DEPARTMENT OF ENVIRONMENTAL SERVICES
KA ʻOIHANA LAWELAWE KAIĀPUNI
CITY AND COUNTY OF HONOLULU

1000 ULUʻŌHIʻA STREET, SUITE 308 • KAPOLEI, HAWAIʻI 96707
PHONE: (808) 768-3486 • FAX: (808) 768-3487 • WEBSITE: honolulu.gov

RICK BLANGIARDI
MAYOR
MEIA

ROGER BABCOCK, JR., Ph.D., P.E.
DIRECTOR
PO'O

DANIEL BRIECK, P.E.
DEPUTY DIRECTOR
HOPE PO'O

IN REPLY REFER TO:
WEC.PE 25-029

September 16, 2025

Ms. Mary Alice Evans, Director
Office of Planning and Sustainability Development
State of Hawaiʻi
235 South Beretania Street, 6th Floor
Honolulu, Hawaiʻi 96813

Dear Ms. Evans:

SUBJECT: Kahaluʻu Wastewater Pump Station - Fuel Storage Tank Improvement
TMK 4-7-011: 016
Kahaluʻu, Oʻahu

The City and County of Honolulu, Department of Environmental Services is transmitting the subject Draft Environmental Assessment and Anticipated Finding of No Significant Impact (DEA-AFONSI) for the subject project. The DEA-AFONSI has been prepared pursuant to Chapter 343, Hawaiʻi Revised Statues, and Chapter 11-200.1, Hawaiʻi Administrative Rules.

We respectfully request that the DEA-AFONSI be published in the next available issue of the Environmental Notice. Materials required for the publication are being provided via the Environmental Review Program's online form.

Should you have any questions, please contact Audrey Uyema Pak from our Division of Wastewater Engineering and Construction at (808) 768-8766.

Sincerely,

Digitally signed by
Babcock, Roger W
Date: 2025.09.17
12:01:28 -10'00'

Roger Babcock, Jr., Ph.D., P.E.
Director

Enclosure

cc: ENV/OAS

From: dbedt.opsd.erp@hawaii.gov
To: DBEDT OPSD Environmental Review Program
Subject: New online submission for The Environmental Notice
Date: Tuesday, September 30, 2025 8:34:35 PM

Action Name

Fuel Storage Tank Improvements Kahaluʻu Wastewater Pump Station

Type of Document/Determination

Draft environmental assessment and anticipated finding of no significant impact (DEA-AFNSI)

HRS §343-5(a) Trigger(s)

- (1) Propose the use of state or county lands or the use of state or county funds

Judicial district

Koʻolaupoko, Oʻahu

Tax Map Key(s) (TMK(s))

(1) 4-7-011:016

Action type

Agency

Other required permits and approvals

SMA

Proposing/determining agency

Department of Environmental Services

Agency jurisdiction

City and County of Honolulu

Agency contact name

Audrey Uyema Pak

Agency contact email (for info about the action)

audrey.uyemapak@honolulu.gov

Email address for receiving comments

comments@townscapeinc.com

Agency contact phone

(808) 768-8766

Agency address

1000 Uluohia Street, Suite 308
Kapolei, HI 96707
United States
Map It

Is there a consultant for this action?

Yes

Consultant

Townscape, Inc.

Consultant contact name

Gabrielle Sham

Consultant contact email

gabrielle@townscapeinc.com

Consultant contact phone

(808) 536-6999

Consultant address

900 Fort Street Mall, Suite 1160
Honolulu, HI 96813
United States
Map It

Action summary

The Kahalu'u Wastewater Pump Station contains an underground storage tank (UST) that stores diesel fuel for a standby generator. To comply with current fuel storage regulations and to strengthen environmental protection efforts, the City Department of Environmental Services Division of Wastewater Engineering and Construction is proposing to replace the existing 1,000 gallon UST system and piping with a new 1,000-gallon aboveground storage tank. Additionally, the project includes replacing the underground fuel piping, fuel monitoring panel, and all associated sensors, as well as connecting the new fuel monitoring panel to the supervisory control and data acquisition (SCADA) system.

Reasons supporting determination

Refer to Section 6.

Attached documents (signed agency letter & EA/EIS)

- WEC.PE-25-029_Kahaluu_Ada.pdf
- Kahaluu-WWPS-Draft-EA-Submittal-to-ERP_Ada.pdf

ADA Compliance certification (HRS §368-1.5):

The authorized individual listed below certifies that documents submitted are unlocked, searchable, and ADA compliant. Audio files include transcripts, captions, or alternative descriptions.

Action location map

- Project-Site-Kahaluu-WWPS.zip

Authorized individual

Gabrielle Sham

Authorized individual email

gabrielle@townscapeinc.com

Authorized individual phone

(808) 536-6999

Authorization

- The above named authorized individual hereby certifies that he/she has the authority to make this submission.

Draft Environmental Assessment
for the
Fuel Storage Tank Improvements
Kahaluʻu Wastewater Pump Station
in Kahaluʻu, Island of Oʻahu, Hawaiʻi

Prepared For:

City and County of Honolulu
Department of Environmental Services

CITY AND COUNTY OF HONOLULU

ENV Community. Commitment. Continuity.

Prepared By:

TOWNSCAPE, INC.
Environmental & Community Planning

September 2025

This page intentionally left blank.

Draft Environmental Assessment
Fuel Storage Tank Improvements
Kahaluʻu Wastewater Pump Station
in Kahaluʻu,
Island of Oʻahu, Hawaiʻi

Tax Map Key (1) 4-7-011:016

This environmental document has been prepared pursuant to
Chapter 343, Hawaiʻi Revised Statutes.

Prepared For:

City and County of Honolulu
Department of Environmental Services
1000 Uluʻōhiʻa Street Suite 308
Kapolei, Hawaiʻi 96707

Prepared By:

Townscape, Inc.
900 Fort Street Mall, Suite 1160
Honolulu, Hawaiʻi 96813

September 2025

This page intentionally left blank.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF APPENDICES

LIST OF ABBREVIATIONS

AST	Aboveground Storage Tank
ATS	Automatic Transfer Switch
BMP	Best Management Practices
BWS	Board of Water Supply
CFR	Code of Federal Regulations
CMU	Concrete Masonry Unit
CRB	Coconut Rhinoceros Beetles
DLNR	Department of Land and Natural Resources
DOFAW	Division of Forestry and Wildlife
DOH	Department of Health
DPP	Department of Planning and Permitting
EA	Environmental Assessment
HAR	Hawaiʻi Administrative Rules
HECO	Hawaiian Electric Company, Inc.
HFD	Honolulu Fire Department
HPD	Honolulu Police Department
HRS	Hawaiʻi Revised Statutes
NFPA	National Fire Protection Association
LUO	Land Use Ordinance
MCC	Motor Control Center
MGD	Million gallons per day
NRHP	National Register of Historic Places
PVC	Polyvinyl Chloride
ROH	Revised Ordinances of Honolulu
SCADA	Supervisory Control and Data Acquisition
SCP	Sustainable Communities Plan
SHPD	State Historic Preservation Division
SLR	Sea Level Rise
SMA	Special Management Area
UST	Underground Storage Tank
USFWS	U.S. Fish and Wildlife Service
WWPS	Wastewater Pump Station
WWTP	Wastewater Treatment Plant

This page intentionally left blank.

PROJECT SUMMARY	
Project Name:	Fuel Storage Tank Improvements Kahaluʻu Wastewater Pump Station
Proposing and Determining Agency:	City & County of Honolulu Department of Environmental Services 1000 Uluʻōhiʻa Street Suite 308 Kapolei, Hawaiʻi 96707
HRS, Chapter 343 Trigger	Use of County lands
Location:	Kahaluʻu, Oʻahu, Hawaiʻi
Tax Map Keys:	(1) 4-7-011:016
Project Address:	47-511 Kamehameha Hwy Kāneʻohe, Hawaiʻi 96744
Land Area:	0.202 acres (or 8,778 square feet) parcel area
Recorded Fee Owner:	City & County of Honolulu (Fee Owner)
Existing Use:	Wastewater Pump Station
Proposed Use:	Wastewater Pump Station
Community Plan Region:	Koʻolau Poko Sustainable Communities Plan
Land Use Designations:	
State Land Use	Urban
County Zoning	B-1 Neighborhood Business
Special Management Area:	In Special Management Area
Proposed Action:	The proposed project involves replacing the existing underground fuel storage tank with a new 1,000-gallon aboveground fuel storage tank, replacing the underground fuel piping, fuel monitoring panel, and all associated sensors, as well as connecting the new fuel monitoring panel to the supervisory control and data acquisition (SCADA) system.
Agency Determination:	Anticipated Finding of No Significant Impact

This page intentionally left blank.

1. SETTING AND PROJECT DESCRIPTION

1.1. Background and Need

The Kahaluʻu Wastewater Pump Station (WWPS), owned by the City and County of Honolulu, has been in operation since 1993. It serves an area of approximately 163 acres, which primarily includes residential neighborhoods and the upstream Laenani WWPS. The Kahaluʻu WWPS contains an underground storage tank (UST) that stores diesel fuel for a standby generator. The generator automatically activates during an outage and provides full operational power to the pump station, including the sewage pump, support equipment, and lighting.

To comply with current fuel storage regulations and to strengthen environmental protection efforts, the City Department of Environmental Services Division of Wastewater Engineering and Construction is proposing to upgrade the existing UST along with making other related improvements. Pursuant to Hawaiʻi Administrative Rules (HAR) 11-280.1, all USTs and piping must have secondary containment and use interstitial monitoring to detect releases from tanks and piping by July 15, 2028. The rules are designed to regulate the release of fluids from outdated tanks due to structural failure, corrosion, or spills and overfills.

Without the emergency backup power system, the WWPS could experience system downtime and sewage backups, both of which are costly and environmentally harmful. In addition to improving the existing UST, upgrades to the fuel monitoring panels are needed. The fuel monitoring panels detect fuel levels and inform the City when fuel is low. Monitoring fuel levels allows for timely refueling, which helps to ensure the generator is ready to use. The new panel will include sensors that provide real-time data on fuel levels within the storage tanks.

Environmental review of this project is required by Hawaiʻi Revised Statutes (HRS) Chapter 343. The statutory trigger for the preparation of this Environmental Assessment (EA) is the use of State and County funds and lands. Given that the parcel is in the Special Management Area (SMA), the proposed project must comply with Revised Ordinances of Honolulu (ROH) Chapter 25.

1.2. Proposed Action

Improvements to the WWPS include replacing the existing 1,000 gallon UST system and piping with a new 1,000-gallon aboveground storage tank (AST). Additionally, the project includes replacing the underground fuel piping, fuel monitoring panel, and all associated sensors, as well as connecting the new fuel monitoring panel to the supervisory control and data acquisition (SCADA) system.

1.3. Site Location and Description

The Kahaluʻu WWPS facility is located at 47-511 Kamehameha Highway in the ahupuaʻa of Kahaluʻu, district of Koʻolaupoko, on the island of Oʻahu in the state of Hawaiʻi. It is located in the rural community of Kahaluʻu, on flat land near the roundabout intersection of Kahekili Highway and Kamehameha Highway. The WWPS parcel, approximately 0.2 acres, is immediately bordered by Kahaluʻu Fishpond to the east, a gas station to the west, Calvary Chapel Kāneʻohe to the north, and Kamehameha Highway to the south (see Figure 1). On the mauka side of the intersection, about 400 feet from the WWPS, is the Kahaluʻu Hygienic Store, a notable community landmark. A concrete masonry unit (CMU)-wall surrounds the WWPS parcel on all sides. Vehicular access to the project site is via a paved driveway fronting Kamehameha Highway.

The State land use designation for the project site is Urban (see Figure 2), which is characterized by city-like concentrations of people, structures and services. Urban land uses are subject to the City's land use policies and controls. The City's Land Use Ordinance (LUO) classifies the project site as B-1 Neighborhood Business (see Figure 3). B-1 is the Neighborhood Business District and according to LUO Chapter 21-3.110, these are areas to "provide relatively small areas that serve the daily retail and other business needs of the surrounding population" and is "intended that this district be generally applied to areas within or adjacent to urban residential areas, along local and collector streets, but not along major travel routes or on a large scale basis".

1.4. Existing Facility

1.4.1. Pump Station Description

This section is based on information described in the Kahaluʻu WWPS Operations Manual prepared by Fukunaga & Associates, Inc. in December 2012, and the Preliminary Engineering Report prepared by Okahara and Associates, Inc. in August 2025. Refer to Figure 4 for a layout of the existing site plan.

With an average design flow of 0.35 million gallons per day (mgd) and a peak flow of 2.0 mgd, the Kahaluʻu WWPS collects wastewater from a low point in its service area and pumps it to a higher elevation along Kahekili Highway through a 12-inch force main. This force main extends 5,487 linear feet to manhole #133170, where the wastewater then flows by gravity to the Ahuimanu Wastewater Pretreatment Facility and, eventually, to the Kailua Regional Wastewater Treatment Plant (WWTP). An interconnection of the Kahaluʻu Housing WWPS force main runs in parallel with the Kahaluʻu WWPS force main near the southwest corner of the

Kahaluʻu Housing WWPS property and is opened during emergencies to prevent overflow.

The pump station building is a three-story structure with CMU walls, consisting of a pump floor, an intermediate floor, and a ground floor. The ground floor, which includes the Motor Room and Generator Room, is approximately 588 square feet and has a finished floor elevation of ten feet above mean sea level. The intermediate and pump floors are similar to the ground floor in area but have a finished floor elevation below mean sea level of 1.33 feet and 13.17 feet respectively. The Generator Room houses the generator, day tank, and fuel monitoring panel.

1.4.2. Fuel System

The Kahaluʻu WWPS facility has a backup power system when normal Hawaiian Electric Company, Inc. (HECO) service fails. There are two major components to the system: the standby generator and the automatic transfer controller.

The fuel system for the existing 100kW, 480 volt, diesel standby generator includes a day tank installed within the Generator Room of the WWPS and a 1,000-gallon, single-walled, fiberglass UST located on the southeastern corner of the parcel. The UST, which is approximately 1.0 feet above mean sea level at its invert and contains a sump leak sensor and a fuel inventory sensor, feeds the 50-gallon day tank (Simplex, Model SST 50). The supply and return fuel piping runs underground from the UST to the outside of the Generator Room. From there, the fuel piping runs aboveground to the day tank. Existing aboveground fuel oil piping is black steel, while the underground fuel oil piping is double containment fiberglass.

In the event of the loss of commercial power, the Automatic Transfer Switch (ATS), which is the mechanism that allows the power for the pump station to be changed between the normal power source and the emergency power source, switches the entire station to operate on the generator. The ATS monitors when power from HECO is restored and transfers the WWPS back to the normal service.

1.4.3. Electrical and Monitoring Systems

The facility is powered by a motor control center (MCC), which is located on the first floor of the Motor Room. The utility service to the MCC is provided by HECO. The MCC serves sewage pumps, exhaust fans, and a 10kVA dry-type transformer. A fuel monitoring panel (Veeder Root, Model TLS-300C) monitors the sensors inside the fuel storage tank to gauge fuel levels and to detect leaks. The SCADA cabinet, located on the first floor of the Motor Room, monitors signals for various equipment including the fuel monitoring panel and the day tank, in the pump station. It has an existing conduit path and wiring for the day tank and fuel monitoring control panel.

The existing fuel monitoring panel and day tank are also both fed by Panel A, a 208Y/120V, 3-phase, 4-wire power panel with a 3P100A main circuit breaker.

1.5. Project Details

The proposed project includes the following actions (see Figure 5 to 9):

Civil

- Excavate area to remove the existing 1,000-gallon UST, including associated fuel lines, conduit, and vent line. Backfill to the bottom of the surface restoration layer. The slab of concrete beneath the UST will be abandoned in place.
- Remove the existing concrete pavement above the existing UST and backfill it after removal of the UST. The backfill will be topped with a non-woven geotextile fabric and four inches of crushed gravel to match the surrounding ground. Portions of the existing concrete curb will be removed and restored. Repave roadway areas where the existing fuel line will be removed.
- Excavate area to install the new 1,000-gallon AST.
- Install eight pipe bollards around the AST.

Architectural

- Paint existing exterior masonry walls and miscellaneous surface incidental to scope using existing colors.
- Paint a minimum of one prime coat and two finish coats on all interior surfaces incidental to scope, conforming to existing standard color palette.

Structural

- Install concrete pads for the new AST and new day tank. The AST requires 14-inch pedestals at the tank supports. A new penetration through the existing wall will be needed to install the new equipment in the Generator Room.
- Install a six-foot high, one-foot thick, reinforced concrete wall along the makai side of the AST to serve as a wave barrier. The wall will be designed to withstand a wave breaking three feet above the existing grade with a force of 1,500 pounds per linear foot of wall, or a hydrostatic pressure of 550 pounds per square foot.

Mechanical

- Replace the existing 1,000-gallon UST with a new 1,000-gallon ConVault AST at the north end of the property, which was selected as the most suitable location to accommodate aboveground fuel piping without crossing driveways or introducing tripping hazards. The AST will be a double wall steel tank encased in concrete measuring 11 feet long, four feet four inches high, and five feet eight inches wide, weighing 28,609 pounds with a full tank.
- Remove existing underground one-inch fuel supply and fuel return piping and install new fuel supply and return piping (one-inch Type 316 Stainless Steel) from the AST to the day tank aboveground. Existing pipe penetrations will be reused where feasible, otherwise, a new penetration will be made.
- Install a SCADA compatible fuel monitoring panel and connect to existing SCADA cabinet.
- Install interstitial monitoring and inventory sensors on the AST and integrated with the fuel monitoring panel.
- Replace the existing 50-gallon fuel oil day tank and associated piping/wiring and conduit in the generator room with a new 60-gallon day tank with two supply pumps, one return pump, and one hand pump.

Figure 1. Location & Vicinity Map

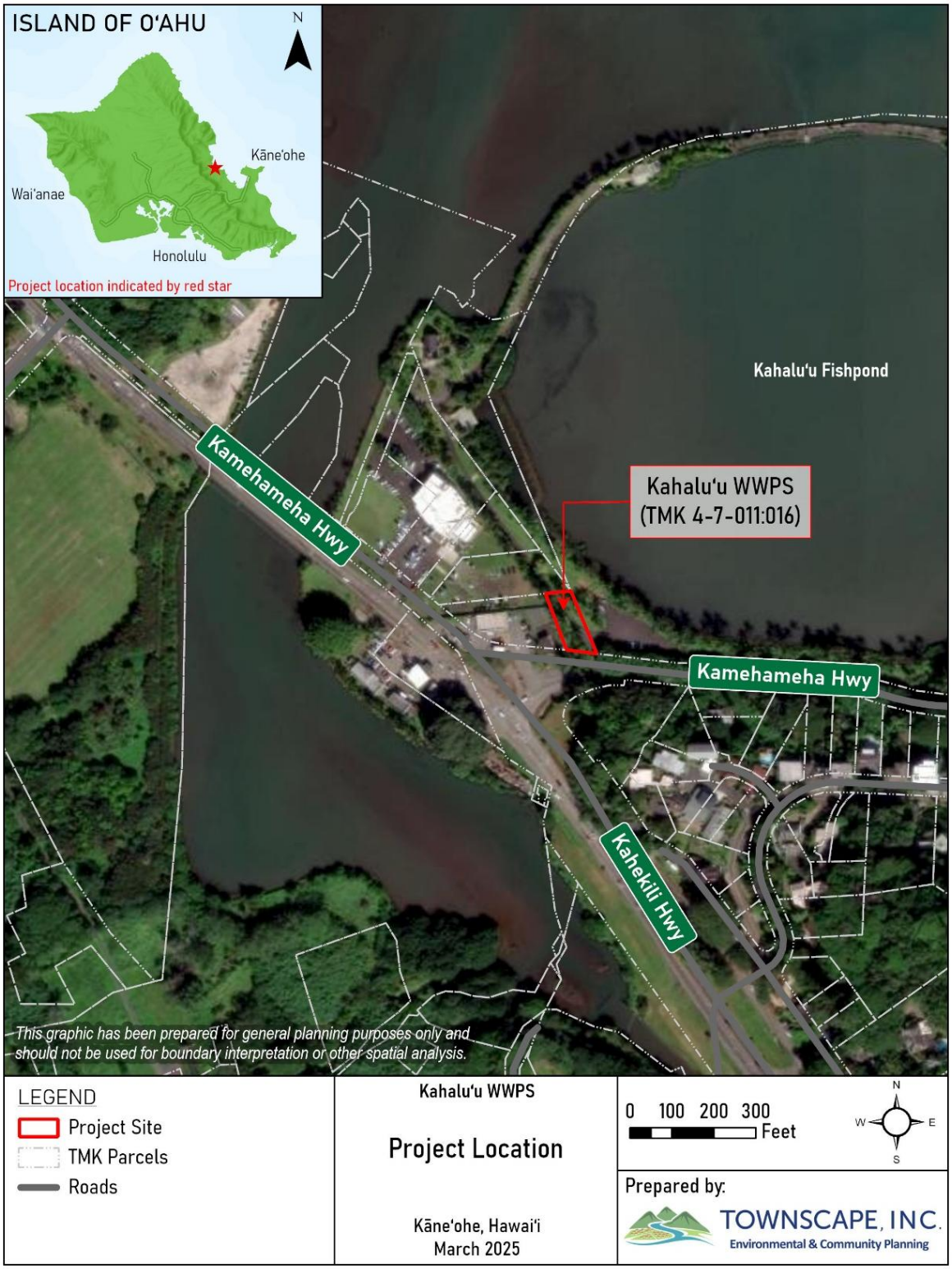


Figure 2. State Land Use Map

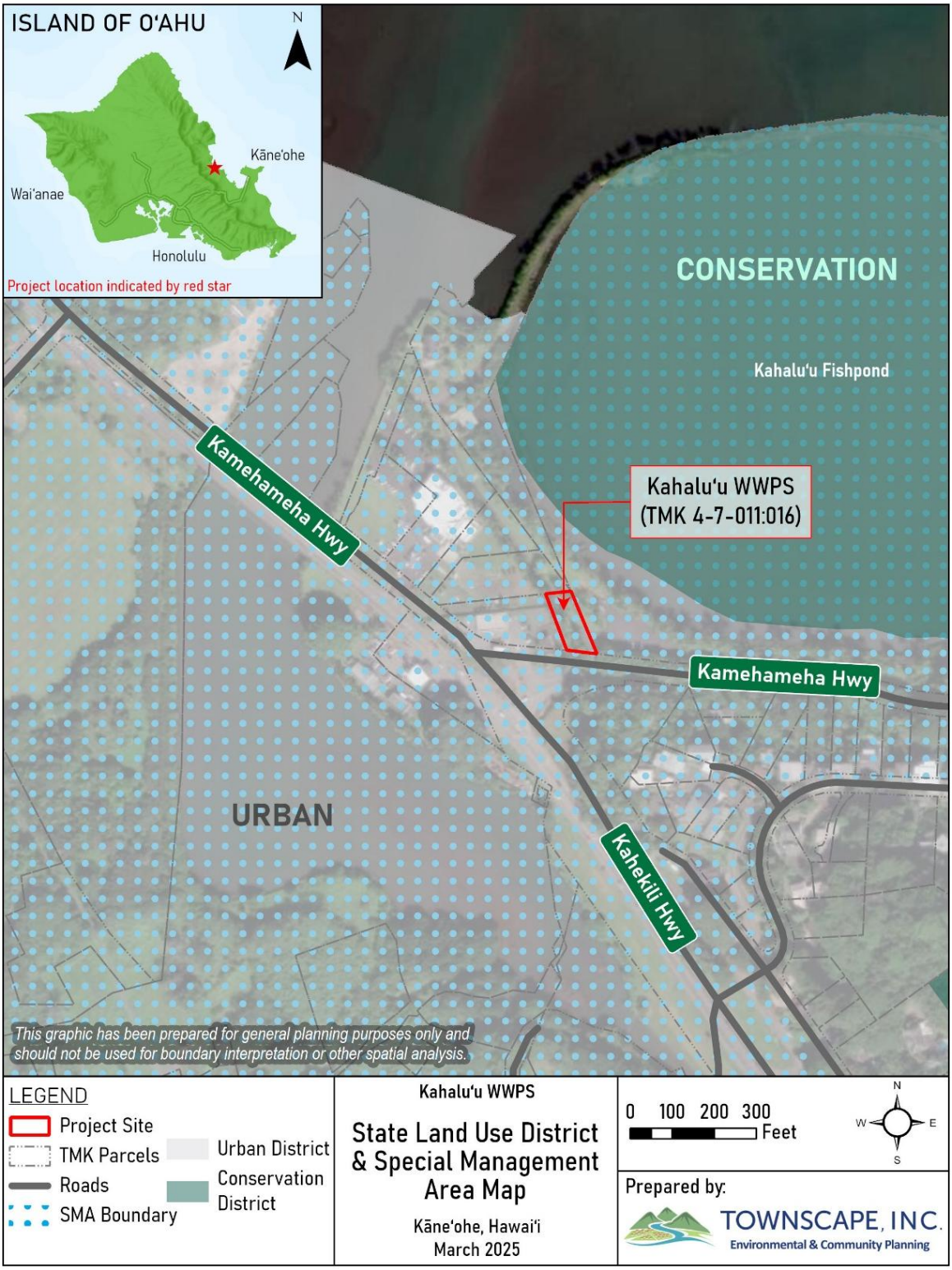


Figure 3. City Zoning Map

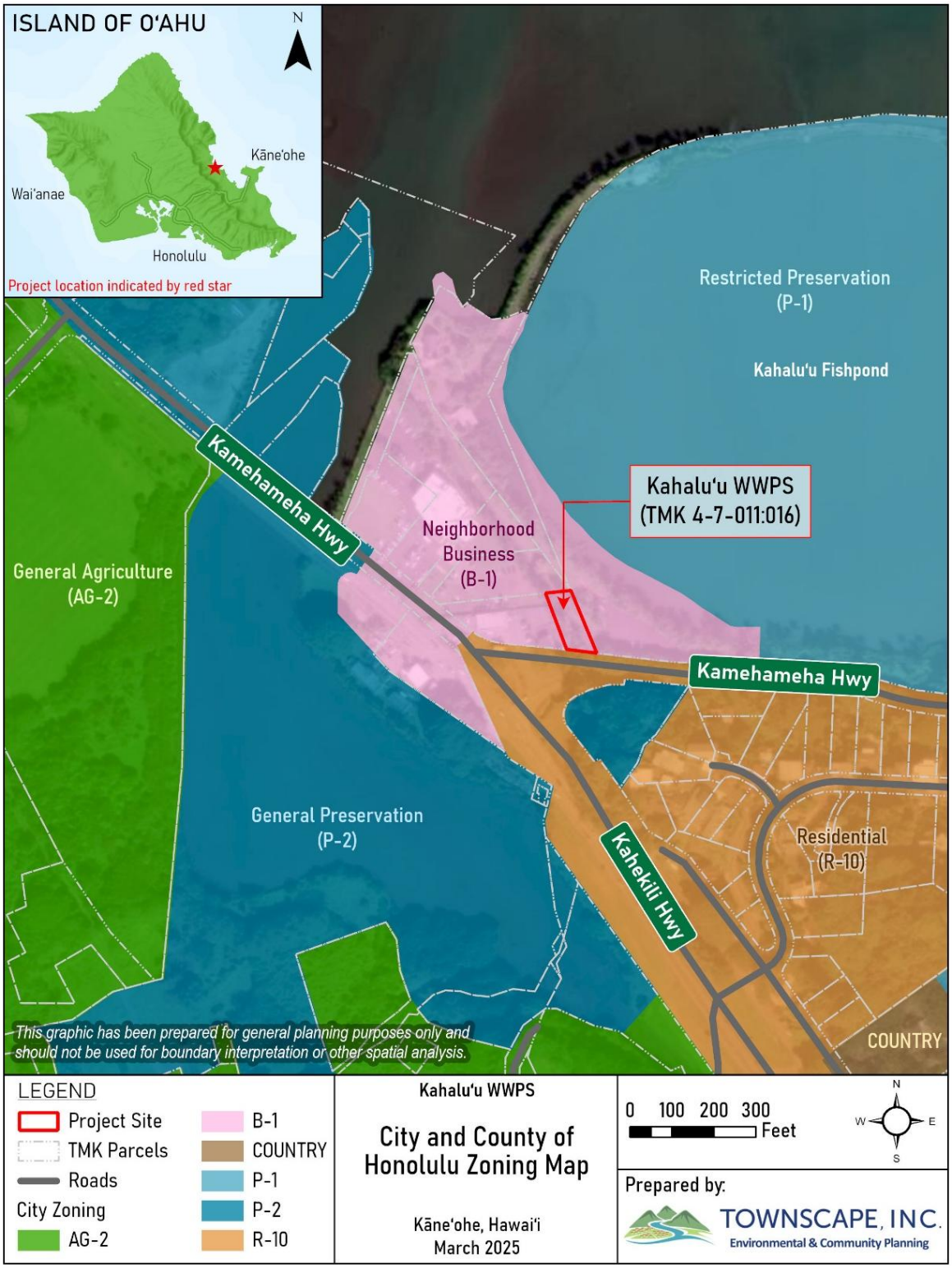


Figure 4. Existing Site Plan (Source: Fukunaga and Associates, Inc., 2012)

