tax Map Key (TMK) (4) 5-2-005:036 (Property). These trails provide both lateral and shoreline access across the Property.

A Draft Environmental Assessment (Draft EA) is now being prepared for this project to comply with State environmental regulations under Chapter 343, Hawaiʻi Revised Statutes (HRS) and Chapter 11-200, Hawaiʻi Administrative Rules (HAR). This letter and attachments are being provided to solicit comments, concerns, or regulatory requirements you may have in regards to this project so that it may be addressed in the Draft EA.

We would greatly appreciate your cooperation in providing us with any written comments within 21 days from the date of this letter. Please send your written comments to:

SSFM International, Inc.
Attn: Robyn Loudermilk
501 Sumner Street, Suite 620
Honolulu, Hawaii 96817

Should you have any questions, please feel free to contact me at (808) 531-1308 or by email at rloudermilk@ssfm.com. Thank you.

Sincerely,

SSFM INTERNATIONAL, INC.

Robyn L. Loudermilk
Project Planner

Enclosures: Project Summary and Location Map

Secret Beach Properties, LLC: Existing Trails
Project Summary
August, 2010

Secret Beach Properties, LLC is initiating an Environmental Assessment (EA) to file for the necessary after the fact approvals for existing mauka-makai and lateral trails constructed on their land located at Tax Map Key (TMK) (4) 5-2-005:036 (Property). This Property is located on the North Shore of Kaua'i, between the existing agricultural lots makai of Kauapea Road and the shoreline of Kauapea Beach. (Exhibit A)

Elevation of the Property ranges from a high of approximately 250^{+} feet above mean sea level (msl) at the top of the pali, and then plunges sharply to the sandy shoreline. There are seven (7) parcels that border the portion of the Property in which the trails are located. This border is approximately 2365 feet in length.

There are a number of existing trails, including stairs, which were installed prior to when Secret Beach Properties, LLC purchased the Property in 2005. Subsequent improvements are comprised mainly of Trex® and wooden planks to shore up the earthen steps; rebars that have been driven into the soil in order to hold these planks in place; and hog wire fencing with metal t-posts along the more hazardous portions of the trails to ensure that persons walking do not slip and fall down the pali.

These improvements were initiated as a response to a complaint of tree cutting. This complaint was filed with the Department of Land and Natural Resources Office of Conservation and Coastal Lands (DLNR-OCCL) in 2007. Upon further investigation and an inspection of the Property, DLNR-OCCL determined that Secret Beach Properties, LLC did not conduct the tree cutting.

DLNR-OCCL also indicated that Secret Beach Properties, LLC could clean the Property of tree cutting debris. During this clean up, additional debris was encountered along a lateral trail that traverses the entire Property. Encountering this additional debris indicated that tree cutting on the Property from abutting landowners had been ongoing for many years.

In 2009, DLNR-OCCL responded to a complaint of tree cutting and trail building. Upon investigation, DLNR-OCCL recommended enforcement action. By letter dated March 15, 20 10, the Board of Land and Natural Resources (BLNR) issued a violation (ENF KA-08-06) to Secret Beach Properties, LLC for unauthorized landscaping (trail building).

The Property is located within the State Conservation District, Limited Subzone, and the County of Kaua'i Special Management Area. An after-the-fact Conservation District Use Permit (CDUP) will be filed with the DLNR-OCCL to: 1) allow for all existing trails on the Property to remain intact; 2) allow for all existing improvements and ongoing maintenance of existing trails; and 3) the removal of diseased, dying, or dead trees that pose a risk to public safety. Additionally, an after-the-fact Special Management Area Minor Permit will be filed with the County of Kaua'i Planning Department to allow for the same improvement and uses being requested for in the after-the-fact CDUP. Lastly, a Shoreline Setback Determination will be filed with the County of Kaua'i Planning Department to determine if any of the existing improvements are located within the Shoreline Setback Area.

FIGURE 1
PROJECT LOCATION
EXISTING TRAILS

Secret Beach Properties, LLC
Source: DeLorne

0 1,050 2,100 4,200 Feet

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SSFM INTERNATIONAL

DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, HONOLULU
FORT SHAFTER, HAWAII 96858-5440

REPLY TO
ATTENTION OF:

August 18, 2010

Regulatory Branch

File Number POH-2010-0208

SSFM International, Inc.
Attention: Robyn Loudermilk
501 Sumner Street, Suite 620
Honolulu, Hawaii 96817

Dear Ms. Loudermilk:

We have received your request for the Department of the Army to review and comment on the Pre-Assessment Consultation for a Draft Environmental Assessment (dEA) for the improvements to the existing trail at Secret Beach, TMK (4) 5-2-005:036, Kilauea, Island of Kauai, Hawaii. We have assigned the project the reference number **POH-2010-0208**. Please cite the reference number in any future correspondence concerning this project. We completed our review of the submitted document pursuant to Section 10 of the Rivers and Harbors Act of 1899 (Section 10) and Section 404 of the Clean Water Act (Section 404).

Section 10 requires that a Department of the Army (DA) permit be obtained from the U.S. Army Corps of Engineers (Corps) prior to undertaking any construction, dredging and other activities occurring in, over, or under navigable waters of the U.S., including the upper limit of adjacent wetlands. The line of jurisdiction extends to the Mean High Water Mark for tidal waters. Section 404 requires that a DA permit be obtained for the discharge (placement) of dredge and/or fill material into waters of the U.S., including wetlands. The line of jurisdiction extends to the Mean Higher High Water Mark for tidally influenced waters, the Ordinary High Water Mark for non-tidal waters and the approved delineated boundary for wetlands.

Based on the information provided, we understand the improvements to the existing trail are complete and the applicant is pursuing after the fact approvals for this action. As the project site abuts the Pacific Ocean, a navigable water subject to Corps jurisdiction, Section 10 authorization may be required for activities occurring in, over or under waters of the U.S. subject to the ebb and flow of tide. The lower reaches of the two unnamed streams traversing the property may be tidally influenced as their end termini are in the Pacific Ocean, whereby activities occurring within the tidal reaches of these water bodies would require Section 10 authorization as well. Be advised, the requirement for Section 10 authorization extends to activities occurring in, over or under adjacent estuarine wetlands. In addition, work activity including those activities for dewatering and excavating purposes in tidally-influenced water bodies, including streams, requires authorization under Section 10. Additionally, should that work result in discharge of fill material into the water body, authorization under Section 404 may be required. The two streams are waters of the U.S., subject to Corps jurisdiction and require a DA permit for any work that may result in the discharge of fill or dredged material below the OHWM of the water body.

The Pre-Assessment Consultation does not provide sufficient information to allow the Corps to determine if the project site encompasses additional unidentified waters of the U.S. or whether such waters are proposed for impact, which may require authorization under Section 10 and/or Section 404. When developing the dEA, we recommend you conduct a thorough aquatic resource survey, describing any wetlands, drainage ditches, gulches, gullies, streams, etc., on-site, especially those that may be

impacted by any of the proposed project components. In addition, include sufficient information concerning the scope of work, including the use of Best Management Practices, i.e. silt fences and sandbag berms within the vicinity and in close proximity to potentially regulated bodies of water.

Only the Corps of Engineers has the authority to determine if any of these aquatic features are or are not waters of the U.S., potentially subject to regulation under Section 10 and/or Section 404. As such, we encourage the applicant to submit a request for an approved jurisdictional determination (JD) for these water bodies. Your request to the Corps should include names (if known), and descriptions of aquatic features proposed for impact, including whether or not they are tidally influenced, flow duration of each feature and the flow path of each feature into navigable waters. For instance: "the unnamed ditch contains flow for two consecutive weeks annually and, from the project impact site, flows for 700 linear feet prior to discharge into X Stream. X Stream flows year-round and flows 1,200 feet prior to discharge into the Pacific Ocean. The lower 200 linear feet of X Stream is influence by the tide." For wetlands, you should submit a wetland delineation conducted in accordance with the Corps of Engineers 1987 Wetland Delineation Manual and the Hawai'i and Pacific Islands Regional Supplement. We recommend the applicant also provide a vicinity map, map of the water bodies and flow paths and on-site photographs so the Corps may prepare an approved JD, if necessary.

If any water bodies are determined to be waters of the U.S., the applicant must obtain authorization from the Corps prior to discharge of dredged or fill material into these water bodies. Fill material, permanent or temporary, may include, but is not limited to: rock, dirt, sand, sandbags and/or concrete. Dewatering effluent from dredging, including filtered and treated effluent, is also considered fill, requiring authorization under Section 404 prior to discharge in waters of the U.S. The applicant should contact the Corps to determine if any of the proposed work constitutes a "discharge of fill" and submit an application and associated drawings that meet our drawing recommendations found at *http://poh.usace.army.mil/EC-R/EC-R.htm*. The Corps will then review the application to ensure it complies with all necessary federal laws and regulations. Note that if the fill results in the loss of waters of the U.S. and/or associated functions, the applicant may be required to provide compensatory mitigation for any unavoidable impacts. A request for an approved JD can be submitted prior to, or concurrently with, an application for the proposed work.

Thank you for contacting us regarding this project and providing us with the opportunity to comment. Should you have any questions, please contact Ms. Jessie Pa'ahana at *808.438.9258* or via email at *Jessie.K.Paahana@usace.army.mil*. Please be advised you can provide comments on your experience with the Honolulu District Regulatory Branch by accessing our web-based customer survey form at *http://per2.nwp.usace.army.mil/survey.html*.

Sincerely,

George P. Young, P.E.
Chief, Regulatory Branch

Paahana, Jessie K POH

From: Robyn Loudermilk [rloudermilk@ssfm.com]
Sent: Wednesday, November 10, 2010 10:51 AM
To: Paahana, Jessie K POH
Subject: Secret Beach Pre-consultation comments: POH-2010-0208

Aloha Jessie,

Can you please provide me with a map identifying the location of the two unnamed streams.

This will ensure that you and I are talking about the same streams.

Mahalo

Robyn L. Loudermilk

SSFM International

501 Sumner Street, Suite 620

Honolulu, Hawaii 96817

Phone: (808) 531-1306

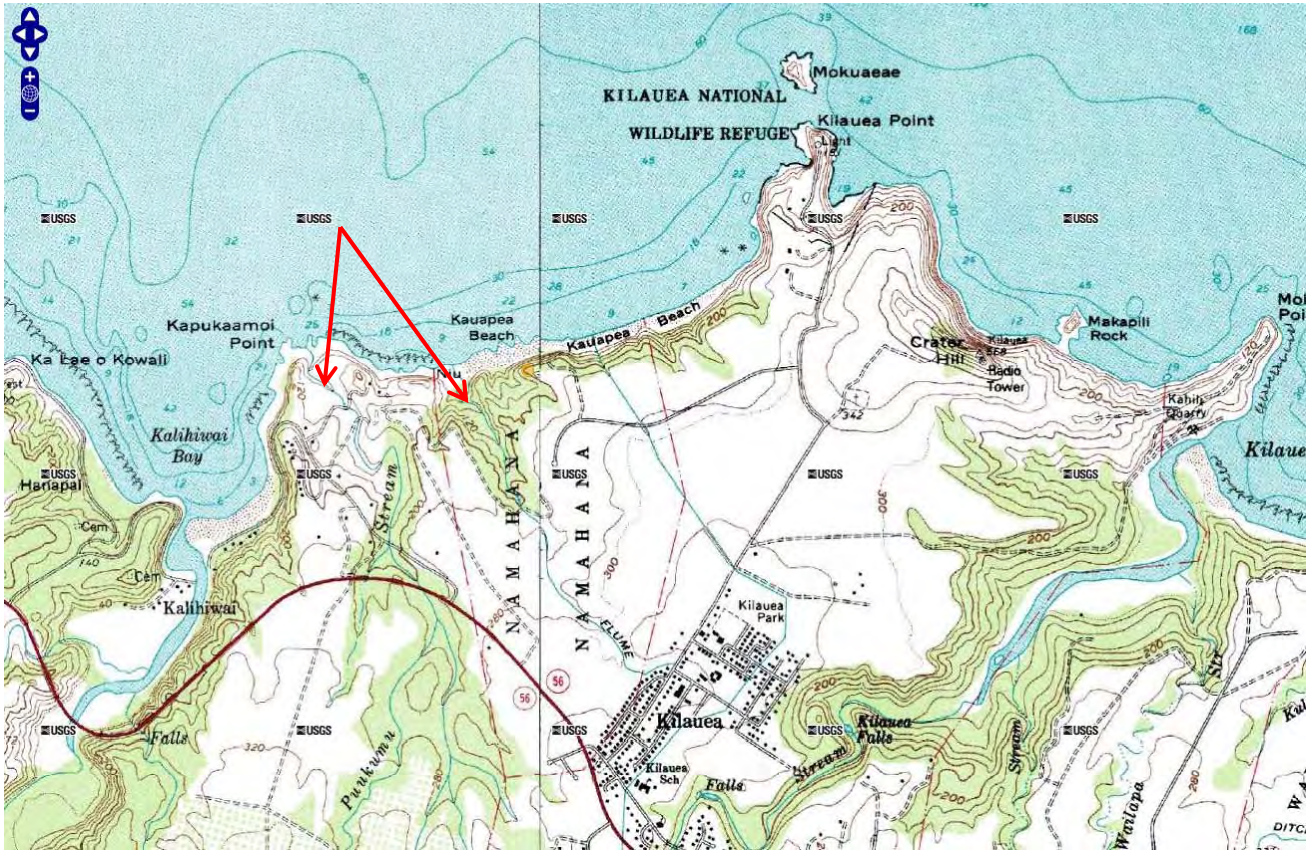
Direct: (808) 628-5854

Fax: (808) 521-7348

rloudermilk@ssfm.com

www.ssfm.com

Kilauea, Kauai



POH-2010-00208 Secret Beach Trail ATF Improvements:
Per e-mail request dated November 10, 2010 by Ms. Robyn Loudermilk of SSFM: the 2 unidentified water bodies of concern for the Corps are identified with red arrows.

Source: US Geological Survey

From:	Robyn Loudermilk
To:	Paahana, Jessie K POH
Cc:	Dean Uchida; Cheryl Soon
Subject:	FW: Secret Beach Pre-consultation comments: POH-2010-0208 (UNCLASSIFIED)
Date:	Tuesday, November 30, 2010 12:16:41 PM
Attachments:	Nov10Loudermilkrequest.pdf Trail Photos.pdf

Aloha Jessie,

Thank you for providing the requested map. Upon review, one of the unnamed streams is located within the project area, while one is not. I have noted this on the USGS map attached to the Nov10Loudermilkrequest.pdf email that is attached to this email.

I am also providing you with a packet of photographs taken of the one stream located within the project area.
The front page of this packet has two aerial photographs of the stream area. The first aerial photograph shows the relationship of the stream area to the Kauapea Beach and surrounding properties. The second aerial photographs provides a view of the stream area from Kalihiwai towards the Kīlauea Point Lighthouse. The second page is an index of the photographs and general location along the stream area. The remaining pages are the photographs with a brief description.

Please do not hesitate to contact me should you require additional assistance.

Mahalo,
Robyn

Robyn L. Loudermilk
SSFM International
501 Sumner Street, Suite 620
Honolulu, Hawaii 96817
Phone: (808) 531-1306
Direct: (808) 628-5854
Fax: (808) 521-7348
rloudermilk@ssfm.com
www.ssfm.com

The photographs were taken on November 23, 2010.
-----Original Message-----
From: Paahana, Jessie K POH [mailto:Jessie.K.Paahana@usace.army.mil]
Sent: Monday, November 15, 2010 7:10 AM
To: Robyn Loudermilk
Subject: RE: Secret Beach Pre-consultation comments: POH-2010-0208 (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: FOUO

-----Original Message-----
From: Robyn Loudermilk [mailto:rloudermilk@ssfm.com]
Sent: Wednesday, November 10, 2010 10:51 AM
To: Paahana, Jessie K POH
Subject: Secret Beach Pre-consultation comments: POH-2010-0208

Aloha Jessie,

Can you please provide me with a map identifying the location of the two unnamed streams.

This will ensure that you and I are talking about the same streams.

Mahalo

Robyn L. Loudermilk

SSFM International

501 Sumner Street, Suite 620

Honolulu, Hawaii 96817

Phone: (808) 531-1306

Direct: (808) 628-5854

Fax: (808) 521-7348

rloudermilk@ssfm.com

www.ssfm.com

Secret Beach Properties, LLC Trails

The following photographs were taken on Tuesday, November 23, 2010 between the hours of 10:30 am and 12:45 pm.

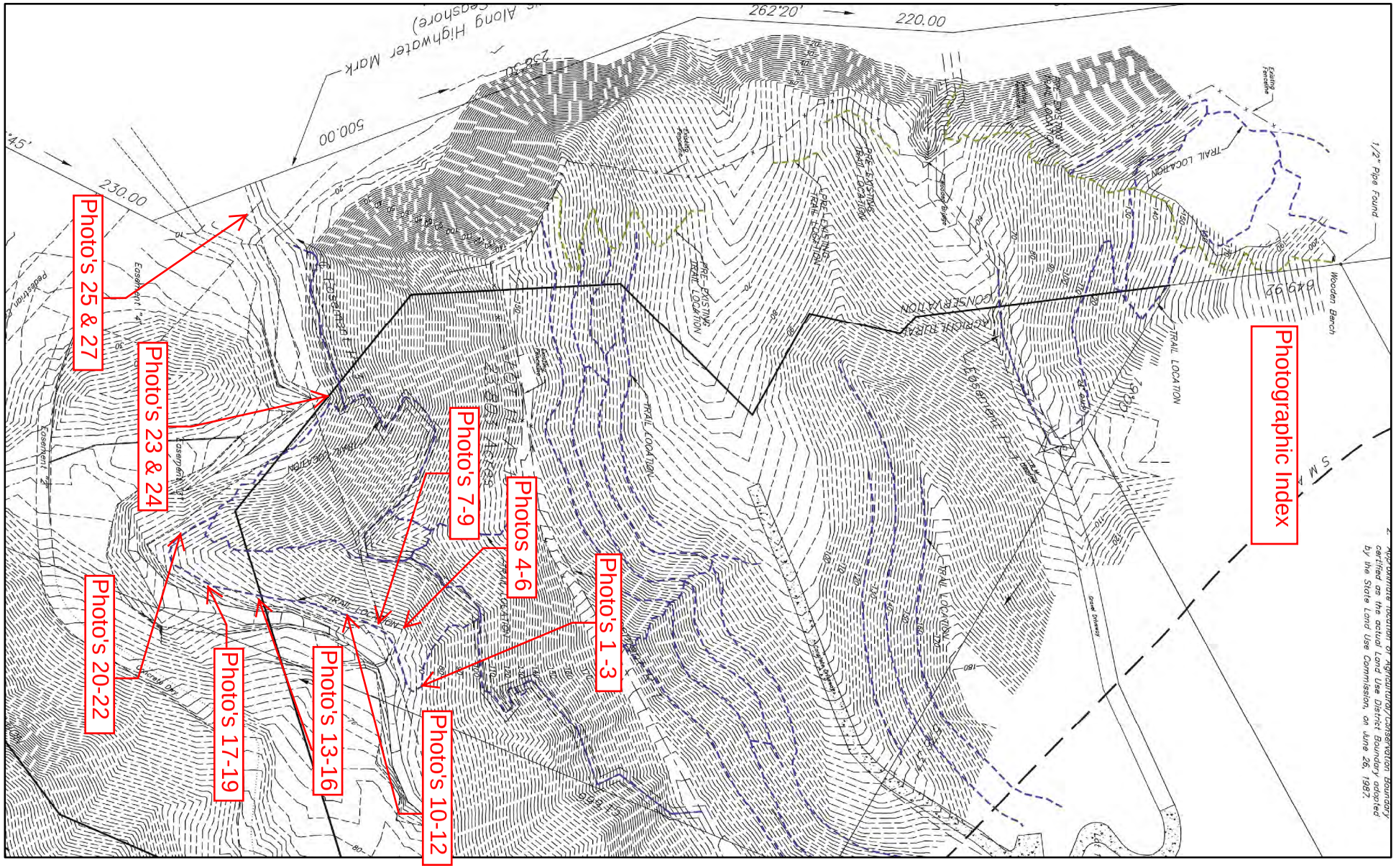


FIGURE 4

LOCATION OF EXISTING TRAILS PART 1

Secret Beach Properties, LLC
Source: Alan Hiranaka

N

Not to Scale

SSFM INTERNATIONAL

Secret Beach Properties, LLC Trails

Photo 1

Existing trail improvements at an elevation of approximately 66 to 70 feet msl.

Photo 2

Bottom portion of trail improvements , along the side of the gulch, shown in Photo 1. Green vegetation on the right denotes abrupt change in elevation.

Photo 3

Another view of trail with botton step on the left side. Green vegetation on the left of the trail demotes an abrupt change in elevation.

Secret Beach Properties, LLC Trails

Photo 4

Continuation of trail looking in the makai direction. Green vegetation on the left of the trail denotes an abrupt change in elevation.

Photo 5

Close up shot of vegetation adjacent to the tree in Photo 4.