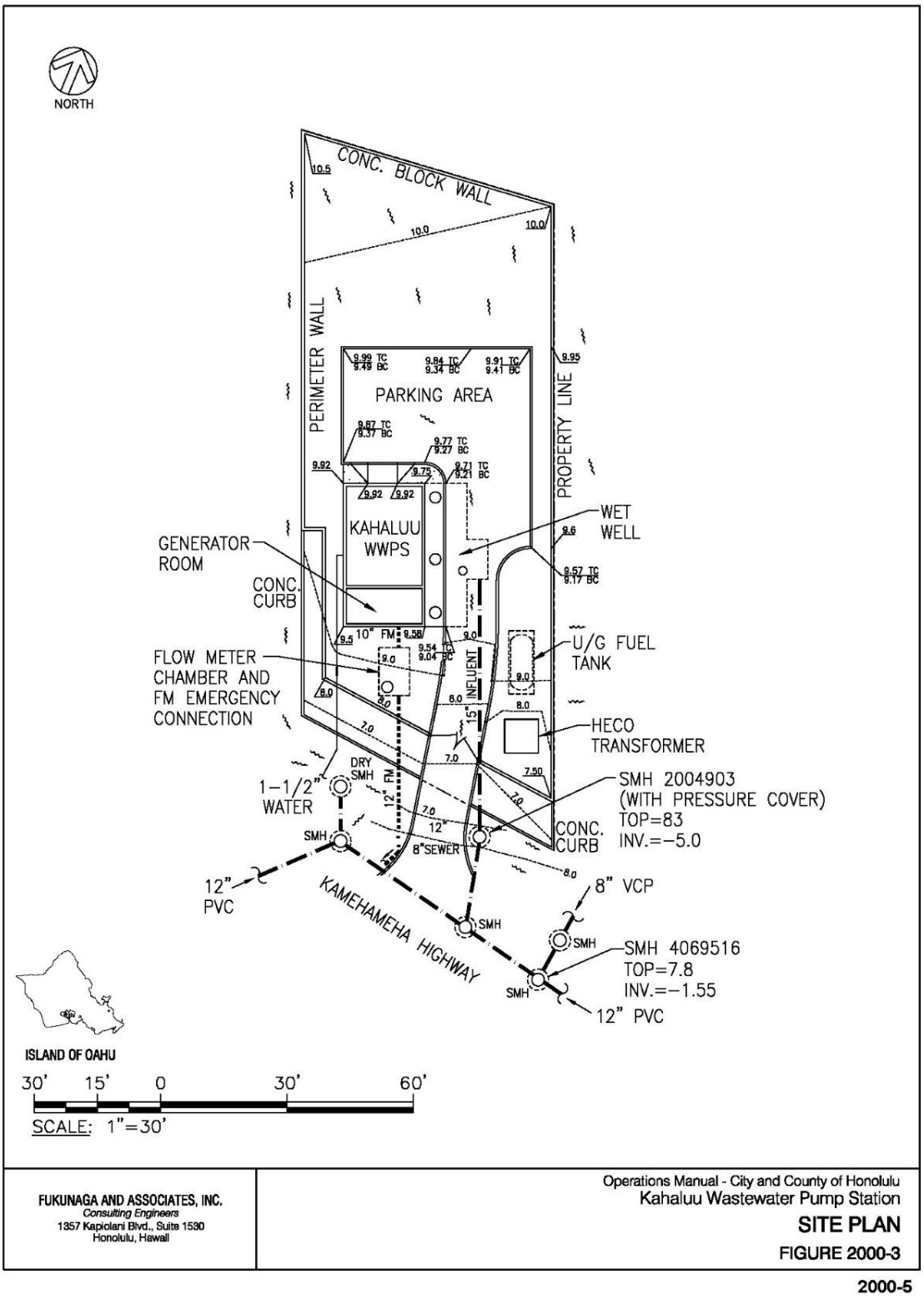


Figure 5. Mechanical Demolition Plan

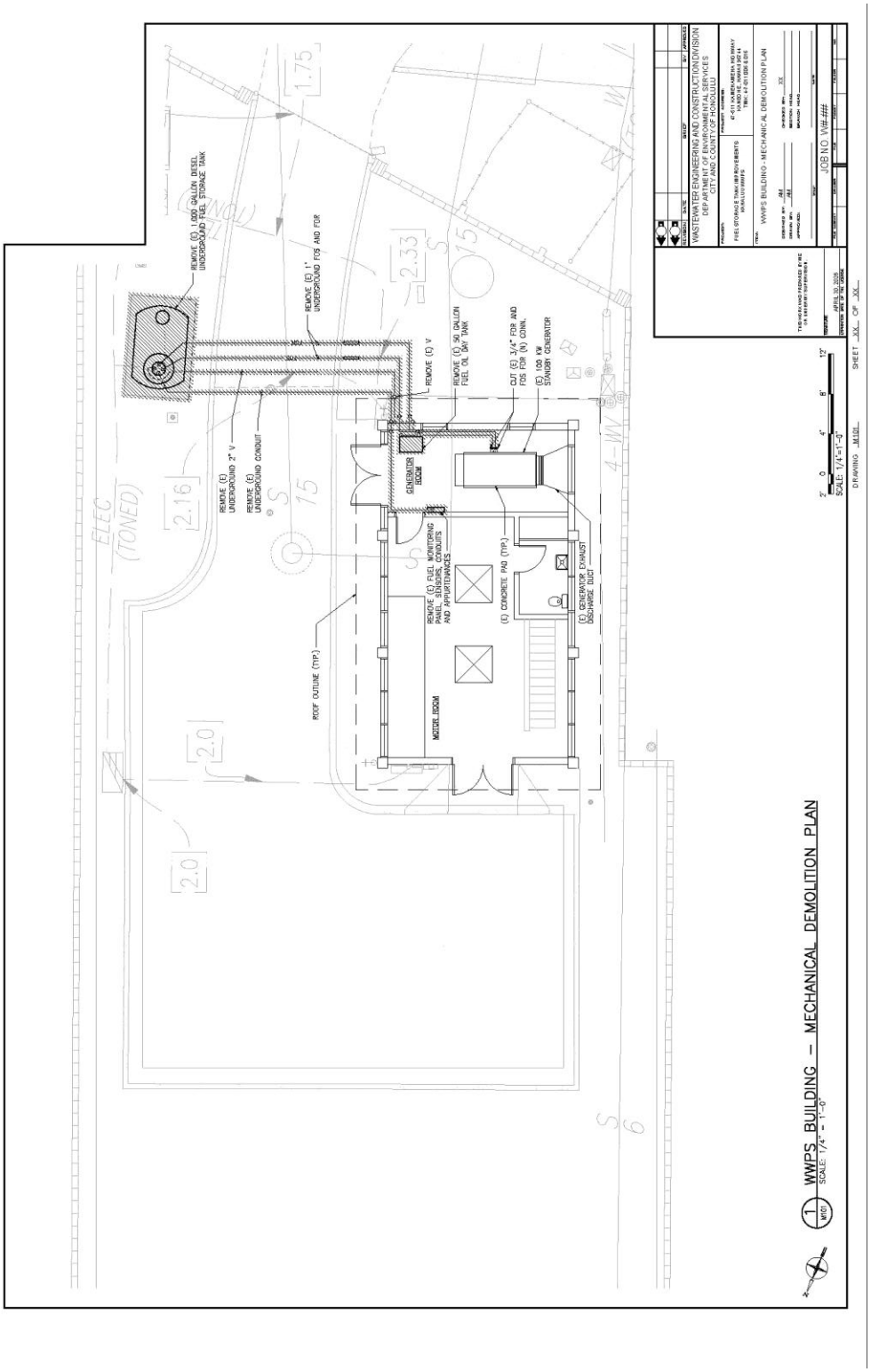


Figure 6. Demolition Floor Plan

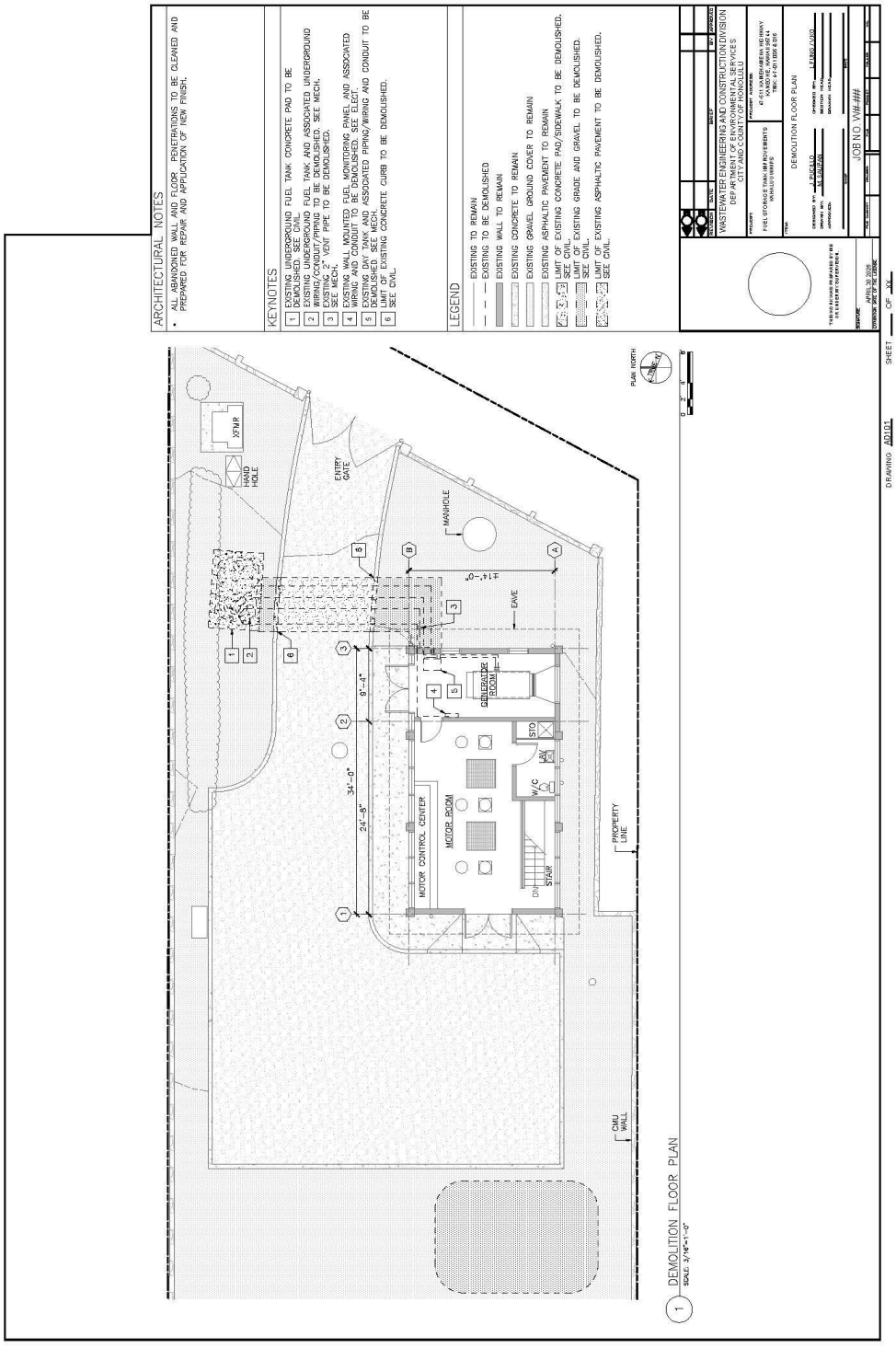


Figure 7. Mechanical Plan

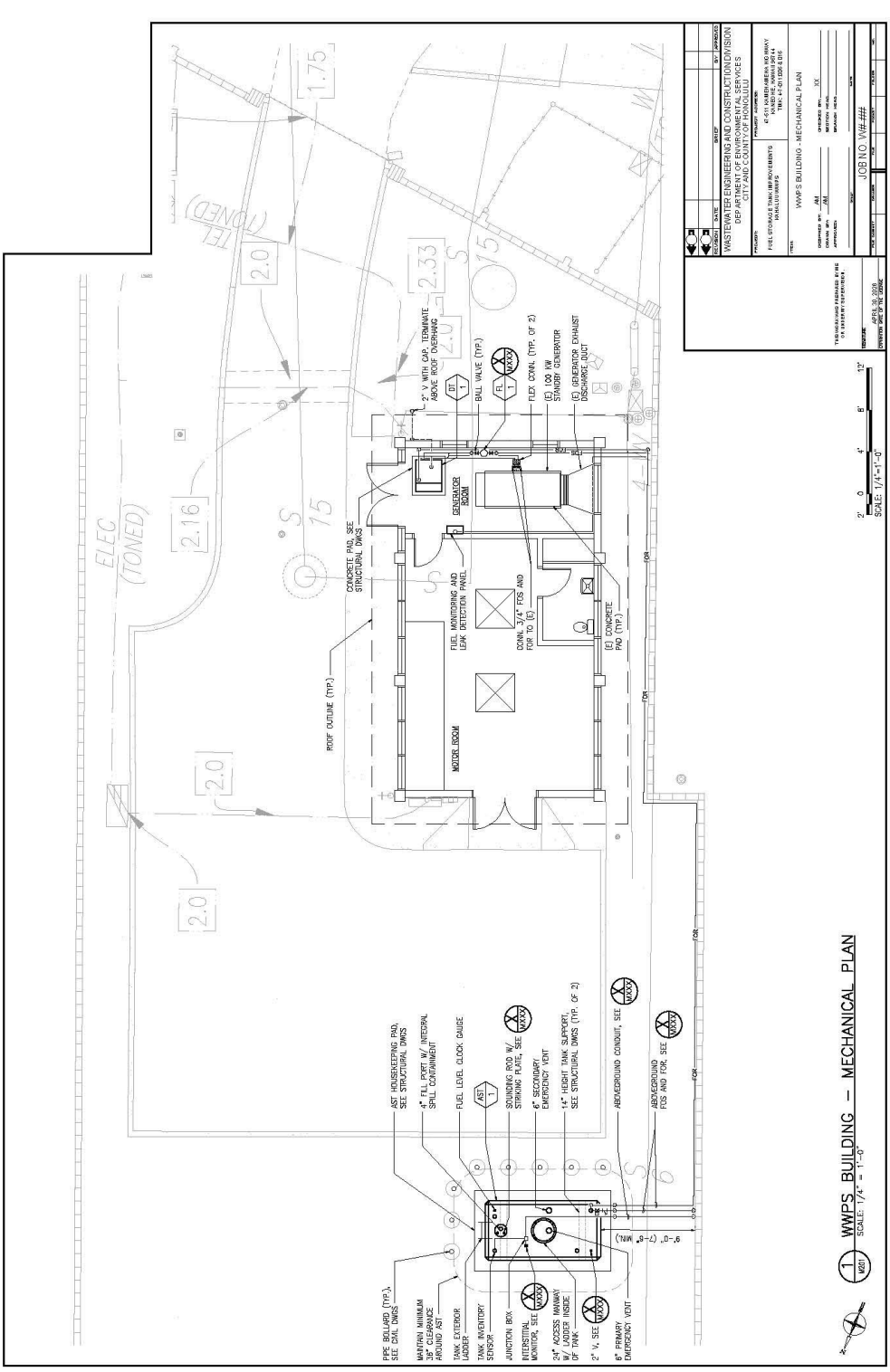


Figure 8. Floor Plan

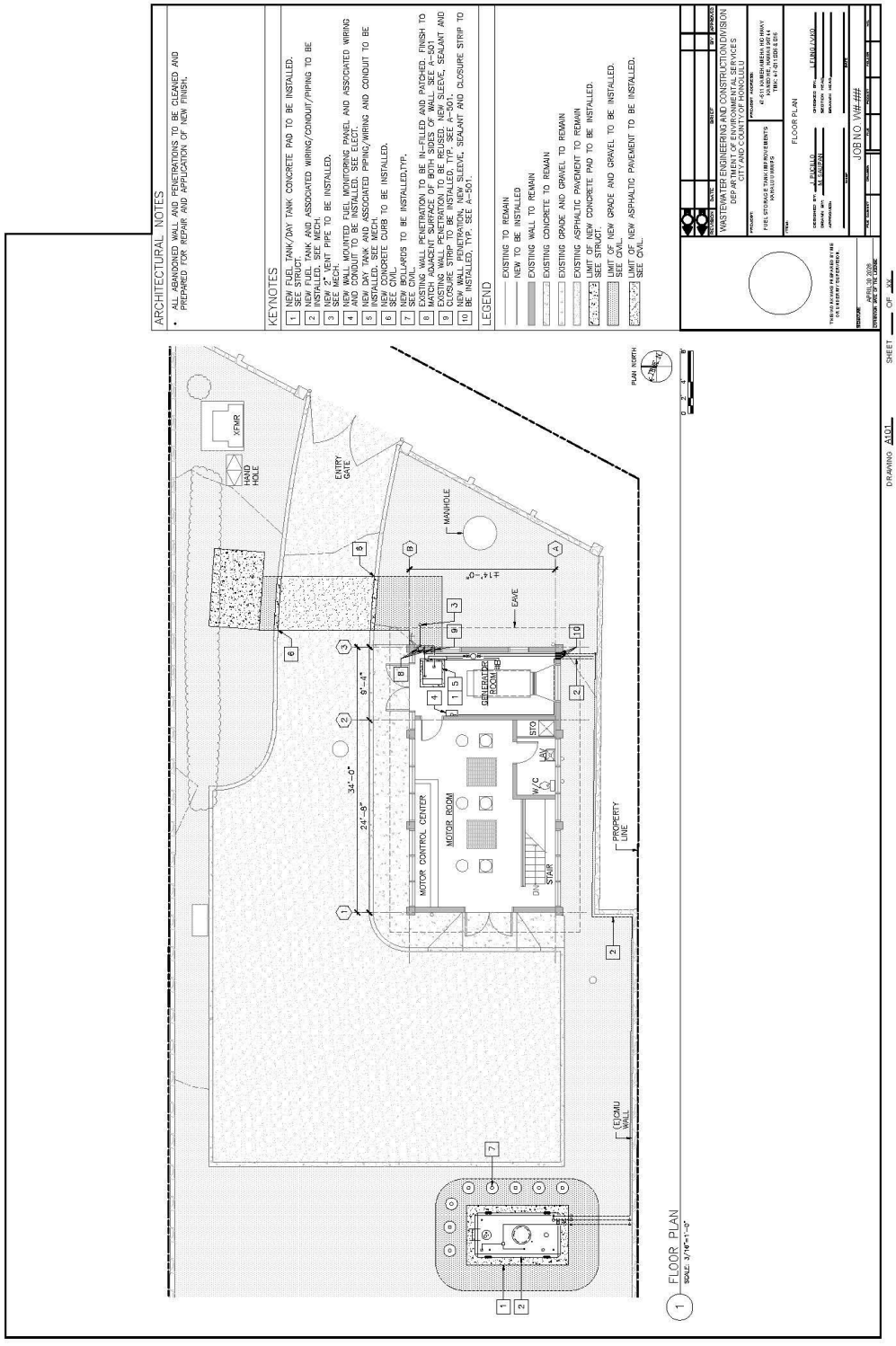
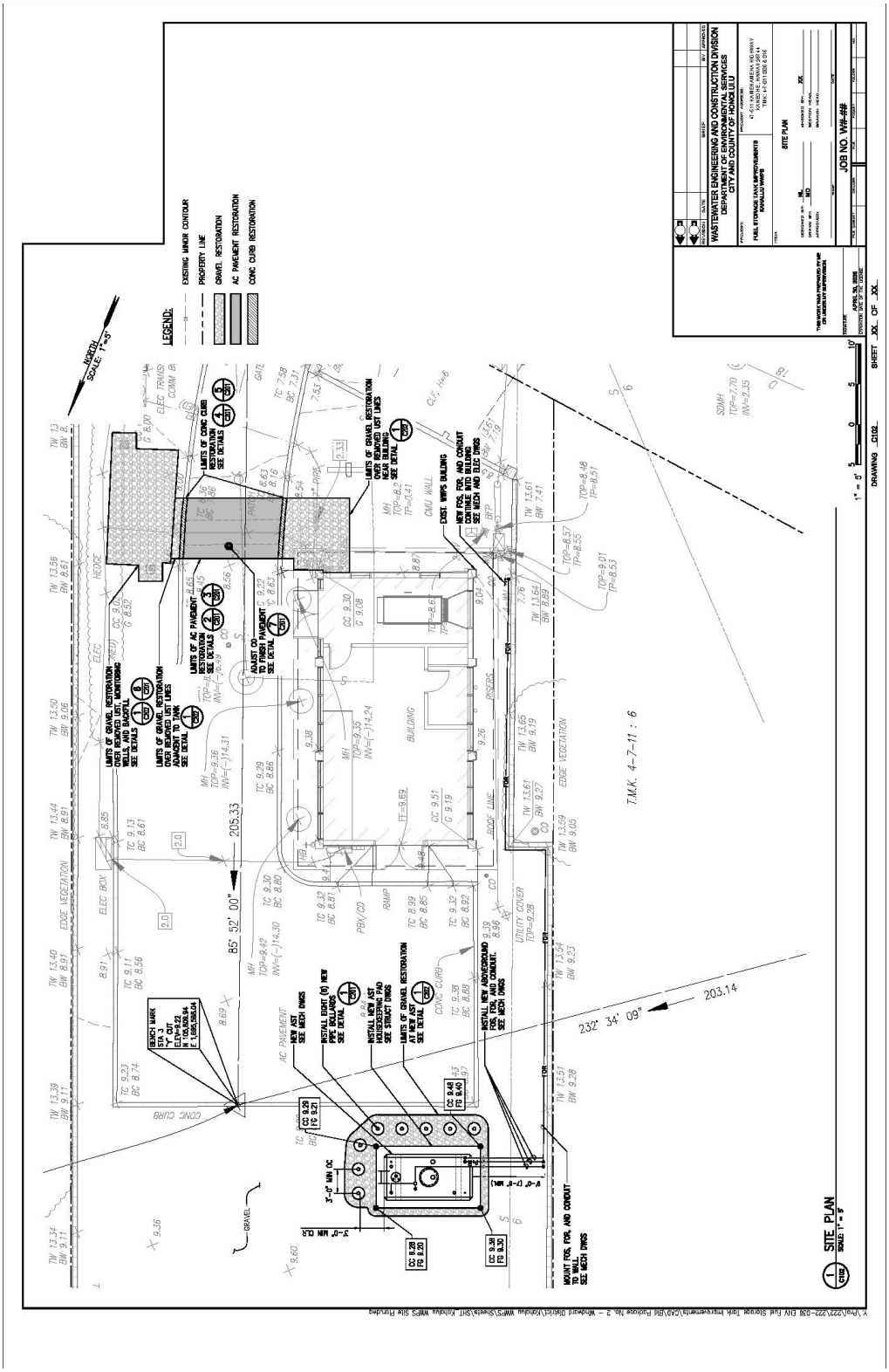


Figure 9. Detailed Site Plan with Proposed Action



1.6. Project Schedule

The project will be executed in multiple phases with other WWPSs, with construction expected to start in April 2027 for 12 months.

View of the WWPS (from the driveway)

This page intentionally left blank.

2. DESCRIPTION OF EXISTING ENVIRONMENT, PROJECT IMPACTS, AND MITIGATION

2.1. Physical Environment

2.1.1. Climate and Rainfall

The climate in the State of Hawaiʻi is generally characterized by a two-season year: the summer period is warm and dry whereas the winter season is cool and wet. Rainfall distribution across Hawaiʻi varies greatly according to geographic conditions, elevation, and long-term climatic cycles.

Similar to other areas in the State of Hawaiʻi, the Kahaluʻu WWPS is located on the windward side of the island and experiences a mild semi-tropical climate. Average temperatures at the project site range from 66 degrees Fahrenheit in February to 82 degrees Fahrenheit in August (University of Hawaiʻi, 2014). The average annual rainfall at the project site is estimated to be between 48.1 inches to 66.0 inches (Giambelluca at al., 2011). Trade winds in the project vicinity are generally from the northeast and east-northeast directions. Strong winds are known to occur in connection with storm systems that disrupt climatic patterns. During the winter months, the trade winds become less frequent and are replaced by the lighter southwest Kona winds.

Impacts and Mitigation Measures

The proposed project is not anticipated to affect or be significantly affected by the existing climatic conditions of the area and region. No mitigation is proposed.

2.1.2. Topography, Geology and Soils

The Island of Oʻahu contains the Koʻolau and Waiʻanae mountain ranges, which are connected by a central plateau. The younger Koʻolau mountain range extends for 37 miles in a northwest to southeast alignment across the eastern two thirds of the island. The older Waiʻanae mountain range spans a distance of about 20 miles across the western third of Oʻahu.

Kahaluʻu WWPS is located on the windward side of the Koʻolau mountain range at an approximate ground elevation of 10 feet. The project area consists of Fill Land (see Figure 10), which includes material dredged from the ocean, hauled from nearby areas, garbage, and other general fill material. The typical soil profile ranges from gravelly sandy loam, fine sandy loam, and bedrock, with lithic bedrock located 40 to 60 inches below the surface. The Fill Land is not prime farmland. It is well-draining with low runoff, has a 0 to 3 percent slope, is more than 80 inches from the

water table, and experiences rare flooding. (U.S. Department of Agriculture, Soil Conservation Service, 1972).

The existing project site ground surface primarily consists of asphalt pavement and crushed gravel surfaces. According to as-building drawings dated November 1985, the asphalt pavement section is two-inch asphalt pavement over six-inch compacted aggregate base course. The existing UST is backfilled with crushed rock and is currently covered with crushed gravel at the surface. The UST pad is approximately 2.5 feet offset from the driveway pavement. Beneath the tank is a 16-inch reinforced concrete slab supporting the tank. The existing surface at the proposed AST location is currently a crushed gravel surface with a six-inch concrete slab.

The general site drainage pattern flows from the northeast to the southwest end of the site. Runoff exits through the fencing on the southwest towards Kamehameha Highway.

Impacts and Mitigation Measures

Project actions are expected to retain the overall topographic profile of the site. Minimal soil erosion and runoff are expected as the project site is relatively flat. The project will adhere to Erosion and Sediment Control measures in accordance with HAR 11-55 and the City's Storm Water Best Management Practice Manual, Construction, Draft, dated August 2017.

In addition, the following are erosion prevention best management practices (BMPs) to prevent any runoff, sediment, soil and debris generated by construction activities from adversely impacting the coastal ecosystems and the State waters:

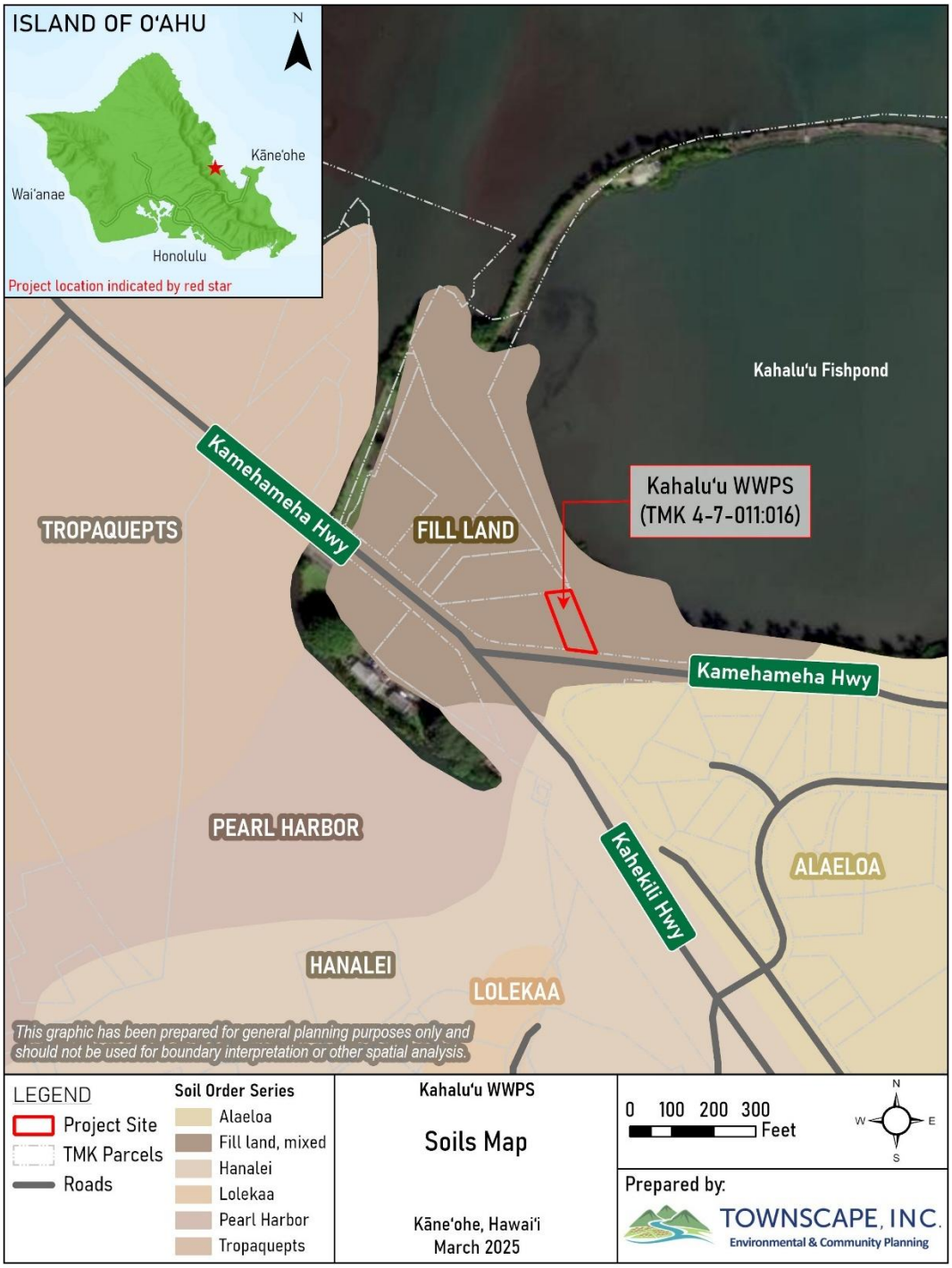
- All exposed disturbed areas to be permanently stabilized with ground covering such as vegetation, gravel, or pavers.
- Sediment fences or barriers to be installed at the perimeter of all disturbed areas where runoff from the project site is possible.
- Environmentally inert construction materials to be used to the extent practicable.
- Construction is to be scheduled with consideration of weather conditions, preferably during low rain conditions. All work to halt during storm events or when storm conditions threaten the watershed. The site is to be secured during conditions to minimize runoff.

A letter from the Department of Land and Natural Resources, Division of Forestry and Wildlife (DLNR DOFAW) dated May 2, 2025 recommends the following measures for the mitigation of soil contamination:

- Consult with the Hawaiʻi Invasive Species Council to create a Hawaiʻi Interagency Biosecurity Plan.
- Minimize the movement of plant or soil material between worksites to prevent the spread of fungal pathogens and invasive species.

Additionally, the proposed plan includes the use of 12-inch compost filter socks, in addition to sandbags, to protect the area and prevent runoff flow.

Figure 10. Soils Map



2.1.3. Natural Hazards

Tsunami

The project site lies within the Tsunami Evacuation Zone, highlighting the area's vulnerability to tsunami events as the parcel is near the shoreline (Hawaiʻi State Civil Defense, 2025). The tsunami evacuation zone maps identify low lying areas where evacuation is recommended since extensive damage to life and property may occur from seismic sea waves (see Figure 11).

Hurricanes

The project area, similar to the rest of Hawaiʻi, is susceptible to hurricanes, particularly during the Pacific hurricane season from June through November. The State of Hawaiʻi has a 68.5 percent chance of a hurricane of any magnitude occurring within 60 nautical miles in any given year (Hawaiʻi Emergency Management Agency, 2023). While direct hits are relatively rare, hurricanes can bring strong winds, heavy rainfall, and storm surges, which could impact the region.

Sea Level Rise

Sea level rise (SLR) has the potential to threaten life and property in coastal and low elevation areas. Based on consultation with the Department of Planning and Permitting (DPP), the State of Hawaiʻi SLR Viewer indicates that the property will not be affected by 3.2 feet of SLR by 2100 (see Figure 12).

The Sea Level Rise II guidance document (2022) developed by the City's Climate Change Commission recommends that the City set the Intermediate High (which projects 5.9 feet of SLR by 2100) as a planning and policy benchmark for all planning and public infrastructure projects. Under this scenario, the Kahaluʻu WWPS is not projected to be inundated, according to the Sea Level Rise Viewer tool provided by the National Oceanic and Atmospheric Administration (NOAA, 2025).

Flooding

The project site is located within Flood Zone X, classified as an area of minimal flood risk. Flood Zone X corresponds with areas that are determined to be outside the 500-year flood and protected by levee from a 100-year flood.

The rules and regulations of the National Flood Insurance Program, Title 44 of the Code of Federal Regulations (CFR), will be in effect and followed during the project development.

Wildfires

Located on the windward side of the island, the likelihood of wildfire occurrence in this area is low. The DLNR DOFAW Fire Management Program classifies the project area as having a low wildfire risk.

Impacts and Mitigation Measures

Threats to humans and property from unpredictable natural events will always be present. The likelihood and potential severity of tsunami and hurricane-related impacts will be no greater than elsewhere in the region, and the planned activities will not exacerbate any hazards associated with tsunami or hurricanes. The location and planned activities do not introduce any significant factors that would elevate the likelihood of wildfire or flooding in the area.

Community members have expressed concern regarding the potential for the proposed AST to rupture or tip over during high wind events, including hurricanes. To address this concern, the AST will be securely anchored to reinforced concrete pads that are bolted into the ground. This design measure is intended to enhance structural stability and reduce the risk of displacement or failure during extreme weather events. Additionally, eight pipe bollards will be installed on the makai side of the AST to prevent vehicles from accidentally hitting it. When compared to the UST, the AST provides added protection by reducing the risk of fuel leaks and groundwater contamination associated with rising groundwater levels and increased corrosion from saltwater intrusion due to sea level rise.

Figure 11. Tsunami Hazard Map

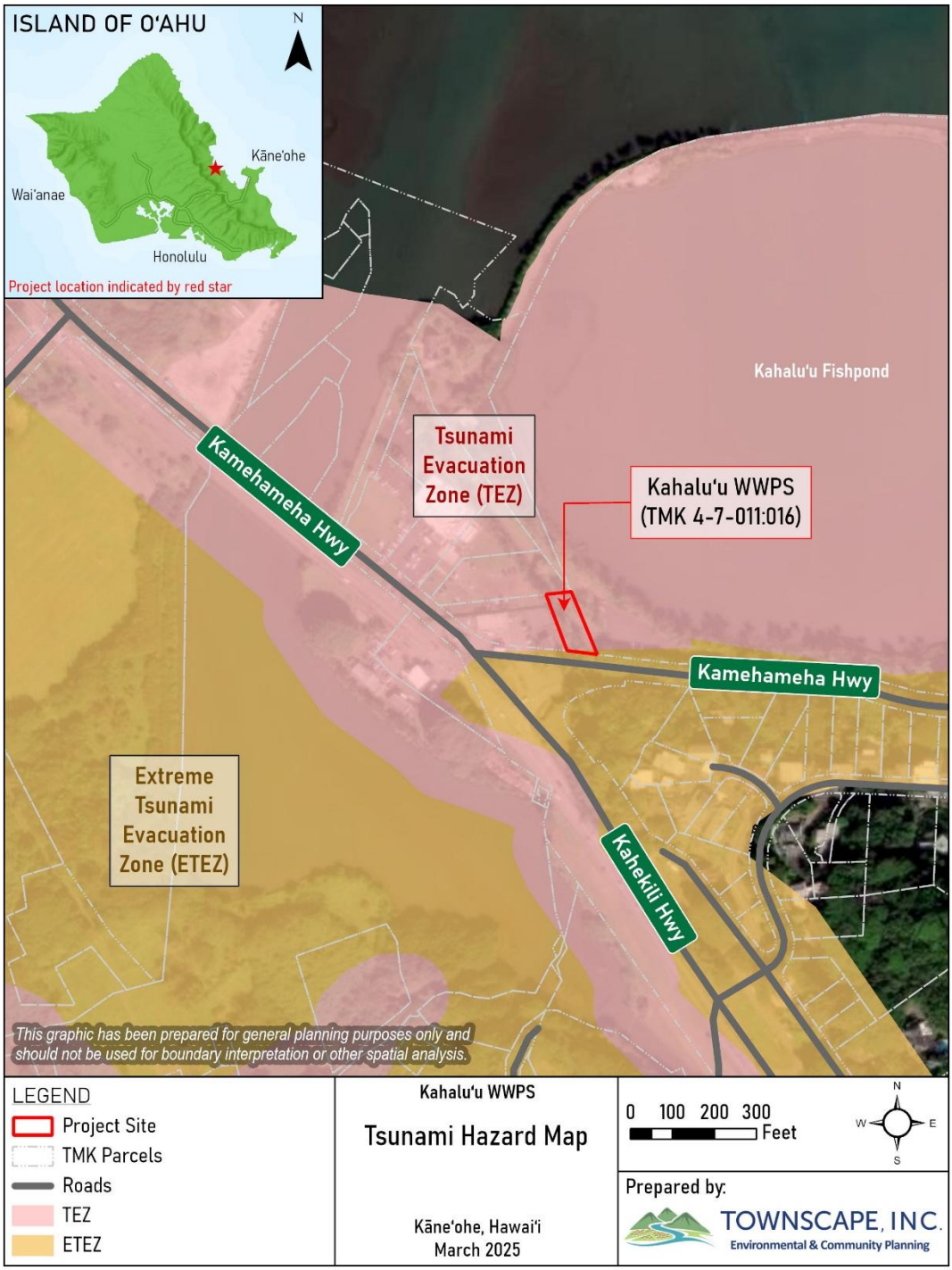
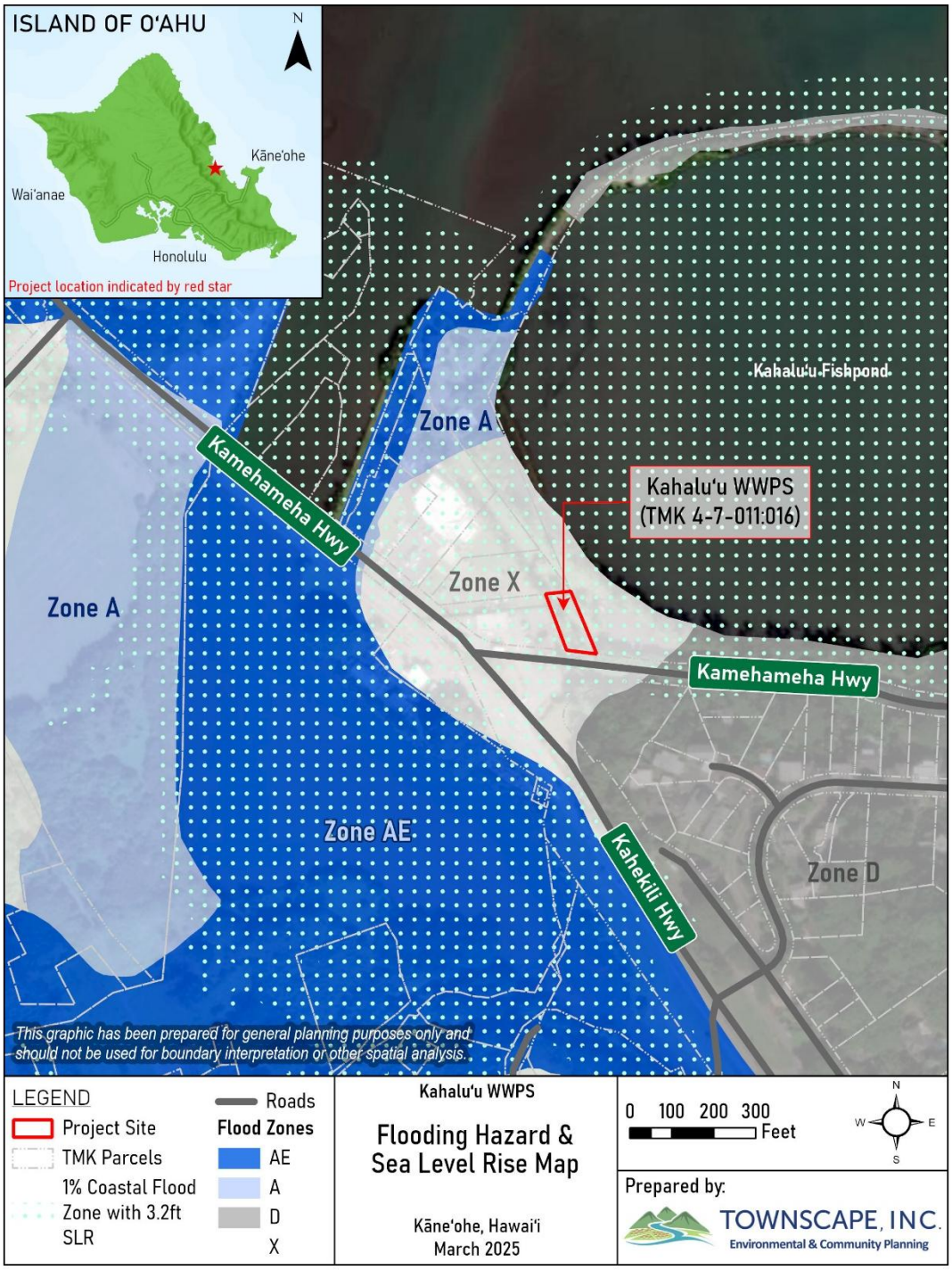


Figure 12. Flooding Hazard & Sea Level Rise Map



2.2. Archaeological, Architectural and Cultural Resources

The WWPS project site is situated within the ahupuaʻa of Kahaluʻu in the Koʻolaupoko district of Oʻahu. The readily available freshwater sources and fertility of the land on the windward side of Oʻahu made it the choice location for the earliest settlement of Hawaiians to the island. Thus, there are many sites of cultural and historical significance surrounding the project vicinity. Historically, Kahaluʻu and the greater Koʻolaupoko district was extensively cultivated with loʻi kalo (pondfield taro patches). Irrigation of the loʻi kalo was made possible by the many streams in the area, including the Waiheʻe and Kahaluʻu streams and their tributaries, located immediately west of the WWPS project area. During the Māhele (land division) of 1848, most of the ahupuaʻa of Kahaluʻu became Crown Lands, while a portion became Government Lands from which makaʻāinana (native tenants) could claim awards to their lands. Two pāhale (house lots) that are directly adjacent to the WWPS project area were awarded during that time, although no surface remnants of the properties are found today. In the later part of the 19th century, land use in the Kahaluʻu area transitioned from traditional kalo (taro) cultivation to rice paddies, sugar plantations, pineapple plantations, and a pineapple cannery. The Kahaluʻu WWPS is located on an area that was historically a wetland that ended up being filled in with material dredged from the reefs and hauled from elsewhere to create developable land.

The high volume of freshwater entering the ocean from the streams in the Kahaluʻu area caused silt to deposit and form shallow flats. The silt material was used during construction of the Kahonua (The Earth) fishpond, today known as the Kahaluʻu fishpond, which is located immediately to the northeast of the project area. The Kahonua fishpond was designated as a historic property on both the State Inventory of Historic Places as well as the National Register of Historic Places (NRHP) in 1973. During this time period, national historic sites were delineated using rectangular boundary lines, irrespective of the actual shape of the historic site. Because of this delineation method, the Kahaluʻu WWPS falls within the boundary of the Kahonua fishpond NRHP site. However, it is quite common to have sites that fall within NRHP rectangular boundaries that can reasonably be understood as not contributing to the actual historic property. A berm approximately 15 meters away from the Kahaluʻu WWPS project area likely defines the true edge of the fishpond.

Two previous archaeological surveys conducted around the immediate project vicinity found no historic properties (Barrera, 1982; Hunkin et al., 2010). Instead, several archaeological sites have been found further away from the Kahaluʻu WWPS project area. Two hundred and fifty meters away from the project area, a pre-contact Hawaiian burial was found (Neller, 1984). Approximately 1,300 meters out from the Kahaluʻu WWPS project area, two small fishponds and two heiau (temples) were

identified (McAllister, 1933). Lastly, two traditional Hawaiian trails were located southwest of the project area, which are now the Kamehameha and Kahekili highways (Shideler et al., 2025).

Impacts and Mitigation Measures

Kahaluʻu WWPS is located on a lowland area adjacent to historic areas of agricultural and aquacultural production, with the most notable nearby historic property being the Kahouna (Kahaluʻu) fishpond. Within the project site, no historic properties have been reported previously nor been observed in the present fieldwork. Cultural Surveys Hawaiʻi conducted a field inspection on March 13, 2025 and developed a Literature Review and Field Inspection report that supports a City and County of Honolulu – Environmental Services determination as per HAR §13-275- 7(a)(1) of "No historic properties affected" and for no further historic preservation study. However, it suggests that early consultation with the State of Hawaiʻi Department of Land and Natural Resources, Historic Preservation Division (SHPD) Archaeology and Architecture Branches be conducted due to the location of the project site, which directly abuts the Kahaluʻu fishpond property and falls within the NRHP boundary line.

2.3. Floral and Faunal Resources

The project site has previously been disturbed for the construction of the Kahaluʻu WWPS. In a letter from DLNR DOFAW on May 2, 2025, it states that there are no Federally declared critical habitats in the vicinity of this project nor any other Federal administered lands in the area. However, the following floral and faunal species may occur within the project area: 1) ʻōpeʻapeʻa, or Hawaiian hoary bat (*Lasiurus semotus*), 2) several species of seabirds and waterbirds, 3) honu or green sea turtle (*Chelonia mydas*), 4) honuʻea or hawksbill sea turtle (*Eretmochelys imbricata*), 5) several species of indigenous flowering plants, and 6) indigenous ferns and allies.

According to the U.S. Fish and Wildlife Service's (USFWS) map for the Information for Planning and Consultation , the following species are listed as potentially occurring in the general vicinity or passing through the area:

- Hawaiian Hoary Bat – *Lasiurus cinereus semotus*
- Band-Rumped Storm-Petrel – *Hydrobates castro*
- Hawaiian Common Gallinule – *Gallinula galeata sandvicensis*
- Hawaiian Coot (alae Keʻokeʻo) – *Fulica alai*
- Hawaiian Duck – *Anas wyvilliana*
- Hawaiian Petrel – *Pterodroma sandwichensis*

- Hawaiian Stilt – *Himantopus mexicanus knudseni*
- Newell’s Shearwater – *Puffinus newelli*
- Green Sea Turtle – *Chelonia mydas*
- Hawksbill Sea Turtle – *Eretmochelys imbricata*

The USFWS map also identifies the following flora species for this region:

- ‘Akoko – *Euphorbia celastroides var. kaenana*
- ‘Ena‘ena – *Pseudognaphalium sandwicensium var. molokaiense*
- Awiwi – *Schenkia sebaeoides*
- Carter’s Panicgrass – *Panicum fauriei var. carteri*
- Hilo Ishaemum – *Ischaemum bryone*
- Ihi – *Portulaca villosa*
- Kamanomano – *Cenchrus agrimoniodes*
- Palapalai – *Microlepia strigosa var. mauiensis*

Impacts and Mitigation Measures

Construction will occur entirely within the existing City property, on land that has been previously disturbed where no native plants are present. Should vegetation need to be replaced, use of native species and/or xeriscape will be considered.

A letter from DLNR DOFAW on May 2, 2025 indicated several possible environmental concerns related to the project. These concerns include the potential adverse effects of artificial lighting on seabirds during the fledgling season; the impact of invasive species such as the coconut rhinoceros beetles (CRB); and the risk of soil and plant disease and fungal pathogen contamination resulting from construction activities. It is requested that special attention be given to fire prevention and planning, forest pathogen management and the control of invasive species.

The following guidelines are provided to minimize impact for the following species:

Hawaiian Hoary Bat

- Woody plants greater than 15 feet tall should not be disturbed, removed, or trimmed during the bat birthing and pup rearing season (June 1 through September 15).
- Barbed wire should not be used in any construction as bats can become ensnared and killed by such fencing material during flight.

Seabirds

- Prior to initiating construction and before restarting construction after a delay, a qualified personnel with seabird biology experience will conduct surveys of nearby areas for signs of active nesting or brooding. If a nest or brood is found, a 100-foot buffer around the area will be created.
- For nighttime work that might be required, use fully shielded lights angled downward to reduce the risk of harm to native seabirds.
- Nighttime work that requires outdoor lighting should be avoided during the seabird fledging season (September 15 through December 15) when young seabirds make their maiden voyage to sea.
- If nighttime construction is required, a qualified biologist should be present at the project site to monitor and assess the risk of seabirds being attracted or grounded due to the lighting.
- Permanent lighting also poses a risk of seabird attraction and should be minimized or eliminated. If needed, permanent lighting should be shielded or angled downward.
- No feeding of feral cats should occur on the premises due to cats' instinctive nature to prey on birds.

Flora and Fauna

- Soil and sediment must be contained during and after construction preventing damage to near-shore waters and marine ecosystems.
- Minimize the movement of plants or soil materials between worksites to prevent potential harmful contamination. It is recommended by DOFAW to consult Oʻahu Invasive Species Committee to help plan, design, and construct the project, learn of any high-risk invasive species in the area, and ways to mitigate their spread.
- Conform to Hawaiʻi Department of Agriculture approved Plant Quarantine Interim Rule 22-1, which restricts the movement of CRB-host material within or to and from the island of Oʻahu.

- Utilize native plant species for landscaping that are appropriate for the area.
- Coordinate with the Hawaiʻi Wildfire Management Organization to strategize on wildfire prevention in the project area due to arid climate and risks of wildfire.

In addition, all on-site workers should be trained on recognizing State-listed waterbirds and seabirds. Should any State-listed waterbirds or seabirds be observed during construction operations, all activities within a 100-foot radius shall stop until all such birds depart the area on their own.

2.4. Environmental Quality

2.4.1. Visual Resources

The project site is nestled between the base of the Koʻolau mountain range and Kāneʻohe Bay. Views of the Koʻolau mountains are visible from the WWPS. It is located near a roundabout at the intersection of Kahekili Highway and Kamehameha Highway. From Kahekili Highway, the project area is tucked behind the neighboring gas station and is only partially visible through the driveway fence of the property along Kamehameha Highway. The project area is enclosed by a CMU wall, which creates a clear separation between the roadway and the pump station and serves as a visual buffer.

Impacts and Mitigation Measures

No significant impact on the area's visual resources is anticipated. The project site is surrounded by a CMU wall, including a chain-link gate in front of the driveway which faces Kamehameha Highway, creating a visual separation between the WWPS and the main road. The installation of the AST will occupy space within the project parcel, adjacent to the existing structure. However, a short-term impact that may result from the WWPS construction is the presence of construction workers, construction equipment, and dust screens on the property, which could create some visual impacts for the duration of construction.

Additionally, the viewsheds of the mountains and ocean in the vicinity around the WWPS will not be further impacted, as the AST will remain slightly below the height of the pre-existing CMU wall that borders the project area.

2.4.2. Acoustic Characteristics

Noise from the project site is influenced by its proximity to Kamehameha Highway and Kahekili Highway, two major State roadways that serve as the main access point to various areas along the North-East and North Coast of Oʻahu. Traffic along Kamehameha Highway and Kahekili Highway is a prominent source of background noise in the area, with the constant flow of vehicles contributing significantly to the overall sound environment.

Impacts and Mitigation Measures

Temporary audible noise from the project is expected to be intermittent and unavoidable due to the presence of construction vehicles, heavy equipment, and excavation activities. Ambient noise levels are expected to briefly increase during construction, primarily from work vehicles and machinery, but the overall impact will be negligible.

To mitigate noise impacts, construction work will be scheduled during daytime hours, thereby avoiding excessive noise during the nighttime. Given the existing noise environment from vehicles passing along Kamehameha Highway, the construction is not expected to significantly increase overall noise levels.

The Contractor will be required to follow BMPs to control noise levels at all times. Temporary noise reduction measures during construction may include, but are not limited to, the use of sound-walls, sound blankets and curtains, equipment mufflers and low-noise generators.

2.4.3. Air Quality

Air quality at the WWPS is generally consistent with ambient conditions typical of the Kahaluʻu coastal area. Emissions from nearby traffic along Kahekili Highway, Kamehameha Highway, and the food trucks on the mauka side of Kamehameha Highway may contribute to localized air pollutants. Since the WWPS is in a relatively open area, prevailing trade winds typically help disperse odors and maintain good air circulation.

Impacts and Mitigation Measures

No significant impacts to air quality is anticipated from the project. Ambient air quality may be temporarily affected by construction-related vehicles, equipment, and activities that would generate fugitive dust and emissions. It should not adversely impact air quality for the overall area in the long-term. To prevent air pollution and dust control as a result of the demolition

activities, the Contractor shall sprinkle water on exposed soils to maintain moistness.

2.4.4. Hazardous Materials

The proposed AST will store up to 1,000 gallons of diesel fuel for the WWPS facility operations. Stored fuel is regulated under National Fire Protection Association (NFPA) 30 (Flammable and Combustible Liquids Code), the Honolulu Fire Code, Chapter 66 of the ROH, and Clean Water Act Spill Prevention, Control and Counter Measures or SPCC (Spill Prevention, Control, and Countermeasure) rule (40 CFR 112).

Impacts and Mitigation Measures

A concrete containment pad will be installed under the AST, with the capability of holding 110 percent of the tank volume, per EPA and NFPA guidelines. The primary tank will be constructed of steel and encased by a secondary tank to provide secondary containment with interstitial monitoring in compliance with regulatory requirements. The double-walled tank will be encased in concrete to ensure corrosion, fire, and impact resistance. The secondary containment serves as a barrier between the steel and concrete.

The proposed fuel storage tank will be designed, installed, and maintained in accordance with all applicable federal, state, and county regulations. With appropriate containment and emergency measures in place, the project is not expected to result in significant adverse impacts related to hazardous materials. The upgrades of the storage tank system shall be in strict accordance with the guidelines and requirements set forth in the Federal Register 40, CFR PART 280 and API recommended practice 2015 "safe entry and cleaning of petroleum storage tanks" and shall adhere to all required safety precautions. If there are any fuel spillages or existing leaks found or as a result of construction, it will be reported to the Hazard Evaluation and Emergency Response Unit of the Department of Health.

Eight steel pipe bollards filled with concrete will be installed to protect the new AST from vehicular traffic. Pipe bollards will be sized and spaced with proper clearances to meet the minimum NFPA requirements, including:

- Three feet minimum horizontal clearance between the edge of the AST and the outer edge of the pipe bollard.

- Three feet maximum spacing, on-center, between adjacent pipe bollards.
- Three feet minimum height of bollard, as measured from finish grade to the top of the bollard.

2.5. Public Infrastructure & Services

2.5.1. Site Access, Circulation and Traffic

Vehicular access to the project site is provided via an asphalt driveway from Kamehameha Highway, near the newly constructed roundabout at the intersection with Kahekili Highway. This intersection was recently reconfigured from a T-intersection to enhance safety and improve traffic operations. Approximately 20,000 vehicles are reported to pass through the intersection daily (Gutierrez, 2022). Prior to the construction of the roundabout, drivers turning left from Kamehameha Highway (fronting the WWPS) onto Kahekili Highway would expereince significant traffic backups during peak hours.

Access to the site is restricted for security and operational purposes. The parcel is fully enclosed by a CMU wall and secured by a locked gate, limiting entry to authorized City personnel and contractors. On-site circulation is minimal and consists of a small paved area extending from the driveway, which is sufficient for maneuvering maintenance vehicles and equipment. Due to the nature of the facility, traffic generation is minimal and predominately involves City staff conducting inspections, routine maintenance, and emergency responses.

Impacts and Mitigation Measures

Construction vehicles hauling materials and workers to and from the WWPS may contribute to the increase in traffic volume on Kahekili Highway and Kamehameha Highway during the duration of construction. It is recommended that construction deliveries be scheduled to avoid peak hours. Temporary impacts to traffic may occur during construction of the proposed project, but the impacts are anticipated to be minimal. Unobstructed access to and from driveways and public streets will be maintained at all times.

A letter from the Honolulu Police Department (HPD) on April 21, 2025 recommends that adequate notification should be made to area businesses and residents prior to possible road closures, as any impact to pedestrian and/or vehicular traffic or construction-related debris could lead to complaints.

2.5.2. Potable Water and Wastewater

Water service is supplied by the Board of Water Supply (BWS). A water line runs south of the site and connects to the water main parallel to Kamehameha Highway. It provides potable water for the facility, which is used for the sink and restroom, hose connections, and air gap flushing.

As stated earlier, wastewater from Kahaluʻu WWPS is conveyed to the Kailua Regional WWTP via a 12-inch force main along Kahekili Highway. Influent to the WWPS flows from a 15-inch polyvinyl chloride (PVC) gravity sewer main on the east side of the pump station. The influent line crosses approximately ten feet below the UST lines, and is not anticipated to be impacted.

Impacts and Mitigation Measures

In a letter dated April 29, 2025, the Board of Water Supply indicated that the existing water system is adequate to accommodate the proposed development. However, the proposed project is subject to BWS Cross-Connection Control and Backflow Prevention requirements prior to the issuance of the building permit application. Final decision on the availability of water will be confirmed when the building permit application is submitted for approval.

The proposed upgrades will not increase potable water demand or alter the capacity or operations of the WWPS. Since no significant impacts to the utilities are anticipated, no mitigation is proposed.

2.5.3. Power and Communications

Hawaiian Electric Company provides power to the pump station. Electrical lines run east of the project and communication lines run south of the project. A transformer is pad-mounted on the East corner of the property. It is HECO owned and maintained.

The emergency power system, which the proposed project aims to support, is used to provide backup power when normal HECO service fails. The system consists of two major components: the emergency generator and the automatic transfer controller (as discussed in Section 1.4).

Communication systems consist of: Telemetry and SCADA, and telephone service. The telemetry and SCADA system provides local and remote monitoring of the facility. Telephone service is used for normal telephone communications and as a mechanism for telemetry to SCADA.

Impacts and Mitigation Measures

No significant adverse impacts to power and communications are anticipated. No response from HECO has been given at this time. However, it is anticipated that coordination may be required for system extensions or service upgrades depending on the final design and electrical load requirements. Access to HECO facilities within or adjacent to the site will need to be maintained at all times for safe operation, maintenance, and emergency response.

During the transition from the existing UST to the new AST fuel system, the standby generator will be without a diesel fuel source for a brief period. A portable fuel storage tank will be staged on site and connected to the generator in advance to ensure continuous standby power capability. Therefore, in the event of a HECO power outage, the generator will be able to use fuel from the temporary tank to provide backup power.

2.5.4. Emergency Service Facilities

Law enforcement services are provided by HPD. The nearest police station is the Kāneʻohe Police Station, located at 45-270 Waikalua Road, approximately 4.9 miles from the project site.

The Honolulu Fire Department (HFD) provides fire protection and first responder emergency services. The nearest fire station is Kahaluʻu Fire Station 37, located at 47-306 Waihee Road, approximately 0.7 miles from the project site.

The Waimānalo Health Center is the nearest comprehensive health facility, located at 41-1295 Kalanianaʻole Highway, approximately 13.5 miles from the project site.

Impacts and Mitigation Measures

No significant adverse impacts to police, fire, or medical services are anticipated to occur from the proposed project at the Kahaluʻu WWPS. A letter from HPD dated April 21, 2025 recommended that the Contractor install and maintain all necessary lights, signs, barricades, and other safety equipment, and provide adequate notification of possible road closures to businesses and residents in the area during the construction phase of the project.

A letter dated April 21, 2025 from the HFD requires the project to follow all applicable requirements of the ROH Chapter 20 regarding Flammable and Combustible Liquid Storage Tanks, be in effect at the time the building permit application for the project is issued.

Additionally, a letter dated April 29, 2025 from BWS specifies that on-site fire protection requirements be coordinated with the Fire Prevention Bureau of the HFD.

2.5.5. Recreational Resources

The area surrounding the Kahaluʻu WWPS offers a variety of recreational resources that serve both residents and visitors. Directly across Kamehameha Highway, approximately 1,000 feet from the WWPS, is the 34.6-acre Kahaluʻu Regional Park, which is used for family gatherings and picnicking. Across from the park is Keahiakahoe Canoe Club's hale and boat ramp, which supports traditional Hawaiian outrigger canoe paddling and hosts community events and training.

Impacts and Mitigation Measures

The proposed action for the project is not anticipated to have any significant impact on the functionality or quality of existing recreational resources in the area.

2.6. Socio-Economic Characteristics

According to the 2020 United States Census Bureau, the project site is within Kahaluʻu, a Census Designated Place with a resident population of 5,241 and a median household income of $128,661.

Impacts and Mitigation Measures

Construction activities for the project will create short-term jobs in design and construction. The project will not affect population levels, housing, or schools. Proposed upgrades will not alter the capacity or operations of the WWPS. The community can expect continued reliable wastewater services, which support the economic and social welfare of the community that is serviced by the WWPS.

This page intentionally left blank.

3. RELATIONSHIP TO PLANS, POLICIES, AND CONTROLS

3.1. Hawaiʻi State Plan

The Hawaiʻi State Plan, HRS Chapter 226, outlines broad goals, policies, and objectives to serve as guidelines for the future growth and development of the State. It also provides a basis for determining priorities, allocating limited resources, and improving coordination of State and County plans, policies, programs, projects, and regulatory activities. The Hawaiʻi State Plan establishes a set of themes, goals, objectives, and policies that are meant to guide the State's long-range growth and development activities. Applicable sections of HRS Chapter 226 to the proposed project are discussed below.

§226-13 Objectives and policies for the physical environment--land, air, and water quality.

Objective 1. Maintenance and pursuit of improved quality in Hawaiʻi's land, air, and water resources.

Policy 2. Promote the proper management of Hawaiʻi's land and water resources.

Policy 3. Promote effective measures to achieve desired quality in Hawaiʻi's surface, ground, and coastal waters.

Policy 5. Reduce the threat to life and property from erosion, flooding, tsunamis, hurricanes, earthquakes, volcanic eruptions, and other natural or man-induced hazards and disasters.

Policy 6. Encourage design and construction practices that enhance the physical qualities of Hawaiʻi's communities.

§226-14 Objective and policies for facility systems--in general.

Policy 1. Accommodate the needs of Hawaiʻi's people through coordination of facility systems and capital improvement priorities in consonance with state and county plans.

Policy 3. Ensure that required facility systems can be supported within resource capacities and at reasonable cost to the user.

Policy 6. Assess a range of options to mitigate the impacts of sea level rise to existing and planned state facilities.

§226-15 Objectives and policies for facility systems--solid and liquid wastes.

Objective 1. Maintenance of basic public health and sanitation standards relating to treatment and disposal of solid and liquid wastes.

Objective 2. Provision of adequate sewerage facilities for physical and economic activities that alleviate problems in housing, employment, mobility, and other areas.

Discussion:

The proposed project complies with the elements of the Hawaiʻi State Plan by providing essential upgrades to critical public infrastructure and enhancing its resiliency against future disruptions or disasters. The AST will be securely anchored to reinforced concrete pads that are bolted into the ground. This design measure is intended to enhance structural stability and reduce the risk of displacement or failure during extreme weather events. Additionally, eight pipe bollards will be installed on the makai side of the AST to prevent vehicles from accidentally hitting the AST. By upgrading the fuel tank storage infrastructure to reduce the risk of fuel leaks into the environment, the project supports the State's objectives to maintain sewage facilities that meet public health and sanitation standards.

3.2. State Land Use District

The State Land Use Law (Chapter 205, HRS) is intended to preserve, protect, and encourage the development of lands in the State for uses which are best suited to the public health and welfare for Hawaiʻi's people. All lands in the State are classified into four land use districts by the State of Hawaiʻi, Land Use Commission: Urban, Rural, Agricultural, and Conservation.

Discussion:

The project site is entirely located within the Urban District, which is regulated by county zoning. The proposed project is a permissible public use and structure within the Urban District, which has residential neighborhoods and commercial enterprises.

3.3. State Coastal Zone Management Program

In 1977, Hawaiʻi enacted HRS Chapter 205A, Hawaiʻi Coastal Zone Management Program, to carry out the State's coastal policies and regulations. The program was designed to coordinate federal, state, and county agency efforts in the comprehensive management of Hawaiʻi's coastal resources. It is administered by the State of Hawaiʻi, Office of Planning and Sustainable Development, while the four individual counties are responsible for local implementation.

The objective of the act is to protect, preserve, and restore recreational, historic, and scenic resources as well as implement the State's ocean resources management plan and protect coastal ecosystems.

The objectives and policies from HRS Chapter 205A-2, along with a discussion of how the project conforms to these objectives and policies, are provided below.

Recreational Resources

Objective: Provide coastal recreational opportunities accessible to the public.

Policies:

(A) Improve coordination and funding of coastal recreational planning and management; and

(B) Provide adequate, accessible, and diverse recreational opportunities in the coastal zone management area by:

i. Protecting coastal resources uniquely suited for recreational activities that cannot be provided in other areas;

ii. Requiring replacement of coastal resources having significant recreational value including, but not limited to, surfing sites, fishponds, and sand beaches, when such resources will be unavoidably damaged by development; or requiring reasonable monetary compensation to the State for recreation when replacement is not feasible or desirable;

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

iv. Providing an adequate supply of shoreline parks and other recreational facilities suitable for public recreation;

v. Ensuring public recreational uses of county, state, and federally owned or controlled shoreline lands and waters having

recreational value consistent with public safety standards and conservation of natural resources;

vi. Adopting water quality standards and regulating point and nonpoint sources of pollution to protect, and where feasible, restore the recreational value of coastal waters;

vii. Developing new shoreline recreational opportunities, where appropriate, such as artificial lagoons, artificial beaches, and artificial reefs for surfing and fishing; and

viii. Encouraging reasonable dedication of shoreline areas with recreational value for public use as part of discretionary approvals or permits by the land use commission, board of land and natural resources, and county authorities; and crediting such dedication against the requirements of section 46-6.

Discussion:

While the Kahaluʻu WWPS is located on a parcel that is in close proximity to the coastline, the proposed project will not impact access to the shoreline. Existing recreational uses in the vicinity of the project site are not anticipated to be adversely affected by the proposed project.

Historic Resources

Objective: Protect, preserve, and, where desirable, restore those natural and manmade historic and prehistoric resources in the coastal zone management area that are significant in Hawaiian and American history and culture.

Policies:

(A) Identify and analyze significant archaeological resources;

(B) Maximize information retention through preservation of remains and artifacts or salvage operations; and

(C) Support state goals for protection, restoration, interpretation, and display of historic resources.

Discussion:

While the Kahaluʻu WWPS falls within the boundary of the Kahonua fishpond NRHP site, national historic sites were delineated using rectangular boundary lines, irrespective of the actual shape of the historic site. Because of this delineation method, the Kahaluʻu WWPS falls within the boundary of the Kahonua fishpond NRHP site. However, it is quite common to have sites that fall within NRHP

rectangular boundaries that can reasonably be understood as not contributing to the actual historic property. Within the project site, no historic properties have been reported previously nor been observed in the present fieldwork. Recommendations by the SHPD will be followed to protect cultural resources, should any be discovered during construction.

Scenic And Open Space Resources

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

Policies:

(A) Identify valued scenic resources in the coastal zone management area;

(B) Ensure that new developments are compatible with their visual environment by designing and locating such developments to minimize the alteration of natural landforms and existing public views to and along the shoreline;

(C) Preserve, maintain, and, where desirable, improve and restore shoreline open space and scenic resources; and

(D) Encourage those developments that are not coastal dependent to locate in inland areas.

Discussion:

The potential for adverse visual impacts is anticipated to be minimal. The proposed project involves replacing an existing underground fuel storage tank with an aboveground fuel storage tank. The AST will be located behind a CMU wall on the far north side of the property, neighboring the Kahaluʻu Fishpond that is on the other side of the wall, eastward of the WWPS parcel. The AST will be installed out of view from Kamehameha Highway. The CMU wall will also serve as a visual screen from the primary public view corridor. Site grading will be minimized to preserve the natural contours of the land.

The project preserves the existing shoreline, vegetation, and open space by limiting the development footprint to a previously disturbed area, thereby avoiding new encroachment into pristine open space. While the AST is not coastal-dependent, its location is determined by the presence of the existing WWPS infrastructure and the critical role it plays in ensuring the continued operation of the WWPS during emergencies. Viewsheds of the mountains and ocean in the vicinity of the WWPS will not be impacted.

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 by 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 development and implementation of point and nonpoint source water pollution control measures.

Discussion:

This project replaces outdated infrastructure with a new fuel storage system that complies with current state regulations. The proposed AST will provide improved monitoring, maintenance and containment capabilities, thereby reducing the risk of fuel leaks that could impact coastal waters, marine ecosystems, and overall water quality. The AST will be equipped with build-in secondary containment systems to capture any potential spills and minimize the risk of environmental contamination.

In addition, the project enhances accessibility and monitoring capability, which supports a more proactive and data-driven approach to resource management. The AST will include leak detection sensors and meet the latest standards for fuel storage safety.

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 that coastal dependent development such as harbors and ports, and coastal related development such as visitor industry facilities and energy generating facilities, are located, designed, and constructed to minimize adverse social, visual, and environmental impacts in the coastal zone management area; and

(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 and risks from coastal hazards are minimized; and

iii. The development is important to the State’s economy.

Discussion:

The proposed project supports a public utility facility that is near the shoreline and is essential for conveying wastewater from schools, residential and commercial lots in Kahaluʻu, as well as the upstream Laenani WWPS, to the ʻĀhuimanu Wastewater Pump Transfer Facility which delivers wastewater to the Kailua Regional WWTP Basin. By upgrading the infrastructure, the project ensures continued operation during power outages, thus supporting public health, safety, and economic stability.

Coastal Hazards

Objective**:** Reduce hazard to life and property from coastal hazards.

Policies:

(A) Develop and communicate adequate information about the risks of coastal hazards;

(B) Control development in areas subject to coastal hazards;

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

(D) Prevent coastal flooding from inland projects.

Discussion:

The AST includes secondary containment to control potential fuel leaks and protect against point source pollution. The project will not increase runoff or alter drainage patterns in a way that could contribute to coastal flooding.

Community members have expressed concern regarding the potential for the proposed AST to rupture or tip over during high wind events, including hurricanes. To address this concern, the AST will be securely anchored to reinforced concrete pads that are bolted into the ground. This design measure is intended to enhance structural stability and reduce the risk of displacement or failure during extreme weather events. Additionally, eight pipe bollards will be installed on the makai side of the AST to prevent vehicles from accidentally hitting the AST.

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.

Discussion:

The project will require several permits and regulatory approvals, including compliance with the Coastal Zone Management Act, Department of Health (DOH) requirements for fuel storage, floodplain management standards, and the Chapter 343 Environmental Review process. The project team has coordinated with relevant regulatory agencies and provided public access to project information through the EA, which outlines potential short-term impacts and long-term benefits of the project. The EA process will provide an opportunity for the public to review and comment on the proposed project.

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 related issues, developments, and government activities; and

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

Discussion:

The proposed project fosters public awareness and publication by promoting communication and engagement through the EA process, including attending and presenting to the Kahuluʻu Neighborhood Board. Additional opportunities for public participation will be provided through the SMA permitting process.

Beach and Coastal Dune Protection

Objective**:**

(A) Protect beaches and coastal dunes for: public use and recreation; the benefit of coastal ecosystems; and use as natural buffers against coastal hazards; and

(B) Coordinate and fund beach management and protection.

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 shoreline hardening structures, including seawalls and revetments, at sites having sand beaches and at sites where shoreline hardening structures interfere with existing recreational and waterline activities;

(C) Minimize the construction of public shoreline hardening structures, including seawalls and revetments, at sites having sand beaches and at sites where shoreline hardening structures interfere with existing recreational and waterline activities;

(D) Minimize grading of and damage to coastal dunes;

(E) Prohibit private property owners from creating a public nuisance by inducing or cultivating the private property owner's vegetation in a beach transit corridor; and

(F) Prohibit private property owners from creating a public nuisance by allowing the private property owner's unmaintained vegetation to interfere or encroach upon a beach transit corridor.

Discussion:

The proposed project conserves open space by being sited within an already developed area, thus avoiding impacts to natural shoreline processes. It does not involve any erosion-protection structures seaward of the shoreline and preserves public access to, and recreational use of, the beaches.

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.

Discussion:

See discussion above, Coastal Ecosystems.

3.4. Special Management Area

The purpose of the SMA is to "preserve, protect, and where possible, to restore the natural resources of the coastal zone of Hawaiʻi" (HRS Chapter 205A). Any action defined as "development," pursuant to HRS Chapter 205A-22, requires an SMA (minor or major) Use Permit. On Oʻahu, the SMA permit is administered by DPP. The project area is in the SMA, and an SMA permit is required.

3.5. Shoreline Setback Ordinance

The purpose of the Shoreline Setback Ordinance, ROH Chapter 26, is to protect and preserve the natural environment and shoreline, reduce exposure to coastal hazards, maintain open space and coastal scenic resources, and prohibit shoreline hardening for coastal restoration. The shoreline setback line is established at a distance of "sixty feet plus 70 times the annual coastal erosion rate, up to a maximum setback of 130 feet, on zoning lots within all development plan and sustainable communities plan areas" (State of Hawaiʻi, 2024). The project area is approximately 174 feet from the Kahaluʻu Fishpond, which exceeds the maximum setback of 130 feet from the coastline, thus not requiring a Shoreline Setback Variance from DPP.

3.6. Oʻahu General Plan

The Oʻahu General Plan (2021, Resolution 21-23, CD1) contains aspirational objectives and policies that address the physical, social, cultural, economic, and environmental concerns affecting the City. The Honolulu City Council adopted the General Plan on December 1, 2021 and the Mayor signed it on January 14, 2022. Applicable objectives and policies from the General Plan relevant to the project are provided below.

III. **Natural Environment and Resource Stewardship**

Objective A: To protect and preserve the natural environment.

Policy 1: Protect Oʻahu's natural environment, especially the shoreline, valleys, and ridges, from incompatible development.

Policy 7: Protect the natural environment from damaging levels of air, water, and noise pollution.

Objective B: To preserve and enhance the natural monuments and scenic views of Oʻahu for the benefit of both residents and visitors.

Policy 3: Locate roads, highways, and other public facilities and utilities in areas where they will least obstruct important views of the mountains and the sea.

V. **Transportation and Utilities**

Objective C: To maintain a high level of service for all utilities.

Policy 1: Maintain and upgrade utility systems in order to avoid major breakdowns and service interruptions.

Policy 2: Provide improvements to utilities in existing neighborhoods to reduce substandard conditions, and increase resilience to fluctuations, natural hazards, extreme weather, and other climate impacts.

Objective D: To maintain transportation and utility systems which will help Oʻahu continue to be a desirable place to live and visit.

Policy 1: Give primary emphasis in the capital improvement program to the maintenance and improvement of existing roads and utilities.

Policy 4: Evaluate the social, economic, and environmental impact of additions to the transportation and utility systems before they are constructed.

VII. Physical Development and Urban Design

Objective A: To coordinate changes in the physical environment of Oʻahu to ensure that all new developments are timely, well-designed, and appropriate for the areas in which they will be located.

Policy 9: Locate community facilities on sites that will be convenient to the people they are intended to serve.

Objective F: To create and maintain attractive, meaningful, and stimulating environments throughout Oʻahu.

Policy 3: Require new developments in stable, established communities and rural areas to be compatible with the existing communities and areas.

IX. Health and Education

Objective A: To protect the health and well-being of residents and visitors.

Policy 3: Coordinate City and County health codes and other regulations with State and Federal health codes to facilitate the enforcement of air-, water-,and noise-pollution controls.

Discussion:

The Kahaluʻu WWPS project aligns with the objectives and policies of the City and County of Honolulu General Plan. The project aims to minimize negative impacts on the natural environment and to maintain a high level of wastewater service for residents by replacing outdated equipment to meet current regulations and protect public health. The proposed improvements are designed to be compatible with the surrounding area.