Photo 6

Continuation of trail improvements heading in the makai direction. Green vegetation on the left side of the trail denotes an abrupt change in elevation.

Secret Beach Properties, LLC Trails

Photo 7

Trail improvements looking makai. Green vegetation on left side of the trail denotes change in elevation.

Photo 8.

Trail improvements looking mauka . This photo was taken behind the tree in the upper left corner of Photo No. 7. Green vegetation on the right side of the trail denotes an abrupt change in elevation.

Photo 9

Trail view of Photos 8 and 9 taken from the opposite side of gulch

Secret Beach Properties, LLC Trails

Photo 10

Continuation of trail looking makai. Green vegetation on the left of the trail denotes abrupt change in elevation.

Photo 11

Continuation of trail looking mauka . This photo was taken behind the banana tree in the left corner of Photo No. 10. Green vegetation on the right side of the trail denotes an abrupt change in elevation.

Photo 12

Trail view of Photos 10 and 11 taken from the opposite side of the gulch.

Secret Beach Properties, LLC Trails

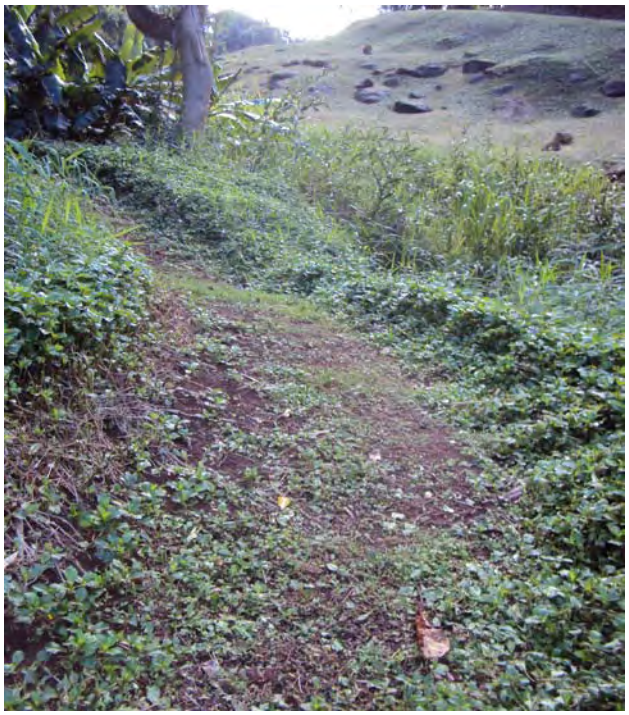


Photo 13

Continuation of trail looking mauka. Green vegetation on the right of the trail denotes an abrupt change in elevation.

Photo 14

View from trail to the opposite site of the gulch. Trail is adjacent to the green vegetation on the bottom of this photo.

Photo 15

An additional view from the trail to the opposite side of the gulch. Trail is adjacent to the green vegetation on the bottom of this photo.

Secret Beach Properties, LLC Trails

Photo 16

One more view from the the trail to the opposite side of the gulch. Trail is adjacent to the green vegetation on the bottom of this photo.

Photo 17

Continuation of trail improvements looking makai.

Photo 18

Trail improvements looking mauka.

Secret Beach Properties, LLC Trails

Photo 19

Trail view of Photos 17 and 18 taken from the opposite side of the gulch.

Photo 20

View of gulch looking mauka. The existing trail is on the left, outside of the picture.

Photo 21

View of Photo 20 taken from the opposite side of the gulch. Trail shown on upper portion of this photo.

Secret Beach Properties, LLC Trails

Photo 22

View of gulch looking makai. Trail is not shown in this photo. It is located further to the right of this photo Note the water in the lower portion of photo. There was water flowing to the beach.

Photo 23

View of trail improvements, looking up from an existing trail that traverses the side of the gulch. These improvements lead to the top of the gulch. All improvements along the side of the gulch end at here.

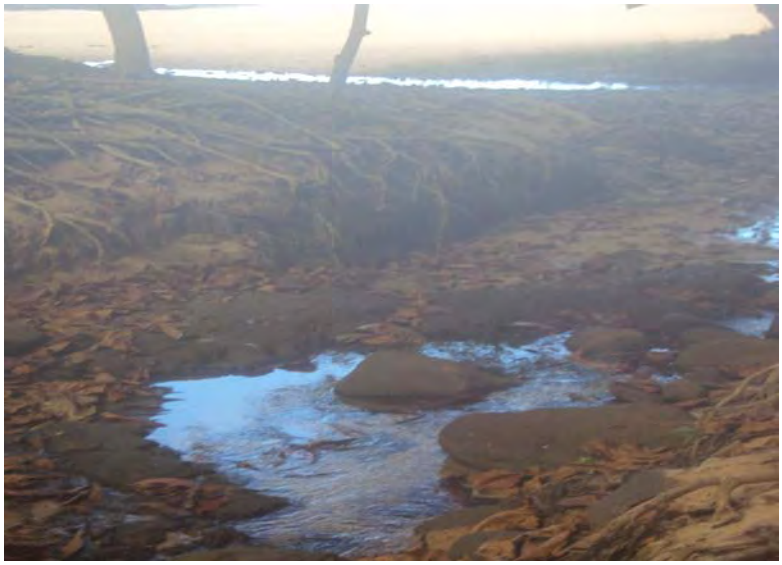


Photo 24

Lower reach of stream before Kauapea Beach.

Secret Beach Properties, LLC Trails

Photo 25

Stream mouth.

Photo 26

End of stream flow on Kauapea Beach.

Photo 27

View form the end of the stream flow in Photo No 26 looking makai. It is approximately 80 feet to the shorebreaks.

DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, HONOLULU
FORT SHAFTER, HAWAII 96858-5440

REPLY TO
ATTENTION OF:

December 1, 2010

Regulatory Branch

File Number POH-2010-0208

SSFM International, Inc.
Attention: Robyn Loudermilk
501 Sumner Street, Suite 620
Honolulu, Hawaii 96817

Dear Ms. Loudermilk:

This letter is in response to your e-mail dated November 30, 2010 to the U.S. Army Corps of Engineers (the Corps) providing requested additional information regarding the existing trail improvements at Secret Beach, TMK (4) 5-2-005:036, Kilauea, Island of Kauai, Hawaii. We completed our review of the submitted documents pursuant to Section 10 of the Rivers and Harbors Act of 1899 (Section 10) and Section 404 of the Clean Water Act (Section 404).

For your information, Section 10 requires that a Department of the Army (DA) permit be obtained from the Corps prior to undertaking any construction, dredging, or other activity occurring in, over, or under or affecting navigable waters of the U.S. For tidal waters, the shoreward limit of the Corps' jurisdiction extends to the Mean High Water Mark. Section 404 requires that a DA permit be obtained for the discharge (placement) of dredged and/or fill material into waters of the U.S., including wetlands. For tidally influenced waters, in the absence of adjacent wetlands, the shoreward limit of the Corps' jurisdiction extends to the High Tide Line, which in Hawai'i may be approximated by reference to the Mean Higher High Water Mark. For non-tidal waters, the lateral limits of the Corps' jurisdiction extend to the Ordinary High Water Mark or the approved delineated boundary of any adjacent wetlands.

We understand from the submitted documents and associated photographic evidence that the work involved with the Secret Beach trail improvements did not result in the discharge of fill material into a water of the U.S. Therefore after-the-fact approval and/or a **DA permit will not be required** for this project. To avoid any unintentional violation to Federal laws and regulations, we encourage the landowner consult with this office prior to any work in, over or under a navigable water or that results in the discharge or placement of fill and/or dredged material into a water of the U.S.

Thank you for contacting us regarding this project and providing us with the opportunity to comment. Should you have any questions, please contact Ms. Jessie Pa'ahana at *808.438.0391* or via email at *Jessie.K.Paahana@usace.army.mil*. You are encouraged to provide comments on your experience with the Honolulu District Regulatory Branch by accessing our web-based customer survey form at *http://per2.nwp.usace.army.mil/survey.html*.

Sincerely,

George P. Young, P.E.
Chief, Regulatory Branch

501 Sumner Street
Suite 620
Honolulu, Hawaii 96817
Phone: (808) 531-1308
Fax: (808) 521-7348
www.ssfm.com

January 7, 2011

SSFM 2010_056.000

Mr. George Y. Young, P.E., Chief
Regulatory Branch
Department of the Army
U.S. Army Engineer District, Honolulu
Fort Shafter, Hawai‘i 96858-5440

Dear Mr. Young:

SUBJECT: Secret Beach Properties, LLC Existing Trail Improvements
Pre-Assessment Consultation for Draft Environmental Assessment
Kīlauea, Namahama, Hanalei, Kaua‘i, Hawai‘i
TMK: (4) 5-2-005:036
File Number POH-2010-0208

Thank you for your letters dated December 1, 2010 and August 18, 2010 providing pre-assessment consultation comments for the preparation of the Draft Environmental Assessment (Draft EA) for the subject project. Additionally, pursuant to my email request of November 10, 2010, a map identifying the two unnamed water bodies in the August 18, 2010 letter was also provided.

We confirm that an after-the-fact approval and/or Department of Army permit will not be required for this project. We understand that this determination was based upon the submitted documents and photographic evidence that the work involved with the existing trail improvements did not result in the discharge of fill material into a water of the U.S.

A copy of the Draft EA will be provided when published.

If you have any questions on this matter, please contact me at 531-1308. Thank you.

Sincerely,

SSFM INTERNATIONAL, INC.

Robyn L. Loudermilk
Project Planner
Email: rloudermilk@ssfm.com

LINDA LINGLE
GOVERNOR OF HAWAII

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

SSFM INTERNATIONAL, INC.
RECEIVED
SEP 14 2010
rtt
FILE

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

September 10, 2010

SSFM International, Inc.
501 Sumner Street Suite 620
Honolulu, Hawaii 96817

FILE COPY

Attention: Ms. Robyn Loudermilk

Ladies and Gentlemen:

Subject: Pre-Assessment Consultation for Draft Environmental Assessment for Secret Beach Properties, LLC Existing Trail Improvements

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

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

Sincerely,

Charlene E. Unoki
for Morris M. Atta
Acting Administrator

NAH section

LINDA LINGLE
GOVERNOR OF HAWAII

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

RECEIVED
LAND DIVISION
2010 AUG 24 P 3:02
DEPT. OF LAND & NATURAL RESOURCES
STATE OF HAWAII

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

August 17, 2010

MEMORANDUM

TO: **DLNR Agencies:**
x Div. of Aquatic Resources
__Div. of Boating & Ocean Recreation
x Engineering Division
x Div. of Forestry & Wildlife
__Div. of State Parks
x Commission on Water Resource Management
x Office of Conservation & Coastal Lands
__Land Division –
X Historic Preservation

FROM: Charlene Unoki, Assistant Administrator
SUBJECT: Pre-Assessment Consultation for Draft Environmental Assessment for Secret Beach properties, LLC Existing Trail Improvements
LOCATION: Island of Kauai
APPLICANT: SSFM International

Transmitted for your review and comment on the above referenced document. We would appreciate your comments on this document. Please submit any comments by September 1, 2010.

If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact my office at 587-0433. Thank you.

Attachments

(X) We have no objections.
( ) We have no comments.
( ) Comments are attached.

Signed: Paul J. Conry
Date: AUG 19 2010

PAUL J. CONRY, ADMINISTRATOR
DIVISION OF FORESTRY AND WILDLIFE

501 Sumner Street
Suite 620
Honolulu, Hawaii 96817
Phone: (808) 531-1308
Fax: (808) 521-7348
www.ssfm.com

January 7, 2011

SSFM 2010_056.000

Mr. Morris Atta, Acting Administrator
Department of Land and Natural Resources
Land Division
P.O. Box 621
Honolulu, Hawai‘i 96809

Dear Mr. Atta:

SUBJECT: Secret Beach Properties, LLC Existing Trail Improvements
Pre-Assessment Consultation for Draft Environmental Assessment
Kīlauea, Namahama, Hanalei, Kaua‘i, Hawai‘i
TMK: (4) 5-2-005:036

Thank you for your letter dated September 10, 2010 providing pre-assessment consultation comments for the preparation of the Draft Environmental Assessment (Draft EA) for the subject project.

We confirm the Department of Land and Natural Resources has no comments to offer on the subject matter.

Division of Forestry & Wildlife

We note your Division has no objections to this project. A copy of the Draft EA will be provided when published.

If you have any questions on this matter, please contact me at 531-1308. Thank you.

Sincerely,

SSFM INTERNATIONAL, INC.

Robyn L. Loudermilk
Project Planner
Email: rloudermilk@ssfm.com

LINDA LINGLE
GOVERNOR

RUSS K. SAITO
COMPTROLLER

STATE OF HAWAI'I
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
P.O. BOX 119, HONOLULU, HAWAII 96810-0119

SEP - 2 2010

SSFM INTERNATIONAL, INC.
RECEIVED
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FILE

FILE COPY

Ms. Robyn L. Loudermilk
Project Planner
SSFM International
501 Sumner Street, Suite 620
Honolulu, Hawai'i 96817

Dear Ms. Loudermilk:

Subject: Secret Beach Properties, LLC Existing Trail Improvements
Pre-Assessment Consultation for a Draft Environmental Assessment
Kilauea, Namahama, Hanalei,Kaua'i
TMK: (4) 5-2-005:036

Thank you for the opportunity to provide comments for the subject property. The proposed project does not impact any of the Department of Accounting and General Services' projects or existing facilities, and we have no comments to offer at this time.

If you have any questions, please call me at 586-0400 or have your staff call Ms. Gayle Takasaki of the Public Works Division at 586-0584.

Sincerely,

Russ K. Saito

RUSS K. SAITO
State Comptroller

501 Sumner Street
Suite 620
Honolulu, Hawaii 96817
Phone: (808) 531-1308
Fax: (808) 521-7348
www.ssfm.com

January 7, 2011

SSFM 2010_056.000

Mr. Russ K. Saito, State Comptroller
State of Hawai‘i
Department of Accounting and General Services
P.O. Box 119
Honolulu, Hawai‘i 96810

Dear Mr. Saito:

SUBJECT: Secret Beach Properties, LLC Existing Trail Improvements
Pre-Assessment Consultation for Draft Environmental Assessment
Kīlauea, Namahama, Hanalei, Kaua‘i, Hawai‘i
TMK: (4) 5-2-005:036

Thank you for your letter dated September 2, 2010 providing pre-assessment consultation comments for the preparation of the Draft Environmental Assessment (Draft EA) for the subject project.

We confirm that the proposed project does not impact any of the Department of Accounting and General Services projects or existing facilities, therefore, have no comments to offer at this time.

A copy of the Draft EA will be provided when published.

If you have any questions on this matter, please contact me at 531-1308. Thank you.

Sincerely,

SSFM INTERNATIONAL, INC.

Robyn L. Loudermilk
Project Planner
Email: rloudermilk@ssfm.com

LINDA LINGLE
GOVERNOR

XXXXXXXXXXXXXXXXXX
PATRICIA HAMAMOTO
XXXXXXXXXXXXXXXXXX
SUPERINTENDENT

KATHRYN S. MATAYOSHI
INTERIM SUPERINTENDENT

STATE OF HAWAI'I
DEPARTMENT OF EDUCATION
P.O. BOX 2360
HONOLULU, HAWAI'I 96804

OFFICE OF THE SUPERINTENDENT

SSFM INTERNATIONAL, INC.
RECEIVED
SEP 01 2010
rtt
FILE

August 30, 2010

FILE COPY

Ms. Robyn Loudermilk
SSFM International, Inc.
501 Sumner Street, Suite 620
Honolulu, Hawai`i 96817

Dear Ms. Loudermilk:

Subject: Secret Beach Properties, LLC Existing Trail Improvements Pre-Assessment Consultation for a Draft Environmental Assessment, TMK (4) 5-2-005:036, Kilauea, Namahama, Hanalei, Kaua`i

The Department of Education (DOE) has reviewed your early consultation request for the Secret Beach Properties, LLC Existing Trail Improvements Draft Environmental Assessment.

The DOE has no comment to offer.

Thank you for the opportunity to offer comment. If you have any questions, please contact Jeremy Kwock of the Facilities Development Branch at 377-8301.

Very truly yours,

Kathryn S. Matayoshi
Interim Superintendent

KSM:JK:jmb

c: Randolph Moore, Assistant Superintendent, OSFSS
William Arakaki, CAS, Kapaa/Kauai/Waimea Complex Areas

501 Sumner Street
Suite 620
Honolulu, Hawaii 96817
Phone: (808) 531-1308
Fax: (808) 521-7348
www.ssfm.com

January 7, 2011

SSFM 2010_056.000

Ms. Kathryn Matayoshi
State of Hawaii
Department of Education
P.O. Box 2360
Honolulu, Hawai‘i 96804

Dear Ms. Matayoshi:

SUBJECT: Secret Beach Properties, LLC Existing Trail Improvements
Pre-Assessment Consultation for Draft Environmental Assessment
Kīlauea, Namahama, Hanalei, Kaua‘i, Hawai‘i
TMK: (4) 5-2-005:036

Thank you for your letter dated August 30, 2010 providing pre-assessment consultation comments for the preparation of the Draft Environmental Assessment (Draft EA) for the subject project.

We confirm Department of Education has no comments to offer. A copy of the Draft EA will be provided when published.

If you have any questions on this matter, please contact me at 531-1308. Thank you.

Sincerely,

SSFM INTERNATIONAL, INC.

Robyn L. Loudermilk

Robyn L. Loudermilk
Project Planner
Email: rloudermilk@ssfm.com

LINDA LINGLE
GOVERNOR OF HAWAII

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

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

In reply, please refer to:
File:
EPO-I-3302

August 18, 2010

Mr. Robyn L. Loudermilk, Project Planner
SSFM International
501 Sumner Street, Suite 620
Honolulu, Hawaii 96817

Dear Mr. Loudermilk:

SUBJECT: Pre-Assessment Consultation for a Draft Environmental Assessment for Secret Beach Properties, LLC Existing Trail Improvements, Kilauea, Namahama, Hanalei, Kauai, Hawaii
TMK: (4)5-2-005:036

Thank you for allowing us to review and comment on the subject document. The document was routed to the various branches of the Environmental Health Administration. We have no comments at this time, but reserve the right to future comments. We strongly recommend that you review all of the Standard Comments on our website: www.hawaii.gov/health/environmental/env-planning/landuse/landuse.html. Any comments specifically applicable to this application should be adhered to.

The same website also features a Healthy Community Design Smart Growth Checklist (Checklist). The Hawaii State Department of Health, Built Environment Working Group, recommends that State and county planning departments, developers, planners, engineers and other interested parties apply the healthy built environment principles in the Checklist whenever they plan or review new developments or redevelopments projects. We also ask you to share this list with others to increase community awareness on healthy community design.

If there are any questions about these comments please contact the Environmental Planning Office at 586-4337.

Sincerely,

Genevieve Salmonson

GENEVIEVE SALMONSON, Acting Manager
Environmental Planning Office

501 Sumner Street
Suite 620
Honolulu, Hawaii 96817
Phone: (808) 531-1308
Fax: (808) 521-7348
www.ssfm.com

January 7, 2011

SSFM 2010_056.000

Ms. Genevieve Salmonson, Acting Manager
State of Hawaii
Department of Health
P.O. Box 3378
Honolulu, Hawai‘i 96801-3378

Dear Ms. Salmonson:

SUBJECT: Secret Beach Properties, LLC Existing Trail Improvements
Pre-Assessment Consultation for Draft Environmental Assessment
Kīlauea, Namahama, Hanalei, Kaua‘i, Hawai‘i
TMK: (4) 5-2-005:036

Thank you for your letter dated August 18, 2010 providing pre-assessment consultation comments for the preparation of the Draft Environmental Assessment (Draft EA) for the subject project.

We have reviewed the Standard Comments from the Department of Health Land Use Planning Review Program website. Attached are matrices of responses to the Standard Comments from the Environmental Planning Office, Clean Air Branch, Clean Water Branch, and Noise, Radiation and Indoor Air Quality Branch.

Further, we have reviewed the Healthy Community Design Smart Growth Checklist. Though this project is not a new development or redevelopment, several environmental quality best practices are being utilized by Secret Beach Properties, LLC. This checklist, with the applicable comments checked off, is also attached.

A copy of the Draft EA will be provided when published.

If you have any questions on this matter, please contact me at 531-1308. Thank you.

Sincerely,

SSFM INTERNATIONAL, INC.