3.7. Koʻolau Poko Sustainable Communities Plan

The City and County of Honolulu has divided Oʻahu into eight planning areas by ordinance, each with a Development Plan or a Sustainable Communities Plan (SCP) that outlines the vision, objectives, and goals for future development in the area. These community-oriented plans are intended to help guide land use planning and development on Oʻahu. The Koʻolau Poko SCP, updated in 2017, encompasses the windward coast of Oʻahu from Makapuʻu Point to Kaʻōʻio Point, which includes the Kahaluʻu WWPS. The key elements of the vision for the 2017 Koʻolau Poko SCP are summarized below:

- Adapt the concept of ahupuaʻa in land use and natural resource management;
- Preserve and promote open space and agricultural uses;
- Preserve and enhance scenic, recreational and cultural features that define Koʻolau Poko's sense of place;
- Emphasize alternatives to the private passenger vehicle as modes for travel;
- Protect and enhance residential character while adapting to changing needs;
- Define and enhance existing commercial and civic districts; and

- Maintain the Community Growth Boundary to protect agricultural, open space, and natural resources.

The plan outlines several policies principles for sustainability to promote the long-term health of the land, people, and community resources for current and future generations. These principles include:

- Encourage planning, development, and construction technologies that minimize negative environmental impacts.
- Guide the process of change. Strive to make decisions based on an understanding of the effects such decisions will have on the land and community resources.
- As an integral part of the planning process, consider the long-term impact of proposed actions and prepare plans that can accommodate the needs of future generations accordingly.

The City's plan prioritizes the preservation of Koʻolau Poko's natural, cultural, and historic resources, working in tandem with members of the community. It also seeks to accommodate very little population growth and preservation of the rural character and lifestyle of the Koʻolau Poko District's people.

The project area is located within the Koʻolau Poko's SCP Community Growth Boundary on land designated by the plan for Rural Commercial Center, which is located makai of Kamehameha Highway, adjacent to areas that are designated "institutional" and "low density residential".

Discussion:

The Kahaluʻu WWPS project supports the vision and policies outlined in the plan by upgrading vital community infrastructure to prevent future risk to the land and surrounding coastal resources. The AST allows for easier access to the fuel tanks for necessary maintenance and repairs, while also avoiding the risk of leakage into the soil.

3.8. Kahaluʻu Community Master Plan

The Kahaluʻu Community Master Plan (2007) is the result of a collaborative planning effort between the Kahaluʻu community and the City and County of Honolulu. It reflects the community's desire to protect and enhance the rural character and lifestyle of the area while addressing key community concerns. The Community Master Plan provides a framework to guide the future development of Kahaluʻu, serves as a tool to help community members navigate and understand the implementation process for recommended actions, and functions as a valuable information resource for the community.

The Kahaluʻu Community Master Plan's purpose is to:

- Establish a shared vision of future community facilities that protect and enhance the lifestyle of Kahaluʻu residents,
- Prioritize a set of capital improvement projects that will achieve the shared vision, and
- Develop general design guidelines that provide direction for the character of both private and public sector developments.

Some of the areas of community concern outlined in the Master Plan include:

- Maintaining Kahaluʻu's rural lifestyle (addressing development pressures),
- Implementing the Kahaluʻu Regional Park Master Plan,
- Enhancing mountain and coastal views and open space resources,
- Addressing incompatible building design and inappropriate uses within the "Heart of Kahaluʻu",
- Improving traffic and pedestrian safety along Kamehameha Highway (enhancing the northern and southern entries into Kahaluʻu),

The Kahaluʻu Community Master Plan prioritizes the preservation of the rural character and lifestyle of the community, with an emphasis on maintaining limited population growth, while also working collaboratively with the community to establish guidelines for future design and development of the area.

Guiding principles of the Plan are:

- Preserve and enhance Kahaluʻu's rural character and cultural resources.
- Enhance public spaces and natural resources, including mauka-makai views.
- Improve circulation and increase transportation safety (bicycle and pedestrian).
- Create a stronger community core (physical improvements and social programs).

The Plan highlights 42 specific improvement projects, including projects that focus on beautifying the "Heart of Kahaluʻu," which is the area in the vicinity of the WWPS, and preserving Kahaluʻu's rural setting. Recommended improvement projects consist of enhancing the Kamehameha Highway and Kahekili Highway intersection through landscaping and community identity signage; and maintaining existing makai views from Kamehameha Highway.

Discussion:

The Kahaluʻu WWPS supports the purpose and addresses the concerns outlined in the Kahaluʻu Community Master Plan by upgrading vital community infrastructure required to protect the lifestyle of Kahaluʻu residents. Improvements to the WWPS facility will allow for easier access to the fuel tanks for necessary maintenance and repairs, while also enabling for early detection of leaks. This improvement minimizes potential harm to the environment, including the surrounding coastal resources. Implementation of the project also aligns with the guiding principles of the Plan to preserve the area's rural character and will not compromise any mauka-makai viewsheds.

3.9. City and County of Honolulu Land Use Ordinance

The LUO regulates land use in accordance with adopted land use policies, including the City's General Plan and the Development/Sustainable Community Plans. The project site is located within the B-1 Neighborhood Business District, and is considered a public use and structure, which is permitted in the B-1 District.

Discussion:

The Kahaluʻu WWPS is a permitted use for the B-1 District because it is a structure owned and managed by the city "to fulfill a government function, activity or service for public benefit."

4. POSSIBLE ALTERNATIVES

4.1. No Action

The no action alternative would maintain the status quo. No improvements would be made to the WWPS. However, since this project aims to provide important upgrades to the emergency fuel storage system, as required by the passage of HAR Chapter 11-280.1, this option is not feasible. The City is legally required to upgrade the fuel storage tank. To forestall this action would increase the risk to the environment and public health due to non-compliant equipment.

4.2. Delayed Action

A delayed action implies that a project of similar scope and size to the proposed action would occur at an unspecific future date. As with the “no action” alternative, this option would increase the risk for long term harm to the environment and public health of the surrounding community. In addition, as stated in HAR Chapter 11-280.1, these improvements must be completed before July 15, 2028. Postponing the construction would result in not meeting this deadline; therefore, this is not a feasible option.

This page intentionally left blank.

5. PERMITS AND APPROVALS

The exact permitting and approval requirements will be determined during the design phase, and the following list contains permits and approvals that may be required for the proposed project.

State of Hawaiʻi

- AST Notification
- Noise Permit
- Non-Covered and/or Covered Source Permit
- Oversized and Overweight Vehicles on State Highways Permit
- Disability and Communication Access Board Review
- State Historic Preservation Division Review

City and County of Honolulu

- Application and Permits for Tank Installation
- Building Permit
- Grubbing, Grading, and Stockpiling Permit
- Erosion Control Plan/Best Management Practices
- Flammable/Combustible Liquid Permit
- Special Management Area Use Permit

This page intentionally left blank.

6. DETERMINATION

According to HAR Chapter 11-200.1-13, an agency must determine whether an action may have a significant impact on the environment, considering all phases of the project, its expected primary and secondary impacts, cumulative effects with other projects, and its short- and long-term effects. In making this determination, the rules establish "significance criteria" to guide the consideration of potential environmental effects.

The proposed project is not likely to have a significant impact on the physical or human environment based on the analysis presented in this document. The City and County of Honolulu, Department of Environmental Services anticipates that the appropriate determination is a Finding of No Significant Impact. The supporting rationale for this finding as set forth in HAR Chapter 11-200.1-13 is discussed below.

(1) Irrevocably commit a natural, cultural, or historic resource;

The proposed project will not impact the Kahonua fishpond and is not expected to result in the loss of or damage to natural, cultural, or historic resources. Instead, it aims to provide protection against the harmful effects to the environment and public health that would occur as a result of deterioration or malfunction if the project were not undertaken. The project proposes to upgrade an existing underground fuel storage tank to an aboveground fuel storage tank system with mandated secondary containment and interstitial monitoring in an area that has been previously disturbed by grading, utility lines and road construction. Biological resources may exist in the area and recommendations by the DLNR-DOFAW will be followed to mitigate any impact on these resources.

(2) Curtail the range of beneficial uses of the environment;

The proposed project does not limit nor prevent future beneficial uses of the surrounding environment for recreational, cultural, or preservation use. Its scope is limited to land which has already been developed, and does not entail the expansion of that area beyond existing boundaries.

(3) Conflicts with the State's environmental policies or long-term environmental goals established by law;

The project does not conflict with the State's environmental policies or long-term environmental goals. Rather, it aligns with Hawaiʻi's environmental goals by reducing the risk of fuel leakage to the surrounding soils. Provision

of the AST will ensure that the facility is operable during a power outage to prevent wastewater back-up.

(4) Have a substantial adverse effect on the economic welfare, social welfare, or cultural practices of the community or State;

The project is not expected to have an adverse effect on economic, social, or cultural welfare. Through the use of BMPs during construction, disturbances to the surrounding community are expected to be minimal. The upgrades to the WWPS prevent future system failures that would cause significant disruptions to the local infrastructure. The ability to better monitor and administer needed repairs to the fuel storage system will help to protect the general welfare of the community.

(5) Have a substantial adverse effect on public health;

The project is not projected to have an adverse effect on public health. Instead, it aims to safeguard public health by reducing the possibility of system failure within the WWPS. Through the use of BMPs, temporary impacts such as fugitive dust, noise, and intermittent traffic, during the construction process is expected to be negligible.

(6) Involve adverse secondary impacts, such as population changes or effects on public facilities;

No major adverse secondary impacts are expected as a result of the proposed project. Construction work will occur within the site boundaries and is not expected to significantly disrupt traffic. Upgrades are expected to positively impact the environmental sustainability of the existing public facility.

(7) Involves a substantial degradation of environmental quality;

No major degradation of environmental quality is expected as a result of the proposed project. The installation of the AST and removal of the existing UST will occur on a previously developed area. Through the use of BMPs, construction work will limit impacts such as erosion or runoff. The project will serve the purpose of protecting the environment by reducing the risk of fuel spillage and malfunction.

(8) Be individually limited but cumulatively has substantial adverse effect upon the environment or involves a commitment for larger actions;

The project is limited in scope. No larger or cumulative impact on the environment is expected from the project.

(9) Have a substantial effect on rare, threatened, or endangered species, or its habitat;

The project area is not located within any critical habitats. No major impact on rare, threatened, or endangered species, or critical habitats is expected. Through the use of BMPs, construction work is expected to mitigate any disturbances to regional species to a minimal effect.

(10) Have a substantial adverse effect on air or water quality or ambient noise levels;

No substantial adverse effect on air or water quality or ambient noise levels are expected. Any potential impacts will be temporary and limited to construction-related disturbances, which will be mitigated through BMPs.

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

The project is situated in a tsunami zone, however, the proposed project is necessary to ensure reliable service from the existing facility located in the area. To mitigate potential impacts from storm surges, the AST will be bolted down on top of a concrete pad that will be anchored to the ground, reducing the risk of the storage tank being displaced or compromised as a result of storm surges. Additionally, the project area is enclosed by a CMU wall, which also serves as wave buffer for the AST.

(12) Have a substantial adverse effect on scenic vistas and view planes identified in county or state plans or studies; or

No substantial adverse effect on scenic vistas or view planes are expected as a result of the project. The AST will not obstruct any scenic vistas and view planes identified in the Koʻolau Poko SCP or the Kahaluʻu Community Master Plan, both of which recognize the makai side of Kamehameha Highway north of the WWPS, near the canoe hālau, as important makai and mauka viewsheds. The AST is sited to remain below the height of the

existing CMU wall and is set back from the shoreline and Kamehameha Highway, behind the existing commercial properties, thereby minimizing visibility from primary vantage points.

(13) Require substantial energy consumption or emit substantial greenhouse gas.

Installation of the AST and piping would take place during a limited time period and would not require substantial energy consumption. Greenhouse gas emissions from diesel-power construction equipment and generators would occur during the temporary period of construction. In the long-term, the permanent fuel tank system infrastructure will support the ongoing operation of the facility.

7. PUBLIC AGENCY REVIEW AND CONSULTATION

An Early Consultation Letter and Handout was sent on April 1, 2025 to initiate the environmental review process. A list of consulted agencies, organizations, and interest groups are listed below. There were 10 formal responses to the early consultation letter, as indicated by the ✓ below. A copy of the Early Consultation Letter and Handout are included in Appendix B.

State of Hawaiʻi

- Department of Health
- ✓ Office of Planning and Sustainable Development
- Department of Transportation
- ✓ Department of Land and Natural Resources, Land Division
- ✓ Department of Land and Natural Resources, Division of Boating & Ocean Recreation
- ✓ Department of Land and Natural Resources, Engineering Division
- ✓ Department of Land and Natural Resources, Division of Forestry and Wildlife

Hawaiʻi Emergency Management Agency

Office of Hawaiian Affairs

Department of Hawaiian Home Lands, Planning Office

City & County of Honolulu

- ✓ Board of Water Supply
- Department of Land Management
- ✓ Department of Planning and Permitting
- Department of Parks and Recreation
- ✓ Honolulu Police Department
- Department of Climate Change, Sustainability & Resiliency
- ✓ Department of Design and Construction
- Department of Emergency Management
- ✓ Honolulu Fire Department
- Department of Facilities Maintenance
- Department of Transportation Services

Elected Officials

Matt Weyer (District 2 – County Council Member)

Brenton Awa (District 23 – State Senator)

Lisa Kitagawa (District 48 – State House Representative)

Parker Spencer (Kahaluʻu Neighborhood Board No.29 – Chairman)

Rick Blangiardi (Mayor of the City & County of Honolulu)

Other

Hawaiian Electric Company

In addition to sending out the early consultation letters, the planning team attended the Kahaluʻu Neighborhood Board No.29 on April 9, 2025 to announce the start of the EA and to encourage participation in the early consultation process.

8. REFERENCES

Barrera Jr., W. M. (1984). Kahaluʻu, Oʻahu: Archaeological survey at proposed well sites.

City & County of Honolulu Climate Change Commission. (2022). *Sea Level Rise II – Guidance Document*.

City & County of Honolulu Department of Budget and Fiscal Services. (2024). Real Property Assessment Division. Retrieved from https://qpublic.schneidercorp.com/Application.aspx?AppID=1045&LayerID=23342&PageTypeID=1&PageID=9743&Q=1019931734&KeyValue=470110160000

City & County of Honolulu Department of Land and Natural Resources. (2025). *Flood Hazard Assessment Tool*. Retrieved from https://fhat.hawaii.gov/

City & County of Honolulu Department of Planning & Permitting. (2007). *Kahaluʻu Community Master Plan.* Retrieved from https://www.honolulu.gov/dpp/wp-content/uploads/sites/56/2024/07/KahaluuCommunityMasterPlan2007_Compressed.pdf.

City & County of Honolulu. (March 2017). *Koʻolau Poko Sustainable Communities Plan*.

City & County of Honolulu. (November 2021). *Oʻahu General Plan*.

Fukunaga & Associates, Inc. (December 2012). *Kahaluʻu Wastewater Pump Station, Operations Manual*.

Giambelluca TW, Chen Q, Frazier AG., Price JP, Chen Y-L., Chu P-S, Eischeid J., and Delparte, D. (2011). *The Rainfall Atlas of Hawaiʻi*. http://rainfall.geography.hawaii.edu.

Gutierrez, Ben. (April 2022). DOT proposes plan for roundabout at a busy Kahaluu highway intersection. Hawaii News Now. Retrieved June 30, 2025 from https://www.hawaiinewsnow.com/2022/04/08/dot-plans-roundabout-busy-kahaluu-highway-intersection/.

Hawaiʻi Climate Change Mitigation and Adaptation Commission. (2017). *Hawaiʻi Sea Level Rise Vulnerability and Adaptation Report*. Prepared by Tetra Tech, Inc. and the State of Hawaiʻi Department of Land and Natural Resources, Office of Conservation and Coastal Lands, under the State of Hawaiʻi Department of Land and Natural Resources Contract No: 64064

Hawaiʻi Climate Change Mitigation and Adaptation Commission. (2021). *State of Hawaiʻi Sea Level Rise Viewer.* Version 1.07. Prepared by the Pacific Islands Ocean Observing System (PacIOOS) for the University of Hawaiʻi Sea Grant College Program and the State of Hawaiʻi Department of Land and Natural Resources, Office of Conservation and Coastal Lands, with funding from National Oceanic and Atmospheric Administration Office for Coastal Management Award No. NA16NOS4730016 and under the State of Hawaiʻi Department of Land and Natural Resources Contract No. 64064. Retrieved from http://hawaiisealevelriseviewer.org.

Hawaiʻi Emergency Management Agency. (2023). *2023 State of Hawaiʻi Hazard Mitigation Plan.*

Hawaiʻi Invasive Species Council. (2017). *The 2027 Hawaiʻi Interagency Biosecurity Plan.* Retrieved from https://dlnr.hawaii.gov/hisc/plans/hibp/.

Hawaiʻi State Civil Defense. n.d. *Tsunami Evacuation Zone Mapping Tool*. (2025). Retrieved from https://dod.hawaii.gov/hiema/public-resources/tsunami-evacuation-zone/.

Hawaiʻi Statewide GIS Program. *Fire Risk Areas*. (2020). Retrieved from https://geoportal.hawaii.gov/datasets/HiStateGIS::fire-risk-areas/explore?location=21.451768%2C-157.836277%2C15.00.

Hunkin, N., Borthwick, D., and Hammatt, H. H. (2010). *Archaeological monitoring report for Kamehameha Highway intersection improvements at Kahekili Highway, project no. 83F-01-99, Kahaluʻu ahupuaʻa, Koʻolau Poko district, island of Oʻahu TMK: [1] 4-7-023, 026, 027, various parcels.* Cultural Surveys Hawaiʻi, Inc.

McAllister, J. G. (1933). *Archaeology of Oʻahu*. Bishop Museum.

National Archives and Records Administration. (2024). *Code of Federal Regulations.* Retrieved from https://www.ecfr.gov/current/title-44/chapter-I/subchapter-B/part-60.

National Oceanic and Atmospheric Administration. (2025). *Sea Level Rise Viewer*. Retrieved from https://coast.noaa.gov/slr/#.

Neller, E. (1984). *An emergency investigation of human bones discovered during construction at Kahaluʻu, Oʻahu (site no. 2897)*. State Historic Preservation Office.

Revised Ordinances of Honolulu. (2021). *Comprising the ordinances of the City and County of Honolulu. Ordinance No. 88-1 through Ordinance No. 20-35. I.*

Ordinances, Municipal-Honolulu. RefKFX1512.A35. Retrieved from https://hnldoc.ehawaii.gov/hnldoc/document-download?id=13798.

Shideler, D. W., Belluomini, S. A., and Hammatt, H. H. (2025). *Draft archaeological literature review and field inspection for the Kahaluʻu Wastewater Pump Station improvements project, Kahaluʻu ahupuaʻa, Koʻolaupoko district, Oʻahu, TMK: (1) 4-7-011:016.* Cultural Surveys Hawaiʻi, Inc.

State of Hawaiʻi, Coastal Zone Management. (2024). *Chapter 25 Special Management Areas*. Retrieved from https://www.honolulu.gov/dpp/wp-content/uploads/sites/56/2024/07/ROH-chapter-25.pdf.

State of Hawaiʻi, Hawaiʻi State Legislature. (2025). *Thirty-Third Hawaiʻi State Legislature: 2025-2026 Regular Session Senate: District Descriptions By District.* Retrieved from https://lrb.hawaii.gov/par/wp-content/uploads/sites/2/2024/12/2025-Senate-District-Descriptions.pdf.

State of Hawaiʻi, Hawaiʻi State Legislature. (2025). *Thirty-Third Hawaiʻi State Legislature: 2025-2026 Regular Session House of Representatives: District Descriptions By District.* Retrieved from https://lrb.hawaii.gov/par/wp-content/uploads/sites/2/2025/03/2025-House-District-Descriptions.pdf.

State of Hawaiʻi, Land Use Commission. (2010). *Chapter 226 Hawaiʻi State Planning Act*. Retrieved from https://luc.hawaii.gov/wp-content/uploads/2012/09/Chapter-226HRS.pdf.

State of Hawaiʻi, Shoreline Setback Ordinance. (2024). *Chapter 26 Shoreline Setbacks*. Retrieved from https://codelibrary.amlegal.com/codes/honolulu/latest/honolulu/0-0-0-35459.

U.S. Census Bureau. (2020). *2020 Kahaluʻu CDP, Hawaiʻi median household income*. Retrieved from https://data.census.gov/table?q=Kahaluu+CDP,+Hawaii+median+household+income.

U.S. Census Bureau. (2020). *2020 Kahaluʻu CDP, Hawaiʻi.* Retrieved from https://data.census.gov/table?q=Kahaluu+CDP,+Hawaii.

U.S. Department of Agriculture, Soil Conservation Service, in cooperation with the University of Hawaiʻi Agricultural Experiment Station. (1972). *Soil Survey of the Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii*. Retrieved from https://websoilsurvey.nrcs.usda.gov/app/.

U.S. Fish & Wildlife Service. (2025). *IPaC Information for Planning and Consultation*. Retrieved from https://ipac.ecosphere.fws.gov/.

University of Hawaiʻi, Geography Department. (2014). *Hawaiʻi Climate Data Portal*. Retrieved from https://www.hawaii.edu/climate-data-portal/climate-atlas/.

Appendix A: Archaeological Literature Review and Field Inspection Report

This page intentionally left blank.

Draft

Archaeological Literature Review and Field Inspection for the Kahaluu Wastewater Pump Station Improvements Project, Kahaluʻu Ahupuaʻa, Koʻolaupoko District, Oʻahu TMK: (1) 4-7-011:016

Prepared for
Townscape, Inc.
on behalf of the
City and County of Honolulu (C&C) Department of Environmental Services

Prepared by
David W. Shideler, M.A.,
Scott A. Belluomini, B.A.,
and
Hallett H. Hammatt Ph.D

Cultural Surveys Hawaiʻi, Inc.
Kailua, Hawaiʻi
(Job Code: KAHALUU 22)

April 2025

Oʻahu Office
P.O. Box 1114
Kailua, Hawaiʻi 96734
Ph.: (808) 262-9972
Fax: (808) 262-4950

www.culturalsurveys.com

Maui Office
1860 Main St.
Wailuku, Hawaiʻi 96793
Ph.: (808) 242-9882
Fax: (808) 244-1994

Management Summary

Reference	Archaeological Literature Review and Field Inspection for the Kahaluʻu Wastewater Pump Station Improvements Project, Kahaluʻu Ahupuaʻa, Koʻolaupoko District, Oʻahu, TMK: (1) 4-7-011:016 (Shideler et al. 2025)
Date	April 2025
Project Number(s)	Cultural Surveys Hawai‘i, Inc. (CSH) Job Code: KAHALUU 22
Investigation Permit Number	CSH completed the fieldwork component of this study under archaeological fieldwork permit number 25-04, issued by the Hawai‘i State Historic Preservation Division (SHPD) per Hawai‘i Administrative Rules (HAR) §13-13-282.
Agencies	SHPD
Project Proponent	City and County of Honolulu (C&C) Department of Environmental Services (ENV)
Project Funding	C&C
Project Location	The project is located at the Kahaluu Wastewater Pump Station (WWPS) at 47-511 Kamehameha Highway, Kāneʻohe, Hawai‘i 96744 in coastal Kahaluʻu Ahupuaʻa, Koʻolaupoko District on the windward (northeast) side of Oʻahu (TMK: [1] 4-7-011:016). The small (less than 0.25-acre) Kahaluu WWPS is depicted on a portion of a 2017 Kaneohe U.S. Geological Survey (USGS) 7.5-minute series topographic quadrangle (Figure 1), a tax map plat (Figure 2), and a 2022 aerial photograph (Figure 3). The actual project involves construction (placement) of a new 1,000-gallon diesel aboveground storage tank (AST), in the northeast corner of the WWPS, extending new, aboveground fuel piping along the east side of the WWPS to the location of a to-be-removed underground storage tank (UST) and then running a short segment (approximately 7 m) of fuel piping underground to the west into the southeast corner of the existing WWPS Pump Station building. The project area is specified in project plans (Figure 4) with the location of project components illustrated on annotated photographs (Figure 5 and Figure 6).
Land Jurisdiction	C&C
Project Acreage	The Kahaluu WWPS is approximately 0.21 acres (0.08 hectares). The to-be-installed 1,000-gallon diesel tank will be an AST and will require minimal excavation. Most of the new fuel piping will be above ground with a short section (approximately 7 m) buried. The existing UST is to be removed. The project area is estimated at 20 square meters (sq m).

Project Description and Ground Disturbance	The City Department of Environmental Services will be replacing the existing diesel fuel UST with an AST (see Figure 4 through Figure 6). It is anticipated that the new AST will involve a concrete slab with cradle supports and minimal ground disturbance. Most of the new fuel piping will be above ground along the east wall and will also involve minimal ground disturbance. The existing UST is to be removed which will involve minimal new ground disturbance. An approximately 7-m section of new, small-diameter fuel line will connect with the southeast corner of the existing WWPS Pump Station building.
Historic Preservation Regulatory Context	This is a state/municipal “governmental” project needing review under Hawai‘i Revised Statutes (HRS) §6E-8 and HAR §13-275
Document Purpose	This investigation was designed—through detailed historical, cultural, and archaeological background research and a field inspection of the project area—to determine the likelihood that historic properties may be affected by the project and based on findings, consider cultural resource management recommendations. This document is intended to facilitate the project’s planning and support the project’s historic preservation environmental review compliance. This investigation does not fulfill the requirements of an archaeological inventory survey investigation, per HAR §13-276.
Natural and Built Environment	The Kahaluu WWPS is only 150 m south of the coast of Kāne‘ohe Bay and is probably at an elevation of less than 5 m. The immediate project vicinity was almost uniquely well-watered, as it was located immediately east of the confluence of Waihe‘e Stream (with its Kālia Stream, Hāmama Stream, and Kolohaka Stream tributaries) and Kahalu‘u Stream (with its ‘Āhuimanu Stream and Waiola Stream tributaries) (Figure 7). E.S. Craighill Handy (1940:97) noted, “It was from all these streams that the water was taken to irrigate the lower flats of Kahaluu which are continuous with those of Waihee.” Another aspect of this stream system was that the silt run-off created an extensive area of shallows which were relatively easily converted into the extensive Kahouna (Kahalu‘u) fishpond immediately to the northeast of the project area. According to the U.S. Department of Agriculture (USDA) Soil Survey Geographic (SSURGO) database (2001) and soil survey data gathered by Foote et al. (1972) soils within the project area (Figure 8) are indicated as “Fill land, mixed” (FL): > It consists of areas filled with material dredged from the ocean or hauled from nearby areas, garbage, and general material from other sources. Included in mapping were a few areas that have been excavated. This land type is used for urban development including airports, housing areas, and industrial facilities. [Foote et al. 1972:31]

	The history of the fill episode(s) remains uncertain, but it does seem clear there was little, if any, filling of coastal shallows, but rather that fill was used to build up low-lying marshy land that was probably prone to flooding. This fill deposition may relate to improvements of the neighboring portion of Kahalu‘u Stream in the late 1950s (Figure 21 and Figure 22). Alternatively, Bill Barrera (1982:1) noted “considerable amounts of garbage of various kinds” suggesting the fill may have been somewhat ad hoc garbage deposition over time. The project area receives annual rainfall of approximately 1,505 mm (59.2 inches) (Giambelluca et al. 2013) which is regarded as sufficient for substantial non-irrigated agriculture. Both today’s Kamehameha Highway and Kahekili Highway alignments (that converge just southwest of the project area) are understood to have been traditional Hawaiian trails. Coastal Kamehameha Highway is understood as the traditionally more important of the two, and was an improved road first by 1919 (Figure 14) but with improvements in the 1960s and 1970s (Figure 25), Kahekili Highway became the dominant thoroughfare. With highway improvements, population density has increased with the vicinity becoming more of a bedroom community servicing Honolulu but one that retains a rural ambiance.
Background Research Methods	Background research included a review of previous archaeological studies on file at the SHPD; review of documents at Hamilton Library of the University of Hawai‘i, the Hawai‘i State Archives, the Mission Houses Museum Library, the Hawai‘i Public Library, and the Bishop Museum Archives; study of historic photographs at the Hawai‘i State Archives and the Bishop Museum Archives; and study of historic maps at the Survey Office of the Department of Accounting and General Services. Historic maps and photographs from the CSH library were also consulted. In addition, Māhele records were examined from the Waihona ‘Aina database (Waihona ‘Aina 2025).
Cultural Context	Well-watered coastal bottomlands near the rich resources of Kāne‘ohe Bay were intensively exploited for ponded taro fields (*lo‘i kalo*) in traditional Hawaiian times (Figure 9). Habitation is understood to have been focused in these rich coastal lands.
Land Commission Awards (LCAs)	In the great division of lands in the Māhele of 1848 the *ahupua‘a* (traditional land division) of Kahalu‘u was largely divided into Crown lands (the *ahupua‘a*) and Government lands (the *‘ili* of Lu‘ukoi) with 53 *kuleana* awards amounting collectively to only 120.4 acres for an average of 2.3 acres per awardee (Devaney et al. 1975:24, 28). The vast majority of Land Commission Awards (LCAs) were in the well-watered bottom-lands close to the coast (Figure 9). Of particular note for the present project is that the two closest native tenant LCA parcels (LCA 2249:2 to Kalauonakukui, adjacent to the south of the project area and LCA 10150 to Mahea, adjacent to the north of the project area) were both for house lots (*pāhale*) (see Appendix A for details). The indicated close

	proximity of these house lots is suggested to significantly increase the prospect of related pre- and post-Contact habitation deposits, human burials, and scattered human skeletal remains in the vicinity of these parcels.
Historical Background Focused on a Review of Historic Maps and Aerial Photographs	Our earliest historic maps of the vicinity showing any detail (the 1874 Gay map, Figure 10) shows a world already radically changed with the extensive commercial cultivation of sugarcane by the Kaalaea Sugar Plantation and extensive areas of rice cultivation that seemingly extended down to the present-day Kamehameha Highway alignment (labeled the “Main Road”) and within 200 m southwest of the project area. The Theo H. Davies Kaalaea Sugar Plantation was short-lived (1865-1880) (Dorrance and Morgan 2000:40, 41). Today’s adjoining Kahekili Highway alignment is shown on this 1874 map as a road “from ahuimanu.” Of note is the presence of a “school” at the confluence of these two main roads less than 100 m south of the project area. Although house density in the vicinity is low and houses are widely scattered, the close proximity of a school suggests this was a center of population. The 1880 Monsarrat map (Figure 11) of the Kaalaea Sugar Plantation (dated the year the plantation closed) shows other encroachments of world trade with the Sing Chong Company to the north and the new Libby pineapple cannery 500 m to the east on the Wailau (Kahaluʻu) peninsula. While most Chinese at the time were engaged in rice production, “the Sing Chong Co. sub-leased most of the higher areas to Japanese farmers for pineapple raising” (Devaney et al. 1982:63). Even traditional Hawaiian enterprises such as management of the Waihee Fishery have passed to non-Hawaiians (H.H. Parker). A curious feature of these early Gay and Monsarrat maps is that the adjacent fishpond is indicated as quite small compared to the way it would be depicted from 1919 on (Figure 14). The 1882 Jackson map (Figure 12) is partially obscured in the immediate vicinity of the project area but does serve to convey how extensive rice cultivation was to the southeast and east. Coulter and Chun (1937) estimated that in 1892 there were 300 acres of rice cultivation in Kaʻalaea and Kahaluʻu with 200 acres more in Heʻeia and Kāneʻohe and another 200 acres in Waikāne and vicinity (Coulter and Chun 1937:21, Figure 13). The 1919 U.S. War Department map (Figure 14) of the vicinity is dominated by the “Libbyville” complex of buildings, , and a railroad extending out to the “Kahaluu Landing.” From approximately 1910 to 1925, enterprise in coastal Waiheʻe and Kahaluʻu was dominated by pineapple cultivation and the Libbyville cannery of the Libby, McNeill and Libby company on the Wailau peninsula on the east side of Kahaluʻu fishpond (Figure 15). The scale of the new cultivation (Figure 16) and the rapidity with which it covered the slopes back of Kāneʻohe Bay were impressive. The fact that much of this land had been previously cleared for the now-closed Kaalaea Sugar Plantation allowed for rapid conversion for pineapple cultivation. The scene is captured in an

account from 1914:

> At last we reached the foot of the Pali [...] Joe and I looked over the surrounding hills, but looked in vain for the great areas of guava through which but a few months ago we had fought and cut our way. As far as the eye could reach pineapple plantations had taken the place of the forest of wild guava. The newest industry in Hawaii was beginning even to press upon the cane fields of this side of the island. [Alexander 1914:318]

Commerce was dominated by coastal shipping with another landing indicated 250 m to the northwest of the project area on the west side of the Kahalu‘u fishpond. The coastal plain is criss-crossed with unimproved roads allowing access to rice and pineapple fields in the vicinity. A foci of commerce and habitation is indicated at the confluence of the two main roads (today’s Kamehameha and Kahekili highways) in the immediate vicinity of the present project area.

The 1928/1930 USGS map (Figure 14), shows the substantial bottom lands on the west side of Kahalu‘u Stream (south and east of the project area) as a blank space which may relate to large-scale rice cultivation being abandoned around this time. The Kamehameha Highway alignment is now shown as improved (and named). Two homes (one shown as immediately adjacent to the project area) are indicated on the southwest margin of Kahalu‘u fishpond accessed from a driveway off Kamehameha Highway; the driveway is indicated as passing through the project area.

The 1936 U.S. War Department map (Figure 18) and the virtually identical 1943 War Department map (Figure 19) still show “Libbyville” as the biggest enterprise in the vicinity, but the cannery is understood to have closed ca. 1925 and most of the cannery infrastructure is believed to have been long gone. Kahekili (Highway) is now also shown as improved. A house is still shown in the immediate vicinity of the project area but there is less enterprise in the immediate vicinity than there had been in 1919 (compare with Figure 14) which reflects the substantial collapse of sugar, rice, and pineapple cultivation. Homes in the general vicinity are widely scattered, reflecting at least in part the extensive network of roads developed during the period of commercial agriculture.

The 1954 USGS map (Figure 17) shows substantial residential development particularly along Kamehameha Highway and out on the Wailau peninsula with its two churches and a pier. Three large buildings are indicated approximately 150 m northwest of the project area, but the nature of this enterprise is unknown. The immediate vicinity of the project area is indicated as undeveloped.

The specific project area is somewhat cloud-hidden in the 1959 USGS aerial photograph (Figure 21), but like virtually the entire expanse *mauka* (inland) of the highway appears to have been graded. Possibly we are seeing fill

	deposition associated with Kahalu‘u Stream improvements. The patchwork of small fields *mauka* of the highway suggests small-scale truck-crop farming. The 1965 USDA aerial photograph (Figure 22) provides greater clarity of indicated land disturbance in the immediate project area. The lower reaches of adjacent Kahalu‘u Stream appear to have been channelized possibly associated with the fill deposition indicated on the soils map (Figure 8). The 1968 USGS map (Figure 23) shows increasing population density in the general vicinity with Kahaluu School, 600 m to the west substantially increased in size to accommodate the post-Statehood population boom. Four scattered houses are indicated in the area between Kahalu‘u pond, Kahalu‘u Stream, and Kamehameha Highway but none are indicated as in, or immediately adjacent to, the project area. The 1968 USGS aerial photograph (Figure 24) continues to convey the impression that the entire area between Kahalu‘u fishpond and the mouth of Kahalu‘u Stream had been graded (or filled). The 1978 USGS aerial photo (Figure 25) indicates the project area was in a copse of trees. The 1998 USGS map appears to show the Kahalu‘u WWPS. The density of structures in the vicinity is still relatively low. The City and County ENV website for wastewater management facilities in the Windward Region lists the “Date Built” as 1988 and the “Year in service” for the Kahaluu Wastewater Pump Station as 1993.
Synopsis of Previous Archaeological Work in the Vicinity	Previous archaeological studies in the vicinity are depicted in Figure 26 and summarized in Table 1. Previously identified historic properties in the vicinity are located on Figure 27 and summarized in Table 2. The general vicinity has had a somewhat low intensity of archaeological study reflecting that many of the lands were developed before contemporary historic preservation laws, the general absence of major developments that would trigger environmental regulations, and perhaps a general perception that much of this area was transformed by commercial agriculture that would have removed any prior archaeological evidence. We show two prior studies between Kahalu‘u fishpond and the mouth of Kahalu‘u Stream (Barrera 1982 and Hunkin et al. 2010). The Barrera (1982) archaeological reconnaissance (one page of text) for a proposed Paradise Village development identified no archaeological or historic sites. He does note that “the property has been used as a dump for considerable amounts of garbage of various kinds” which may relate to the history of the development of the indicated Fill land, mixed soil type. Barrera does note the presence of a Land Court Award, and the proximity of the Kahalu‘u Fishpond, (placed on both the national and the state Registers of Historic Places) “also suggests the possible presence of cultural materials.” Barrera recommended further archaeological study. The Hunkin et al. (2010) study is an archaeological monitoring report for Kamehameha Highway/Kahekili Highway intersection improvements. No historic properties were identified, but most of the excavations were relatively

	shallow (less than 70 cmbs) and “the majority of the area displays heavily disturbed natural sediments and imported fill due to development of the area” (Hunkin et al. 2010:43). The study recommended “an archaeological monitoring program be implemented for any future ground disturbing activities in the vicinity of the project area” (Hunkin et al. 2010:43). Previously identified historic properties in the vicinity are dominated by Kahouna (Kahalu‘u) fishpond State Inventory of Historic Places (SIHP) # 50-80-10-00319) which was placed on both the Hawai‘i Register of Historic Places (HRHP) and the National Register of Historic Places (NRHP) on 14 March 1973. The (Watts 1971) NRHP Inventory-Nomination Form is provided here in full in Appendix B. We note in passing that, as was the norm at the time (1971), the historic property was designated with “Latitude and Longitude Coordinates Defining a Rectangle Locating the Property” and that the designated rectangle for this NRHP historic property appears to include the area of the present project area (see present Appendix B). It is not uncommon that the specifically designated “rectangle” boundaries of an NRHP-listed historic property include adjacent lands (and/or waters) that may be reasonably understood as not directly contributing to the historic property. However, the fact that the Kahalu‘u WWPS does lie within the designated NRHP site boundary does underscore the need that redevelopment of the WWPS facility should not directly, or indirectly, adversely affect this historic property of national importance. In terms of previously identified historic properties, it also may be noted that within a distance of approximately 1,300 m to the southeast along the coast there are an additional two fishpond sites (McAllister Site 319 “Small Fishpond” and McAllister Site 322 Pokole Pond) and two *heiau* (Hawaiian pre-Christian place of worship; Pukui and Elbert 1984:60) (McAllister Site 320 Haluakaiamoana Heiau and McAllister Site 321 Kalaeaalakihi Heiau). This suggests relatively intensive traditional Hawaiian utilization of coastal areas in the immediate vicinity. A last historic property to note is a pre-Contact Hawaiian grave with basalt flakes and lithic tools approximately 250 m southeast of the project area (SIHP # 50-80-10-02897; Neller 1984).
Fieldwork Effort	A brief field inspection of the project area was conducted by CSH archaeologists Scott Belluomini, B.A., and Ceinwyn Phipps, B.A., on 13 March 2025. This was conducted by archaeological transects spaced 2 m apart (Figure 29). Ground visibility was good. The field inspection was completed to identify the likelihood of historic properties being present within the project area. Photographs were taken of the project area and are provided in Figure 30 through Figure 41 with their locations depicted in Figure 29. The Kahuluu WWPS property is surrounded by a concrete masonry unit (CMU) wall and an access gate (Figure 30). The WWPS structure is on the *mauka* side of the property with an access road and with a turnaround area extending into the center of the property (Figure 31). The remainder of the

	property is covered in gravel (Figure 32 and Figure 33). Observations suggest the gravel surface is approximately 2-3 ft above the surrounding ground surface, suggesting the property has been filled to raise the ground height (Figure 34). There are numerous utility-related lines and equipment in the south portion of the property (Figure 35and Figure 36) with the current underground storage tank observed on the east (*makai*; seaward) side of the access road (Figure 37). Based on field observations, Kahouna (Kahalu‘u) fishpond (SIHP # -00319) is to the northeast of the property (see Figure 38 and Figure 39). A large berm was observed approximately 15 m northeast of the project area that likely defines the southwest edge of the pond. The property to the northwest of the WWPS within LCA 10150 (*pāhale*) was observed as having been previously paved; the pavement is deteriorating with grasses reclaiming the area (Figure 40). No remnants of LCA 10150 were observed on the surface. A similar attempt to identify remnants of LCA 2249:2 (*pāhale*) on the south side of WWPS property was undertaken. The LCA appears to be largely within the Kamehameha Highway roadway and traffic circle (roundabout). No surface remnants of LCA 2249:2 were observed (Figure 41). No surface historic properties were observed within the property. It is unlikely subsurface historic properties are present within 0.6–0.9 m (2–3 ft) of the surface based on field observations.
Historic Properties Potentially Affected	Based on field observations, no portion of the (NRHP and HRHP-listed) Kahouna (Kahalu‘u) fishpond (SIHP # 50-80-10-00319) is within the Kahaluu WWPS project area. No historic properties have been previously reported from the Kahaluu WWPS and none were observed during the present fieldwork.
Historic Preservation Next Steps	This study would support a C&C ENV determination as per HAR §13-275-7(a)(1) of “No historic properties affected” and for no further historic preservation study. Early consultation with the SHPD archaeology and architecture branches (with submittal of this study to the SHPD’s Hawai‘i Cultural Resources Information System or HICRIS system) is recommended.

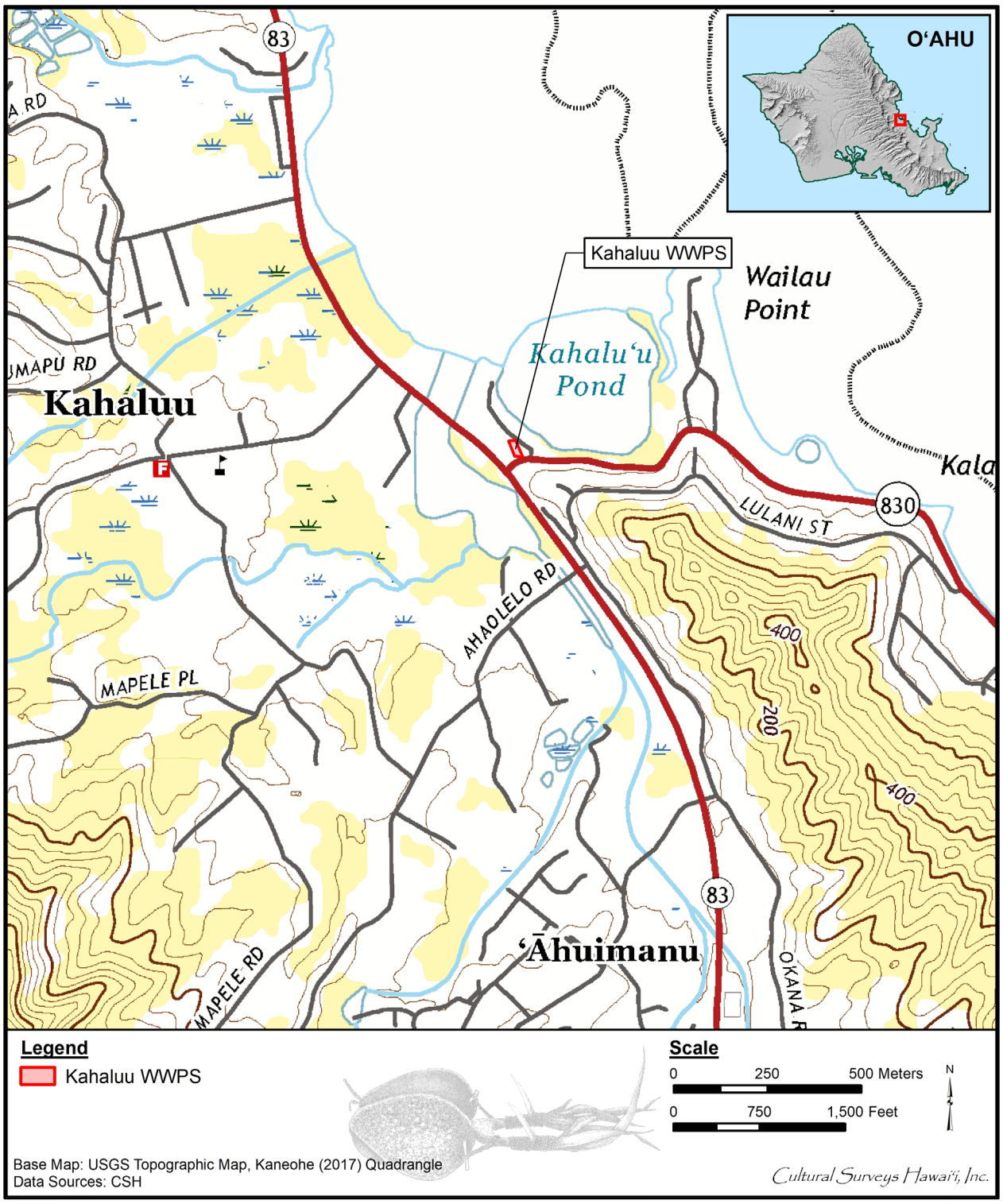


Figure 1. Portion of a 2017 Kaneohe USGS 7.5-minute topographic quadrangle showing the location of the Kahaluu WWPS

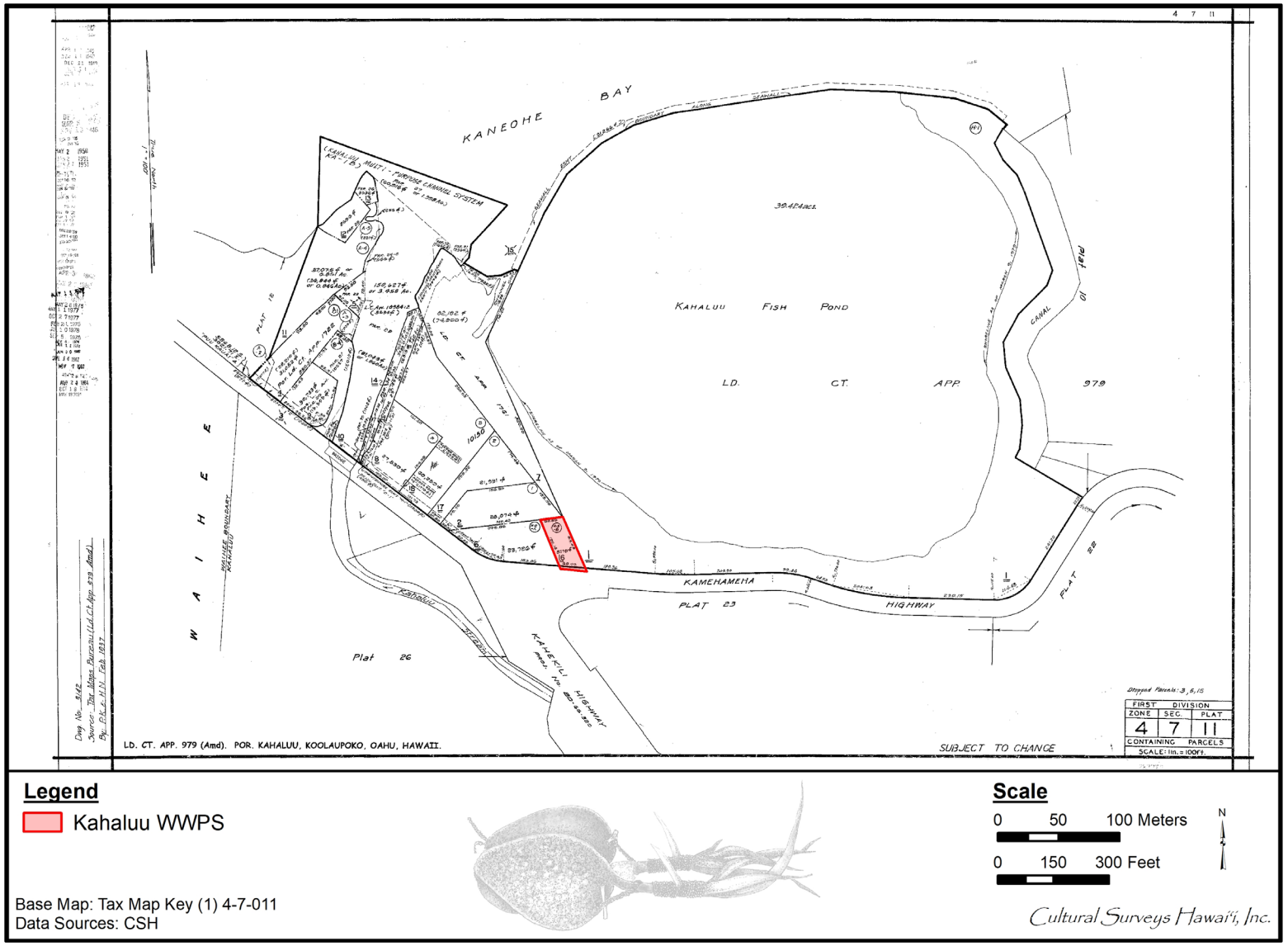


Figure 2. TMK: (1) 4-7-011 showing the location of the Kahaluu WWPS (Hawai‘i TMK Service 2025)

Figure 3. Aerial photograph showing the location of the Kahaluu WWPS (ESRI 2022)

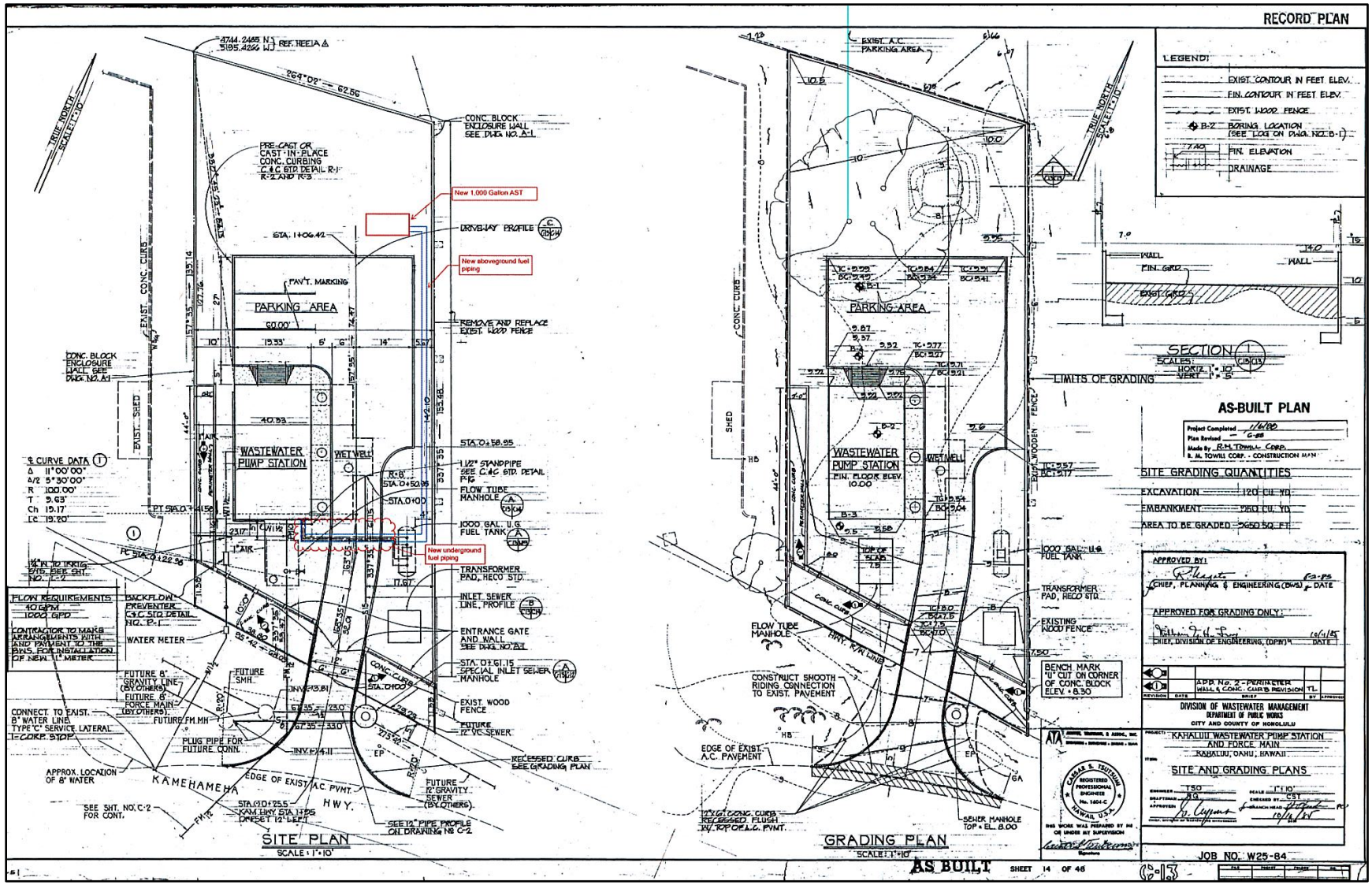


Figure 4. “As Built” plans for the Kahaluu WWPS (“Project Completed 1/6/88”) showing locations of the new 1,000-gallon AST, new above-ground fuel piping, and new underground fuel piping (Okahara and Associates, Inc.; courtesy of client)

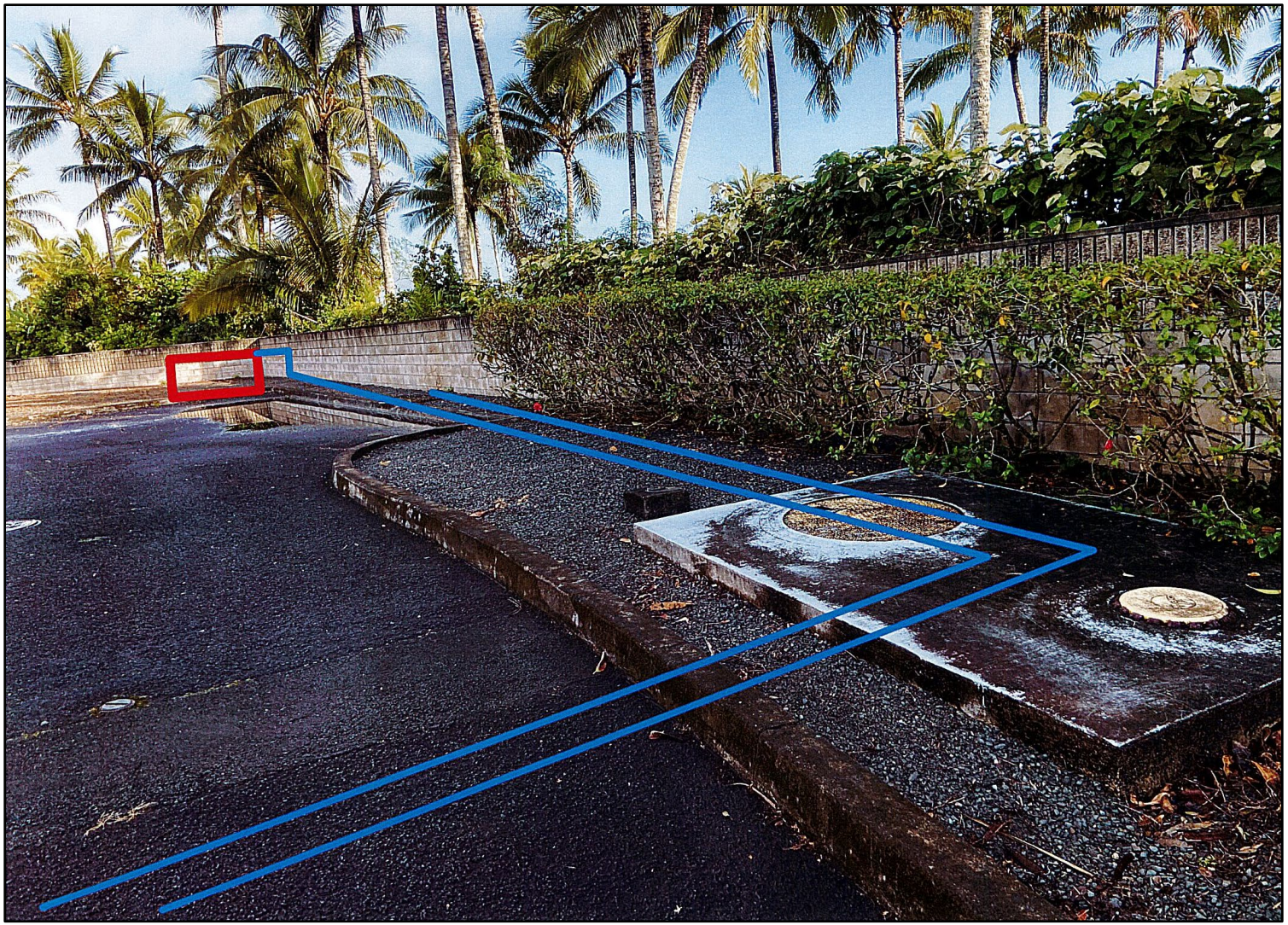


Figure 5. Indicated route of fuel piping approaching the proposed 1,000-gallon AST (in red); the new fuel line (in blue) will be above ground along the east wall and then, when it reaches the existing, to-be-removed UST (at right), it will be underground approaching the WWPS building at the Kahaluu WWPS (Okahara and Associates, Inc.; courtesy of client)

Figure 6. Indicated route of underground fuel piping approaching the Kahaluu WWPS building (Okahara and Associates, Inc.; courtesy of client)

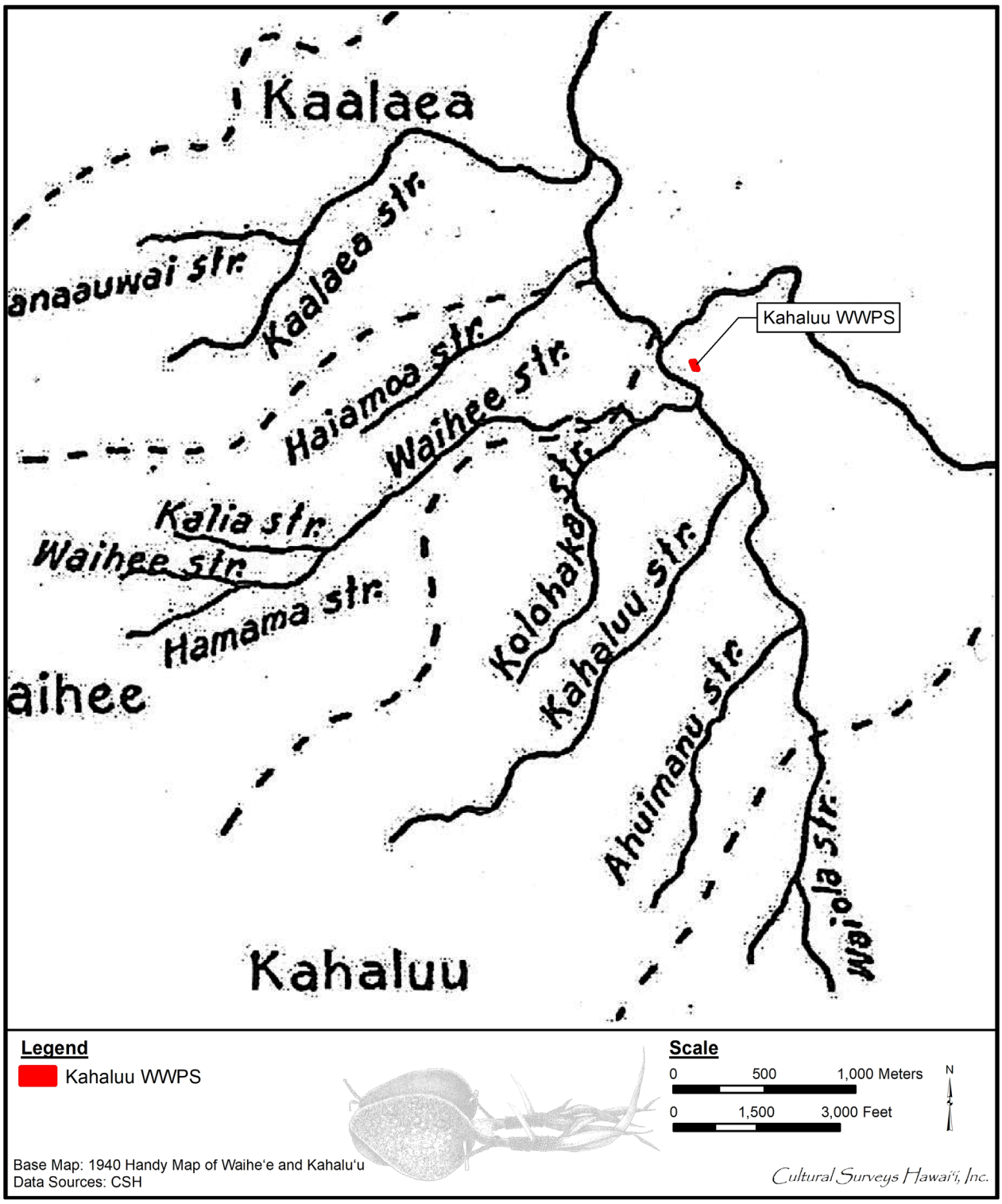


Figure 7. Map of Waihe‘e and Kahalu‘u Streams showing the location of the Kahaluu WWPS (adapted from Handy 1940:96, “The Hawaiian Planter” study)

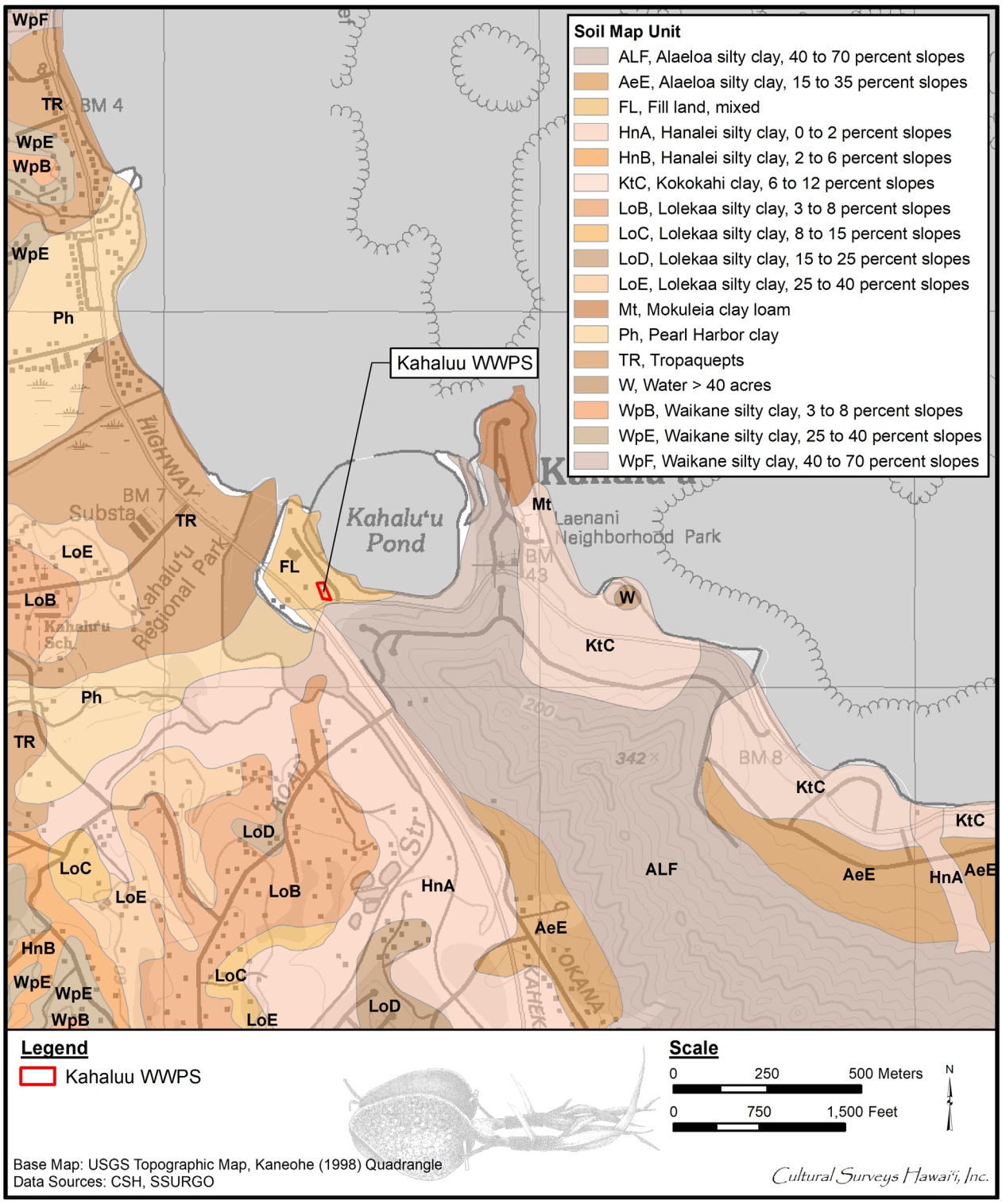


Figure 8. Overlay of *Soil Survey of the Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii* (Foote et al. 1972; USDA SSURGO 2001) indicating soil types within and surrounding the Kahaluu WWPS on a portion of a 1998 Kaneohe USGS 7.5-minute topographic quadrangle

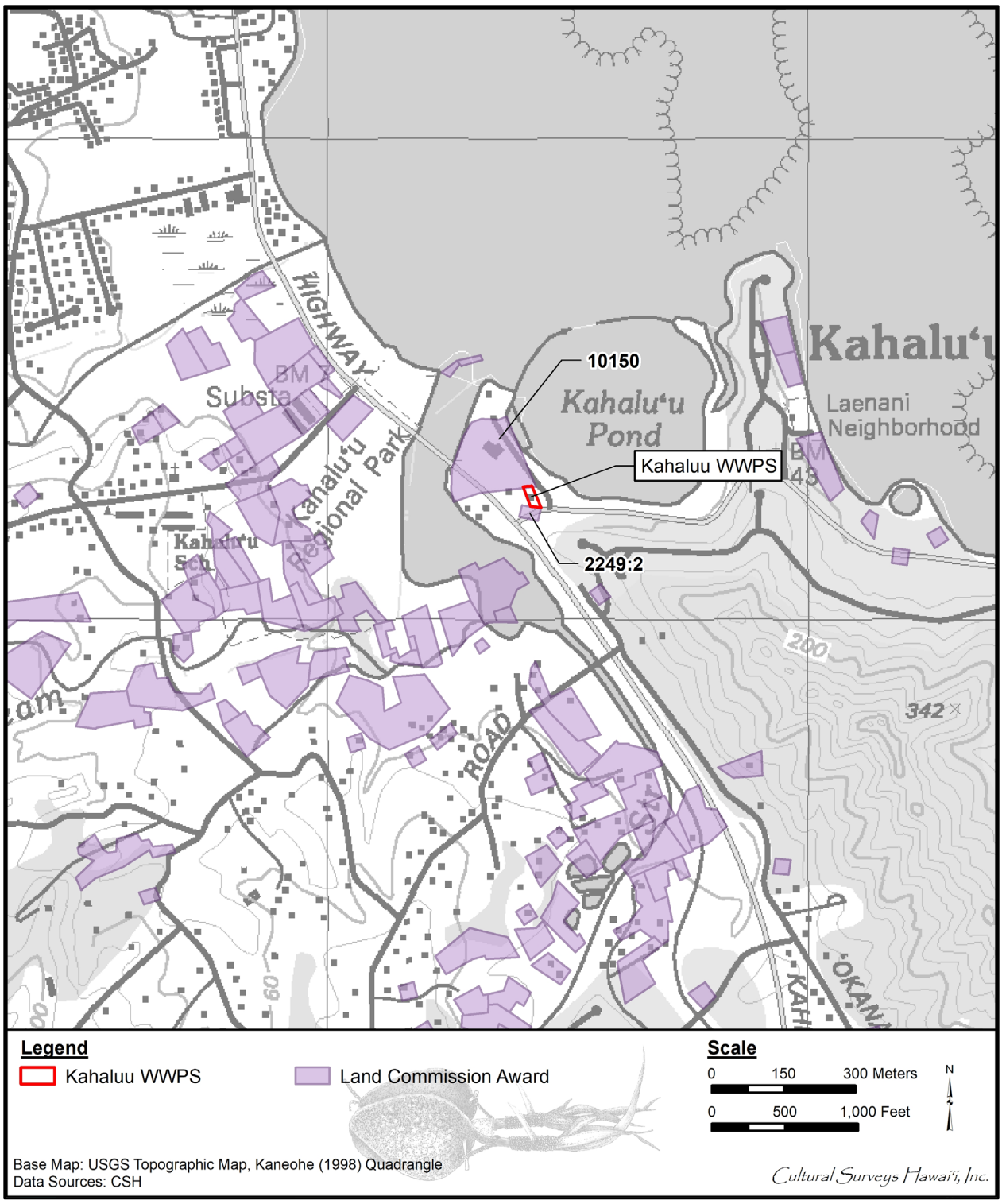


Figure 9. Portion of a 1998 Kaneohe USGS topographic map showing the distribution of LCAs in the vicinity of the Kahaluu WWPS, LCA 2249:2 and LCA 10150, which both included house lots (*pāhale*) bracketed the project area