Robyn L. Loudermilk
Project Planner
Email: rloudermilk@ssfm.com

Environmental Planning Office Standard Comments / Areas of Concern Updated 9/15/05

COMMENTS	Response
Waterbody type and class	
Identify the waterbody type and class, as defined in Hawaii Administrative Rules Chapter 11-54 (http://www.state.hi.us/health/about/rules/11-54.pdf), of all potentially affected Water bodies.	Kauapea Beach is classified as "Class AA" Marine waters.
Existing water quality management actions	
Identify any existing National Pollutant Discharge Elimination System (NPDES) permits and related connection permits (issued by permittees) that will govern the management of water that runs off or is discharged from the proposed project site or facility. Please include NPDES and other permit numbers; names of permittees, permitted facilities, and receiving waters (including waterbody type and class as in 1. above); diagrams showing drainage/discharge pathways and outfall locations; and note any permit conditions that may specifically apply to the proposed project.	There are no known NPDES permits issued for the Property.
Identify any planning documents, groups, and projects that include specific prescriptions for water quality management at the proposed project site and in the potentially affected waterbodies. Please note those prescriptions that may specifically apply to the proposed project.	A review of the Kaua'i General Plan indicates no specific prescriptions for water quality management at or in the vicinity of Kauapea Beach.
Pending Water Quality Management Actions	
Identify all potentially affected water bodies that appear on the current List of Impaired Waters in Hawaii Prepared under Clean Water Act §303(d) including the listed waterbody, geographic scope of listing, and pollutant(s) (See Table 5 at http://www.hawaii.gov/health/environmental/env-planning/wqm/303dpcfinal.pdf).	There is no affected water
If the proposed project involves potentially affected water bodies that appear on the current List of Impaired Waters in Hawaii Prepared under Clean Water Act §303(d), identify and quantify expected changes in the following site and watershed conditions and characteristics: • surface permeability • hydrologic response of surface (timing, magnitude, and pathways) • receiving water hydrology • runoff and discharge constituents	The proposed project does not potentially affect impaired water.

• pollutant concentrations and loads in receiving waters • aquatic habitat quality and the integrity of aquatic biota Where TMDLs are already established they include pollutant load allocations for the surrounding lands and point source discharges. In these cases, we suggest that the submittal specify how the proposed project would contribute to achieving the applicable load reductions. Where TMDLs are yet to be established and implemented, a first step in achieving TMDL objectives is to prevent any project-related increases in pollutant loads. This is generally accomplished through the proper application of suitable best management practices in all phases of the project and adherence to any applicable ordinances, standards, and permit conditions. In these cases we suggest that the submittal specify how the proposed project would contribute to reducing the polluted discharge and runoff entering the receiving waters, including plans for additional pollutant load reduction practices in future management of the surrounding lands and drainage/discharge systems.	
Proposed Action and Alternatives Considered	
We suggest that each submittal identify and analyze potential project impacts at a watershed scale by considering the potential contribution of the proposed project to cumulative, multi-project watershed effects on hydrology, water quality, and aquatic and riparian ecosystems.	This will be part of the analysis in the relevant sections of the Draft EA.
We also suggest that each submittal broadly evaluate project alternatives by identifying more than one engineering solution for proposed projects. In particular, we suggest the consideration of "alternative," "soft," and "green" engineering solutions for channel modifications that would provide a more environmentally friendly and aesthetically pleasing channel environment and minimize the destruction of natural landscapes.	There will be no modification to existing channels or other natural features.

Clean Air Branch Standard Comments

COMMENTS	RESPONSE
Construction/Demolition Involving Asbestos	
If the proposed project includes renovation/demolition activities which may involve asbestos, the applicant should contact the Asbestos Abatement Office in the Noise, Radiation and Indoor Air Quality Branch at 586-5800	No asbestos are associated with this action.
Control of Fugitive Dust	
A significant potential for fugitive dust emissions exists during all phases of construction and operations. Proposed activities that occur in proximity to existing residences, businesses, public areas or thoroughfares, exacerbate potential dust problems. It is recommended that a dust control management plan be developed which identifies and addresses all activities that have a potential to generate fugitive dust. The plan, which does *not* require DOH approval, would help with recognizing and minimizing the dust problems from the proposed project.	This will be done should construction of the boundary fence occur.
Activities must comply with the provisions of Hawaii Administrative Rules, §11-60.1-33 on Fugitive Dust. In addition, for cases involving mixed land use, we strongly recommend that buffer zones be established, wherever possible, in order to alleviate potential nuisance problems.	Due to the nature of the action, minimal fugitive dust is anticated.
The contractor should provide adequate measures to control the fugitive dust from the road areas and during the various phases of construction. Examples of measures that can be implemented to control dust include, but are not limited to, the following: a) Planning the different phases of construction, focusing on minimizing the amount of dust-generating materials and activities, centralizing on-site vehicular traffic routes, and locating potential dust-generating equipment in areas of the least impact; b) Providing an adequate water source at the site prior to start-up of construction activities; c) Landscaping and providing rapid covering of bare areas, including slopes, starting from the initial grading phase; d) Minimizing dust from shoulders and access roads; e) Providing adequate dust control measures during weekends, after hours, and prior to daily start-up of construction activities; and f) Controlling dust from debris being hauled away from the project site.	Due to the nature of the action, minimal fugitive is anticipated.

Clean Water Branch Standard Comments August 22, 2008

COMMENTS	RESPONSE
Permit Issuance	
Any project and its potential impacts to State waters must meet the State's: 1) Antidegradation policy, which requires that the existing uses and the level of water quality necessary to protect the existing uses of the receiving State water be maintained and protected; 2) Designated uses, as determined by the classification of the receiving State waters; and 3) Water quality criteria (Hawaii Administrative Rules (HAR), Chapter 11-54).	The existing and proposed improvements are not anticipated to impact State waters. Existing runoff sheet flows into a gulch or down a coastal bluff where it is absorbed by soil or sand.
The Army Corps of Engineers should be contacted at (808) 438-9258 to see if this project requires a Department of the Army (DA) permit. Permits may be required for work performed in, over, and under navigable waters of the United States. Projects requiring a DA permit also require a Section 401 Water Quality Certification (WQC) from our office.	The Army Corp has been contacted as part of the pre-consultation process. They have determined that a DA permit is not required for this project.
National Pollutant Discharge Elimination System (NPDES) permits are required for discharges of wastewater, including storm water runoff, into State surface waters (HAR, Chapter 11-55). For the following types of discharges into Class A or Class 2 State waters, NPDES general permit coverage may be applied for by submitting a Notice of Intent (NOI) form: 1) storm water associated with industrial activities, as defined in Title 40, Code of Federal Regulations, Sections 122.26(b)(14)(i) through 122.26(b)(14)(ix) and 122.26(b)(14)(xi); 2) storm water associated with construction activities, including excavation, grading, clearing, demolition, uprooting of vegetation, equipment staging, and storage areas that result in the disturbance of equal to or greater than one (1) acre of total land area*; 3) treated effluent from leaking underground storage tank remedial activities; 4) once through cooling water less than one (1) million gallons per day; 5) hydrotesting water; 6) dewatering effluent; 7) treated effluent from petroleum bulk stations and terminals; 8) treated effluent from well drilling activities; 9) treated effluent from recycled water distribution systems; 10) storm water and certain non-storm water from a small municipal separate storm sewer system; and	The project does not meet any of the criteria listed.

11) circulation water from decorative ponds or tanks. **The total land area includes a contiguous area where multiple separate and distinct construction activities may be taking place at different times on different schedules under a larger common plan of development or sale. An NPDES permit is required before the start of the construction activities.*	
A separate NOI form for each type of discharge must be submitted at least 30 calendar days prior to the start of the discharge activity, except when applying for coverage for discharges of storm water associated with construction activity. For this type of discharge, the NOI must be submitted 30 calendar days before to the start of construction activities. The NOI forms may be picked up at our office or downloaded from our website at http://www.hawaii.gov/health/environmental/water/cleanwater/forms/genl-index.html.	N/A.
For types of wastewater discharges not listed above or wastewater discharging into Class 1 or Class AA waters, you may need to obtain an NPDES individual permit. Class 1 waters include, but is not limited to, all State waters in natural reserves, preserves, sanctuaries, and refuges established by the Department of Land and Natural Resources (DLNR) under Hawaii Revised Statutes (HRS), Chapter 195, or similar reserves for the protection of aquatic life established under HRS, Chapter 195.	N/A.
An application for an NPDES individual permit must be submitted at least 180 calendar days before the commencement of the discharge or start of construction activities. The NPDES application forms may be picked up at our office or downloaded from our website at http://www.hawaii.gov/health/environmental/water/cleanwater/forms/indiv-index.html.	N/A.
You must also submit a copy of the NOI or NPDES permit application to the State DLNR, State Historic Preservation Division (SHPD), or demonstrate to the satisfaction of the CWB that SHPD has or is in the process of evaluating your project. Please submit a copy of your request for review by SHPD or SHPD's determination letter for the project along with your NOI or NPDES permit application, as applicable.	N/A.
Please note that all discharges related to the project construction or operation activities, whether or not NPDES permit coverage and/or Section 401 WQC are required, must comply with the State's Water Quality Standards.	N/A.
Monitoring	
Effluent discharge and/or receiving water monitoring may be required as conditions of Section 401Water Quality Certifications and NPDES General and Individual permits.	N/A.
Enforcement	
Noncompliance with water quality requirements contained in HAR, Chapter 11-54 and/or	N/A

permitting requirements specified in HAR, Chapter 11-55 may be subject to penalties of $25,000 per day per violation.	
Polluted Runoff Control Projects	
Projects addressing activities related to polluted runoff control as outlined in the State's Coastal Nonpoint Pollution Control Management Plan and/or Hawaii's Implementation Plan for Polluted Runoff Control may qualify for federal grants administered by our office. At a minimum, grant funds must be matched 100% with match funding or in-kind contributions from non-federal sources and are subject to the requirements of EPA 40 CFR Chapter 1 (7-1-98 Edition), Section 31.24 Matching or Cost Sharing. Request for Proposals to solicit qualified projects for grant funding are issued on an annual basis and interested parties can request to be placed on a mailing list to receive a copy of the RFP when it is issued. The deadline for submittal of a proposal is usually one (1) month from the date of the RFP. For more information, please read our website at: http://www.hawaii.gov/health/environmental/water/cleanwater/about/prc/index.html.	N/A

Noise, Radiation & Indoor Air Quality Branch Standard Comments Dated 3/2/04

SCOMMENTS	RESPONSE
Project activities shall comply with the Administrative Rules of the Department of Health:	
Chapter 11-39 Air Conditioning and Ventilating	N/A
Chapter 11-45 Radiation Control.	N/A
Chapter 11-46 Community Noise Control.	Are aware of these rules. There may be short term impacts during day light hours should weed whackers be required for landscape maintenance. This activity would occur during daylight hours and is not anticipated to exceed maximum sound levels.
Chapter 11-501 Asbestos Requirements.	N/A
Chapter 11-502 Asbestos-Containing Materials in Schools.	N/A
Chapter 11-503 Fees for Asbestos Removal and Certification	N/A
Chapter 11-504 Asbestos Abatement Certification Program	N/A

Healthy Community Design
Smart Growth Checklist

The Hawaii State Department of Health, Built Environment Working Group, recommends that State and County Planning Departments, developers, engineers and other professionals apply healthy built environment principles when they plan or review new developments or redevelopments. Government agencies should lead by example in their own projects. This checklist focuses on public health elements that would be integrated into land use and community planning and design. We ask you to share this list with others to increase community awareness of how to design healthier communities.

Healthy Built Environment Principles:

- Promote fitness through safe walking, biking, and other active transportation through connectivity of planned bikeways and paths with existing and adjacent networks, designing travelways that connect multiple destinations and encourage non-vehicular travel.
- Promote clean air by making transit convenient and comfortable, minimizing petroleum fueled car and truck use, and minimizing fossil energy use.
- Promote a healthy environment by buying green products, reducing, reusing & recycling, and minimizing waste in construction, operations, and demolition.
- Promote fitness and health by encouraging home and community gardens

Healthy Built Environment Best Practices:

Close Proximity to Existing/Future Development and Infrastructure

☐ Close to roadways, water and sewer service

☐ Located within growth/redevelopment area

☐ Walking distance to transit

☐ Next to or includes food/convenience/retail/services

☐ Next to or includes employment, recreation, entertainment

☐ Wide range of housing opportunities

Mix and Balance of Uses

☐ Multi-use buildings

☐ Multi-use districts

☐ Provide employment, housing, neighborhood serving retail/service

☐ Provide civic, educational, cultural recreation

☐ Provide street-level uses that maximize pedestrian activity

Site Optimization and Compactness

☐ Maximize allowable floor-area ratio

☐ Maximize dwelling unit/acreage density

☐ Maximize usable open space for gathering and recreation

☐ Maximize usable open space for home and community gardens

☐ Locate buildings at minimum setbacks or at "build-to" lines

Accessibility and Mobility Choices Provide:

☐ Shelters at transit stops and store fronts (e.g. awnings or arcades) and along paths and lanes.

☐ Pedestrian/bicycle/stroller/wheelchair facilities for and on transit

☐ Sidewalks, preferably on both sides of the street

☐ Walking and bike paths separate from roads (e.g. in greenways)

☐ Bike lanes in roads marked with paint and good signs

Content adapted from *Smart Scorecard for Development Projects* (Congress for New Urbanism and the US Environmental Protection Agency 2002) and *East Garrison Smart Growth Checklist* (Monterey, CA)

(*Continued on next page*)

Accessibility and Mobility Choices Provide:

☐ Shared paths & sidewalks marked to separate walkers and bicyclists. (paint, texture, signs)

☐ Bike racks, stroller storage

☐ Direct street connections, such as well-marked paths to front doors

☐ Parking lots & garages behind, above, or below buildings

☐ Connections to existing or planned parks, open space

☐ Raised or highly visible crosswalks near schools (paint and signs)

☐ Ramps, depressed curbs, and periodic breaks in curbs for people with disabilities

☐ Meet all ADA standards for accessibility

Healthy Designs for Indoor Areas

☐ Pleasant, wide central stairs provided to encourage walking

☐ Elevators stop on alternate floors (except ADA elevator)

☐ Bike/luggage/stroller ramps on stairs

☐ Indoor bicycle parking provided

☐ Showers and lockers provided at work sites

Community Context, Site Design, and Visual Appeal

☐ Preserve or re-use existing buildings/structures when feasible

☐ Incorporate buildings reflect local historic building materials, styles and/or design

☐ Include a map of the neighborhood and nearby street connections is included with plans

☐ Scale and mass of buildings relate to existing neighborhood structures

☐ Provide open access to all adjacent natural features such as coasts, streams, river-ways, mountains, forests, hiking, trails

☐ Create coastal, stream, and forest **green-ways** with walking and bike paths to town/village centers, parks, other destinations

☐ Insure automobile access makes minimum impact on pedestrian/bicyclist experience

☐ Create or enhance community spaces such as plazas, squares, parks, etc.

☐ Include open spaces and trails that provide opportunities for physical activity

☐ Provide play equipment in parks for children

☐ Include pedestrian/bicyclist–oriented landscaping and lighting

Fine - Grained Block, Pedestrian and Park Network

☐ Create street networks based on a grid system; avoid cul de sacs

☐ Incorporate short block lengths

☐ Design for traffic calming measures in and around residential areas

☐ Design pedestrian/bicycle systems to link with civic, cultural, retail/service destinations, and other paths

☐ A variety of park types and sizes

Environmental Quality

☐ Recycle materials from deconstruction of existing infrastructure

☐ Maximize energy efficiency of buildings

☐ Use green building materials when feasible

☐ Use energy conservation equipment, systems and/or programs

☐ Use water conservation systems

☐ Use rainwater on-site - provide storage, infiltration, irrigation

☐ Use on-site wastewater treatment & reuse or disposal where appropriate

☐ Use solar energy for heating and electricity

☐ Use wind energy

☐ Minimize artificial A/C, energy use, GHG emissions

☒ Protect, preserve and/or restore any on-site natural features such as steep slopes, wetlands, watersheds

☐ Create and maintain buffers around natural areas

☒ Plant native Hawaiian species

☐ Establish a recycling program for residents/ tenants

Content adapted from *Smart Scorecard for Development Projects* (Congress for New Urbanism and the US Environmental Protection Agency 2002) and *East Garrison Smart Growth Checklist* (Monterey, CA)

Variety and Range

☐ Include a variety of building types and styles

☐ Include locally owned businesses in project

☐ Provide a wide-range in pricing structure of units that will be sold or leased

☐ Insure at least 20% of the units will be priced for very low and moderate incomes

☐ Provide a variety of densities in both residential and commercial employment units

☐ Vary set backs

☐ Vary residential lot size

☐ Address need for community facilities

Re-Use and Redevelopment Options

☐ Install utility lines along access roads

☐ Install utility lines underground

☐ Master plans to show future/projected streets, blocks and development sites

☐ Include building types and structures that are adaptable to different uses

Process Collaboration and Predictability of Decisions

☐ Conduct pre-design workshops/Charrettes with stakeholders, agencies, and the public

☐ Provide public outreach regarding, input, project vision, goals, and timetable

☐ Provide a project model that serves as a visual representation of the project

☐ Contact State and county staff (planning, public works, etc) in all key departments in the planning phase of project development

☐ Develop Public/Private partnerships

☐ Align design plans with existing community and general plans

Content adapted from *Smart Scorecard for Development Projects* (Congress for New Urbanism and the US Environmental Protection Agency 2002) and *East Garrison Smart Growth Checklist* (Monterey, CA)

PHONE (808) 594-1888

FAX (808) 594-1865

STATE OF HAWAI'I
OFFICE OF HAWAIIAN AFFAIRS
711 KAPI'OLANI BOULEVARD, SUITE 500
HONOLULU, HAWAI'I 96813

HRD10/5191

August 30, 2010

Robyn Loudermilk, Project Planner
SSFM International
501 Sumner Street, Suite 620
Honolulu, Hawai'i 96817

RE: Pre- Draft Environmental Assessment Consultation
Secret Beach Properties, LLC Existing Trail Improvements
Kīlauea, Hanalei District, Island of Kaua'i

Aloha e Robyn Loudermilk,

The Office of Hawaiian Affairs (OHA) is in receipt of your August 12, 2010 letter seeking comments ahead of a draft environmental assessment (DEA) being prepared for Secret Beach Properties, LLC (landowner).

Based on the information contained within your letter, this DEA is being prepared to facilitate an "after the fact" Conservation District Use Application (CDUA) and Special Management Area Minor Permit application (SMA). A Shoreline Setback determination will also be filed with the County of Kaua'i-Planning Department. Your letter details that the Board of Land and Natural Resources (BLNR) has taken an enforcement action against the landowner for unauthorized activities (landscaping and trail building) within the Conservation District. It is our understanding public access is not facilitated by the trails constructed on this property.

We have no specific comments at this time. We look forward to receiving the DEA and providing specific comments at that time. Should you have any questions, please contact Keola Lindsey at 594-0244 or keolal@oha.org.

'O wau iho nō me ka 'oia'i'o,

Clyde W. Nāmu'o
Chief Executive Officer

C: Kaua'i Island Community Resource Coordinator

501 Sumner Street
Suite 620
Honolulu, Hawaii 96817
Phone: (808) 531-1308
Fax: (808) 521-7348
www.ssfm.com

January 7, 2011

SSFM 2010_056.000

Mr. Clyde W. Nāmuʻo
Chief Executive Officer
State of Hawaiʻi
Office of Hawaiian Affairs
711 Kapiʻolani Boulevard, Suite 500
Honolulu, Hawaiʻi 96813

Dear Mr. Nāmuʻo:

SUBJECT: Secret Beach Properties, LLC Existing Trail Improvements
Pre-Assessment Consultation for Draft Environmental Assessment
Kīlauea, Namahama, Hanalei, Kauaʻi, Hawaiʻi
TMK: (4) 5-2-005:036

Thank you for your letter dated August 30, 2010 providing pre-assessment consultation comments for the preparation of the Draft Environmental Assessment (Draft EA) for the subject project.

We confirm that Office of Hawaiian Affairs have no specific comments at this time. A copy of the Draft EA will be provided when published.

If you have any questions on this matter, please contact me at 531-1308. Thank you.

Sincerely,

SSFM INTERNATIONAL, INC.

Robyn L. Loudermilk
Project Planner
Email: rloudermilk@ssfm.com

Department of Water
County of Kaua'i

Water has no substitute.....Conserve it

SSFM INTERNATIONAL, INC.
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SEP 14 2010
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FILE

September 10, 2010

UID #5156

FILE COPY

Robyn Loudermilk
SSFM International, Inc.
501 Sumner Street, Suite 620
Honolulu, HI 96817

Dear Robyn Loudermilk:

Subject: Pre-Assessment Consultation for a Draft Environmental Assessment, Secret Beach Properties, LLC Existing Trail Improvements on TMK: (4) 5-2-005:036, Kilauea, Hawaii

Dear Ms. Loudermilk,

This is in regards to your Pre-Assessment consultation for a Draft Environmental Assessment received by the Department of Water (DOW) on August 18, 2010. We have no objections to the Draft Environmental Assessment for the Secret Beach Properties, LLC Existing Trail Improvements. Request for additional water meters or an increase in water meter size will be dependent on the adequacy of the source, storage, and transmission facilities existing at that time.

If you have any questions please contact Mr. Heath Prow at (808) 245-5445.