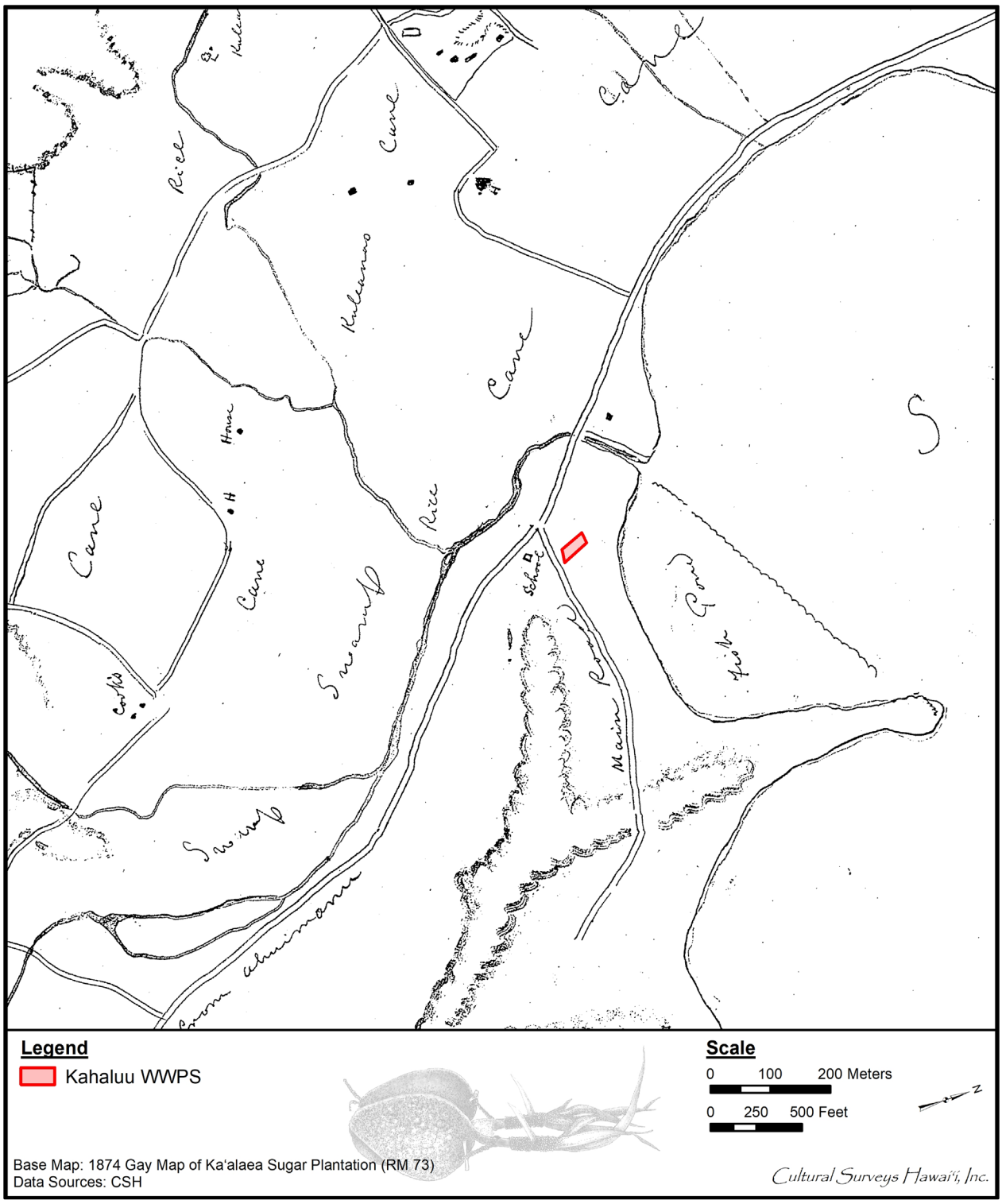


Figure 10. Portion of an 1874 Gay map of Kaalaea Sugar Plantation (RM 73) showing the relationship to the Kahaluu WWPS

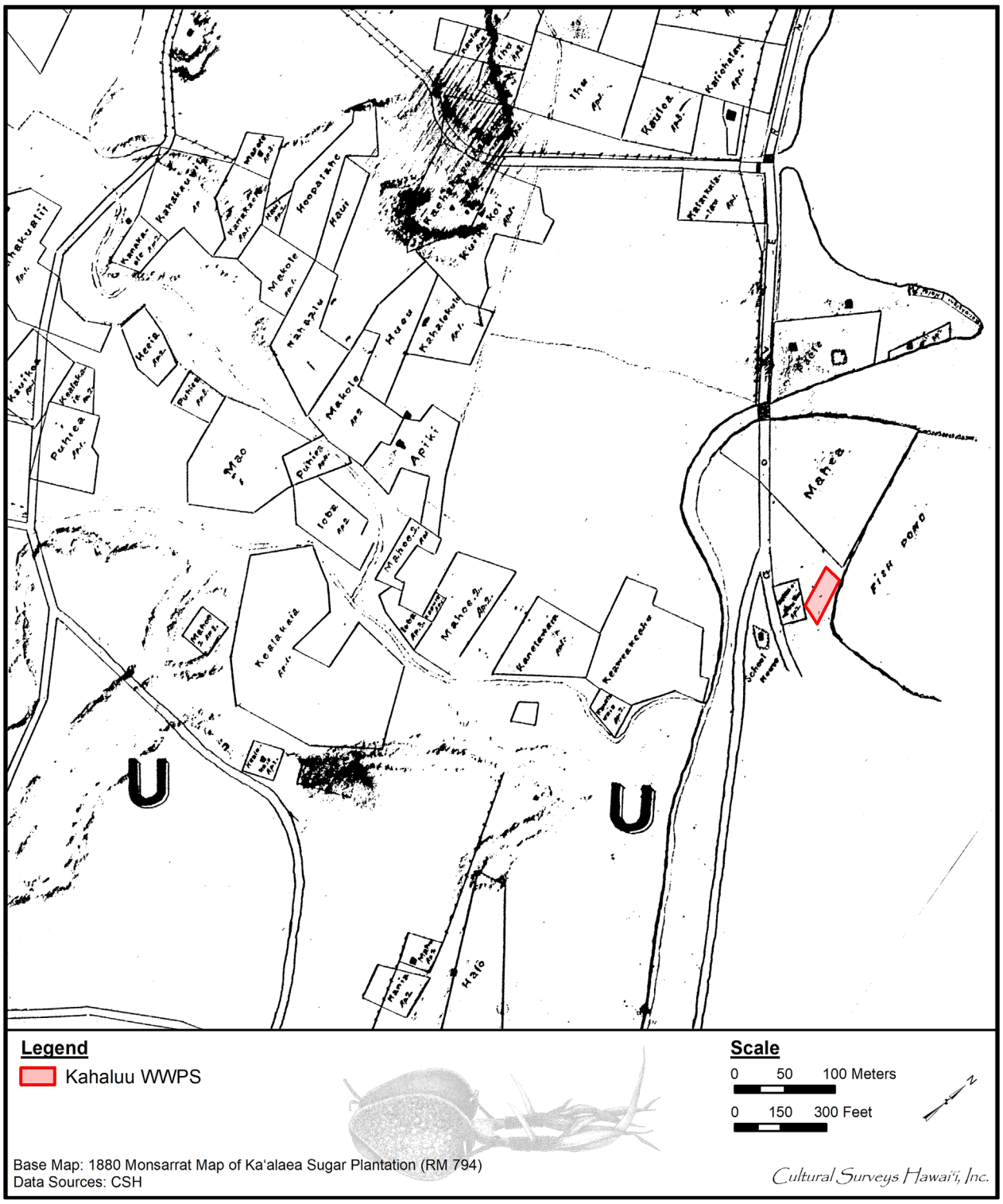


Figure 11. Portion of an 1880 Monsarrat map of Kaalaea Sugar Plantation (RM 794) showing the relationship to the Kahaluu WWPS

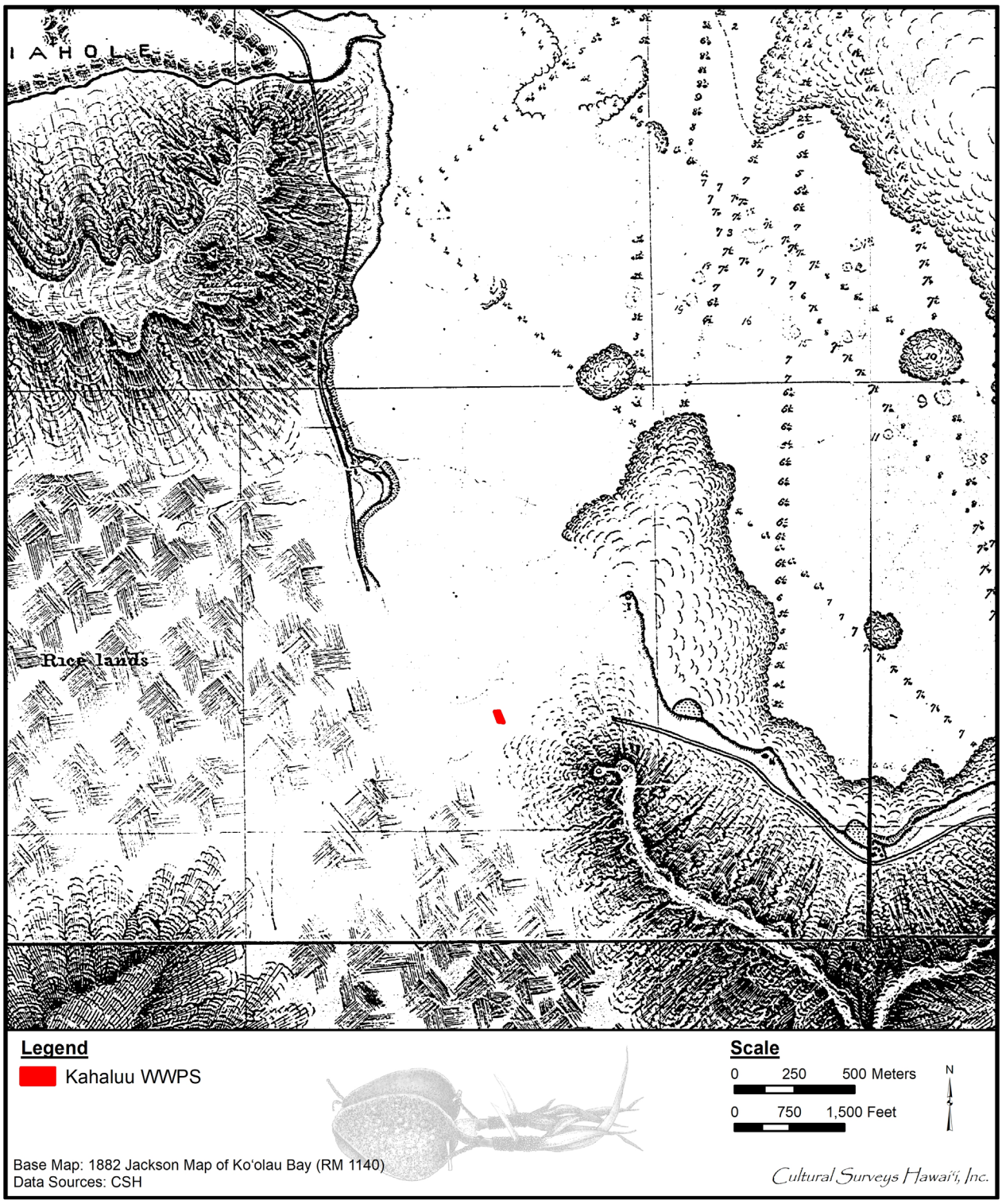


Figure 12. Portion of the 1882 Jackson map of Koolau Bay (RM 1140) showing the location of the Kahaluu WWPS

Figure 13. A portion of a map of "Rice farming districts on O‘ahu 1892" showing extensive rice production extending to the coast along the southwest margin of Kāne‘ohe Bay near the Kahaluu WWPS (Coulter and Chun 1937:12)

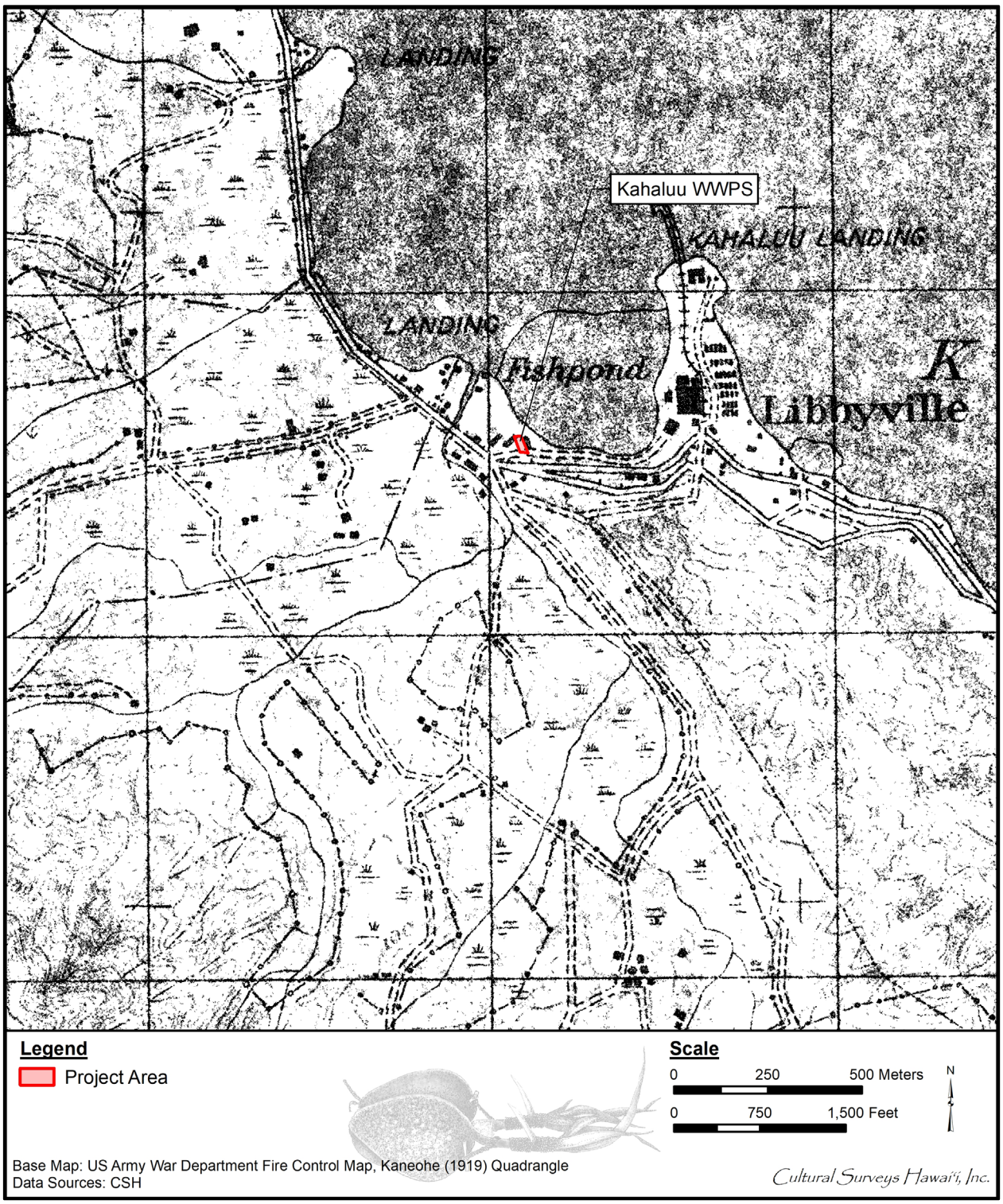


Figure 14. Portion of a 1919 U.S. War Department fire control map, Kaneohe quadrangle showing the Kahaluu WWPS located at a node of commercial enterprise

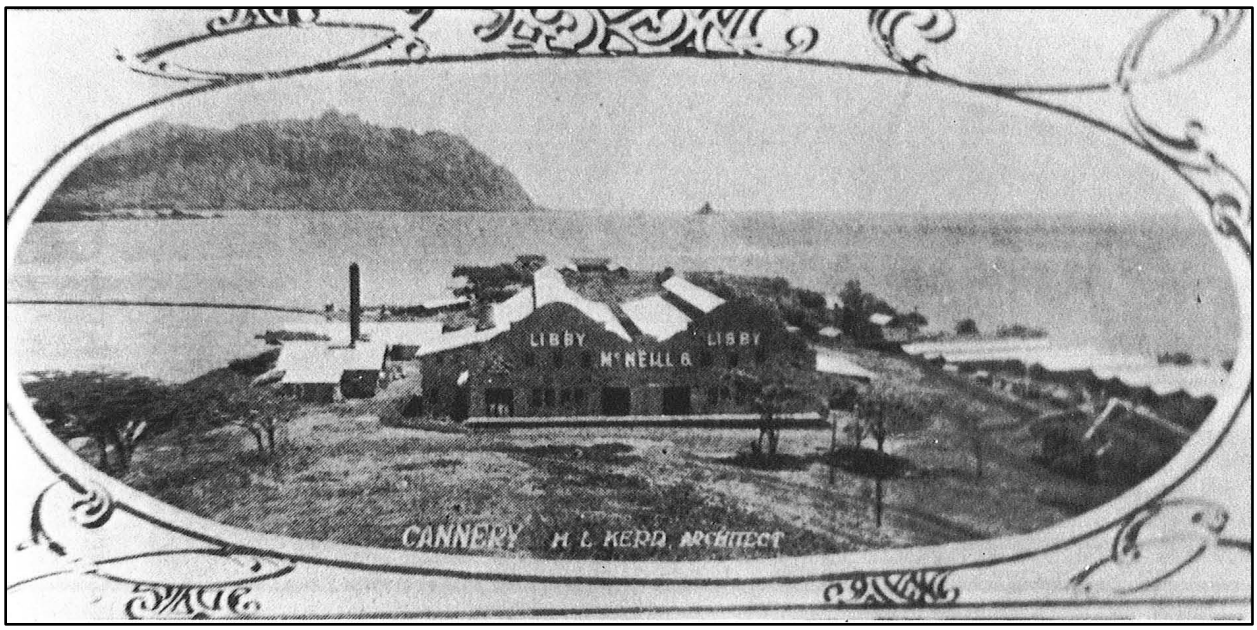


Figure 15. View of the Libby, McNeill and Libby cannery on the peninsula on the east side of Kahaluʻu fishpond in 1913 (from Devaney et al. 1982:following page 69)

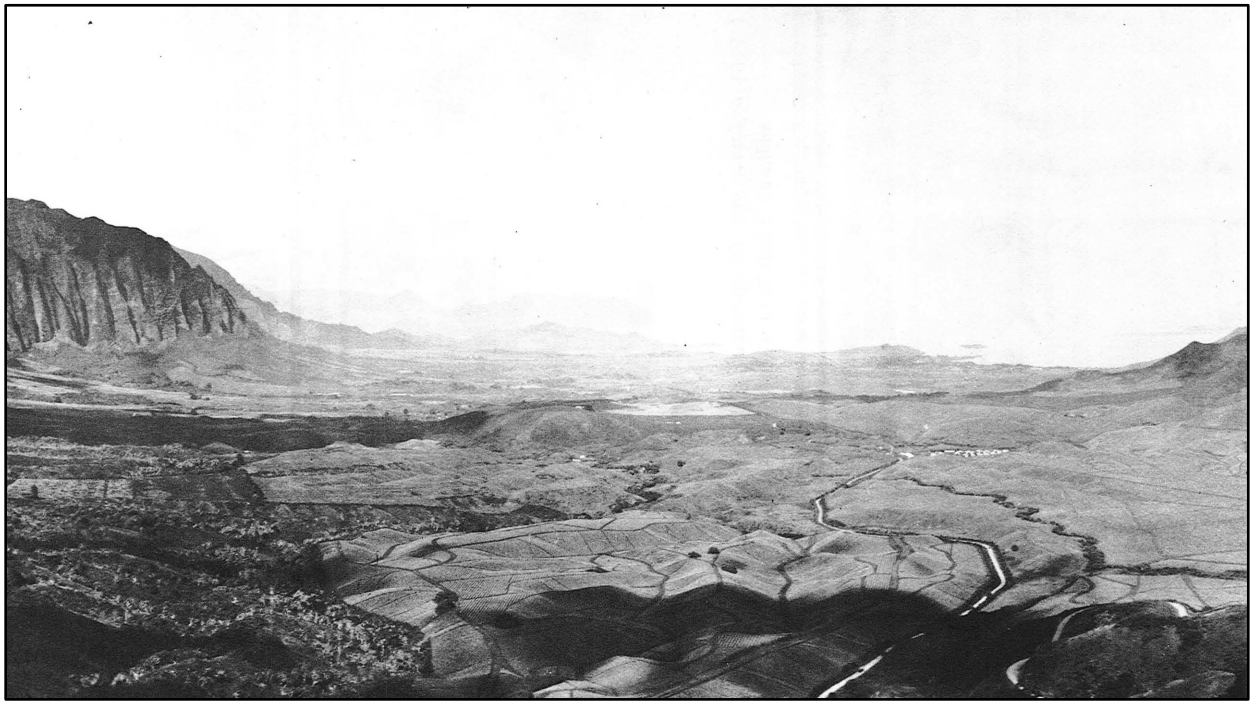


Figure 16. View of the Kāneʻohe Bay region at the height of pineapple cultivation ca. 1920 (from Devaney et al. 1982:following page 64)

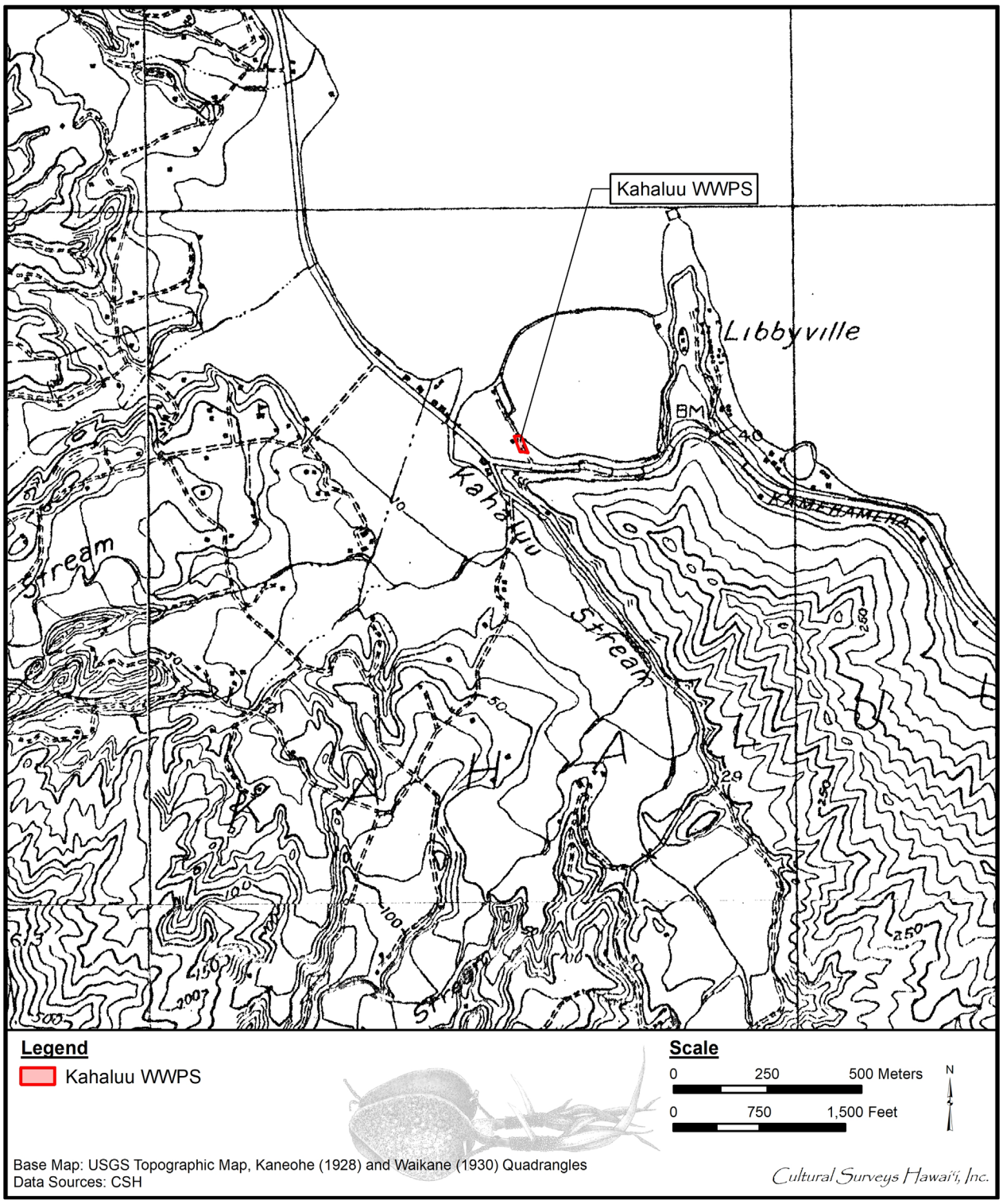


Figure 17. Portion of 1928 Kaneohe and 1930 Waikane USGS topographic quadrangles, showing the location of the Kahaluu WWPS with less activity following the collapse of sugarcane, rice, and pineapple enterprises

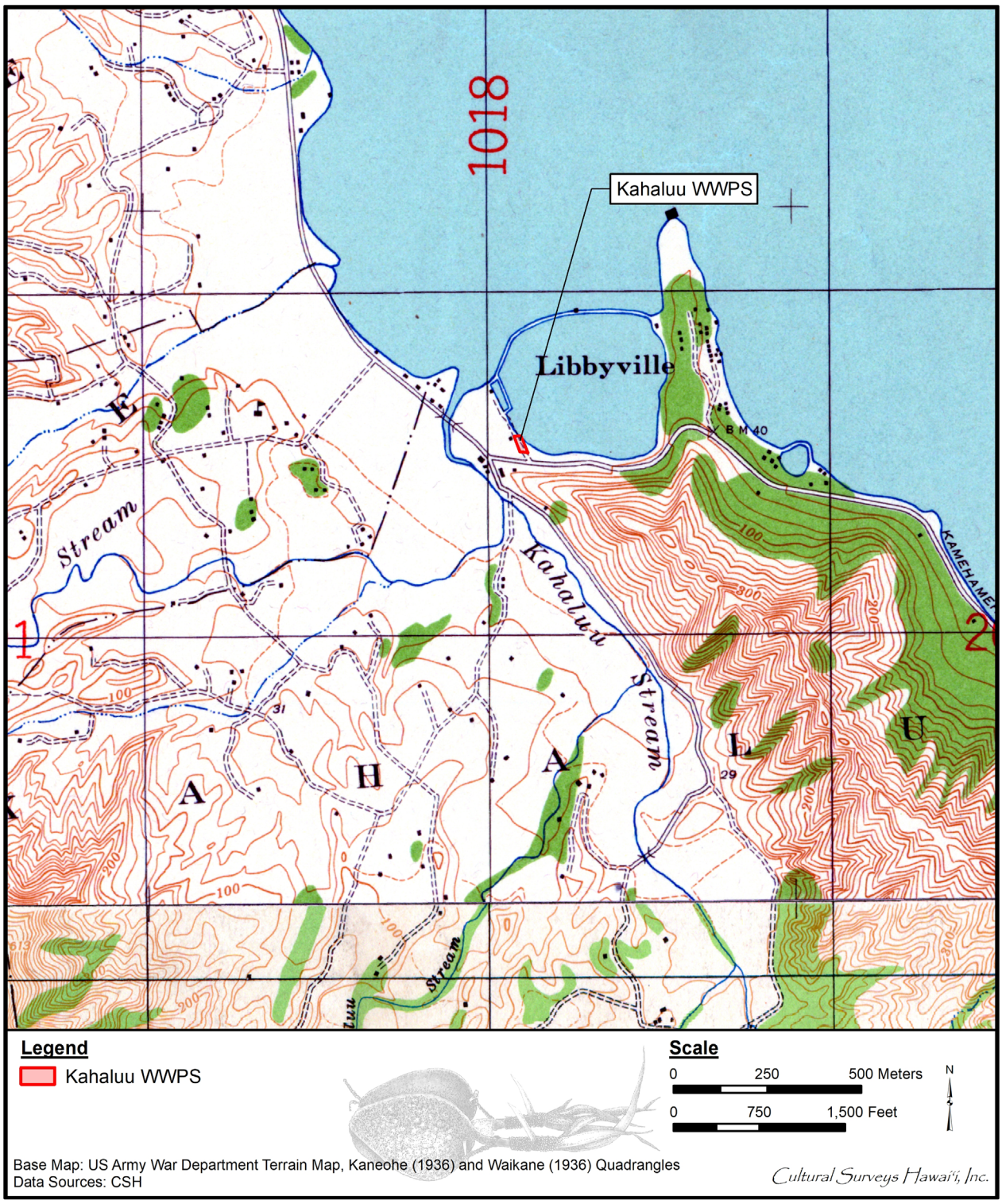


Figure 18. Portion of 1936 U.S. Army War Department terrain map, Kaneohe and Waikane quadrangles showing the location of the Kahaluu WWPS

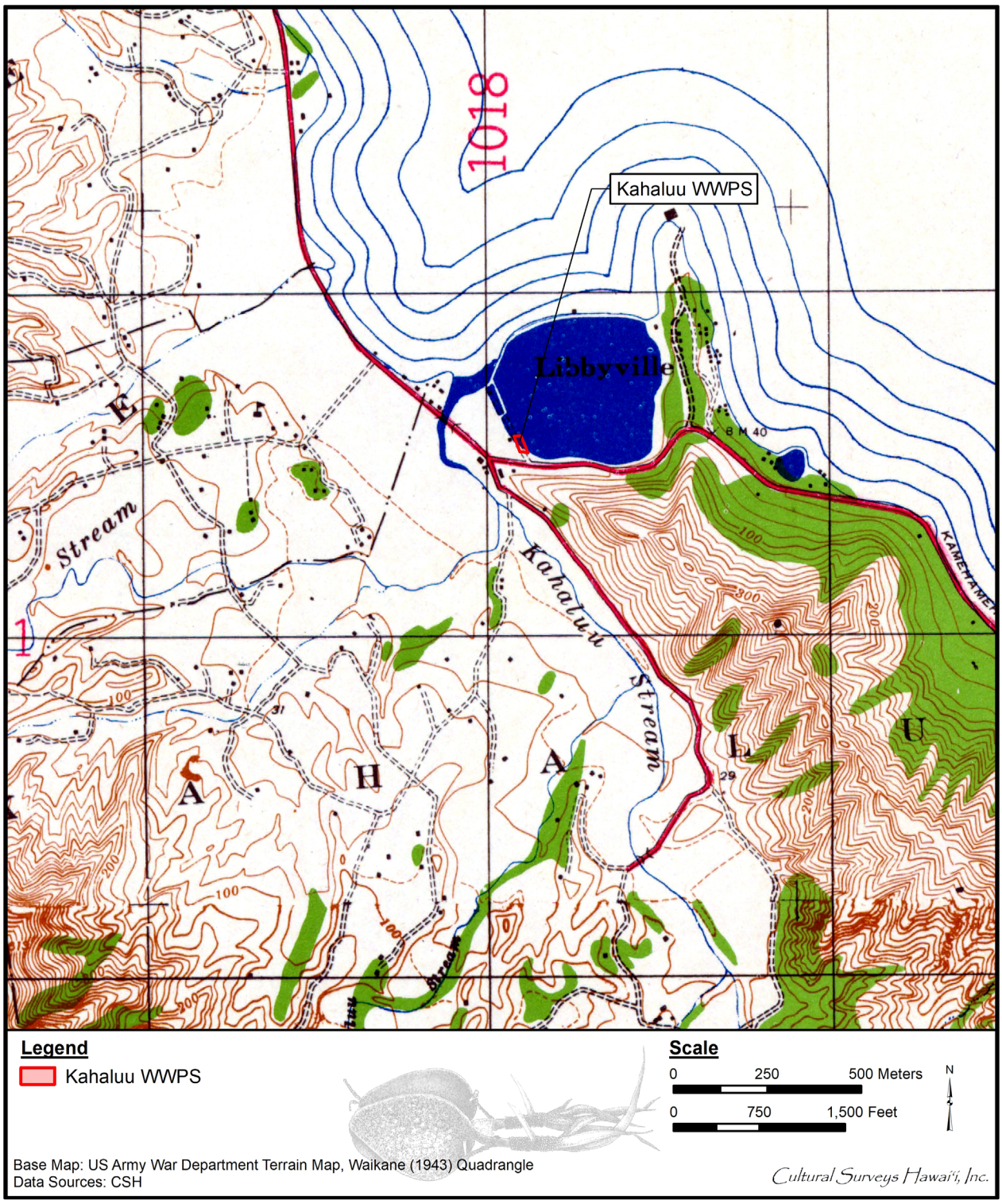


Figure 19. Portion of 1943 U.S. Army War Department terrain map, Waikane quadrangle showing the location of the Kahaluu WWPS

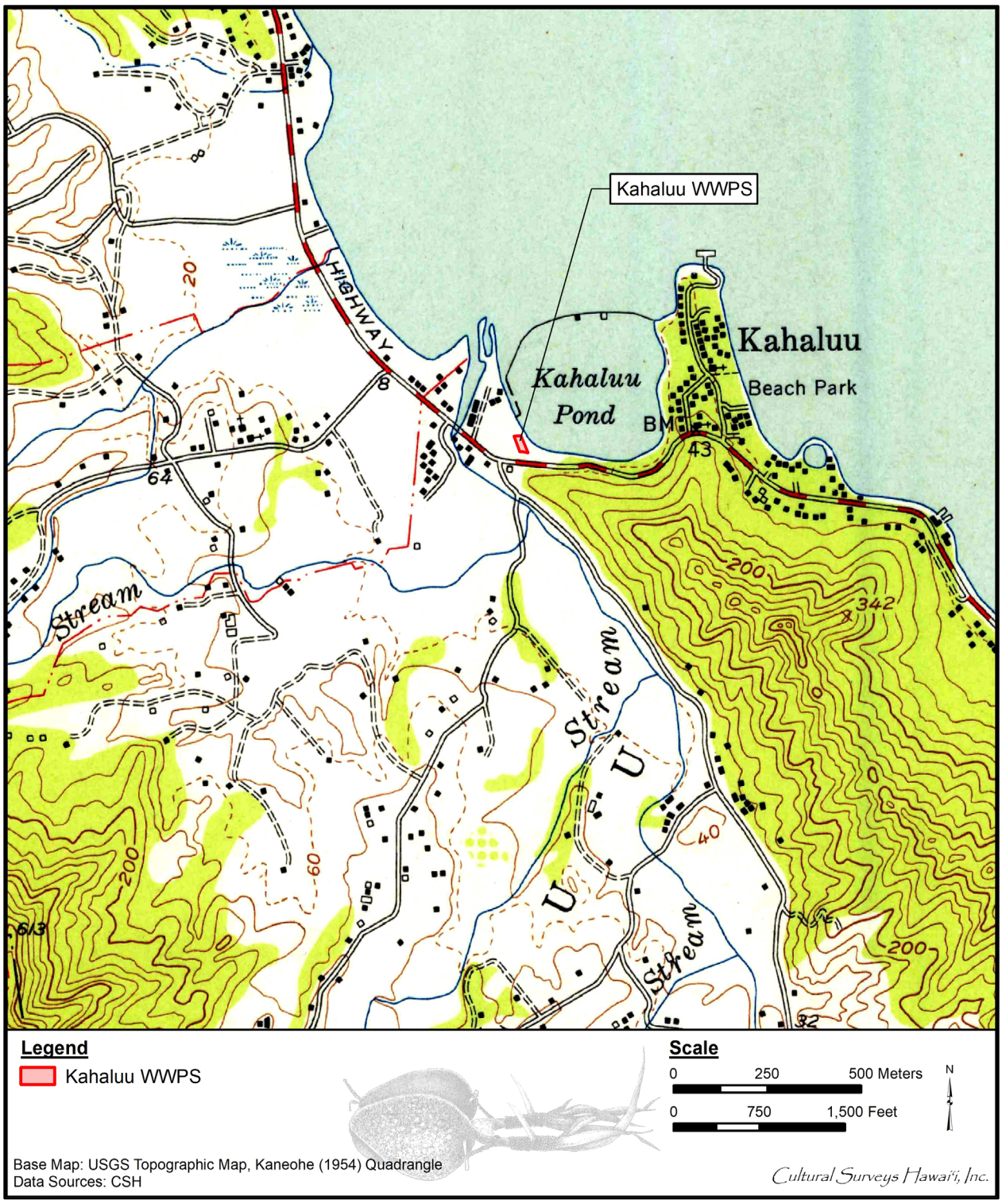


Figure 20. Portion of 1954 Kaneohe USGS topographic quadrangle showing the location of the Kahaluu WWPS with a rejuvenation of activity at the confluence of the now paved Kamehameha Highway and Kahekili Highway alignments