Sincerely,

Gregg Fujikawa
Chief of Water Resources and Planning

HP:lao
5-2-005-036 Secret Beach-Loudermilk T-12456

4398 Pua Loke St., P.O. Box 1706, Lihue, HI 96766 Phone: 808-245-5400
Engineering and Fiscal Fax: 808-245-5813, Operations Fax: 808-245-5402, Administration Fax: 808-246-8628

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January 7, 2011

SSFM 2010_056.000

Mr. Gregg Fujikawa
Chief of Water Resources and Planning
Department of Water Supply
4444 Rice Street
Līhu'e, Hawai'i 96766

Dear Mr. Fujikawa:

SUBJECT: Secret Beach Properties, LLC Existing Trail Improvements
Pre-Assessment Consultation for Draft Environmental Assessment
Kīlauea, Namahama, Hanalei, Kaua'i, Hawai'i
TMK: (4) 5-2-005:036

Thank you for your letter dated August 10, 2010 providing pre-assessment consultation comments for the preparation of the Draft Environmental Assessment (Draft EA) for the subject project.

We confirm that you have no objections.

We would also like to note that the applicant does not intend to request additional water meters or to increase the size of the existing water meter.

A copy of the Draft EA will be provided when published.

If you have any questions on this matter, please contact me at 531-1308. Thank you.

Sincerely,

SSFM INTERNATIONAL, INC.

Robyn L. Loudermilk
Project Planner
Email: rloudermilk@ssfm.com

BERNARD P. CARVALHO, JR.
MAYOR

GARY K. HEU
ADMINISTRATIVE ASSISTANT

DONALD M. FUJIMOTO
COUNTY ENGINEER
TELEPHONE 241-4992

EDMOND P.K. RENAUD
DEPUTY COUNTY ENGINEER
TELEPHONE 241-4992

AN EQUAL OPPORTUNITY EMPLOYER
COUNTY OF KAUA'I
DEPARTMENT OF PUBLIC WORKS
4444 RICE STREET
MO'IKEHA BUILDING, SUITE 275
LĪHU'E, KAUA'I, HAWAI'I 96766-1340

August 24, 2010

SSFM International, Inc.
501 Sumner Street, Suite 620
Honolulu, HI 96817
Attention: ~~Mr.~~ Robyn Loudermilk

FILE COPY

SUBJECT: PRE-ASSESSMENT CONSULTATION FOR DRAFT EA TMK: 5-2-005-036, SECRET BEACH PROPERTIES, LLC PW 8.10.075

Gentlemen,

We reviewed the subject project summary. We offer the following comments regarding the existing trail improvements to the property. The project summary is general and our comments are therefore general until more specific details are provided. As such, we wish to remain on your mailing list in receiving a copy of the draft environmental assessment:

1. From the project summary we understand that tree cutting and trail building has commenced. We are not sure whether a grading and/or grubbing permit will be required.
   - A grading permit is required if grading activities exceed more than a 100 cubic yards. Grading means any excavation or fill or any combination thereof.
   - A grubbing permit is required if the grubbed area exceeds more than one acre. Grubbing means any act by which vegetation or materials, including but not limited to trees, timber, shrubbery, plants, concrete or asphalt concrete is dislodged or uprooted from the surface exposing bare ground.
   - We do not consider tree cutting above the roots as grubbing.
   - A retro-active grading and/or grubbing permit may be required since the work has commenced. We wish to know the work that has commenced and the additional work that is being proposed.
   - Pursuant to Ordinance No. 808 known as the Sediment and Erosion Control Ordinance:
     - Section 22.7.5 (h) states "the use of soil as fill is prohibited within any shoreline areas, as defined by Section 205A-41, Hawai'i Revised Statutes, except for sand as defined in Section 22-7.4 of the Sediment and Erosion Control Ordinance". Our Planning Department needs to be consulted with regarding the shoreline area.
     - Section 22.7.5 (i) states "Any grading or mining of a coastal dune is prohibited, unless permits by the Board of Land and Natural Resources."

The Department of Land and Natural Resources needs to verify and confirm that grading or mining of the coastal dune is not occurring with this project.

- Regardless of whether a grading and/or grubbing permit is required, all grading and/or grubbing or stockpiling activities **shall** incorporate BMP's to the maximum extent practicable to prevent damage by sedimentation to streams, watercourses, natural areas and the property of others. It **shall** be the responsibility of the permitee's and/or property owner's responsibility to ensure that the BMP's are satisfactorily implemented.

2. Based on Panel No. 60E of the FIRM (Federal Insurance Rate Maps) dated September 16, 2005, the captioned property is susceptible to flooding from the Pacific Ocean. The flood zonings are a Zone VE with a corresponding base flood elevation that varies between 24' above mean sea level (MSL) to 29 feet MSL. Zone VE is described as tsunami flooding. The project may need to comply with the County's Flood Plain Management Ordinance No. 831.

Should you have any questions, please contact me at (808) 241-4891.

Very truly yours,

Wallace Kudo, P.E.
Chief, Engineering Division

CONCUR:

DONALD M. FUJIMOTO, P.E.
County Engineer

WK
cc: Design and Permitting
Wynne Ushigome w/attachments

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January 7, 2011

SSFM 2010_056.000

Mr. Wallace Kudo, P.E. and
Mr. Donald M. Fujimoto, P.E.
County of Kaua'i
Department of Public Works
4444 Rice Street
Moikeha Building, Suite 2785
Līhu'e, Kaua'i, Hawai'i 96766

Dear Mr. Kudo and Mr. Fujimoto:

SUBJECT: Secret Beach Properties, LLC Existing Trail Improvements
Pre-Assessment Consultation for Draft Environmental Assessment
Kīlauea, Namahama, Hanalei, Kaua'i, Hawai'i
TMK: (4) 5-2-005:036

Thank you for your letter dated August 24, 2010 providing pre-assessment consultation comments for the preparation of the Draft Environmental Assessment (Draft EA) for the subject project.

We have the following responses to your comments:

1. We understand that the Department of Public Works has not determined whether a grading and/or grubbing permit will be required. We will continue to work with your office so that a determination can be made.

    - All of the trail improvements are completed. There will be no additional work except maintenance.

    - There is approximately two miles of trails traversing the width of the Property with an average width of 2.5 feet. This is approximately 26,400 square feet of trail, or 0.5 acres. No grubbing permit is required for under one acre.

    - The existing lateral trail improvements are located along a natural shelf on the side of the coastal bluff, at an elevation of approximately 150 feet mean sea level (msl). Improvements include narrow swaths cleared of vegetation; Trex and wooden planks to shore up earthen steps; rebars that have been driven into the soil to hold these planks into place; and hog wire fencing with metal T-posts along the more hazardous portions of the trail to ensure that persons walking along the trails do not slip and fall down the pali. Secret Beach Properties, LLC confirms that no excavation occurred with these improvements.

- Future activities on the Property will consist of trail maintenance, landscape maintenance, and removal and replacement of dead trees and noxious vegetation. The removal and replacement of dead tress and noxious vegetation will be conducted in accordance with a plan that has been reviewed and approved by the Department of Land and Natural Resources Office of Conservation and Coastal Lands. Secret Beach Properties, LLC confirms that no fill has been brought on and used on the Property.

- Consultation has occurred with the County of Kaua'i Planning Department (KPD) regarding KPD permits that will be required. A Special Management Area (SMA) Minor Permit and a Shoreline Setback Determination are required. The Shoreline Setback Determination is required in order to delineate the shoreline areas as defined by Section 205A-41, HRS.

- There has been no mining or removal of soil from the Property.

- Consultation with the Department of Land and Natural Resources Office of Conservation and Coastal Lands (DLNR-OCCL) has also occurred.

- The preparation of the Draft EA is in support of a Conservation District Use Permit (CDUP) Application that will be processed by DLNR-OCCL.

2. We confirm that portions of the property are located in Food Hazard Zone VE with a base flood elevation ranging from 24 feet to 29 feet above mean sea level. We will continue to work with your office to ensure compliance with the County's Flood Plain Management Ordinance No. 831.

A copy of the Draft EA will be provided when published.

If you have any questions on this matter, please contact me at 531-1308. Thank you.

Sincerely,

SSFM INTERNATIONAL, INC.

Robyn L. Loudermilk

Robyn L. Loudermilk
Project Planner
Email: rloudermilk@ssfm.com

Appendix C:

Biological Survey

Biological surveys for an after-the-fact CDUA, Hughes coastal parcel (TMK: 5-2-05: 036, Lot 11-A-15, Pali Namahana Subdivision), Kilauea, Kaua'i[1]

October 1, 2010 *AECOS* No. 1240

Eric Guinther and Reginald David[2]
AECOS Inc.
45-939 Kamehameha Highway, Suite 104
Kāne'ohe, Hawai`i 96744
Phone: (808) 234-7770 Fax: (808) 234-7775 Email: guinther@aecos.com

Introduction

In August 2010, *AECOS* and Rana Consulting biologists conducted surveys of a 23.805-ac (9.63-ha) parcel (TMK: 5-2-05: 036, Lot 11-A-15, Pali Namahana Subdivision, Namahana, Hanalei, Kaua'i) located along the coastline west of Kilauea Point, Kaua'i. The parcel includes a coastal cliff (pali), portions of Kauapea Beach, and bluffs and swales. A small, perennial stream crosses the parcel at its western end. The purpose of the surveys documented herein is to assess biological resource on the subject property for an after-the-fact Conservation District Use Permit (CDUP). Nearly all of the eastern "panhandle" part of the parcel is in the Conservation District. The western "pan" part is divided into a makai portion in the Conservation District and a mauka portion in the Agricultural District. The biological surveys covered the entire parcel.

A CDUP is needed in this case to cover the construction and maintenance of foot trails within the Conservation District. Several trails down the pali section were in place when the current owners purchased the parcel. These trails were constructed by adjacent land owners to provide private access to the beach below the pali and are typically steps of lumber (e.g., old railway ties). The present owner constructed/reconstructed a trail paralleling the coast the full length of the panhandle, mostly along a natural shelf located midway down the pali. These trails are constructed with lumber and TREX forming edging and

[1] This report was prepared for SSFM International to be used as needed to support a CDUA for work done on the subject parcel. This report will become part of the public record.
[2] Rana Biological Consultants, Inc., Kailuia-Kona, Hawai'i.

steps. Various other trails were constructed in the broader, pan part of bluff and swale topography. These trails are for access to the shore and gardens in some cases or simply access for maintenance to planted areas.

Survey Methods

The botanical survey consisted of walking the entire parcel on August 11, 2010 mostly following the trail system that exists in the area; small white dots in Fig. 1 record the botanist's trek. The sea cliff or pali would be largely inaccessible were it not for the trails constructed along and up and down the steep face by various property owners to connect their lots to Kauapea Beach. For the most part, the trails provide adequate views of the entire cliff face, so there was no need to explore off-trail areas on the cliff face. Plants were identified as they were encountered and, in areas where landscaping was minimal or not evident, an estimate made of their relative abundance.

Five avian count stations (red points in Fig. 1) were evenly spaced within the subject property on August 11. An eight-minute point count was conducted at each station. Stations were each counted once. Field observations were made with the aid of Leica 10 X 42 binoculars and by listening for vocalizations. Counts were conducted during the early morning hours, the peak of daily bird activity. Time not spent counting was used to search the property for species and habitats not detected during count sessions.

With the exception of the endangered Hawaiian hoary bat (*Lasiurus cinereus semotus*) or *'Ōpe'ape'a* as it is known locally, all terrestrial mammals currently found on the Island of Kaua'i are alien species, and most are ubiquitous. The survey of mammals was limited to visual and auditory detection, coupled with visual observation of scat, tracks, and other animal sign. A running tally was kept of all vertebrate species observed and heard within the subject property.

Plant names used in this report generally follow Palmer (2003), Staples and Herbst (2005), and Wagner, Herbst, and Sohmers, 1990, 1999). The avian phylogenetic order and nomenclature used in this report follows *The American Ornithologists' Union Checklist of North American Birds 7th Edition* (American Ornithologists' Union 1998), and the 42nd through the 51st supplements to *Check-list of North American Birds* (American Ornithologists' Union 2000; Banks et al. 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010). Mammal scientific names follow *Mammals in Hawaii* (Tomich 1986).

Figure 1. Map of TMK: 5-2-05: 036, Lot 11-A-15 (bold yellow outline) showing botany trek (white dots), bird count stations (red asterisks), Conservation District mauka boundary (fine white line), and general vegetation zones (green-grey lines; Cf = coastal forest, Ls = landscaped).

Results

Vegetation

The vegetation on the subject parcel can be divided into several more or less distinct types. Along the steep pali of the eastern "panhandle" piece, the vegetation is mixed forest with small open areas dominated by grasses and/or shrubs. The western end of the parcel includes extensively landscaped slopes and valleys (Fig. 2), partially cleared or otherwise ridge line assemblages of grasses, ferns and other herbs, and areas of coastal forest. The western boundary of the parcel is a small, flowing stream with riparian vegetation.

Figure 2. Swale and bluff in the landscaped area, showing landscaping mostly at the bottom (lawn and plantings). Lateral trails are for vegetation maintenance. Scrub areas above retain some of the natural vegetation.

The dominant tree found along the pali is ironwood (*Casuarina equisetifolia*). Some areas of *hala* (*Pandanus tectorius*), also common in the coastal forest, are present. In places where ironwood is not abundant, a thick understory growth of Chinese violet (*Asystasia gangetica*), *maunaloa* vine (*Canavalia cathartica*), wedelia (*Sphagneticola triloba*), dayflower (*Commelina diffusa*), and numerous

other, mostly non-native, shrubs and herbs (Fig. 3). In a few areas on the cliff face, wet seeps are present, and these support mostly California grass (*Urochloa mutica*), with other grasses, sedges, and mosses present. The base of the cliff is a coastal strand with tropical almond (*Terminalia cattapa*), some *ʻakiʻaki* (*Sporoboilis virginica*), and *naupaka kahakai* (*Scaevola sericea*); *pōhinahina* (*Vitex rotundifolia*), and *pōhuehu*e (*Ipomoea pes-caprae*) grow out across the sand of the back beach.

Figure 3. In some places along the cliff face, the vegetation is very thick, here dominated by ti, *maunaloa* (vine), *hala*, and Java plum.

The coastal forest is dominated inland by Java plum (*Syzygium cuminii*), *hala*, and Christmas berry (*Schinus terebinthefolius*), with tropical almond and *hala* dominating the seaward edge up to the beach.

A few areas near the crown of a ridge (Fig. 2) may represent a minimally disturbed open area, or an area in the process of conversion from coastal forest to landscaped. This vegetation was dominated by sword fern (*Nephrolepis multiflora*), lace fern or *palaʻ*ā (*Odontosoria chinensis*), *naupaka kahakai*, various weedy herbs, and scattered young strawberry guava (*Psidium cattleiana*) and albizia (*Falcateria moluccana*) trees.

Flora

The results of the botanical survey are expressed in Table 1. The table lists plants observed in August 2010 within the bounds of the Hughes parcel. Plants are arranged in taxonomic order, with species listed alphabetically by family. Plant "status" follows the common name and indicates whether a species is native (endemic [End] or indigenous [Ind]), a Polynesian introduction before 1778 (Pol), or non-native (naturalized [Nat] or ornamental [Orn]). Of course native plants and naturalized non-natives are used as ornamentals. A plant species status relates to its situation generally within the Hawaiian Islands.

Relative abundance values (see legend) pertain only to the "undeveloped" parts of the parcel. Note <1> indicates that a species was seen in the landscaped area (although not necessarily as a welcome part of the landscaping; weeds are listed as well). A species listed with note <1> but no abundance, was seen only in the landscaped area.

Table 1. Flora for Hughes Property, Kilauea, Kauai

Species	Common name	Status	Abundance	Notes
	FERNS and FERN ALLIES			
BLECHNACEAE				
Blechnum appendiculatum Willd.	---	Nat	U2	
DENNSTAEDTIACEAE				
Odontosoria chinensis (L.) J. Smith	*pala'ā;* lace fern	**Ind**	U3	
NEPHROLEPIDACEAE				
Nephrolepis multiflora L.	sword fern	Nat	U3	
POLYPODIACEAE				
Phymatosorus grossus (Langsd. & Fisch.) Brownlie	*lauae*	Nat	O	<1>
PTERIDACEAE				
Adiantum 'Edwinii'	maidenhair fern	Nat	R	
Pityrogramma calomelanos (L.) Link	silverback fern	Nat	R	
THELYPTERIDACEAE				
Christella parasitica (L.) H. Lév	wood fern	Nat	U	
	CONIFERS and CYCADS			
CYCADACEAE				
Cycas sp.	sago palm	Orn	--	<1>

Table 1 (continued).

Species	Common name	Status	Abundance	Notes
	FLOWERING PLANTS			
	DICOTYLEDONE			
ACANTHACEAE				
Asystasia gangetica (L.) T. Anderson	Chinese violet	Nat	C2	
Barleria repens C. Nees	pink-ruellia	Orn	R	
Thunbergia fragrans Roxb.	sweet clockvine	Nat	O	<1>
ANACARDIACEAE				
Mangifera indica L.	mango	Nat	--	<1>
Schinus terebinthifolius Raddi	Christmas berry	Nat	O	
APOCYNACEAE				
Plumeria obtusa L.	Singapore plumeria	Orn	--	<1>
Plumeria rubra L.	graveyard flower	Orn	--	<1>
Thevetia peruviana (Pers.)K. Schum.	be-still	Nat	R	
ARALIACEAE				
Schefflera actinophylla (Endl.) Harms	octopus or umbrella tree	Nat	U	
ASTERACEAE (COMPOSITAE)				
Bidens alba L.	*ki*	Nat	--	<1>
Calyptocarpus vialis Less.	---	Nat	--	<1>
Conyza sp.	horseweed	Nat	R	<1>
Cyanthillium cinereum (L.) H. Rob.	little ironweed	Nat	R	<1>
Erigeron bellioides DC	fleabane	Nat	--	<1>
Emilia fosbergii Nicolson	Flora's paintbrush	Nat	R	<1>
Pluchea indica (L.) Less.	Indian fleabane	Nat	U2	<1>
Pluchea carolinensis (Jacq.) G. Don	sourbush	Nat	O	<1>
Sonchus oleraceus L.	sow thistle	Nat	U	
Sphagneticola triloba (L.) Pruski	wedelia	Nat	A	<1>
BIGNONIACEAE				
Spathodea campanulata P. Beauv.	African-tulip tree	Nat	U	
CARICACEAE				
Carica papaya L.	papaya	Nat	R	
CARYOPHYLLACEAE				
Drymaria cordata (L.) Willd. ex Roem.	*pipili*	Nat	R	
CASUARINACEAE				
Casuarina equisetifolia L.	ironwood	Nat	AA	
CECROPIACEAE				
Cecropia obtusifolia Bertol.	guarumo	Nat	R	
CLUSIACEAE				
Calophyllum inophyllum L.	*kamani*	Pol	--	<1>

Table 1 (continued).

Species	Common name	Status	Abundance	Notes
COMBRETACEAE				
Conocarpus erectus L.	button mangrove	Nat	--	<1>
Terminalia catappa L.	tropical almond	Nat	C	
CONVOLVULACEAE				
Ipomoea pes-caprae (L.) R. Br.	*pōhuehue*	**Ind**	--	<2>
Ipomoea triloba L.	little bell	Nat		
CUCURBITACEAE				
Momordica charantia L.	wild bitter melon	Nat	R	
EUPHORBIACEAE				
Aclypha wilkesiana	beefsteak plant	Orn	--	<1>
Aleurites moluccana (L.) Willd.	*kukui*	Pol	U	
Breynia disticha J.R. & G. Forst.	snowbush	Orn	--	<1>
Codiaeum variegatum (L.) Blume	croton	Orn		<1>
FABACEAE				
Canavalia cathartica Thours	*maunaloa*	Nat	C2	
Chamaecrista nictitans (L.) Moench	partridge pea	Nat	U	
Desmodium triflorum (L.) DC	---	Nat	--	<1>
Falcataria moluccana (Miq.) Barneby & Grimes	albizia (juv)	Nat	R	
Leucaena leucocephala (Lam.) deWit	*koa haole*	Nat	U	
Mimosa pudica L.	sensitive plant	Nat	--	<1>
Senna surattensis (N.L. Burm.) H. Irwin & Barneby	*kolomana*	Nat	R	
GOODINACEAE				
Scaevola taccada (J. Gaert.) Roxb.	*naupaka kahakai*	**Ind**	U	<1>
MALVACEAE				
Hibiscus rosa-sinensis L. cultivars	Chinese hibiscus	Orn	--	<1>
MORACEAE				
Ficus microcarpa L. fil.	Chinese banyan	Nat	R	<1>
MYRSINACEAE				
Ardisia elliptica Thunb.	shoebuton ardisia	Nat	R	
MYRTACEAE				
Psidium cattleianum Sabine	strawberry guava	Nat	U	
Psidium guajava L.	common guava	Nat	U	
Syzygium cumini (L.) Skeels.	Java plum	Nat	O	
Syzigium malaccense (L.) Merr. & L. M. Perry	mountain-apple	**Pol**	--	<1,3>
NICTAGINACEAE				
Mirabilis jalapa L.	marvel of Peru	Nat	R1	
ONAGRACEAE				
Ludwigia octovalvis (Jacq.) Raven	primrose willow	Nat	R1	
Ludwigia palustris (L.) Elliott	water purslane	Nat	R	

Table 1 (continued).

Species	Common name	Status	Abundance	Notes
OXALIDACEAE				
Oxalis corniculata L.	yellow wood sorrel	**Pol**	U	<1>
PASSIFLORACEAE				
Passiflora laurifolia L.	yellow granadilla	Nat	R	
PLANTAGINACEAE				
Plantago lanceolata L.	nrw-lvd plantain	Nat	U1	
POLYGALACEAE				
Polygala paniculata L.	bubblegum plant	Nat	--	<1>
POLYGONACEAE				
Coccoloba uvifera (L.) L.	sea-grape	Nat	--	<1>
RUBIACEAE				
Gardenia taitensis de Candolle	Tahitian gardenia	Orn		<1>
Morinda citrifolia L.	*noni*	Pol	R	<1>
Spermacoce assurgens Ruiz. & Pav.	buttonweed	Nat		<1>
SCROPHULARIACEAE				
Bacopa monnieri (L.) Pennell	*'ae'ae*	**Ind**	R2	
VERBENACEAE				
Lantana camara L.	lantana	Nat	O	<1>
Stachytarpheta cayennensis (Rich.) Vahl	nettle-leaved vervain	Nat	O	<1>
Vitex rotundifolia L. fil.	*pōhinahina*	**Ind**	U2	<2>
MONOCOTYLEDONES				
AGAVACEAE				
Cordyline fruticosa (L.) A. Chev.	*ki*; green ti	Pol	U1	<1>
Cordyline fruticosa cultivars	ti cultivars	Orn	--	<1>
ALOEACEAE				
Aloë vera (L.) N.L. Burm.	aloe	Orn	--	<1>
ARACEAE				
Alocasia macrorrhizos (L.) G. Don	'ape	Nat	R	
Colocasia esculenta L.	*kalo*	Pol	R1	
Philodendron bipinnatifidum Endl.	selloum	Orn	R	
Xanthosoma robustum Schott	*'ape*	Nat	R1	
ARECACEAE				
Cocos nucifera L.	coconut palm	Nat	O	
Dypsis lutescens (H. Wendl.) Beentje & Dransfield	golden-fruited palm	Orn	--	<1>
Veitchia merrillii (Beccari) H. E. Moore	Manila palm	Orn	--	<1>
Wodyetia bifurcata Irvine	foxtail palm	Orn	--	<1>
CANNACEAE				
Canna indica L.	Indian-shot	Nat	R	
COMMELINACEAE				
Commelina diffusa N. L. Burm.	dayflower	Nat	C	

Table 1 (continued).

Species	Common name	Status	Abundance	Notes
COSTACEAE				
Costus woodsonii Maas	Indian-head ginger	Orn	--	<1>
CYPERACEAE				
Cyperus involucratus Rottb.	umbrella sedge	Nat	R	
Cyperus polystachyos Rottb.	---	**Ind**	R	
Kyllinga brevifolia Rottb.	*kili'o'opu*	Nat	R	
Kyllinga nemoralis (J.R. Forster & G. Forster) Dandy ex Hutchinson & Dalziel	*kili'o'opu*	Nat	--	<1>
Mariscus javanicus (Houtt.) Merr. & Metcalf	*'ahu'awa*	**Ind**	R	
HELICONIACEAE				
Heliconia collinsiana Griggs	hanging heliconia	Orn	--	<1>
Heliconia metallica W. J. Hook.	---	Orn	--	<1>
Heliconia rostrata Ruiz & Pavón	parrot's-beak heliconia	Orn	--	<1>
Heliconia sp.	dwarf red	Orn	--	<1>
LILIACEAE				
Asparagus densiflorus (Kunth) Jessop	asparagus fern	Nat	O3	
Crinum cf. *pedunculatum* R. Brown	river lily	Orn	--	<1>
Crinum asiaticum L.	giant lily	Nat	R	
MUSACEAE				
Musa hybrid	banana	Orn	R1	<1>
ORCHIDACEAE				
Spathoglottis plicata Blume	Philippine ground orchid	Nat	R	
PANDANACEAE				
Pandanus tectorius S. Parkinson ex Z	*hala*	**Ind**	C	<1>
Pandanus tectorius 'Veitchii'	*hala*	Orn	--	<1>
POACEAE (GRAMINEAE)				
Andropogon virginicus L.	broomsedge	Nat	R1	
Axonopus compressus (Sw.) P.Beauv.	brd-lvd. carpetgrass	Nat	O	<1>
Coix lacryma-jobi L.	Job's tears	Nat	R	
Cynodon dactylon (L.) Pers.	Bermuda grass	Nat	O	<1>
Digitaria ciliaris (Retz.) Koeler	Henry's crabgrass	Nat		<1>
Digitaria insularis (L.) Mez ex Ekman	sourgrass	Nat	U1	
Eleusine indica (L.) Gaertn.	wiregrass	Nat	U	
Paspalum conjugatum Bergius	Hilo grass	Nat	O3	<1>
Paspalum dilatatum Poir.	Dallis grass	Mat		
Paspalum scrobiculatum L.	---	**Ind**	R	<3>
Paspalum sp.	indet.	Nat	R	
Setaria gracilis Kunth	yellow foxtail	Nat	R	<1>
Sporobolis cf. *africanus* (Poir.) Robyns &Tournay	smutgrass	Nat	R	<1>
Sporobolus virginicus	*'aki'aki*	**Ind**	R1	<2>

Table 1 (continued).

Species	Common name	Status	Abundance	Notes
POACEAE (continued)				
Urochloa maxima (Jacq.) Webster	Guinea grass	Nat	O	<1>
Urochloa mutica (Forssk.) Nguyen	California grass	Nat	O2	
Zoysia matrella (L.) Merr.	zoysia grass	Orn	R	
ZYNGIBERACEAE				
Alpinia purpurata (Vieil.) K. Schum.	red ginger	Orn	--	<1>
Hedychium coronarium J. König	white ginger	Nat	R	<1>

Legend to Table 1

Status = distributional status

End. = endemic; native to Hawai'i and found naturally nowhere else.

Ind. = indigenous; native to Hawai'i, but not unique to the Hawaiian Islands.

Nat. = naturalized, exotic, plant introduced to the Hawaiian Islands since the arrival of Cook Expedition in 1778, and well-established outside of cultivation.

Orn. = exotic, ornamental or cultivated crop; plant not naturalized (not well-established outside of cultivation, at least at this location).

Pol. = Polynesian introduction; brought to the Hawaiian Islands before 1778.

Abundance = occurrence ratings for plants on property in March 2008

R – Rare - only one or two plants seen.

U - Uncommon - several to a dozen plants observed.

O - Occasional - found regularly, but not abundant anywhere.

C - Common - considered an important part of the vegetation and observed numerous times.

A - Abundant - found in large numbers; may be locally dominant.

AA - Abundant - very abundant and dominant; defining vegetation type.

Numbers (as in R3) offset occurrence ratings (1 – several plants; 2 – many plants; 3 – abundant in a limited area) in cases where distribution across the survey area may be limited, but individuals seen are more than indicated by the occurrence rating alone.

Notes:

<1> Landscaped areas (abundance, if given, relates to the presence in undeveloped areas)

<2> Mostly associated with beach at base of cliff.

<3> Plant lacking flowers or fruit; identification uncertain.

Avifauna

A total of 116 individual birds of 18 species, representing 15 separate families, were recorded within the subject property (Table 2). One species recorded—Nēnē (*Branta sandvicensis*)—is listed as an endangered species under both federal and State of Hawai'i endangered species statutes. Two other recorded species—Wedge-tailed shearwater (*Puffinus pacificus*) and White-tailed Tropicbird (*Phaethon lepturus*)—are indigenous nesting seabird. Another species recorded—Pacific Golden-Plover (*Pluvialis fulva*)—is an indigenous migratory shorebird that nests in the high Arctic during the late spring and summer months, returning to wintering grounds in Hawai'i, Japan, Okinawa, Polynesia, Micronesia, Melanesia, New Zealand, Australia, Indonesia, Philippines, southern China, southeast Asia, Bangladesh, Nepal, India, Sri Lanka, Pakistan, Iran, Bahrain, and northeast and southern Africa (Johnson and Conners, 1996). Wintering birds usually leave Hawai'i for the Arctic in late April or the very early part of May, and return to the wintering grounds in late July and early August. A few individuals overwinter in Hawai'i, and thus are

present here year round. The remaining 13 species detected during the survey are regularly encountered alien species, common in low elevation areas on the Island of Kaua'i.

Table 2. Avian Species Recorded on the Hughes Property, Kilauea, Kauai

Common Name	Scientific Name	***ST***	***RA***
	ANSERIFORMES		
	ANATIDAE - Ducks, Geese & Swans		
	Anserinae - Geese & Swans		
Hawaiian Goose	*Branta sandvicensis*	ER	0.80
	PHASIANIDAE - Pheasants & Partridges		
	Phasianinae - Pheasants & Allies		
Grey Francolin	*Francolinus pondicerianus*	A	0.20
Red Junglefowl	*Gallus gallus*	A	1.40
Ring-necked Pheasant	*Phasianus colchicus*	A	0.20
	PROCELLARIIFORMES		
	PROCELLARIIDAE - Shearwaters & Petrels		
Wedge-tailed Shearwater	*Puffinus pacificus*	IB	Dead
	PELECANIFORMES		
	PHAETHONTIDAE - Tropicbirds		
White-tailed Tropicbird	*Phaethon lepturus*	IB	1.80
	CICONIIFORMES		
	ARDEIDAE - Herons, Bitterns & Allies		
Cattle Egret	*Bubulcus ibis*	A	0.20
	CHARADRIIFORMES		
	CHARADRIIDAE - Lapwings & Plovers		
	Charadriinae - Plovers		
Pacific Golden-Plover	*Pluvialis fulva*	IM	0.20
	COLUMBIFORMES		
	COLUMBIDAE - Pigeons & Doves		
Zebra Dove	*Geopelia striata*	A	0.20

Table 2 (continued).

Common Name	Scientific Name	*ST*	*RA*
	PASSERIFORMES		
	ZOSTEROPIDAE - White-eyes		
Japanese White-eye	*Zosterops japonicus*	A	3.40
	TIMALIIDAE - Babblers		
Hwamei	*Garrulax canorus*	A	0.60
	TURDIDAE - Thrushes		
White-rumped Shama	*Copsychus malabaricus*	A	0.80
	STURNIDAE - Starlings		
Common Myna	*Acridotheres tristis*	A	3.00
	EMBERIZIDAE - Emberizids		
Red-crested Cardinal	*Paroaria coronata*	A	1.40
	ICTERIDAE - Blackbirds		
Western Meadowlark	*Sturnella neglecta*	A	1.80
	FRINGILLIDAE - Fringilline and Carduline Finches & Allies		
	Carduelinae - Carduline Finches		
House Finch	*Carpodacus mexicanus*	A	5.40
	ESTRILDIDAE - Estrildid Finches		
Nutmeg Mannikin	*Lonchura punctulata*	A	0.60
Chestnut Munia	*Lonchura atricapilla*	A	1.40

Key to Table 2.

ST	Status
RA	Relative Abundance - Number of birds detected divided by the number of count stations (2).
A	Alien species – introduced to Hawai'i by humans and established in the wild.
ER	Endemic Resident species.
IB	Indigenous Breeding species.
IM	Indigenous Migratory species.

Avian diversity and densities were in keeping with the locations and the habitat present within the subject property. Three species: House Finch (*Carpodacus mexicanus*), Japanese White-eye (*Zosterops japonicus*), and Common Myna (*Acridotheris tristis*), accounted for slightly more than 50% of the total number of birds recorded during station counts. The most commonly recorded species was House Finch, which accounted for slightly more than 23% of the total number of individual birds recorded. An average of 23 birds was detected per station count.

Mammals

Three mammalian species were detected during the course of this survey. Tracks and sign of several dogs (*Canis f. familiaris*) were encountered at several

locations within the site, as were rooting, tracks, and sign of pig (*Sus s. scrofa*). Cat (*Felis catus*) tracks and scat were seen in several locations within the site as was one dead Wedge-tailed Shearwater which appeared to have been taken by a cat and hidden under a wooden platform along the pali trail. The endangered Hawaiian hoary bat was not seen during the course of this survey. No mammalian species protected or proposed for protection under either the Federal or State of Hawaiʻi endangered species programs (DLNR, 1998; USFWS, 2005, 2010) were detected during the course of this survey.

Discussion

The subject parcel supports a fairly typical coastal/lowland assemblage of plants with some native species prominent (here, *hala* in particular) but mostly dominated by non-native species. Properties inland from the subject parcel are extensively landscaped.

Seeps on the face of the pali feed several wet areas that support vegetation indicative of wetlands. No attempt was made to ascertain if hydric soils are present, so it cannot be determined if these areas are wetlands subject to Clean Water Act jurisdiction. Wetted ground covers a very small portion of the parcel and the trail crosses these areas (three distinct seeps were counted) on the shelf midway up the pali, requiring minimal or no structural amendments to support the trail in these places. Nonetheless, consideration should be given to avoiding adding structures to places of constantly wetted ground. The law does permit control of vegetation and construction of trails. Where safety considerations dictate adding structural elements (such as fencing, edging, or fill), permission from the U.S. Army Corps of Engineers may be required.

The subject property supports a typical assemblage of avian species one would expect to find in this general location on the Island of Kauaʻi. The property supports two nesting seabird species, Wedge-tailed Shearwater, and White-tailed Tropicbird. These species are nesting in the ocean cliffs and immediately inland from the cliff top. Two, banded Nēnē were seen foraging on the site, the two birds recorded are birds that nest at the Kīlauea Point National Wildlife Refuge (USFWS unpublished data). Currently the habitat present on the property is not typical of that in which one would expect Nēnē to nest

The findings of the mammalian survey are consistent with the habitat available and the location of the property. Although no Hawaiian hoary bats were detected during the course of this survey, bats have been recorded foraging for insects in the general vicinity of the project site in the recent past (David, 2010).

Hawaiian hoary bats are widely distributed in the lowland areas on the Island of Kauaʻi, and have been documented in and around almost all areas that still have some dense vegetation. Although no rodents were detected during the course of this survey, it is likely that several if not all of the four established alien Muridae found on Kauaʻi—roof rat (*Rattus r. rattus*), Norway rat (*Rattus norvegicus*), European house mouse (*Mus musculus domesticus*) and Polynesian rats (*Rattus exulans hawaiiensis*)—use various resources found within the project area. All of these introduced rodents are deleterious to native ecosystems and the native faunal species dependant on them.

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Appendix D:

Archaeological Field Inspection Report

Archaeological Field Inspection Report for a 23.8-Acre Coastal Parcel at, Namahana Ahupua‘a, Hanalei District, Kaua‘i Island TMK: [4] 5-2-005:036

Prepared for
SSFM International

Prepared by
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Management Summary

Reference	Archaeological Field Inspection Report for a 23.8-Acre Coastal Parcel at, Namahana Ahupua‘a, Hanalei District, Kaua‘i Island TMK: [4] 5-2-005:036
Date	December 2010
Project Number (s)	Cultural Surveys Hawai‘i, Inc. (CSH) Job Code: NAMAHANA 1
Investigation Permit Number	The fieldwork component of the archaeological inventory survey was carried out under archaeological permit number 10-10 issued by the Hawai‘i State Historic Preservation Division/Department of Land and Natural Resources (SHPD/DLNR), per Hawai‘i Administrative Rules (HAR) Chapter 13-282.
Project Location	The project area is a fairly narrow strip, approximately a kilometer long east/west and averaging approximately 100 m wide north/south lying adjacent to the coast seaward of Kauapea Road approximately 1200 m northwest of Kīlauea Town on the north shore of Kaua‘i
Land Jurisdiction	Private
Agencies	State Historic Preservation Division / Department of Land and Natural Resources (SHPD/DLNR)
Project Description	No specific project is known by us on these lands. The concept behind this study is to provide the landowner (or their representative) with an overview of existing archaeological conditions, to facilitate planning and budgeting considerations, and to convey any possible archaeological constraints to the proposed development.
Project Acreage	23.8 acres
Historic Preservation Regulatory Context	This document was prepared to support the proposed project’s historic preservation review under Hawai‘i Revised Statutes (HRS) Chapter 6E-8 and Hawai‘i Administrative Rules (HAR) Chapter 13-13-275. In consultation with the Hawai‘i State Historic Preservation Division (SHPD), the archaeological inventory survey investigation was designed to fulfill the State requirements for an archaeological inventory survey per HAR Chapter 13-13-276.
Fieldwork Effort	The fieldwork component of this archaeological field inspection report was conducted on December 20, 2010 by three CSH archaeologists, Kendy Altizer, B.A., Gerald Ida, B.A. and Missy Kamai, B.A., under the general supervision of Hallett H. Hammatt, PhD. The fieldwork required approximately 3 person-days to complete.
Number of Historic Properties Identified	None

Summary	The archaeological field inspection investigation identified no historic properties within the 23.8-acre project area. No historic properties are believed to have been impacted by any land-altering activities of the recent past.

Table of Contents

List of Figures

List of Tables

Section 1 Introduction

1.1 Project Background

At the request of SSFM International, Cultural Surveys Hawai‘i, Inc. (CSH) completed an archaeological field inspection for a 23.8-acre coastal parcel in Namahana Ahupua‘a, Hanalei District, Kaua‘i Island (TMK [4] 5-2-005:036). The project area is located adjacent to the coast, approximately 1200 m northwest of Kīlauea Town and 800 m southwest of Crater Hill and the Kīlauea National Wildlife Refuge visitor center (Figure 1, Figure 2, Figure 3). The project area is shown on Tax Map Key plat [4] 5-2-005 (Figure 2) as a “Conservation Area”.

The project area is a fairly narrow strip, approximately a kilometer long east/west and averaging approximately 100 m wide north/south lying adjacent to the coast seaward of Kauapea Road. Private house lots, typically of between 5 and 6 acres, lie seaward of Kauapea Road inland of the project area which is accessed via a narrow access corridor on the south side between parcels 5-2-005:32 and 5-2-005:33. The project area was accessed via Kīlauea Road, Kauapea Road and the narrow access corridor

This document was prepared to support any State Historic Preservation Division and/or County of Kaua‘i historic preservation review.

1.2 Scope of Work

The archaeological field inspection and its accompanying report documented all historic properties within the project area. The following scope of work was agreed to:

Scope of Work

1. Historical research to include study of archival sources, historic maps, Land Commission Awards and previous archaeological reports to construct a history of land use and to determine if archaeological sites have been recorded on or near this property.
2. Limited field inspection of the project area to identify any surface archaeological features and to investigate and assess the potential for impact to such sites. This assessment will identify any sensitive areas that may require further investigation or mitigation before the project proceeds.
3. Preparation of a report to include the results of the historical research and the limited fieldwork with an assessment of archaeological potential based on that research, with recommendations for further archaeological work, if appropriate. It will also provide mitigation recommendations if there are archaeologically sensitive areas that need to be taken into consideration.