Figure 21. 1959 USGS aerial photograph of Kahalu‘u (UH MAGIS) showing the location of the Kahaluu WWPS (the extensive clearing shown inland goes back to the Kaalaea Sugar Plantation of 1865-1880)

Figure 22. 1965 USDA aerial photograph of Kahalu‘u (UH MAGIS) showing the vicinity of the Kahaluu WWPS location as relatively undeveloped

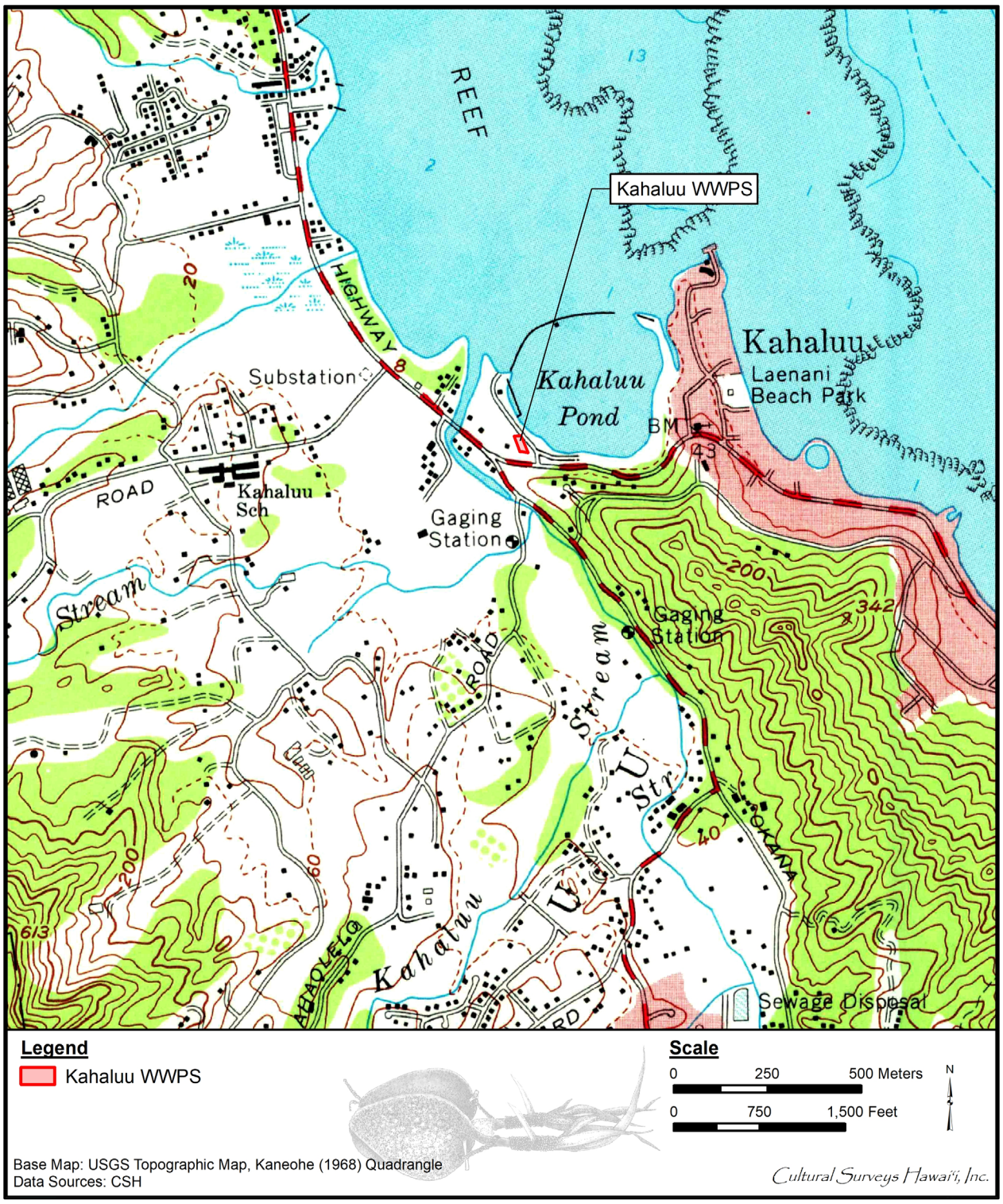


Figure 23. Portion of 1968 Kaneohe USGS topographic quadrangle showing the location of the Kahaluu WWPS

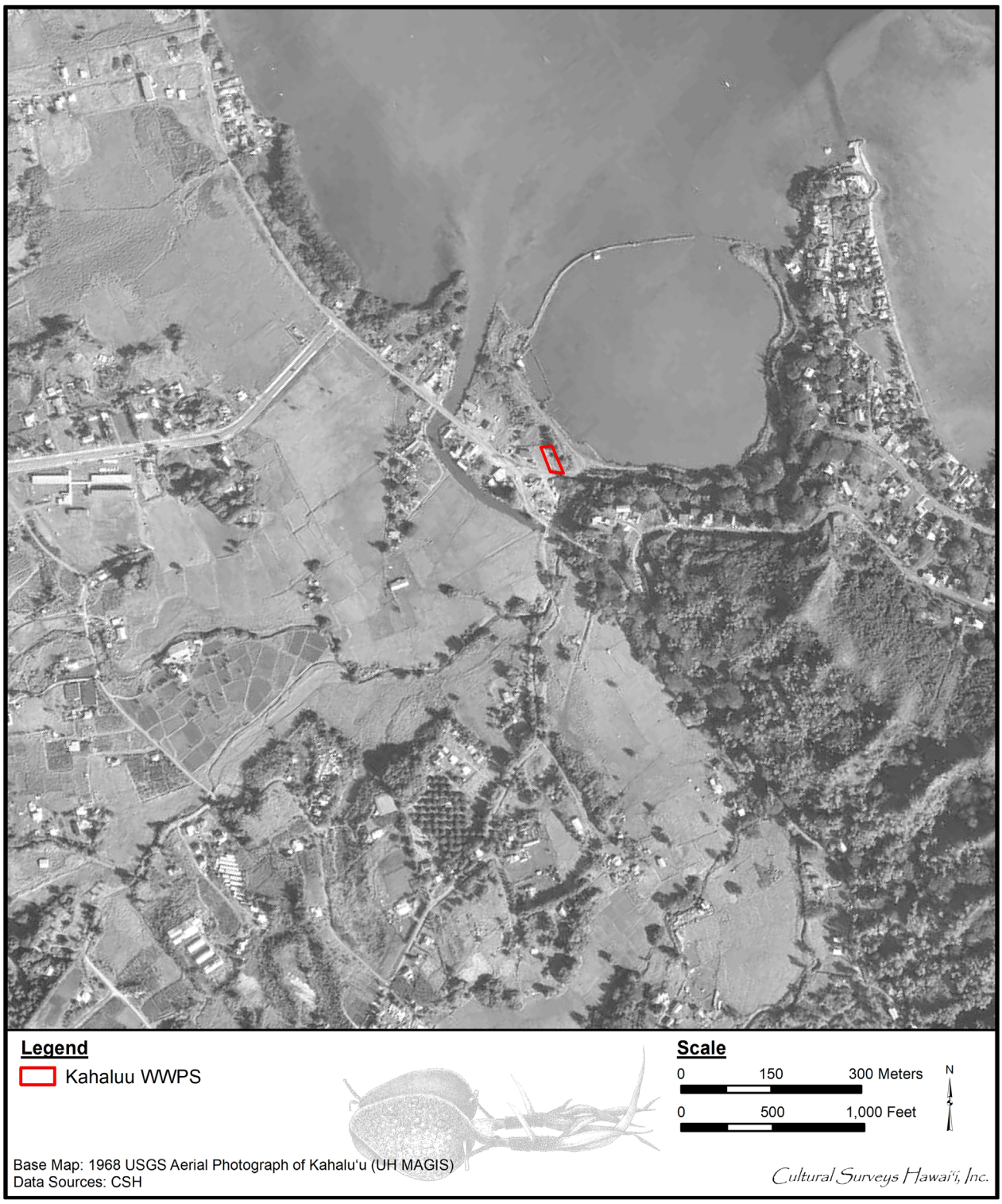


Figure 24. 1968 USGS aerial photograph of Kahalu‘u (UH MAGIS) showing the location of the Kahaluu WWPS

Figure 25. 1978 USGS orthophotoquad aerial photograph of Kāne‘ohe showing the location of the Kahaluu WWPS

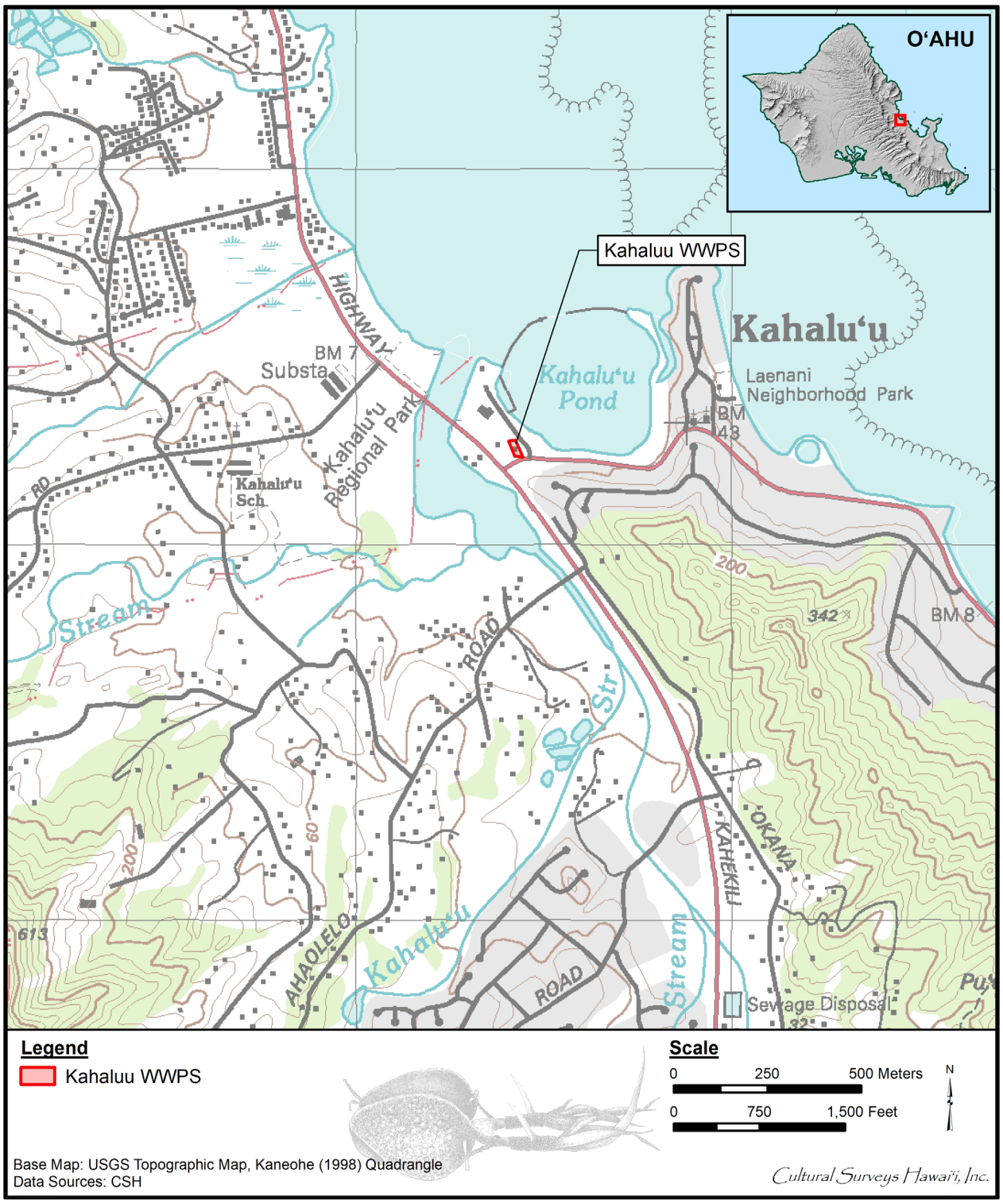


Figure 26. Portion of the 1998 Kaneohe USGS topographic quadrangle showing the location of the Kahaluu WWPS

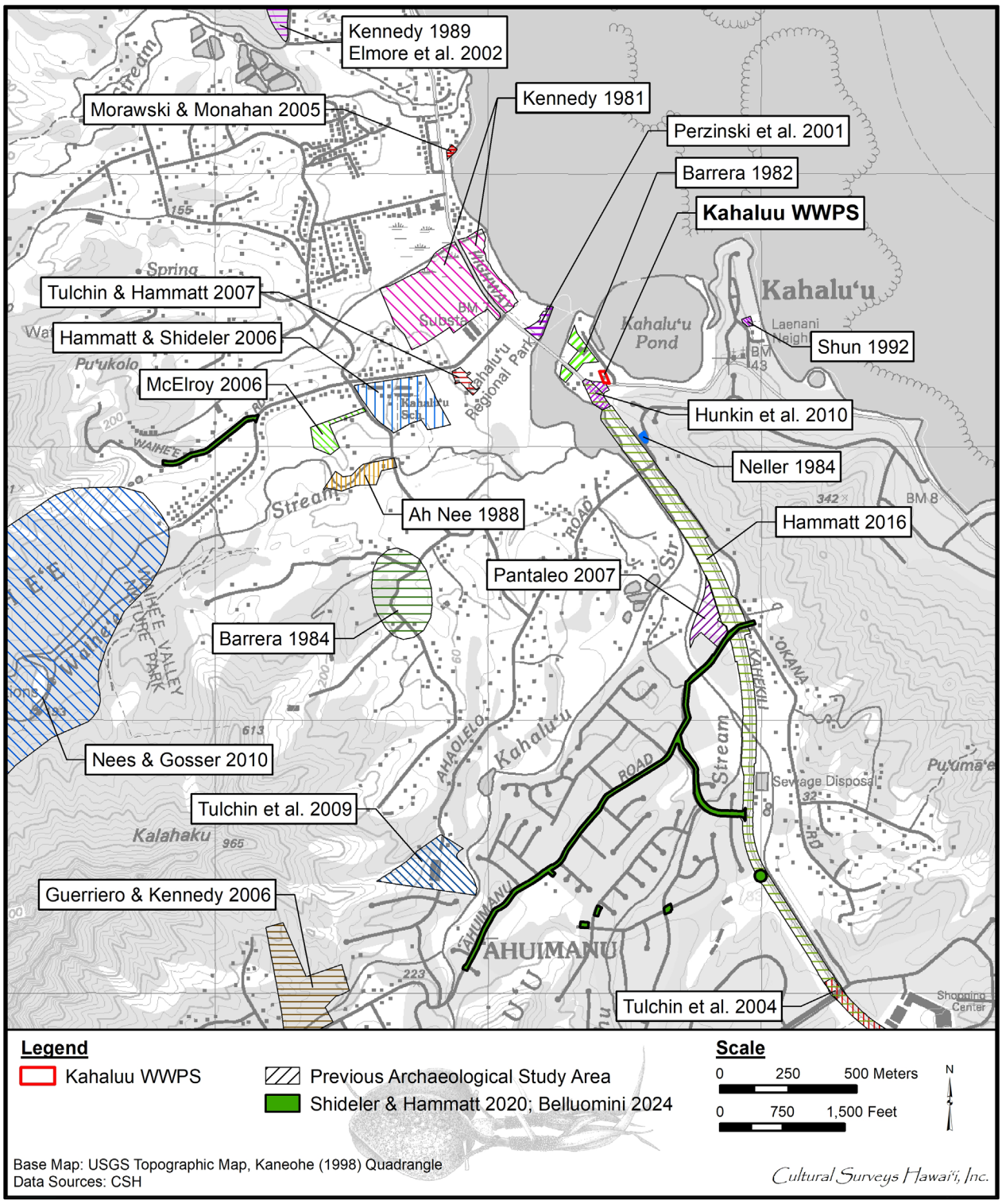


Figure 27. Previous archaeological studies within approximately 1,300 m of the Kahaluu WWPS on a 1998 Kaneohe USGS topographic quadrangle base map

Table 1. Previous archaeological studies within approximately 1,300 m of the Kahaluu WWPS

Reference	Type of Study	Location	Results
McAllister 1933	Archaeological reconnaissance survey	Island-wide	Identified Kahouna Fishpond (Site 319), an unnamed pond (Site 319-A), Haluakaiamoana Heiau (Site 320), Kalaeaalakihi Heiau (Site 321), and Pokole Pond (Site 322) in the vicinity
Handy 1940	Study of the “Hawaiian Planter”	Archipelago-wide	Provides description of taro cultivation in Waihe‘e and Kahalu‘u keyed into a supplied map of streams (see Figure 7)
Kennedy 1981	Archaeological reconnaissance survey	Just inland from Kamehameha Hwy, Waihe‘e	No historic properties identified
Barrera 1982	Archaeological reconnaissance survey	Adjacent to Kamehameha Hwy, Kahalu‘u (Paradise Village Development)	No historic properties identified
Barrera 1984	Archaeological survey	Three proposed well locations adjacent to Mapele Rd at elevation of approx. 40 ft in Kahalu‘u	Notes numerous irrigated agricultural terraces and at least one *‘auwai* (ditch)
Neller 1984	Inadvertent find of human remains	Intersection of Lulani St and Ahuimanu Rd in Kahalu‘u	Single pre-Contact Hawaiian burial with grave goods identified
Ah Nee 1988	Medical Examiner, City and County of Honolulu summary memo	#12 Mapele Rd, Kahalu‘u	Addresses human femur reported by farmer and evaluated as “from the remote past with no current forensic significance”
Kennedy 1989	Archaeological reconnaissance survey	500 m inland in Ka‘alaea Ahupua‘a	Documents single site with seven clustered features identified including partial enclosure with a walkway and an *ahu* and three neighboring low mounds (no SIHP # assigned)
Shun 1992	Archaeological monitoring	Laenani Beach Park, Kahalu‘u	No historic properties identified

Reference	Type of Study	Location	Results
Perzinski et al. 2001	Archaeological inventory survey	Kahalu‘u Beach Park, Kahalu‘u and Waihe‘e	Excavation of seven trenches unearthed modern fill components, historic and modern artifacts, and two former foundations; single historic property identified as SIHP # 50-80-08-05880, which included three designated features; Feature A, remnant of concrete foundation associated with “Flying A Service Station”; Feature B, remnant of oil crushed coral foundation; Feature C, intact cesspool
Elmore et al. 2002	Archaeological inventory survey	4.0-acre property located on sloping hillside below ridgeline extending between Pu‘u Kaua‘i and Pu‘u Kiolea in Ka‘alaea Ahupua‘a	No historic properties identified
Tulchin et al. 2004	Literature review and field inspection	Between West Hui Iwa St and East Hui Iwa St along Kahekili Hwy	No historic properties identified
Morawski and Monahan 2005	Archaeological inventory survey (absence of finds termed archaeological assessment)	Two contiguous parcels at northernmost portion of Kahalu‘u Regional Park	Nine backhoe trenches collectively totaling 52.0 m (170.6 ft) in length excavated to an average depth of 176.1 cm (69.3 inches) below ground surface (cmbs); no significant historic sites, features, and/or artifacts located
Guerriero and Kennedy 2006	Archaeological inventory survey	15.4-acre parcel property off *mauka* ‘Āhuimanu Rd, in Kahalu‘u Ahupua‘a	Two historic properties identified during surface survey; SIHP # 50-80-10-06709 comprised a *lo‘i* terrace and *‘auwai;* SIHP # 50-80-10-06710 consists of larger taro *lo‘i* complex
Hammatt and Shideler 2006	Archaeological literature review and field check	Study of six DOE Schools, including Kahalu‘u Elementary School (actually located in Waihe‘e Ahupua‘a)	No historic properties identified and no further work recommended

Reference	Type of Study	Location	Results
McElroy 2006	Archaeological inventory survey (absence of finds termed archaeological assessment)	2.5-acre property off Āhuilama Rd, 100 m north of Waihe‘e Stream in Waihe‘e Ahupua‘a	No historic properties identified; stratigraphy of parcel relatively uniform, consisting of upper layer of fill and basal wetland deposit; series of concrete alignments regarded as probably related to recent pig farming activities
Pantaleo 2007	Archaeological inventory survey (absence of finds termed archaeological assessment)	3.96-acre First Assembly of God Church and Preschool on Āhuimanu Rd in Kahalu‘u Ahupua‘a	No historic properties identified
Tulchin and Hammatt 2007	Archaeological inventory survey (absence of finds termed archaeological assessment)	Kahalu‘u Regional Park, Waihe‘e Ahupua‘a	No historic properties identified; of note, coral fragments and marine shell observed associated with old coral road destroyed and used as fill; also black clay containing charcoal flecking, determined to be *lo‘i* deposit; sediment associated with cultivation of wetland taro
Tulchin et al. 2009	Archaeological inventory survey (absence of finds termed archaeological assessment)	10.1-acre proposed Dereis subdivision project, located in *mauka* portion of Āhuimanu neighborhood of Kahalu‘u, adjacent to Kahalu‘u Stream	No historic properties identified within project area; noted majority of project area had been heavily disturbed by grading and leveling associated with modern development
Hunkin et al. 2010	Archaeological monitoring	Kamehameha Hwy intersection improvements at Kahekili Hwy	No historic properties identified; subsurface deposits appear to have been disturbed by past land use, which likely included extensive earthmoving activity and importation of fill sediments

Reference	Type of Study	Location	Results
Nees and Gosser 2010	Archaeological monitoring and reconnaissance survey	Former He‘eia Combat Training Area and Pali Training Camp	No previously unrecorded archaeological sites recorded; traditional Hawaiian cultural materials (basalt flakes) and manuports (culturally deposited, waterworn pebbles and cobbles) sporadically observed on surface, but not recorded as sites due to isolated nature and lack of context; east of present larger, *makai* project area recorded “Temporary Site No. 002 east of the Board of Water Supply Access Road and east of, and above, a stream. The general area is fairly level with a slight slope towards the north. It appears that the site area has been dragged to remove rocks […] The site is situated along the west side of this cleared area and consists of a soil berm (Feature I) and a ditch (Feature 2)”; thought be “land clearing related to more modern intensive ‘truck’ farming.”
Hammatt 2016	Archaeological literature review and field inspection	3.3-mile length of Kahekili Hwy from intersection of Ha‘ikū Rd to intersection of Kamehameha Hwy	No previously undocumented potential historic properties identified within project APE (area of potential effect); number of historic properties in vicinity discussed including: SIHP # 50-80-10-00328, Kaualauki Heiau, SIHP # 50-80-10-00319, Kahalu‘u Fishpond (Kahouna Fishpond), a subsurface historic property initially documented by Neller (1984) and SIHP # 50-80-10-02897, a human burial pit containing multiple distinctive deposits

Reference	Type of Study	Location	Results
Shideler and Hammatt 2020	Archaeological literature review and field inspection	‘Āhuimanu Rd Area and Waihe‘e Place Water System Improvements project, Waihe‘e and Kahalu‘u Ahupua‘a	Formulates sensitivity map (low, moderate, high sensitivity) for project corridors based largely on LCA data
Belluomini 2024	Archaeological findings during geotechnical testing	‘Āhuimanu Rd Area and Waihe‘e Place Water System Improvements project, Waihe‘e and Kahalu‘u Ahupua‘a	Reports on geotechnical testing at 19 locations; no historic properties or cultural materials observed during geotechnical investigation, except for some charcoal flecking

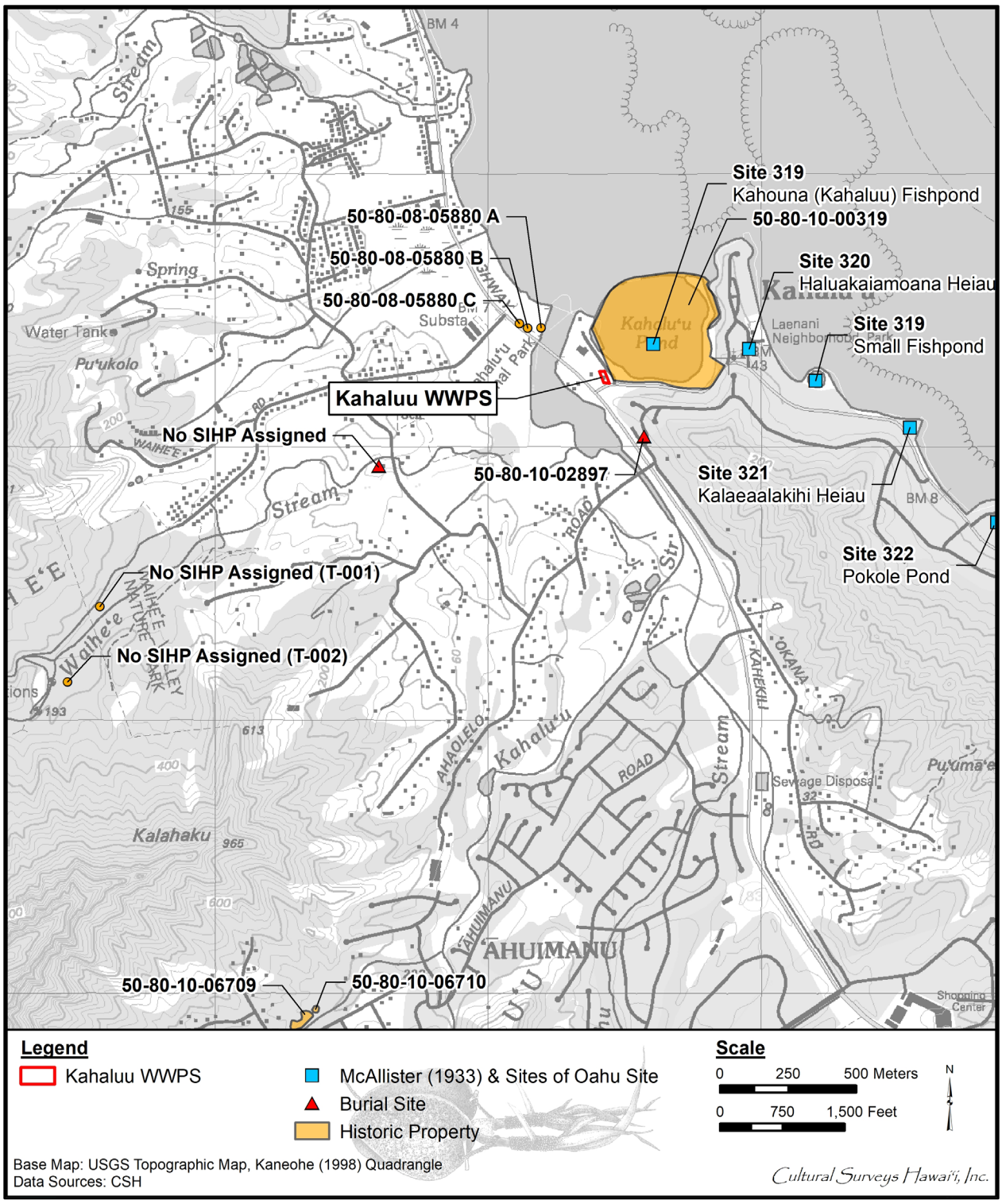


Figure 28. Previously identified historic properties within approximately 1,300 m of the Kahaluu WWPS on a 1998 Kaneohe USGS topographic quadrangle base map

Table 2. Previously identified historic properties within approximately 1,300 m of the Kahaluu WWPS

SIHP # (50-80-)	Site Type	Comments	Source
McAllister Site 319	Fishponds; Kahouna (Kahalu‘u) fishpond and another “very small pond”	The wall approximates 1200 feet in length and it was said to have had two outlets (*mākāhā*) and one watch house. At one time Kaku was its keeper. There is a very small pond just east of Libbyville, but no information regarding it could be obtained.	McAllister 1933:170
McAllister Site 320	*Heiau*; Haluakaiamoana Heiau	Site of the cannery of the Libby, McNeill & Libby Company. The canning factory was built on the *heiau*, of which nothing now remains.	McAllister 1933:170
McAllister Site 321	*Heiau*; Kalaeaalakihi Heiau	On a small point of land on the sea side of the government road, Kahaluu; this was probably a small fisherman’s temple because of its proximity to the sea. It was destroyed during the building of the road.	McAllister 1933:171
McAllister Site 322	Pokole Pond	The wall was semicircular in shape, rather loosely built of lava and coral stones to a width of 4 to 5 feet. The coral seems to be a later addition in order to make the wall higher. It is 850 feet long. At present there is only one outlet (*mākāhā*) , but there appears to have been another. The pond was not in use [ca. 1931] and was only 1 to 2 feet deep.	McAllister 1933:171
08-05880 A	20th century infrastructure remnants	Feature A was a remnant of a concrete foundation associated with a “Flying A Service Station”	Perzinski et al. 2001
08-05880 B	20th century infrastructure remnants	Feature B was a remnant of an oil crushed coral foundation	Perzinski et al. 2001
08-05880 C	20th century infrastructure remnants	Feature C was an intact cesspool	Perzinski et al. 2001

SIHP # (50-80-)	Site Type	Comments	Source
10-02897	Burial	A prehistoric Hawaiian grave was discovered by construction workers. Several layers were noted in the burial pit profile, including a layer of basalt flakes that included some flake scrapers and the broken end of a tanged, rectangular adz, a layer of deteriorated human bone, and a layer of fire-cracked basalt and charcoal.	Neller 1984
10-06709	Agricultural complex	Comprised of a *lo‘i* terrace and an *‘auwai*	Guerriero and Kennedy 2006
10-06710	Agricultural complex	Consists of a larger taro *lo‘i* complex	Guerriero and Kennedy 2006
No SIHP # Assigned	Burial	A human femur reported by a farmer at #12 Mapele Road, and evaluated as “from the remote past with no current forensic significance”	Ah Nee 1988
No SIHP # Assigned (T-001)	Retaining walls	Three features: Feature 1 is an 8.0-m long L-shaped retaining wall with an abutting lower terrace, Feature 2 is an 8.0-m long L-shaped retaining wall, Feature 3 is an 8.0 by 1.0 terrace	Nees and Gosser 2010
No SIHP # Assigned (T-002)	Soil berm and ditch	Feature 1 is soil berm and Feature 2 is a 50.0-m long ditch	Nees and Gosser 2010

Figure 29. Archaeologist’s track log and key to the following photographs indicating general location from which the photograph was taken and the general orientation (base map: ESRI 2022 aerial photograph)

Figure 30. Photo A: View of south side of the WWPS property, view to north

Figure 31. Photo B: View of WWPS property from southeast corner, view to northwest

Figure 32. Photo C: View of WWPS property from north side of property, view to southeast

Figure 33. Photo D: View east side of the WWPS property where new underground line will extend from the existing underground storage tank in background to the new aboveground storage tank location in foreground, view to south

Figure 34. Photo E: View of north wall of the WWPS property showing raised ground surface, view to west

Figure 35. Photo F: View of south end of the WWPS property showing numerous utility lines, note the existing underground storage tank in center of photograph, view to east

Figure 36. Photo G: View of south end of the WWPS property showing numerous utility lines, view to south

Figure 37. Photo H: View of existing underground storage tank, view to east

Figure 38. Photo I: View east of the WWPS property showing Kahouna (Kahalu‘u) fishpond (SIHP # -00319); note large berm in center of photograph, view to east

Figure 39. Photo J: View east of the WWPS property showing Kahouna (Kahalu‘u) fishpond (SIHP # -00319), view to southeast

Figure 40. Photo K: View north of the WWPS property showing LCA 10150, view to northwest

Figure 41. Photo L: View south of the WWPS property showing Kamehameha Highway atop area of LCA 2249:2, view to southwest

References Cited

Ah Nee, Albert H.

1988 *Case No. 88-0007. Examination of a Bone Recovered in Kaneohe*. Department of the Medical Examiner, 3 January 1988.

Alexander H.F.

1914 Cycling Around Oahu. *Mid-Pacific Magazine*. (Oct.) 8 (4):317–323.

Barrera, William M., Jr.

1982 *Archaeological Reconnaissance Paradise Village Development, Kahaluu, Oahu (TMK 4-7-11:2 and 4-7-26:9).* Chiniago Enterprises, Kāne‘ohe, Hawai‘i.

1984 *Kahalu‘u, O‘ahu: Archaeological Survey at Proposed Well Sites* Chiniago Enterprises, Kāne‘ohe, Hawai‘i.

Belluomini, Scott

2024 *Report of Archaeological Findings during Geotechnical Testing for the ‘Āhuimanu Road Area and Waihe‘e Place Water System Improvements Project, Waihe‘e and Kahalu‘u Ahupua‘a, Ko‘olaupoko District, O‘ahu, TMKs: (1) 4-7-003:999, 025:999, 031:999, 032:999, 037:999, 050:999, 055:999, 057:999, 068:999 (‘Āhuimanu Road), 4-7-003:999, 052:999, 055:999 (‘Āhuimanu Place), 4-7-004:999, 025:999, 037:999 (Kahekili Hwy), 4-7-033:999 (Waihe‘e Place), 4-7-052:999, 067:999 (Hui ‘Io Street), 4-7-052:999 (Hui ‘Ūlili Street), and 4-7-066:999 (Alawiki Street)*. Cultural Surveys Hawai‘i, Inc., Kailua, Hawai‘i.

City and County of Honolulu

2025 Honolulu.gov ENV web site for Wastewater Management Facilities in the Windward Region: Kaneohe Bay #3 Wastewater Pump Station. Available online, https://www.honolulu.gov/rep/site/env/wwm_docs/wwm_kailua (accessed March 2025)

Coulter, John Wesley and Chee Kwon Chun

1937 *Chinese Rice Farmers in Hawaii,* UH Research Publications, Number 16. University of Hawai‘i, Honolulu.

Devaney, Dennis M., Marion Kelly, Polly Jae Lee, and Lee S. Motteler

1982 *Kaneohe. A History of Change*. Bess Press, Honolulu.

Dorrance, William H. and Francis S. Morgan

2000 *Sugar Islands: The 165-Year Story of Sugar in Hawaii*. Mutual Publishing, Honolulu.

Elmore, Michelle, James R. Moore, and Joseph Kennedy

2002 *Archaeological Inventory Survey Report for a Property Located at TMK: 4-7-07:30 in Ka‘alaea Ahupua‘a, Ko‘olaupoko District, Island of O‘ahu.* Archaeological Consultants of the Pacific, Inc., Honolulu.

ESRI Aerial Imagery

2022 Map Image Layer. Esri, Inc. Redlands, California.

Foote, Donald E., Elmer L. Hill, Sakuichi Nakamura, and Floyd Stephens

1972 *Soil Survey of the Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii.* U.S. Department of Agriculture, Soil Conservation Service, in cooperation with the University of Hawai‘i Agricultural Experiment Station. U.S. Government Printing Office, Washington, D.C.