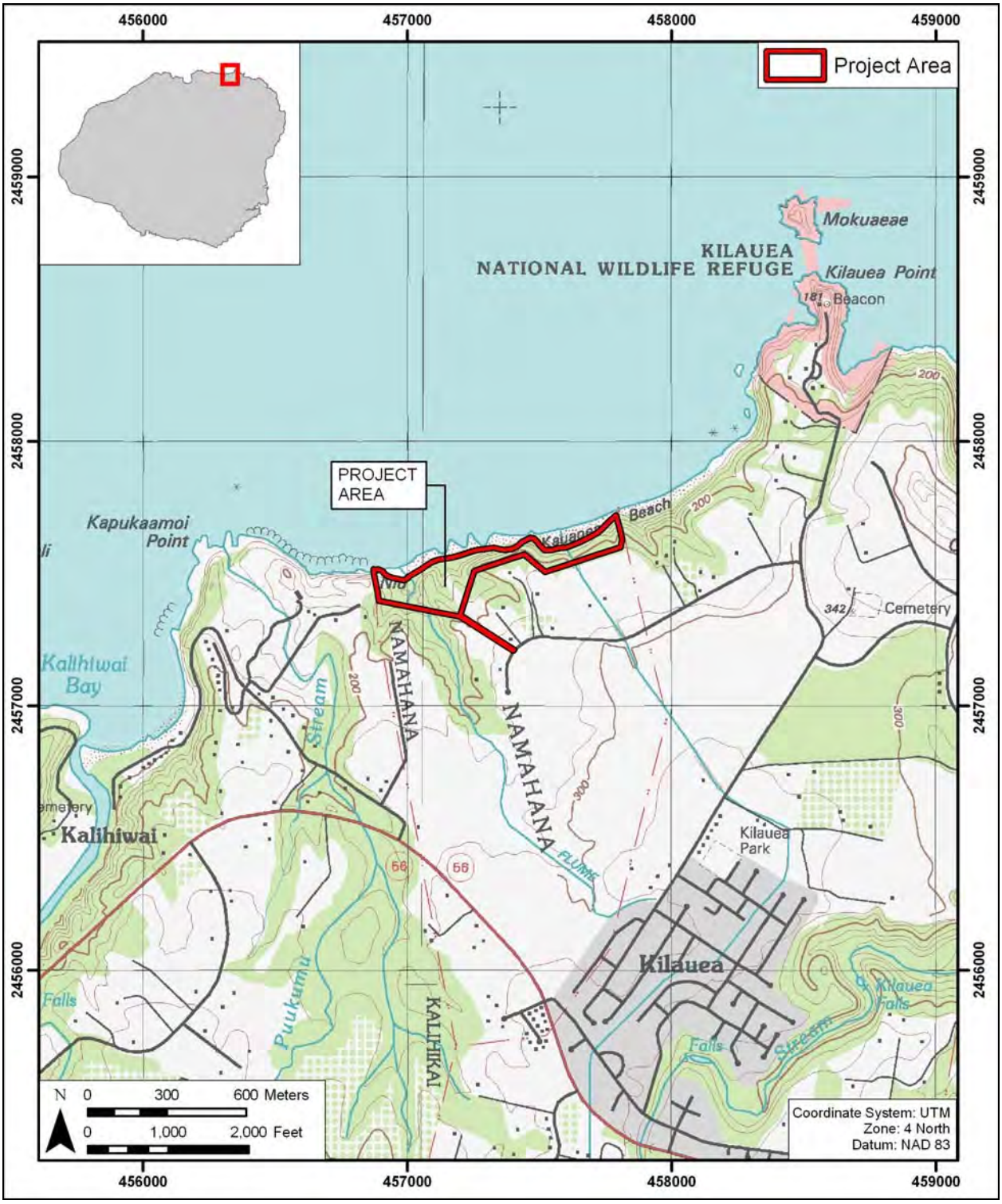

Figure 1. U.S. Geological Survey 7.5 Minute Series Topographic Map, Anahola Quadrangle (1996), showing the location of the project area

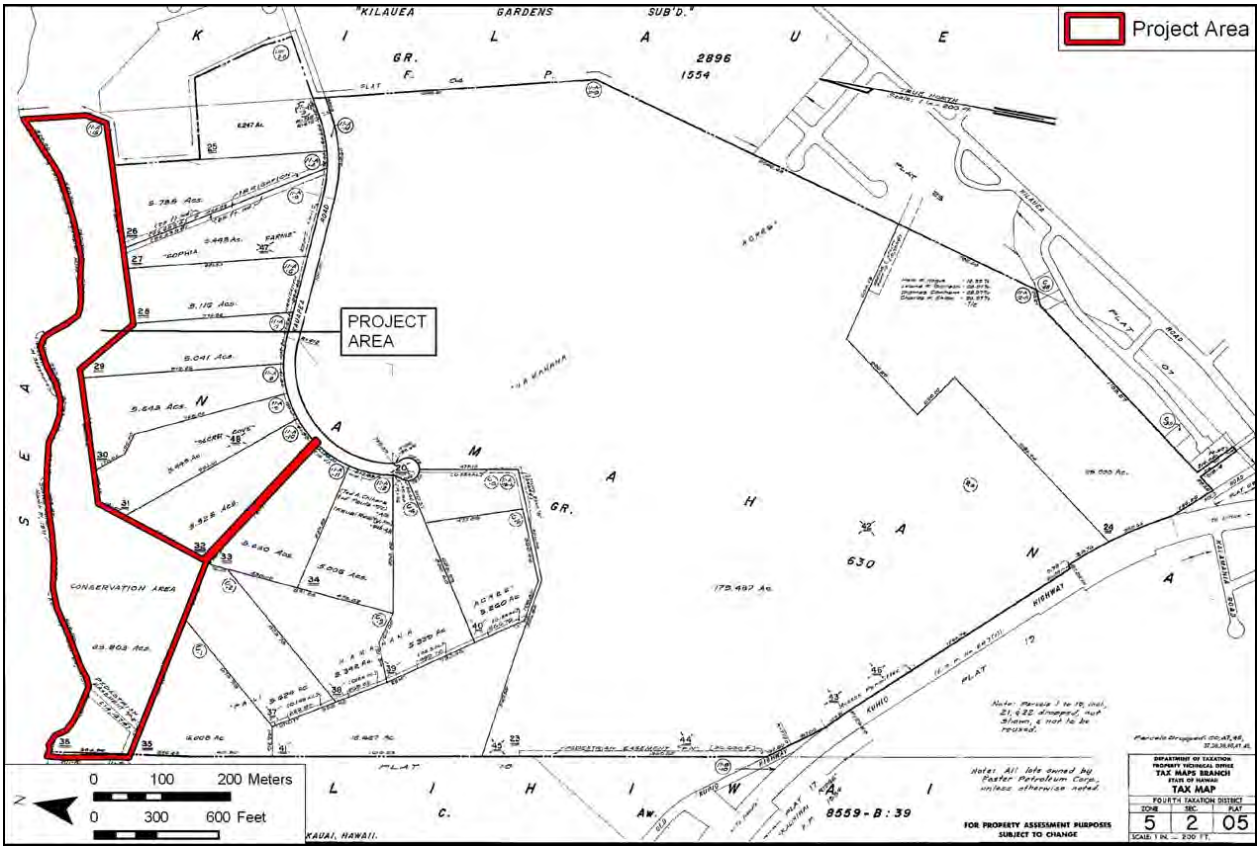

Figure 2. Tax Map Key (TMK) plat 5-2-005, showing the location of the project area

Figure 3. Aerial photograph (source: Google Earth 2010) showing the location of the project area

1.3 Environmental Setting

1.3.1 Natural Environment

The 23.8-acre project area includes mostly coastal cliff extending from an elevation of approximately 75 m above sea level at Kauapea Road on the south side down to the sea in the northwest corner. Kauapea Beach (also known as “Secret Beach” extends along the north side of the project area except at the extreme west side where a rocky headland extends to the coast.

Soils are primarily of Rock Outcrop (rRO) (Figure 4).

> Rock outcrop (rRO) consists of areas where exposed bedrock covers more than 90 percent of the surface. It occurs on all five islands [Kaua‘i, O‘ahu, Maui, Molokai, and Lāna‘i]. The rock outcrops are mainly basalt and andesite. This land type is gently sloping to precipitous. Elevations range from nearly sea level to 10,000 feet. …This land type is not suited to farming. It is used for water supply, wildlife habitat, and recreation. (Foote et al. 1972:119)

A small area of Hanalei Silty Clay Deep Water Table, 0 to 6 Percent Slopes (HrB) is present running across the west side of the project area. Portions of the north side of the project area are shown as “Beaches” (BS).

The project area is indicated to receive approximately 1500-1800 mm (60-70 in.) of annual rainfall, (Giambelluca et al. 1986). This is more than sufficient for most non-irrigated agriculture, and supports luxuriant and diverse vegetation.

The majority of the project area consists of steep slope and/or cliff. Vegetation observed includes tall stands of Ironwood trees (*Cassuarina equisetifolia*), ti (*Cordyline fruticosa*), *naupaka*, ferns, *wedelia*, buffle grass, crab grass, *hala*, *hilahila*, and palm trees. Taro was observed in the southern end of the project area, growing at the base of a steep *pali*.

A popular guidebook notes the popularity of Kauapea Beach (also known as secret beach) with nudists and the many drowning and near drownings in dangerous winter and spring high surf conditions. [Clark 1990:23-24]

The 203-acre Kīlauea National Wildlife Refuge is located along the Kīlauea shoreline, to the north of the project area, and was created largely as a preserve for various seabird species.

1.3.2 Built Environment

The project area is undeveloped land. Only minor modifications such as paths and steps were observed in the project area. The surrounding area is primarily rural, dominated by luxury house lot development.

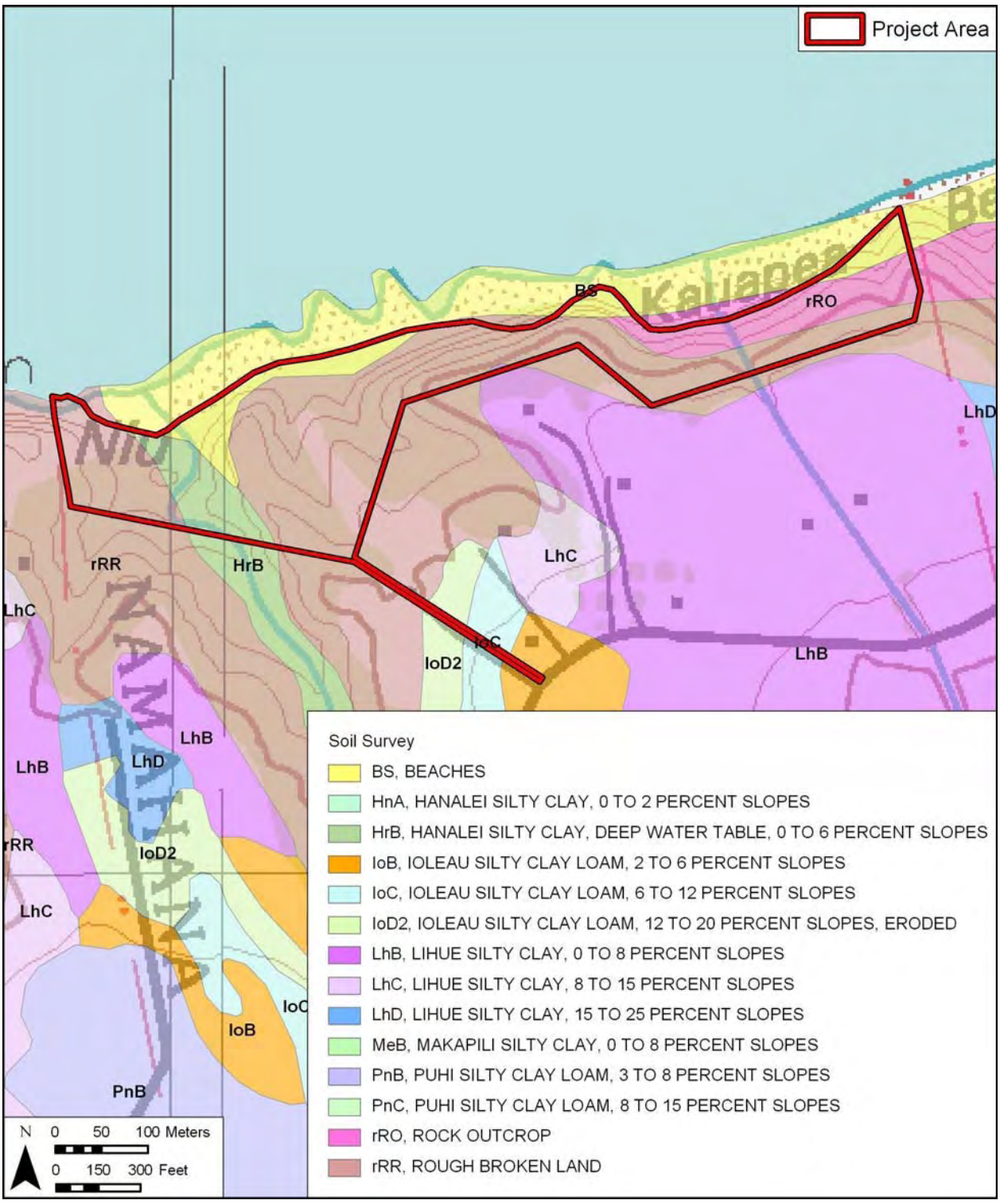

Figure 4. Overlay of Soil Survey of the State of Hawai‘i (Foote et al. 1972), indicating soil types within the project area

Section 2 Background Research

2.1 Traditional and Historical Background

2.1.1 The Land of Namahana

The project area lies on the *makai* (seaward) portion of the traditional Hawaiian land division of Namahana Ahupua‘a. Namahana is a small, atypical *ahupua‘a* in that it is not laid out to stretch from the reef to the mountains. It includes only the shoreline of Kauapea Beach and a small intermittent stream valley. The *ahupua‘a* extends only 6,000 feet inland and is not more than 3,500 feet wide.

Tracing the traditional pattern of land use one would expect a fishpond or extensive *lo‘i* along the shoreline but it appears that neither were present. The bulk of the *ahupua‘a* would have been *kula* lands. As is suggested by Handy and Handy (1972:421) of similar *kula* land in the adjacent Kīlauea Ahupua‘a the *kula* land of Namahana may have been productive land for cultivating sweet potatoes. However, the relatively dry landscape was undoubtedly non-productive for growing taro *lo‘i*.

Because Namahana Ahupua‘a does not extend upland and it appears to be situated within what may have been the original northwest corner of Kīlauea Ahupua‘a, Namahana may have been an *‘ili* that was subsequently subdivided from Kīlauea Ahupua‘a. Namahana is briefly mentioned in Commission of Boundaries (1873) documents of Kalihiwai Ahupua‘a as being a mountain peak along the east boundary of Kalihiwai. However, no mention of the adjacent ahupua‘a of Namahana or Kīlauea are given in these documents.

The entire *ahupua‘a* was awarded to Miriam Kekau‘ōnohi (LCA 11216) who also received extensive lands elsewhere on Kaua‘i, Maui, Hawai‘i and Moloka‘i. M. Kekau‘ōnohi was the daughter of Kahoano Kū Kinau‘u who was the son of Kamehameha I. Her mother was a close relative of Kekaulike, Chief of Maui. Most importantly she was the wife of Kamehameha II (Liholiho). After her husband’s death she moved to Kaua‘i, married Keli‘iahonui (son of the deceased Kaumuali‘i) and became governor of Kaua‘i in 1842.

Unfortunately little is known of this small *ahupua‘a*. There are no *kuleana* awards listed within this land. Namahana Ahupua‘a was incorporated into Kilauea Plantation Co. in the late 19th century.

2.1.2 Mythological and Traditional Accounts

An exhaustive search of Hawaiian legends and myths in print produced no references at all to the *ahupua‘a* of “Namahana” per se. A search for references to Kaupea (Kauapea) produced one passing reference in the “Legend of Kawelo (*He Mo‘olelo no Kawelo*)” in which the folk-hero Kawelo chants during fighting near Wailua, Kaua‘i. He makes reference to:

By the soldier of the noonday,	*Nā ke koa i ke awakea*
The soldiers of the waters of Wailua	*He kaha pue wai no Wailua*
Of the path that leads to Kaupea	*Kea lo hiki i Kaupea*
Where you and I are made weary…	*Kuhi au ka luhi kaua…*

(Fornander 1918 Volume V Part 1:36-37)

It is unclear whether this is in fact a reference to Kaupea Beach in Namahana Ahupua‘a.

Four mythological references were identified for neighboring Kīlauea Ahupua‘a and are summarized below.

Dole (1892) relates a somewhat vague account that at Kīlauea there were the remains of three, long, ancient, parallel irrigation ditches attributed by the Hawaiians to the claw marks of a *mo‘o*. “The lizard had been ordered by [the famous ruling chief] Mano-ka-lani-pō to open Kīlauea’s upper regions for agriculture” (Wichman 1998:102). In context the *mo‘o* is associated with the “brave lizard” Ka-mo‘o-koa after whom a ridge of the Makaleha Mountains is named.

Wichman (1998:102) relates an account, (that may have originated in a 1939 story contest - Juliette Ferreira’s “Pele the Goddess of Fire” for the Martha W. Beckwith prize, Kamehameha School for Girls), that near the top of a volcanic cone open to the ocean:

> …once stood three huge stones that have since been moved, with great difficulty, to make room for sugarcane. These three stone sisters of great beauty, were a warning that Pele, the volcano goddess, was not to be trifled with….Pele [seeking to establish a home for herself and her Kaua‘i lover Lohiau] caused an eruption here, but it was soon extinguished when the sea goddess [Nā-maka-o-kaha‘i] broke down the walls of the crater, drowning the fire with the ocean. The laughter of the three beautiful sisters enraged Pele. They had seen Pele defeated and shamed. Their scorn was not to be endured. “What are your names?” Pele asked. And one replied “I am Kalama, this is Pua, and this is Lāhela.” Pele repeated their names, touching them with her staff as she did so, turning them to stone. They were a mute and visible warning not to laugh at or ridicule Pele. (Wichman 1998:103)

In a slight variant of the story Pele is motivated by jealousy of the three girls’ beauty and fear they will make Lohiau fall in love with them and thus she turns them to stone to protect her love interest.

A third mythological account of Kīlauea related by Rice (1923:38, see also Wichman 1998:104) concerns the creation of a swath of awash boulders lying between the islet of Moku‘ae‘ae and Kīlauea crater:

> Traveling on the Menehune moved a big stone to Kahili, below Kilauea, which they used to dive from. At Mokuaeae, the island off the present Kilauea lighthouse, they began to fill in the channel between the island and the mainland. They were just able to touch the bottom with a paddle when morning dawned, and their task was left unfinished.

In the Story of Lonomakahiki (Fornander 1917: Vol IV, Part II: 358-359) is a passing reference to the ruling chief Lonoikamakahiki traveling with a companion at Kīlauea and Kalihi (Kalihiwai, Kalihikai) Kaua‘i. The account makes reference to “days of hunger” in which their hunger was appeased by eating the ripe flowers (or possibly fruit) of pandanus trees (*hele aku a ai i ka pua pala o ka hala, hala ia la poloi o ka ua ilaila, e ka hoa, he hoa i ka nahele lauhala loloa, mai Kilauea a Kalihi la*). The account emphasizes the great *lauhala* tracts and “…the heavy and wind-blown rain, the ceaseless and general rain…” The “ae-kai” is said to be the name of a wind specific to the vicinity of Moku‘ae‘ae Island and “the Wai-mio is the wind of Kilauea” (Aikin 1988:7). The wind name for the Ko‘olau District of Kaua‘i between Moloa‘a and Kalihikai was the “Kiukainui” (Nakuina 1990:54).

2.1.3 Population

Our best data on the population of north Kaua‘i comes from a census there in the spring of 1847 (Table 1). Namahana Ahupua‘a is not listed and we speculate that the population of Namahana was for the purposes of the census, lumped with adjacent Kīlauea Ahupua‘a and Kāhili Ahupua‘a to the east. Even given this conflation of the three it may be noted that the recorded population of 240 is relatively large, larger than the combined populations of Kalihiwai and Kalihikai to the west and larger than the combined populations of Waiakalua, Pāpa‘a, Waipāke, and Lepeuli to the southeast. The population is larger than that of the huge valleys of Kalalau or Wainiha. The population density of Namahana/Kīlauea/Kāhili thus would appear to have been relatively high for Kaua‘i in 1847. Most likely this pattern of being relatively well-populated would have continued back far into pre-contact times.

Table 1 Population of Northern Kaua‘i (1847) (from Schmitt 1969:229), indicating a relatively large population (and high population density at “Kilauea and Kahili”)

TABLE 1. POPULATION OF NORTHERN KAUAI, BY AHUPUAA: SPRING 1847

*Ahupuaa**	*Population*
Total	2,698
Kalalau	190
Haena	162
Wainiha	154
Lumahai	123
Waikoko	5
Waipa	66
Waioli	159
Hanalei	637
Kalihikai	87
Kalihiwai	78
Kilauea and Kahili	240
Waiakalua	43
Papaa	22
Pilaa	51
Waipake	60
Lepeuli	23
Moloaa	104
Papaa	23
Anahola	280
Hoomaikawaa	32
Kumukumu	21
Kealia	143

* Listed from west to east. Two different areas are named “Papaa’. See text and footnote 3 for further comment.

2.1.4 Early Historic Records

We have identified few early narratives of the vicinity of the project area. In 1849, William DeWitt Alexander wrote the following passing account crossing the Kilauea/Kahili River just to the east:

> …A little farther on we entered groves of hala, through which we continued to ride for the rest of our journey. We turned from the road to see the falls of the Kahili River. Though not large they are beautiful. Here the river falls in a jet of foam over a precipice of about 40 feet into a broad clear basin below… (Alexander 1991:124)

2.1.5 Māhele Records

As previously mentioned the entire *ahupua‘a* was awarded to Miriam Kekau‘ōnohi (LCA 11216) who also received extensive lands elsewhere on Kaua‘i, Maui, Hawai‘i and Moloka‘i. There are no *kuleana* awards listed within Namahana Ahupua‘a which appears to be something of a pattern in the vicinity (there are no *kuleana* Land Commission Awards within Kīlauea Ahupua‘a either.

It is unknown why there were no commoner *kuleana* land holdings within Namahana Ahupua‘a at the time of the Māhele (1848) and the following Kuleana Act. There was however a pattern at the time of the division of lands in which the land overseers (*konohiki*) often tried to present their overlord *ali‘i* with undivided tracts of land believing that to be in the best interests of their masters. Thus it could be that there was a systematic pattern to discourage commoner land claims in Namahana Ahupua‘a. It certainly seems odd that there was not a single claim in what should have been a well-populated, albeit small *ahupua‘a*.

Virtually all claims in the general vicinity involve a house-lot (understood as a permanent residence) and a few irrigated ponded fields for taro cultivation (*lo‘i*). Several claims mention “*kula*” which in this context probably refers both to pasturage and areas of dry land cultivation (with *wauke* specifically mentioned as a *kula* crop). Other specific cultigens mentioned are the bark-cloth plant *wauke, noni,* and orange trees.

2.1.6 Late 1800s

<u>The History of Kilauea Plantation</u>

In January 1863, a former American whaler named Charles Titcomb purchased the entire *ahupua‘a* of Kīlauea amounting to approximately 3,016 acres from Kamehameha IV for $2,500 (Grant 2896). This land grant included the present project area. By this time, Charles Titcomb was already a veteran of several enterprises at Kōloa, Hanalei, and Kīlauea, Kaua‘i, including efforts to cultivate silkworms, coffee, tobacco, sugarcane and cattle. He expanded his holdings to the west through further purchases within the next couple of years. The Kilauea Plantation, begun in 1863 by Mr. Titcomb, became a sugar estate in 1877 when Captain John Ross and E. P. Adams, in partnership with Titcomb, purchased much of the land and leased another substantial tract (Aikin 1988:19). Titcomb and his family continued to be involved in the plantation. He, his

Hawaiian wife and two of his eight children are buried in a family plot near his former home behind the Kīlauea Elementary School.

The Kilauea Plantation “was one of the smallest plantations in the Hawaiian Islands operating its own sugar mill” (Condé and Best 1974:159). In 1881, a railway was begun and Princess Lydia Kamakaeha (Lili‘uokalani) drove in the first spikes for the railroad bed. The plantation infrastructure grew over the next twenty years:

> Transportation system consists of 12 and a half miles of permanent track, five miles of portable track, 200 cane cars, six sugar cars and four locomotives. Kilauea is situated three miles from the landing at Kahili, with which it is connected by the railway system. Sugar is delivered to the steamers by means of a cable device at the rate of from 600 to 800 bags an hour. Mr. J. R. Meyers was the plantation manager. (*San Francisco Chronicle*, July 18, 1910, in Condé and Best 1974:152)

The plantation employed Chinese and Portuguese workers. In the 1880s, Kilauea Sugar Company began major modification of water resources in the uplands with dams, reservoirs, ditches and flumes (Joesting 1984). This may have had a major damaging effect on *lo‘i kalo* downstream and possibly signaled the end of large-scale native agricultural practices in Kīlauea and vicinity.

The Kilauea Plantation Company started to be managed by C. Brewer and Company in 1910 and C. Brewer took over the controlling interest in 1948. In 1938, trucks were employed to transport harvested cane, and by 1942, the rail system was abandoned entirely (Conde and Best 1974). Sugar continued as a crop until 1971 when Kilauea Sugar Co. was terminated (Anonymous, Custodial Chronology of the Sandy Saemann Property, Kilauea, Kauai 1989).

The Monsarrat map of “Kaua‘i Between the Kalihiwai and Moloaa Streams” (1898) shows the plantation infrastructure in place at that time (Figure 5). Overlays indicate that the “Government Road”, which crossed the southwest portion of Namahana Ahupua‘a, lies at approximately the same elevation as the older “Hanalei Road” and the present Kūhiō Highway - well *mauka* of the project area. The railroad, begun in 1881, and the Ko‘olau Ditch are shown running from the mill at Kīlauea as far as the east side of East Waiakalua, terminating near the Government Road. The railroad also extended to the southwest skirting the southeast side of Namahana Ahupua‘a.

The Monsarrat map (Figure 5) shows Namahana Ahupua‘a as Grant 630 awarded to Jules Dudoit. Jules Dudoit (1803-1866) arrived in Hawaii in 1835 and served as French consul from 1837 to 1848. He had quite a variety of business affairs.

A 1910 U.S. Geological Survey Map, Kilauea Quadrangle (Figure 6) shows the plantation infrastructure and other development in the vicinity of the project area at that time. No development is shown near the present project area.

A Condé and Best (1974:159) 1930 map of the Kilauea Plantation (Figure 7) shows the plantation’s sugar cane fields and associated infrastructure. The map indicates that sugar was cultivated close to the west side of the present project area in field 10 but indicates that sugar was not grown in or immediately adjacent to the project area. No infrastructure is shown in the project area.

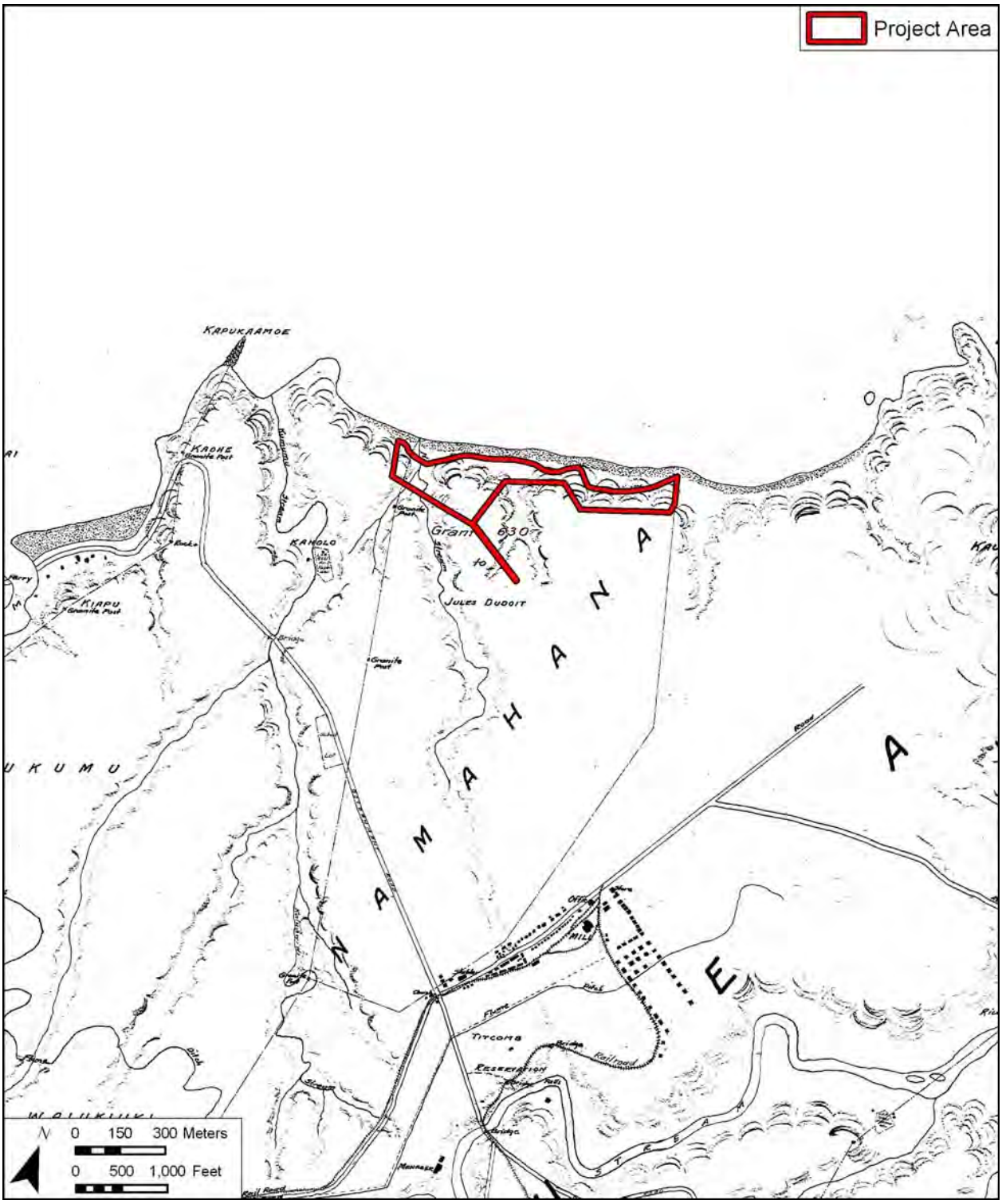

Figure 5. Portion of Monsarrat map of “Kaua‘i Between the Kalihiwai and Moloaa Streams” showing general development in the project area and vicinity circa 1892

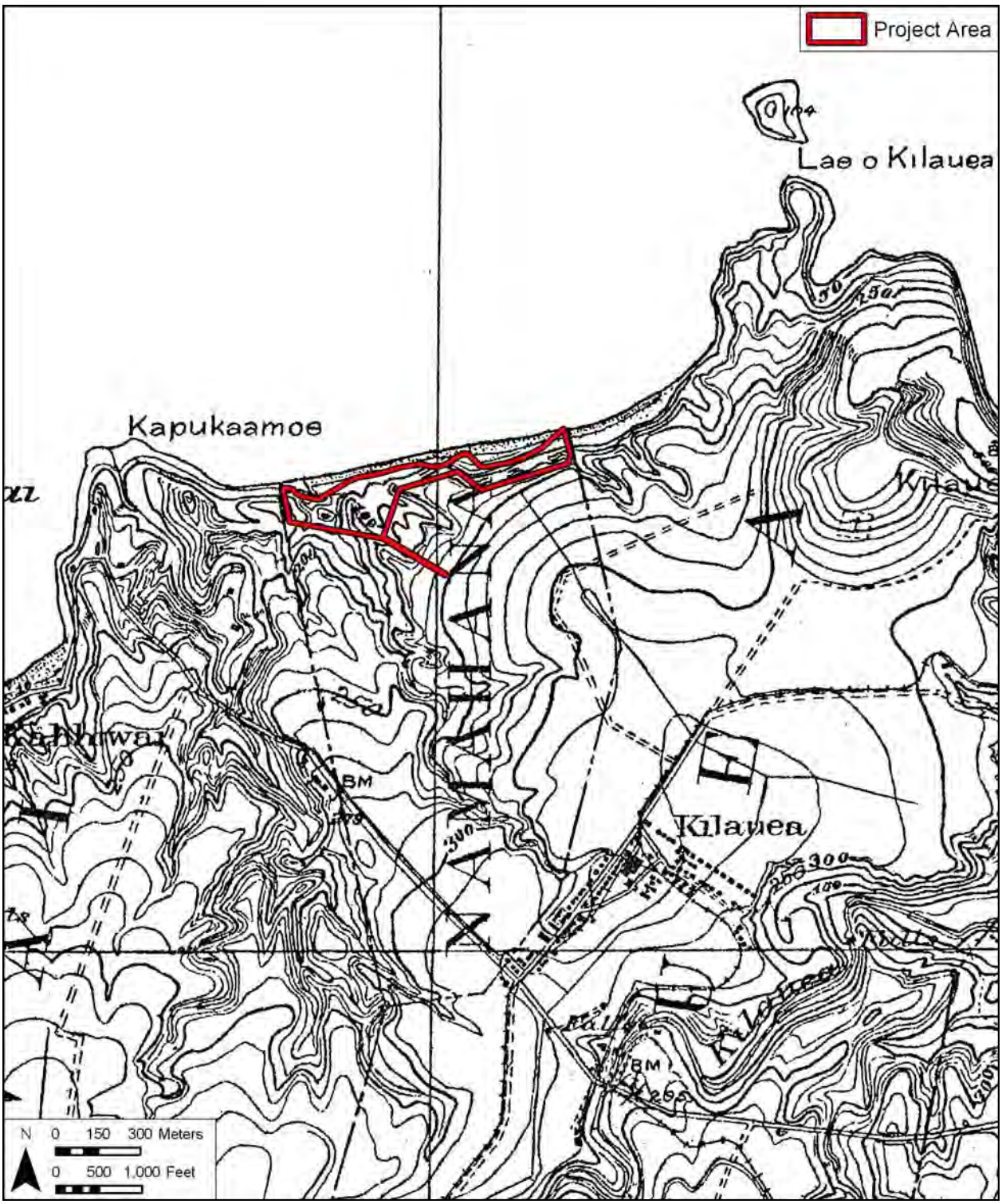

Figure 6. Portion of 1910 U.S. Geological Survey 1:31680 Scale Topographic Map, Kilauea Quadrangle, showing the location of the project area

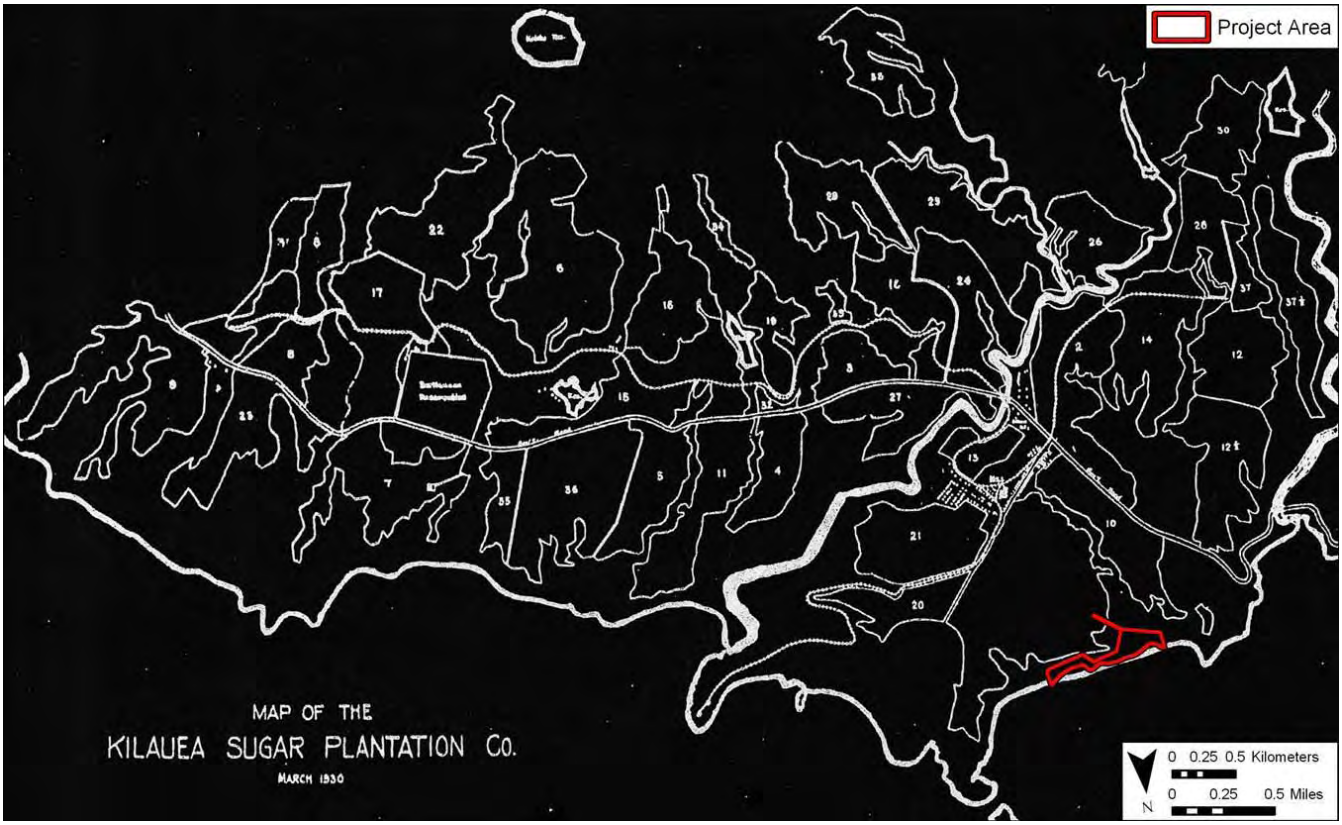

Figure 7. 1930 Map of the Kilauea Sugar Company note railroad down to Mōkōlea Point but otherwise no infrastructure in or adjacent to project area

The 1963 U.S. Geological Survey map (Figure 8) does not indicate any structures within the project area but does show an unimproved road extending along the seaward edge of the table lands quite close to the top of the sea cliff (and cutting through the access corridor at the south side of the project area). The modern alignment of Kauapea Road is not shown at that time.

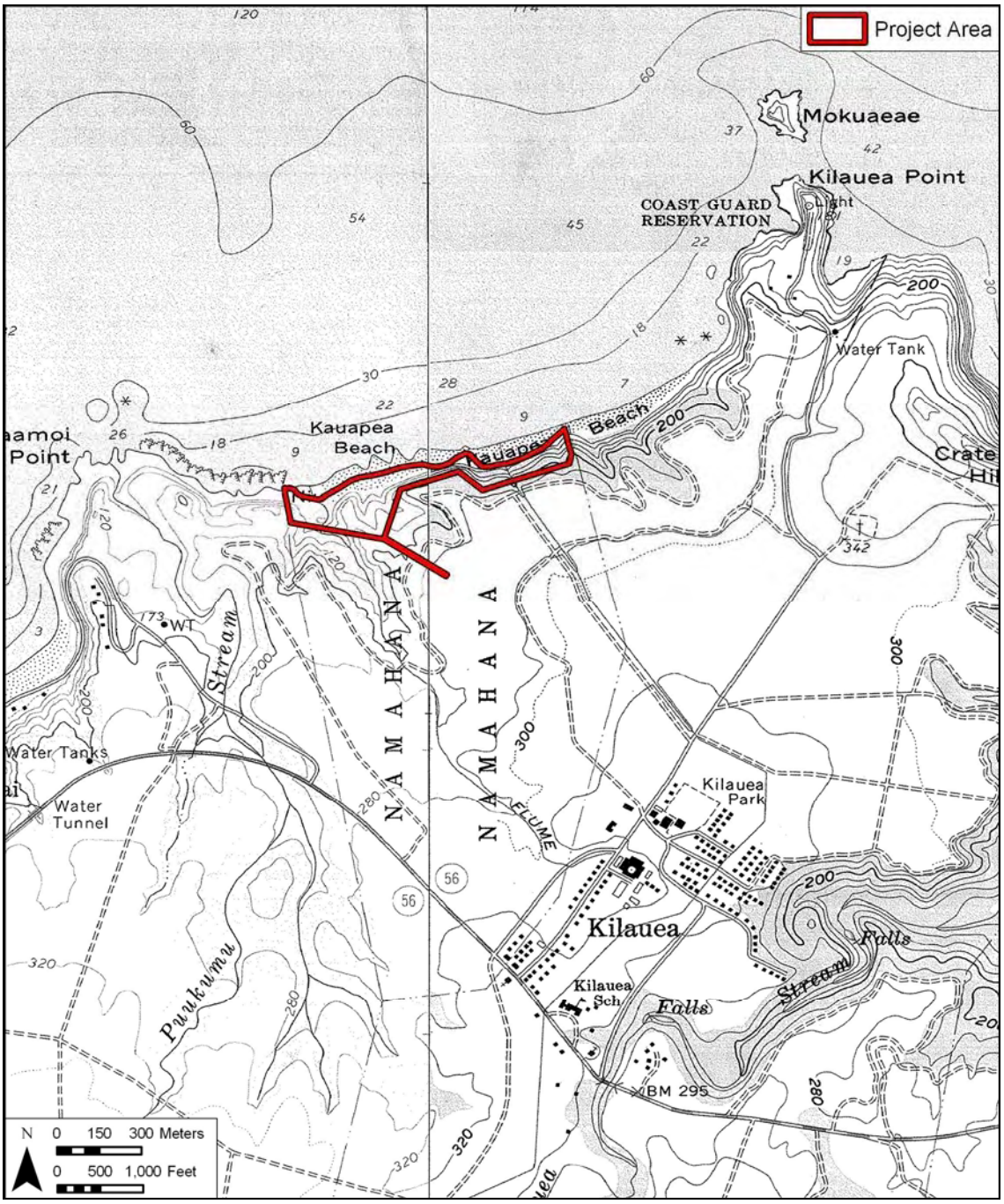

Figure 8. 1963 U.S. Geological Survey Topographic Map, Anahola Quadrangle, showing the location of the project area.

Section 3 Previous Archaeological Research

The only archaeological study of land within the boundaries of the subject property (Kikuchi 1987; discussed below) effectively presents no data. Archaeological studies in the vicinity are summarized in Table 2 and are located in Figure 9. More detailed discussion of some of the more pertinent studies follows.

3.1 Thrum's *Heiau* Study (1906)

Thomas Thrum compiled the first systematic listing of Kaua‘i Island archaeological sites in his study of "Heiaus and Heiau Sites Throughout the Hawai‘i Islands" (Thrum 1906:36-44). In the vicinity he briefly described four *heiau*: Pailio at central Kīlauea, Kapinao and Kapuohaua‘e at Waiakalua and Kipapa at Kāhili as follows:

- Pailio - Central Kilauea – a round heiau of about 100 feet diameter; class unknown. Site covered in cane field
- Kapinao - Waiakalua-east - A large heiau of about 200 x 400 feet, high walled and stone paved. Still in existence. Of po‘okanaka class.
- Kapuohaua‘e – Waiakalua-uka – a small round heiau, paved, with high walls of husbandry class; still standing
- Kipapa – Kahili - A large heiau of some 300 by over 100 feet in size, paved, walls five feet high, standing in cane field in partial ruins.

3.2 Bennett's Survey (1931)

During his 1928/1929 landmark survey of the island of Kaua‘i Wendell Clark Bennett identified five sites (sites 129 to 133) within the Ko‘olau District of Kaua‘i between Pila‘a to the east and Kalihiwai to the west including Site 129, Kapinao heiau, in Waiakalua Valley, Site 130, Taro terraces, in East Waiakalua and West Waiakalua valleys and Site 131, House sites, in East Waiakalua and West Waiakalua Valleys and on the ridge between. The closest sites were in neighboring Kīlauea where Bennett described two *heiau* sites: Site 132 Kipapa heiau and Site 133 Pailio heiau. Bennett described Site 132 Kipapa Heiau as follows:

> Site 132 Kipapa heiau, on the end of the first bluff east of Kilauea River in Kahili section. Described by Thrum as "A large heiau of some 300 by over 100 feet in size, paved, walls five feet high, standing in cane field in partial ruins." Since that time the stones have been removed.

U.S. Geological Survey maps indicated Kipapa Heiau as located on the east side of the mouth of Kīlauea Stream.

Bennett described Site 133 Pailio Heiau as follows:

> Site 133 Pailio heiau in the canefields shorewards of Kilauea. The site does not have a view of the river valley. Thrum says that it was, "A round heiau of about 100 feet diameter: class unknown. Site covered in cane field." Nothing remains of the heiau today [c. 1928].

Table 2. Archaeological Studies Near the Present Namahana Project Area

Source	Nature of Study	Location of Study	Finds
Handy and Handy 1972	Native Planters of Hawaii	Archipelago-wide	Conclude Kīlauea a relatively small producer of taro because of the nature of its hinterland
Kikuchi 1987	Archaeological Survey	Proposed Visitor Center, Kīlauea Point, National Wildlife Refuge Kalae O Kīlauea,	Surface remains of historic structures associated with Kīlauea Lighthouse are described, but no traditional Hawaiian sites were found
Fredericksen and Fredericksen 1989	Archaeological Inventory Survey	Crater Hill and Mokolea Point of Kīlauea Point National Wildlife Refuge, Kīlauea	Identifies historic structural remains related to the transport and loading of sugar at Mokolea Point, a Second World War era radar installation on Crater Hill and Kīlauea Lighthouse.
Rosendahl 1989, 1991a & 1991b	Archaeological Inventory Survey & additional survey	Kalihiwai Valley Proposed Housesites project	Minimal archaeological remains reported
Kennedy 1990	Surface Reconnaissance	19 Acres Located at Kalihiwai Ridge, Kīlauea, TMK 4-5-2-002:010	No sites identified
Toenjes and Hammatt 1990	Archaeological Survey	94 Acres in Kīlauea	No sites identified
Kennedy 1991	Archaeological Inventory Survey and Testing	Kalihiwai Ridge Subdivision-Phase II, TMK: 5-2-, 02:11, Kalihiwai,	Site 50-30-03-06007
Hammatt and Chiogioji 1992	Archaeological Inventory Survey	15-Acre Property in the Ahupua‘a of Namahana and Kalihiwai	No sites identified
Hammatt and Robins 1993	Archaeological Inventory Survey	Proposed Kilauea Golf Course in the Ahupua‘a of Namahana 204 acres	Site 50-30-04-00572 consisting of 3 irrigation ditches

Source	Nature of Study	Location of Study	Finds
Hammatt et al 1996	Archaeological Inventory Survey	5 acre parcel TMK 5-2-021:005 on east slope of Kīlauea Valley	3 sites:
Ida and Hammatt 1996	Reconnaissance Survey	Kīlauea Bridge	Railroad bridge foundation
McGerty and Spear 1998	Archaeological Inventory Survey	Proposed Driveway Corridor, Kīlauea Ahupua‘a	Site 50-30-04-644
Cleghorn 2001	Archaeological Monitoring Report	Kilauea Japanese Cemetery, (TMK: 5-2-4:49)	No significant finds
Elmore & Kennedy 2001	Archaeological Inventory Survey	At a small (0.37 acre) property located on the east side of the mouth of the Kalihiwai River	A habitation site (SIHP # 50-30-03-671) was identified that included six burials.
Rechtman et al. 2001	Archaeological Inventory Survey	Halaulani Property (TMK: 4-5-2-02:11, 12) Kīlauea and Kalihi Wai Ahupua‘a,	Sites 50-30-03-2060, -2062, -2063, 2064
Shideler, Tulchin and Hammatt 2007	Archaeological field inspection and literature review	An approximately 74-Acre portion of the Kilauea Falls Ranch Property, (TMK: [4] 5-2-012:035 por.)	Four specific areas of pre-contact agricultural terraces were observed. A posited mill site (CSH 1) in the north side of the southwest project area was noted. An extensive complex of long well-built terraces supporting a series of what appear to have once been ponded fields (CSH 2) was noted.

Source	Nature of Study	Location of Study	Finds
Shideler, Yucha and Hammatt 2008	Archaeological Inventory Survey	An approximately 74-Acre portion of the Kilauea Falls Ranch Property, (TMK: [4] 5-2-012:035 por.) (roughly the same as Shideler et al. 2007)	Five historic properties: SIHP # 50-10-04-579, an agricultural terrace; # 50-10-04-580, 53 agricultural terraces and 2 possible habitation areas (probably related to agriculture as field shelters); # 50-10-04-581, a stone retaining wall with cement and alignments and a rock-faced trail understood as a post-contact permanent habitation; # 50-10-04-582, agricultural terraces and # 50-10-04-583, agricultural terraces

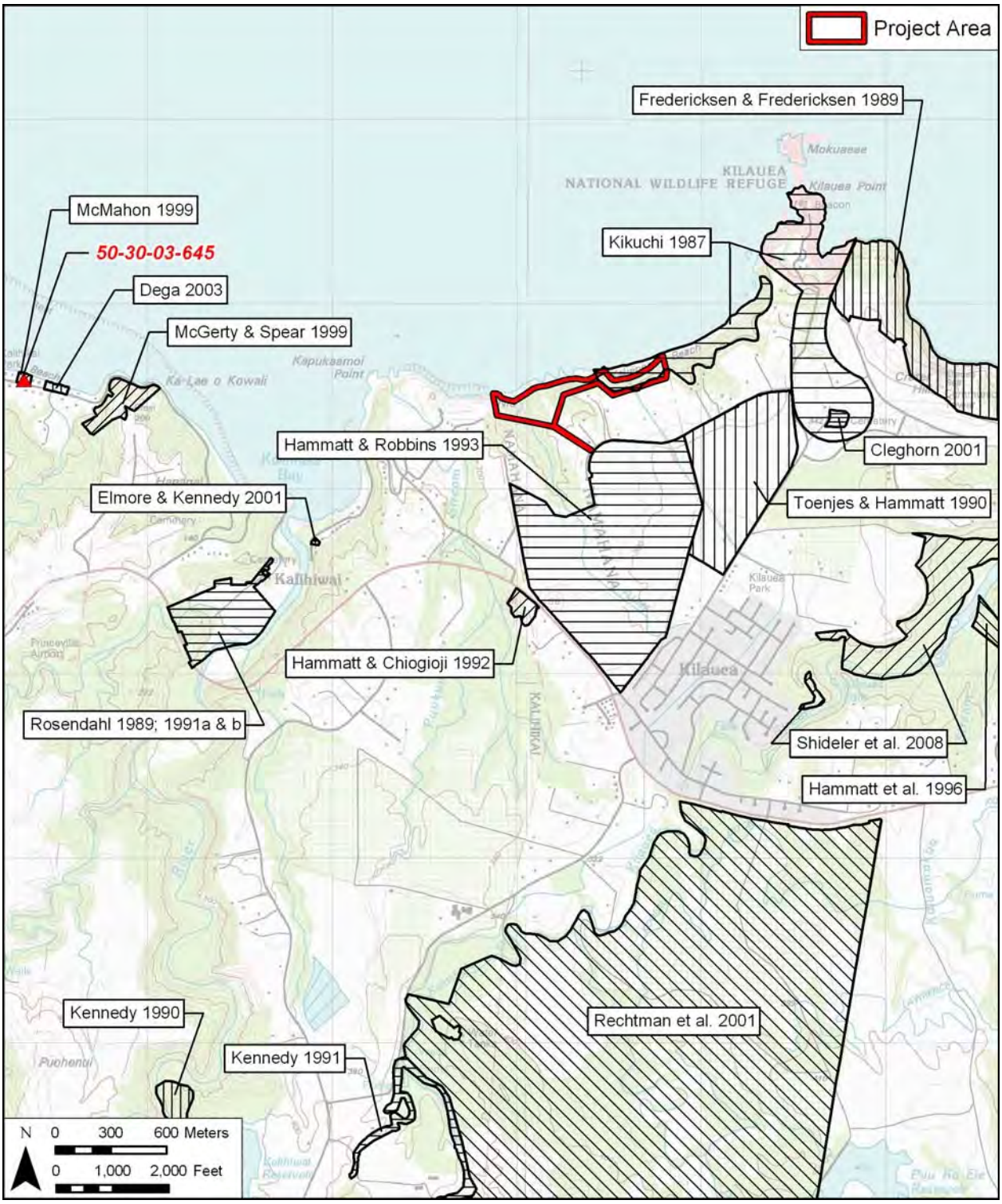

Figure 9. Map showing locations of previous archaeological studies in the vicinity of the project area

The location is uncertain (Bennett didn't find any trace) but the description suggests Pailio Heiau was not close to the present project area.

3.3 Handy and Handy's Native Planter Observations (1972)

Handy and Handy (1972) carried out a summary study of traditional Hawaiian agriculture and the life, lore and environment of native planters throughout the Hawaiian Islands. They did not address Namahana Ahupua‘a per se but noted the following at Kīlauea and Kāhili

> Kilauea is watered by a small river whose headwaters take the flow of streams above Kalihiwai as well as those coming down sloping kula lands above Kilauea. This is a peculiar terrain, with terraces along the north side of the river toward its seaward end belonging to Kilauea and those on the south side to the small ahupua‘a named Kahili. A mile upstream is a small terraced area, but beyond this there were no terraces, for the main stream flows in a narrow gulch, and so do other side streams which flow into the Kilauea River. Hawaiians evidently never developed lo‘i here because the neighboring kula land is too high above the streams for irrigation. This kula would have been excellent sweet-potato land. On the whole, Kilauea, despite a sizable river flowing through it, was a relatively small producer of taro because of the nature of its hinterland.
>
> Kahili is, as indicated above, part of the complex that includes Kalihiwai, Kalihikai and Kilauea. The three streams empty into the Kilauea River, which forms the boundary between Kilauea and Kalihi below the falls of the river. There are terraces on the south side of Kilauea River watered by two of Kahili's streams. This is doubtless why this area was part of Kahili rather than of Kilauea. Only one stream had terraces back from the river. Here to the kula land was good for sweet-potato planting. (Handy and Handy, 1972:421).

3.4 Recent Studies in the Vicinity

At least two archaeological surveys have been conducted in and adjacent to areas proposed as extensions to the Kīlauea Point National Wildlife Refuge. The Kikuchi 1987 study indicates that much of the eastern portion of the present project area was covered in archaeological survey. A discussion of these and other archaeological studies in the vicinity follows.

3.4.1 Kikuchi's Kīlauea Point National Wildlife Refuge Survey (1987)

In 1987, Wm. K. Kikuchi surveyed the present grounds of the Kīlauea Point National Wildlife Refuge and areas of proposed extension. Considering the significance to native Hawaiians of seabird nesting colonies found within the refuge, Kikuchi extended the limits of his survey to search for associated cultural features or material. One area of his survey abuts the northeastern end of the present project area at the west bank of the mouth of Kīlauea Stream. Surface remains of historic structures associated with Kīlauea Lighthouse are described, and limited subsurface testing was performed, but Kikuchi found no evidence of remains related to native Hawaiian culture.

Kikuchi (1987:4) indicates in his “Figure 3 Area Surveyed” map that an extensive area back of Kaupea Beach including much of the eastern portion of the present project area was an “Area Surveyed Outside of Refuge Area”. No details are provided at all. It is unclear whether Kikuchi himself surveyed the Kaupea Beach area (there are no references to any other archaeological studies), why the Kaupea Beach area was surveyed, or whether there were any finds (the absence of reference to finds suggests there were none).

3.4.2 Xamanek Researches Kīlauea Point National Wildlife Refuge Survey (Fredericksen and Fredericksen 1989)

Xamanek Researches (Fredericksen and Fredericksen 1989) surveyed extensions to the wildlife refuge including Crater Hill and Mōkōlea Point (parcel 19 of approximately 38 acres). Land use and history of tenure is well documented, followed by detailed descriptions of historic structural remains related to the transport and loading of sugar at Mōkōlea Point, a Second World War era radar installation on Crater Hill and Kīlauea Lighthouse. Though archaeological evidence of native Hawaiian exploitation of seabird colonies was one object of the survey, no such remains were observed.

3.4.3 Rosendahl (1989, 1991a and 1991b)

PHRI carried out a number of archaeological studies (Rosendahl 1989, 1991a and 1991b) at a Kalihiwai Valley Proposed Housesites project area on the northwest side of Kalihiwai Stream. Minimal findings were reported.

3.4.4 Toenjes and Hammatt Study of 94-Acres at Kīlauea (1990)

Two loci suggesting previous traditional Hawaiian activity were found and tested for subsurface deposits. Locus A was located in the southwest corner of the 94-acre parcel and was under papaya cultivation. Upon finding a water-rounded cobble and a small fragment of coral, an examination was made of the soil between every other row of trees in the grove. Indications of archaeological deposits were sparse and included two pieces of coral, one fragment of unidentified marine shell and several possible basalt flakes dispersed through the grove. The area of the papaya grove and scatter covered approximately 3,800 square meters (41,000 square feet).

Locus B was located in the central portion of the 94-acre parcel in an extensive former sugar cane field, then lying fallow. Much of the ground surface was clearly visible, with scattered indications of recent mechanized disturbance. The only suggestion of previous cultural activity consisted of sparsely scattered coral across an area of about 7,500 square meters (80,700 square ft.) No bone or shell material was observed in association with Locus B or anywhere else in the project area. Several possible flakes of basalt and one basalt core or possible adze blank were observed dispersed across the surface of the field apart from the coral scatter.

Subsurface testing at Locus A and Locus B, as well as in the area from which a basalt core was collected was conducted. Excavation exposed no culturally modified lithics. The presence of coral and coral sand in cane fields was noted as common, having been historically imported for the purpose of "liming" the soil. Lacking other archaeological components of Hawaiian culture, e.g. bone and shell midden, lithic debris or modified coral, the significance of these scatters was

regarded as minimal Examination of all other fields of the property indicated no archaeological remains of informational significance were present.

3.4.5 Hammatt and Chiogioji (1992)

Hammatt and Chiogioji (1992) carried out an archaeological inventory survey on a 15.17 acre property in Namahana and Kalihiwai on the *mauka* side of Kūhiō Highway approximately 3,000 feet south of the present study area. There were no significant finds. A practice of Kilauea sugar Company using marine sand with coral and shell as liming fertilizer for agricultural fields was noted.

3.4.6 Hammatt and Robbins (1993)

Hammatt and Robbins (1993) carried out an archaeological inventory survey on 204 acres adjacent to the *mauka* side of the present study area access corridor for a proposed Kilauea Golf Course project. Only one plantation-era site (consisting of three irrigation ditches) was documented.

3.4.7 Cleghorn (2001)

Cleghorn (2001) reports on archaeological monitoring carried out at the Kilauea Japanese Cemetery, (TMK: 5-2-4:49) located 2500 feet southeast of the present study area. There were no significant finds.

3.4.8 Elmore and Kennedy (2001)

Elmore and Kennedy (2001) carried out an archaeological inventory survey on a small (0.37 acre) property located on the east side of the mouth of the Kalihiwai River approximately 4,000 feet southwest of the present study area. A habitation site (SIHP # 50-30-03-671) was identified that included six burials.

3.4.9 Rechtman, Orr and Dougherty (2001) 1400-acre *Mauka* study

Rechtman Consulting (2001) carried out an Archaeological Inventory Survey of approximately 1400-acres about a mile south of the present project area in Kīlauea Ahupua‘a and Kalihi Wai Ahupua‘a at elevations from 300 feet to 764 feet. They only identified four sites all of which were related to plantation agriculture between 1881 and 1922.

3.4.10 Shideler et al. (2007) & (2008) Studies for Kilauea Falls Ranch

CSH carried out two studies for Kilauea Falls Ranch on the west side of Kīlauea Stream (aka Kahili Stream). A total of 62 features were identified within a total of five sites in a proposed agro-forestry area. Four of these five sites (SIHP # 50-30-04-579, -580, -582 and -583) are primarily or exclusively agricultural terraces The only exception at these four sites is SIHP # 50-30-04-580 features L and MM that are interpreted as temporary habitation features related to the agricultural terraces. One site (SIHP # 50-30-04-581) was understood as primarily post-contact and either a permanent habitation or work area.

The inventory survey study (Shideler et al. 2008:69) concluded that the approximately 1500-1800 mm (60-70 in.) of annual rainfall within that project area made cultivation possible without

irrigation. While it was concluded that there may well have been pre-contact ponded field (*lo‘i*) taro cultivation along the Kīlauea Stream flood plain, it was suggested that the vagaries of hurricane, tsunami, and flood may have made such planting down by the stream precarious. It was suggested that cultivation up on the steep slope may have been more secure.

The evidence from the *māhele* records indicates that there was little or no pre-contact permanent habitation within the Kilauea Falls Ranch project area per se although there was a community on the southeast side of the stream mouth from the 1840s well into the twentieth century. An interviewee, Ms. Sara H. Keahonui Jones, born in 1919 who had lived in the *makai* area of Kāhili Ahupua‘a most of her life, remembered: “the homes were all on stilts and once the water rose all the way up under the house.” The propensity of the Kāhili/Kīlauea Stream to flood may have encouraged development on the steep slope.

3.5 Background Summary and Predictive Model

Most of the archaeological studies in the flat tablelands of Namahana Ahupua‘a and vicinity (Toenjes and Hammatt 1990, Hammatt and Robins 1993, Ida and Hammatt 1997, Hammatt and Shideler 1998) have encountered very few sites other than remnants of plantation agriculture. Somewhat curiously the studies along the coastline (Kikuchi 1987, Fredericksen and Fredericksen 1989) found no pre-contact sites or deposits. Very few sites other than remnants of plantation agriculture would be expected in the flat tableland portion of Namahana. Some remnant of the road shown on the 1963 U.S. Geological Survey map (Figure 8) crossing the access way to the present project area might be extant.

On the other hand, the studies (Ching and Bordner 1978, Hammatt et al. 1996, McGerty et al. 1997, Shideler et al. 2008) of un-bulldozed valley areas that were less disturbed by plantation agriculture have reported a number of permanent habitation and agricultural complexes.

Section 4 Results of Fieldwork

4.1 Survey Findings

Cultural Surveys Hawai‘i’s fieldwork was conducted December 20, 2010 by three CSH archaeologists, Kendy Altizer, B.A., Gerald Ida, B.A. and Missy Kamai, B.A., under the general supervision of Hallett H. Hammatt, Ph.D. The fieldwork required approximately 2 person-days. In general, the purpose of the initial field work was to develop data on the nature, density, and distribution of archaeological sites within the project area.

The survey area consists of approximately 24 acres of conservation lands just west of Kīlauea Lighthouse, abutting “Secret Beach” on the north shore of the island of Kaua‘i. The conservation area has been modified in recent years by the addition of a series of staircases to access the beach, as well as to traverse the steeper portions of the area. The project area is bounded on the west side by privately owned parcels, which consist of well manicured gardens and houses.

The majority of the project area consists of steep slope and/or cliff with little possibility for cultural resources or historic properties. Taro was observed in the southern end of the project area, growing at the base of a steep *pali*. There was no evidence of human modification. No cultural material was observed within the project area. Vegetation observed includes tall stands of Ironwood trees, ti, *naupaka*, ferns, *wedelia*, buffle grass, crab grass, *hala*, *hilahila*, and palm trees.

The presence of taro on quite steep cliffs (see Figure 13 to Figure 15) was notable. These may have grown up from shoots washed down from above. Very small patches of taro and other Polynesian cultigens are a feature of small spring and waterfall pools near the coast of the north shore of Kaua‘i and it is certainly possible these are the offspring of Hawaiian plantings of some antiquity.

Somewhat similarly the bamboo shower pipe (Figure 15) could be quite modern or may have antecedents extending back in time at this location.

Figure 10. Project area overview from central portion of project area, view to north

Figure 11. Project area overview from northeast end of project area, view to southwest

Figure 12. Project area overview of northeastern end of project area showing stairs, view to south

Figure 13. View of taro growing on *pali* on east side of small central headland, view to southwest

Figure 14. View of taro growing on *pali* on west side of small central headland, view to southeast

Figure 15. View of modern bamboo shower pipe (note taro on steep cliff above) on west side of small central headland, view to southeast

Figure 16. Stairs facilitating beach access, west central coastal portion of project area, view to southeast

Figure 17. General view of eastern end of project area, view to southeast

Section 5 Summary and Interpretation

Our background research and field inspection have identified no historic properties on the 23.8 acre coastal Namahana study area. None are believed to be present. The conservation area has been modified in recent years by the addition of a series of staircases to access the beach, as well as to traverse the steeper portions of the area. No historic properties are believed to have been impacted by any land-altering activities of the recent past. There is no indication that these paths and stairs have had any adverse impact to historic resources (as no historic properties were observed). The de facto channelizing and controlling of pedestrian traffic may have served to minimize erosion.

No further archaeological study is recommended.

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