Gay

1874 Map of Kaalaea Sugar Plantation by Gay. Hawai‘i Land Survey Division, Department of Accounting and General Services, Honolulu. Available at http://dags.hawaii.gov/survey/search.php

Giambelluca, T.W., Q. Chen, A.G. Frazier, J.P. Price, Y.-L. Chen, P.-S. Chu, J.K. Eischeid, and D.M. Delparte

2013 Online Rainfall Atlas of Hawai‘i. *Bulletin of the American Meteorological Society volume 94, pp. 313-316, doi: 10.1175/BAMS-D-11-00228.1.* Electronic document, http://rainfall.geography.hawaii.edu.

Guerriero, Diane and Joseph Kennedy

2006 *Archaeological Inventory Survey Report for a Property Located at TMK: 4-7-05:60 at Ahuimanu in Kahalu‘u Ahupua‘a, Ko‘olaupoko District, Island of O‘ahu.* Archaeological Consultants of the Pacific, Inc., Hale‘iwa, Hawai‘i.

Hammatt, Hallett H.

2016 *Archaeological Literature Review and Field Inspection for the Kahekili Highway Improvements Project He‘eia and Kahalu‘u Ahupua‘a, Ko‘olaupoko District, O‘ahu TMKs: [1] 4-6-013, 014, 016, 017, 026, 035, 036 (various parcels) and 4-7-002, 003, 004, 023, 025, 026, 028, 037, 039, 052, 060, and 071 (various parcels), and Kahekili Highway Right of Way.* Cultural Surveys Hawai‘i, Inc., Kailua, Hawai‘i.

Hammatt, Hallett H. and David W. Shideler

2006 *Archaeological Literature Review and Field Check Study of Six DOE Schools, Island of Oahu Hawaii Inter-Island DOE Cesspool Project (Blanche Pope Elementary School; Ka‘a‘awa Elementary School; Kahalu‘u Elementary School, Sunset Beach Elementary School; Waialua High and Intermediate School, and Waimānalo Elementary & Intermediate School).* Cultural Surveys Hawai‘i, Inc., Kailua, Hawai‘i.

Handy, E.S. Craighill

1940 *Hawaiian Planter (The) Volume I His Plants, Methods and Areas of Cultivation.* Bishop Museum Bulletin 161. Kraus Reprint Company, Millwood, New York.

Hawai‘i TMK Service

2025 Tax Map Key (1) 4-7-011. Hawai‘i TMK Service, Honolulu.

Hunkin, Nifae, Douglas Borthwick, and Hallett H. Hammatt

2010 *Archaeological Monitoring Report for Kamehameha Highway Intersection Improvements at Kahekili Highway, Project No. 83F-01-99, Kahalu‘u Ahupua‘a, Ko‘olau Poko District, Island of O‘ahu TMK: [1] 4-7-023, 026, 027, various parcels*. Cultural Surveys Hawai‘i, Inc., Kailua, Hawai‘i.

Jackson, George E.Gresley

1882 Map of Koolau Bay. Registered Map 1140. Hawai‘i Land Survey Division, Department of Accounting and General Services, Honolulu. Available online at http://dags.hawaii.gov/survey/search.php

Kennedy, Joseph

1981 *An Archaeological Reconnaissance at Waihe‘e, Ko‘olaupoko, Hawai‘i.* Archaeological Consultants of Hawai‘i, Hale‘iwa, Hawai‘i.

1989 *Archaeological Consultants of Hawaii Letter to Dr. Watson Regarding Recon Survey at Kaalaea Property TMK: 4-7-07:25.* Archaeological Consultants of Hawai‘i, Hale‘iwa, Hawai‘i.

McAllister, J. Gilbert

1933 *Archaeology of Oahu*. Bishop Museum Bulletin 104. Bernice Pauahi Bishop Museum, Honolulu.

McElroy, Windy K.

2006 *Archaeological Assessment of TMK: 4-7-006:027, Waihe‘e Ahupua‘a, Ko‘olaupoko, O‘ahu, Hawai‘i*. Garcia & Associates, Honolulu.

Monsarrat, M.D.

1880 Map of Kaalaea Sugar Plantation (RM 794) by Monsarrat. Hawai‘i Land Survey Division, Department of Accounting and General Services, Honolulu. Available at http://dags.hawaii.gov/survey/search.php

Morawski, Lauren and Christopher M. Monahan

2005 *Archaeological Assessment Report on Two Contiguous Parcels Measuring Approximately 0.26 Acres for the Proposed Kahalu‘u Regional Park, Ka‘alaea Ahupua‘a, Ko‘olaupoko District, Island of O‘ahu, Hawai‘i [TMK (1) 4-7-014: 17 and 18].* Scientific Consultant Services, Inc., Honolulu.

Nees, Richard C. and Dennis Gosser

2010 *Archaeological Monitoring and Reconnaissance Survey at the Former He‘eia Combat Training Area and Pali Training Camp, Ko‘olaupoko District, Island of O‘ahu, Hawai‘i.* Pacific Consulting Services, Inc., Honolulu.

Neller, Earl

1984 *An Emergency Investigation of Human Bones Discovered During Construction at Kahalu‘u, O‘ahu. (Site No. 2897).* State Historic Preservation Office, Honolulu.

Pantaleo, Jeffrey

2007 *Archaeological Assessment of the Redevelopment/Expansion of the First Assembly of God Church and Preschool, Kahaluu Ahupua‘a, Ko‘olaupoko District, Island of O‘ahu, TMK 4-7-025:008, 026.* Jeffrey Pantaleo Consultants, LLC, Honolulu.

Perzinski, Mary P., David Perzinski, and Hallett H. Hammatt

2001 *Archaeological Inventory Survey Report for Proposed Beach Park Improvements at Kahalu‘u Beach Park, Kahalu‘u, Ahupua‘a of Kahalu‘u and Waihe‘e, District of Ko‘olaupoko, Island of O‘ahu (TMK: 4-7-12:13).* Cultural Surveys Hawai‘i, Inc., Kailua, Hawai‘i.

Pukui, Mary K. and Samuel H. Elbert
1984 *Hawaiian Dictionary*. Second edition. University of Hawaii Press, Honolulu.

Shideler, David W. and Hallett H. Hammatt
2020 *Archaeological Literature Review and Field Inspection Report to Support Consultation with SHPD for the ʻĀhuimanu Road Area and Waiheʻe Place Water System Improvements Project, Waiheʻe and Kahaluʻu Ahupuaʻa, Koʻolaupoko District, Oʻahu, TMK Section: [1] 4-7 various plats Waiheʻe Place (por.), ʻĀhuimanu Road (por.), ʻĀhuimanu Place (por.), Kahaluʻu Booster Station (TMK: [1] 4-7-032:025), Hui ʻIo St. (por.), Alawiki St. (por.), Intersection of Hui ʻŪlili St. and Hui ʻIo St. and Kahekili Hwy. ROW (por.)* Cultural Surveys Hawai‘i, Inc., Kailua, Hawai‘i.

Shun, Kanalei
1992 *Archaeological Monitoring Wastewater Pumping Station, Laenani Beach Park, Kahaluʻu, Koʻolaupoko (TMK: 4-7-10-17) Island of Oʻahu*. Archaeological Associates Oceania, Kāneʻohe, Hawai‘i.

Tulchin, Jon and Hallett H. Hammatt
2007 *Archaeological Assessment for Kahaluʻu Regional Park, Waiheʻe Ahupuaʻa, Koʻolaupoko District, Oʻahu TMK: [1] 4-7-012:10, 11, 17, 18 & 28.* Cultural Surveys Hawai‘i, Inc., Kailua, Hawai‘i.

Tulchin, Jon, Sarah Masciangelo, and Hallett H. Hammatt
2004 *Literature Review and Field Check for Intersection Improvements to Kahekili Highway, Heʻeia, Ahupuaʻa, Oʻahu Island.* Cultural Surveys Hawai‘i, Inc., Kailua, Hawai‘i.

Tulchin, Todd, Trevor M. Yucha, Douglas F. Borthwick, and Hallett H. Hammatt
2009 *Archaeological Assessment for the Proposed Dereis Subdivision Project, Kahaluʻu Ahupuaʻa, Koʻolaupoko District, Island of Oʻahu TMK: [1] 4-7-046:006*. Cultural Surveys Hawai‘i, Inc., Kailua, Hawai‘i.

U.S. Army War Department
1919 U.S. War Department fire control map (Kaneohe quadrangle) USGS Information Services, Denver, Colorado.

1936 U.S. War Department terrain map (Kaneohe and Waikane quadrangles). USGS Information Services, Denver, Colorado.

1943 U.S. War Department terrain map (Waikane quadrangle). USGS Information Services, Denver, Colorado.

USDA (U.S. Department of Agriculture)
1965 USDA aerial photograph of Kahaluʻu (UH MAGIS).

2001 Soil Survey Geographic (SSURGO) database. U.S. Department of Agriculture, Natural Resources Conservation Service. Fort Worth, Texas. http://www.ncgc.nrcs.usda.gov/products/datasets/ssurgo/ (accessed March 2005).

USGS (U.S. Geological Survey)
1928 Kaneohe USGS 7.5-minute series topographic quadrangle. USGS Information Services, Denver, Colorado.

1930 Waikane USGS 7.5-minute series topographic quadrangle. USGS Information Services, Denver, Colorado.

1954 Kaneohe USGS 7.5-minute series topographic quadrangle. USGS Information Services, Denver, Colorado.

1959 Aerial photograph of Kaneohe (UH MAGIS). USGS Information Services, Denver, Colorado.

1968 Aerial photograph of Kaneohe (UH MAGIS). USGS Information Services, Denver, Colorado.

1968 Kaneohe USGS 7.5-minute series topographic quadrangle. USGS Information Services, Denver, Colorado.

1978 Aerial photograph of Kaneohe (UH MAGIS). USGS Information Services, Denver, Colorado.

1998 Kaneohe USGS 7.5-minute series topographic quadrangle. USGS Information Services, Denver, Colorado.

Waihona ‘Aina

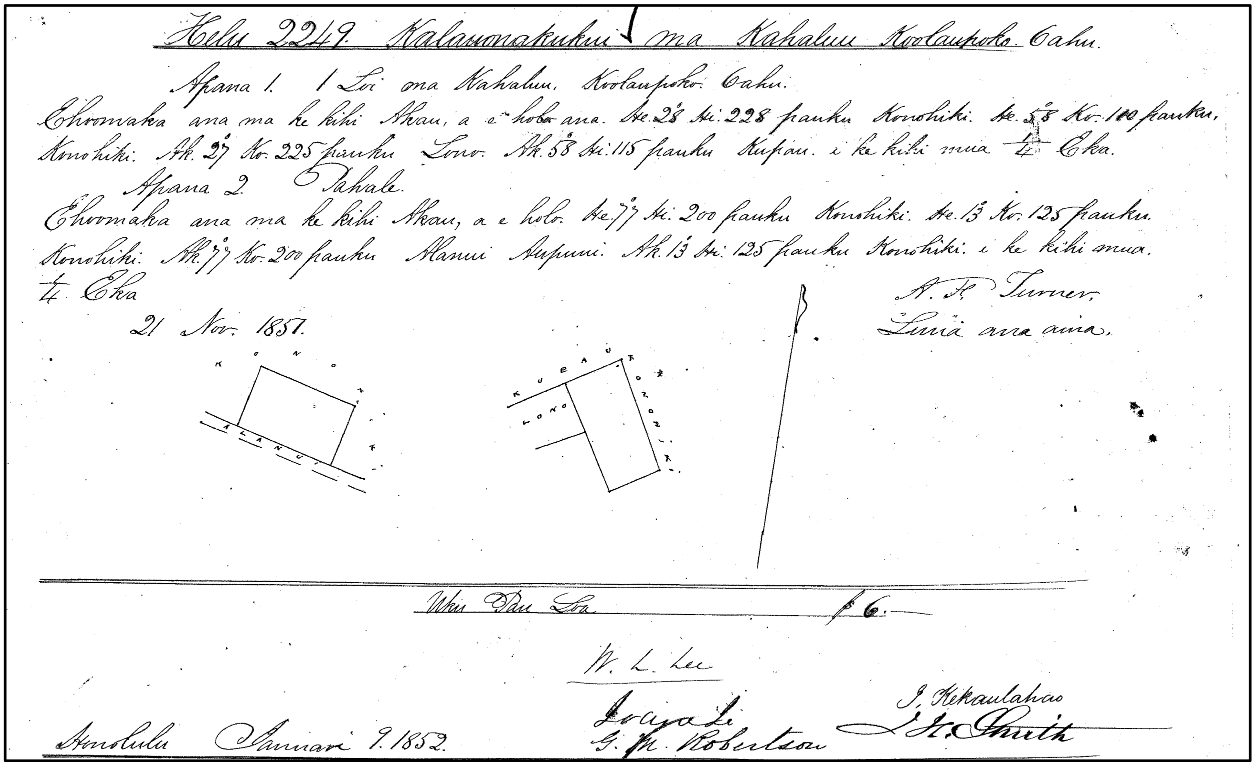
2025 The Māhele Database. Electronic document, http://waihona.com.

Watts, Jennifer Hunt

1971 National Register of Historic Places (NRHP) Inventory-Nomination Form: Kahaluu Fish Pond (9/23/17971). Honolulu.

Appendix A LCA Data

LCA 2249:2 to Kalauonakukui



Helu 2249 Kalauonakukui ma Kahaluu Koolaupoko Oahu.

Apana 1. 1 Loi ma Kahaluu, Koolaupoko Oahu.

Ehoomaka ana ma ke kihi Akau, a e holo ana. He. 28° Hi. 228 pauku Konohiki. He. 58° Ko. 100 pauku, Konohiki. Ak. 27° Ko. 225 pauku Lono. Ak. 58° Hi. 115 pauku Kupau. i ke kihi mua 1/4 Eka.

Apana 2. Pahale.

Ehoomaka ana ma ke kihi Akau, a e holo. He. 77° Hi. 200 pauku Konohiki. He. 13 Ko. 125 pauku. Konohiki. Ak. 77° Ko. 200 pauku Alanui Aupuni. Ak. 13 Hi. 125 pauku Konohiki. i ke kihi mua. 1/4 Eka

21 Nov. 1851.

A. F. Turner, Luna ana aina.

Uku Pau Loa $6.

W. L. Lee

Honolulu Ianuari 9. 1852.

Ioane Ii

G. M. Robertson

J. Kekaulahao

J. H. Smith

Transliteration

Helu 2249 Kalauonakukui ma Kahaluu Koolaupoko Oahu

Apana 1. 1 Loi ma Kahaluu Koolaupoko Oahu

E hoomaka ana ma ke kihi Akau, a e holo ana He. 28° Hi. 228 pauku Konohiki. He. 58° Ko. 100 pauku, Konohiki. AK. 27° Ko. 225 pauku Lono. AK. 58° Hi. 115 pauku Kupau. i ke kihi mua 1/4 Eka.

Apana 2. Pahale

E hoomaka ana ma ke kihi Akau, a e holo. He 77° Hi. 200 pauku Konohiki. He. 13° Ko. 125 pauku Konohiki. Ak. 77° Ko. 200 pauku Alanui Aupuni. Ak. 13° Hi. 125 pauku Konohiki i ke kihi mua.

1/4 Eka. *A.F. Turner*

21 Nov. 1851 *Luna ana aina*

[Diagram in Original]
[Text in Diagram: *Konohiki, Alanui, Kupau, Lono, Konohiki]*

Uku Pau Loa *$6.—*

W.L. Lee
Ioane Ii *J. Kekaulahao*
G.M. Robertson *J.H. Smith*

Honolulu Januari 9 1852

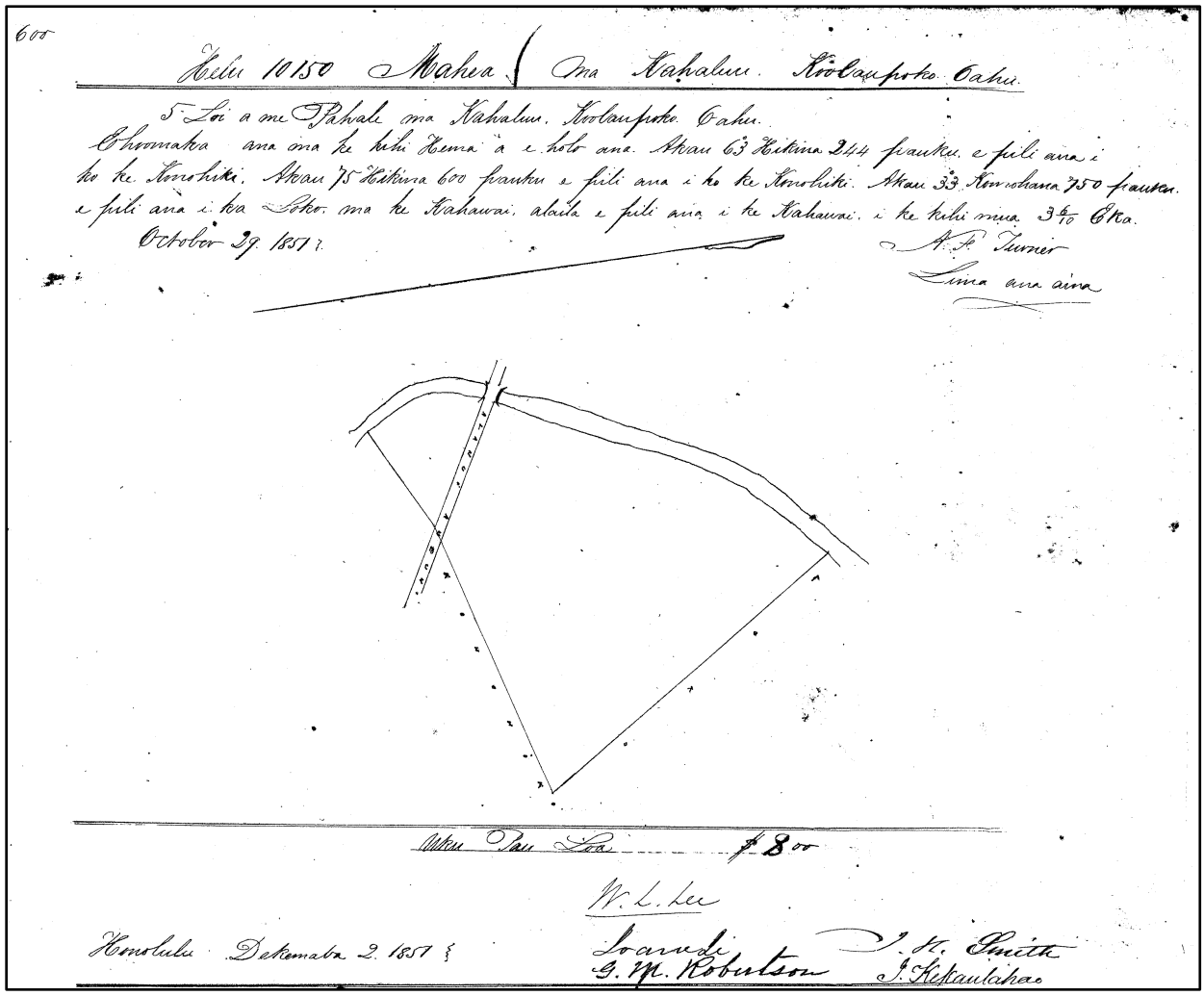
Summary

Kalauonakukui’s LCA claim 2249 in the year 1852 was for two parcels of land at Kahaluʻu. Only the claim for parcel 2, a *pāhale* or house lot concerns us here.

The house lot was bounded by the Alanui (main road, today’s Kamehameha Highway) on the south side and with *konohiki* (headman of the *ahupuaʻa*) lands wrapping around the other three sides.

The indicated presence of a house lot is suggested to significantly increase the prospect of related pre- and post-Contact habitation deposits, human burials, and scattered human skeletal remains within and in the immediate vicinity of the parcel.

LCA 10150 to Mahea



Transliteration

Helu 10150 Mahea Ma Kahaluu Koolaupoko Oahu

5 Loi a me Pahale ma Kahaluu, Koolaupoko, Oahu
E hoomaka ana ma ke kihi Hema a e holo ana Akau 63° Hikina 244 pauku e pili ana i ko ke Konohiki. Akau 75° Hikina 600 pauku e pili ana i ko ke Konohiki. Akau 33° Komohana 750 pauku. e pili ana i ka Loko. ma ke kahawai, alaila e pili ana i ke Kahawai i ke kihi mua 3 6/10 EKa.

October 29 1851 *A.F. Turner*
Luna ana aina

[Diagram in Original]
[Text in Diagram: *Alanui Aupuni, Konohiki, Loko*]

Uku Pau Loa *$8.00*
W.L. Lee
Ioane Ii *J.H. Smith*
G.M. Robertson *J. Kekaulahao*

Honolulu Dekemaba 2 1851

Summary

Mahea’s LCA 10150 claim in the year 1851 was for one parcel at Kahalu‘u that included five ponded taro fields (*lo‘i*) and a house lot (pā hale). The south and north sides are bounded by land of the *konohiki* (headman of the *ahupua‘a*), the west side is bounded by Kahalu‘u stream (kahawai), and the east side is bounded by the Loko (pond, Kahalu‘u fishpond). A government road (Alanui Aupuni, today’s Kamehameha Highway) cuts across the southwest corner of the parcel.

No detail is provided regarding the disposition within the parcel of the five *lo‘i* or the house but logically the ponded taro fields would have been irrigated off of the stream suggesting they were on the west side of the parcel. The indicated presence of another house lot (LCA 2249:2 to Kalauonakukui) just to the south of the southeast corner increases the prospect Mahea’s house lot was in the southeast quadrant of his parcel.

The indicated presence of a house lot is suggested to significantly increase the prospect of related pre- and post-Contact habitation deposits, human burials, and scattered human skeletal remains within and in the immediate vicinity of the parcel.

Appendix B Kahaluu (Kahouna) Fishpond NRHP Inventory-Nomination Form

PH0055301

Form 10-300 (July 1969)

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES INVENTORY – NOMINATION FORM

(Type all entries – complete applicable sections)

RECEIVED MAR 15 1972 NATIONAL REGISTER

STATE: Hawaii
COUNTY: Honolulu
FOR NPS USE ONLY
ENTRY NUMBER: MAR 14 1973 DATE:

1. NAME
COMMON: Kahaluu Fish Pond
AND/OR HISTORIC: Kahouna Fish Pond

2. LOCATION
STREET AND NUMBER: NW of Laenani Street just off of Kamehameha Highway
CITY OR TOWN: Kahaluu
STATE: Hawaii — CODE: 15 — COUNTY: Honolulu — CODE: 003

3. CLASSIFICATION

CATEGORY (Check One)	OWNERSHIP		STATUS	ACCESSIBLE TO THE PUBLIC
☐ District ☐ Building	☐ Public	Public Acquisition:	☒ Occupied	Yes:
☒ Site ☐ Structure	☒ Private	☐ In Process	☐ Unoccupied	☒ Restricted
☐ Object	☐ Both	☐ Being Considered	☐ Preservation work in progress	☐ Unrestricted ☐ No

PRESENT USE *(Check One or More as Appropriate)*

☐ Agricultural	☐ Government	☐ Park	☐ Transportation	☐ Comments
☐ Commercial	☐ Industrial	☐ Private Residence	☒ Other *(Specify)* Unused	
☐ Educational	☐ Military	☐ Religious		
☐ Entertainment	☐ Museum	☐ Scientific		

4. OWNER OF PROPERTY
OWNER'S NAME: Kahaluu Pond, Inc.
STREET AND NUMBER: 47-507 Kamehameha Highway
CITY OR TOWN: Kaneohe — STATE: Hawaii — CODE: 15

5. LOCATION OF LEGAL DESCRIPTION
COURTHOUSE, REGISTRY OF DEEDS, ETC: Bureau of Conveyances, Department of Land and Natural Resources
STREET AND NUMBER: 465 S. King Street
CITY OR TOWN: Honolulu — STATE: Hawaii — CODE: 15

6. REPRESENTATION IN EXISTING SURVEYS
TITLE OF SURVEY: Statewide Inventory by the Hawaii Register of Historic Places
DATE OF SURVEY: ongoing ☐ Federal ☒ State ☐ County ☐ Local
DEPOSITORY FOR SURVEY RECORDS: Hawaii Register of Historic Places
STREET AND NUMBER: 465 S. King Street
CITY OR TOWN: Honolulu — STATE: Hawaii — CODE: 15

SEE INSTRUCTIONS

STATE: COUNTY: FOR NPS USE ONLY ENTRY NUMBER: MAR 14 1973 DATE:

7. DESCRIPTION

CONDITION	(Check One)					
	☐ Excellent	☒ Good	☐ Fair	☐ Deteriorated	☐ Ruins	☐ Unexposed
	(Check One)		(Check One)			
	☐ Altered	☒ Unaltered	☐ Moved	☒ Original Site		

DESCRIBE THE PRESENT AND ORIGINAL *(if known)* PHYSICAL APPEARANCE

Kahouna Fish Pond is smaller in size than either Molii or Heeia ponds but it is also located in Kaneohe Bay on Windward Oahu. The wall forms a semi-circle out from the shore measuring some 1,200 feet in length. This wall is built of stacked stone courses on both the inner and outer faces with a fill of smaller rock, soil, and coral rubble between. Wave action has caused one break in the wall, but otherwise, the pond is in remarkably good condition. The pond was an operational fish pond up until about 1960, but since then has been allowed to remain idle and deteriorate.

RECEIVED
MAR 16 1972
NATIONAL REGIST.

SEE INSTRUCTIONS

8. SIGNIFICANCE

PERIOD *(Check One or More as Appropriate)*

☐ Pre-Columbian	☐ 16th Century	☒ 18th Century	☒ 20th Century
☐ 15th Century	☐ 17th Century	☒ 19th Century	(x)pre-contact

SPECIFIC DATE(S) *(If Applicable and Known)*

AREAS OF SIGNIFICANCE *(Check One or More as Appropriate)*

Aboriginal	☐ Education	☐ Political	☐ Urban Planning
☒ Prehistoric	☐ Engineering	☐ Religion/Philosophy	☒ Other *(Specify)* aquaculture
☒ Historic	☐ Industry		
☐ Agriculture	☐ Invention	☐ Science	
☐ Architecture	☐ Landscape Architecture	☐ Sculpture	
☐ Art		☐ Social/Humanitarian	
☐ Commerce	☐ Literature		
☐ Communications	☐ Military	☐ Theater	
☐ Conservation	☐ Music	☐ Transportation	

STATEMENT OF SIGNIFICANCE

Kahouna Fish Pond would be rated number three in importance, behind Molii and Heeia fish ponds that are also being nominated to the National Register. However, this may be misleading, for only four good examples of Hawaiian fish ponds exist on Oahu where there were known to be almost 100 at about the turn of the 20th century.

Kahouna is in good condition, highly visible to the public, and could be developed into an excellent example of this form of Hawaiian sea tillage.

Like most other fish ponds in the state, Kahouna has been subjected to great pressures for development. Fish ponds almost always occur in very favorable locations, are easily developed into waterfront property, and most are in private ownership. Therefore, it is crucial to Hawaii that a sample of these unique structures be preserved, Kahouna included.

RECEIVED MAR 16 1972 NATIONAL REGISTER

SEE INSTRUCTIONS

9. MAJOR BIBLIOGRAPHICAL REFERENCES

McAllister, J. Gilbert
1933 Archaeology of Oahu. Bernice P. Bishop Museum Bulletin 104. Honolulu, Hawaii, Published by the Museum. 1971, New York, Kraus Reprint Co.

10. GEOGRAPHICAL DATA

LATITUDE AND LONGITUDE COORDINATES DEFINING A RECTANGLE LOCATING THE PROPERTY				OR	LATITUDE AND LONGITUDE COORDINATES DEFINING THE CENTER POINT OF A PROPERTY OF LESS THAN TEN ACRES	
CORNER	LATITUDE		LONGITUDE		LATITUDE	LONGITUDE
	Degrees Minutes Seconds		Degrees Minutes Seconds		Degrees Minutes Seconds	Degrees Minutes Seconds
NW	21° 27' 53"		157° 50' 27"		° ' "	° ' "
NE	21° 57' 52"		157° 50' 09"			
SE	21° 27' 37"		157° 50' 27"			
SW	21° 27' 38"		157° 50' 10"			

APPROXIMATE ACREAGE OF NOMINATED PROPERTY: 172

LIST ALL STATES AND COUNTIES FOR PROPERTIES OVERLAPPING STATE OR COUNTY BOUNDARIES

STATE:	CODE	COUNTY	CODE
STATE:	CODE	COUNTY:	CODE
STATE:	CODE	COUNTY:	CODE
STATE:	CODE	COUNTY:	CODE

RECEIVED MAR 16 1972 NATIONAL REGISTER

11. FORM PREPARED BY

NAME AND TITLE: Jennifer Hunt Watts, Research Assistant

ORGANIZATION: Hawaii Register of Historic Places — DATE: 9/23/71

STREET AND NUMBER: 465 S. King Street

CITY OR TOWN: Honolulu — STATE: Hawaii — CODE: 15

12. STATE LIAISON OFFICER CERTIFICATION

As the designated State Liaison Officer for the National Historic Preservation Act of 1966 (Public Law 89-665), I hereby nominate this property for inclusion in the National Register and certify that it has been evaluated according to the criteria and procedures set forth by the National Park Service. The recommended level of significance of this nomination is:

National ☐ State ☒ Local ☐

Name: Shunzo Kido

Title: Chairman and Member

Date: March 3, 1972

NATIONAL REGISTER VERIFICATION

I hereby certify that this property is included in the National Register.

Robert Kirkley
Chief, Office of Archeology and Historic Preservation

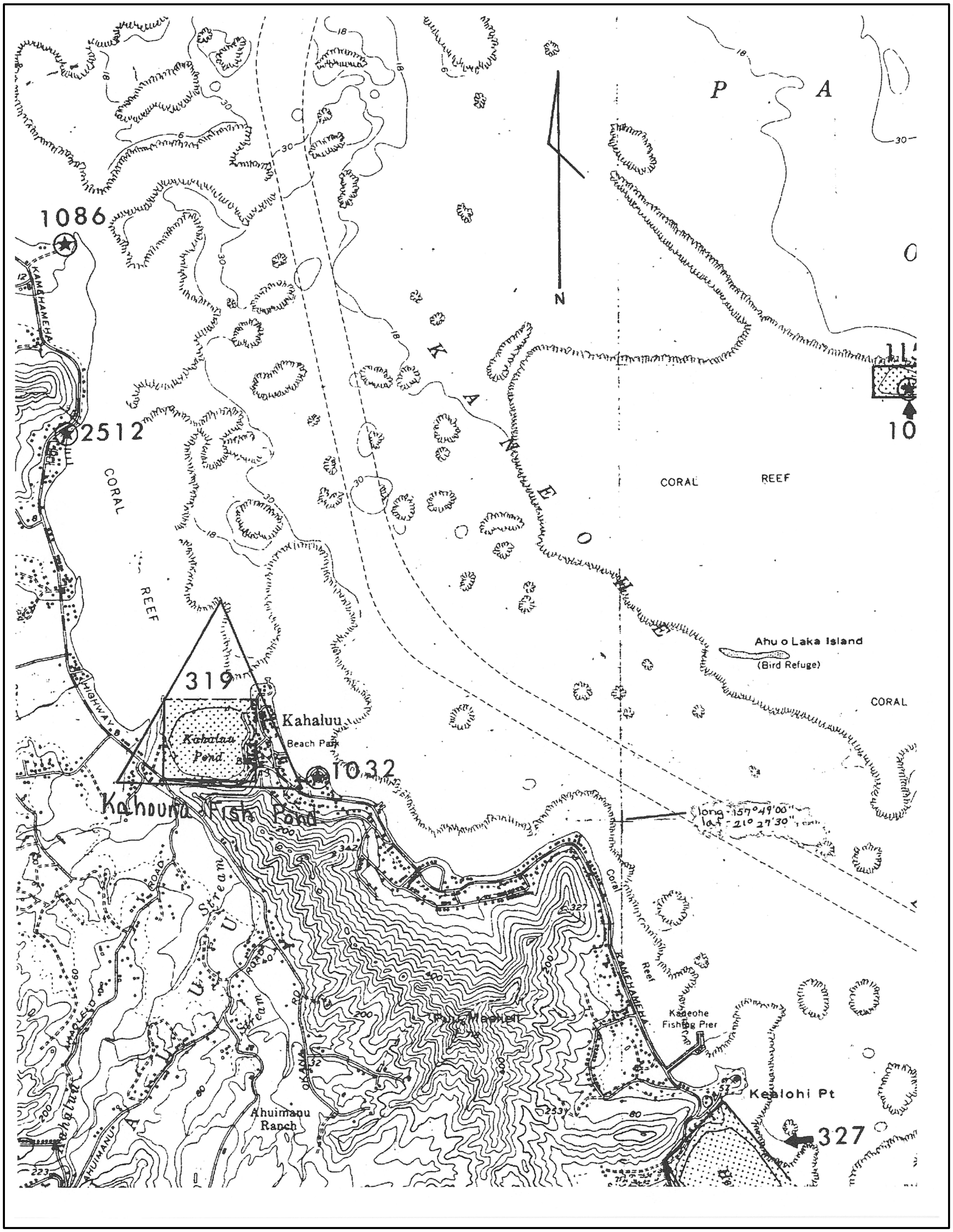
Date: 5/14/73

ATTEST:

Keeper of The National Register

Date: 3-8-73

SEE INSTRUCTIONS


1086
2512
319
1032
327
CORAL
REEF
CORAL REEF
CORAL
Kahaluu
Beach Park
Kahaluu Pond
Kahouna Fish Pond
Ahu o Laka Island
(Bird Refuge)
long 157°49'00"
lat 21°27'30"
Kaneohe Fishing Pier
Kealohi Pt
Ahuimanu Ranch
KAMEHAMEHA
HIGHWAY
Stream
N
P
A
K A N E O H E

Appendix B: Early Consultation Letter, Handout, & Responses

This page intentionally left blank.

TOWNSCAPE, INC.
Environmental & Community Planning

900 Fort Street Mall Suite 1160 · Honolulu, HI 96813 · PH: (808) 536-6999 · FAX: (808) 524-4998 · www.townscapeinc.com

April 1, 2025

Subject: Early Consultation Request for Draft Environmental Assessment (DEA)
Fuel Storage Tank Improvements for the Kahaluu Wastewater Pump Station – Kaneohe, Island of O'ahu
Tax Map Key 4-7-011:016

Dear Participant,

On behalf of the City and County of Honolulu, Department of Environmental Services, Townscape, Inc. is preparing a DEA, pursuant to Hawai'i Revised Statues, Chapter 343, and Hawai'i Administrative Rules (HAR), Chapter 11-200.1 for the Kahaluu Wastewater Pump Station Fuel Storage Tank Improvements ("Project").

Pursuant to HAR, Chapter 11-200.1-18, the City's Department of Environmental Services (Proposing Agency) is conducting early consultation to seek input from agencies, citizen groups, and individuals who may have an area of expertise, which may guide the scope and preparation of the DEA, and/or may be affected by the proposed Project. Please find enclosed an Early Consultation Handout with a project description and location map for your review and comment. We are requesting comments no later than **May 1, 2025** to be sent via mail or e-mail to:

Townscape, Inc.
Attn: Gabrielle Sham
900 Fort Street Mall, Suite 1160
Honolulu, HI 96813
E-mail: gabrielle@townscapeinc.com

If we do not receive a response by this date, we will assume your agency or organization has no comments. Please contact the undersigned with any questions you may have at (808) 550-3894 or via e-mail at gabrielle@townscapeinc.com. Mahalo in advance for your participation in the early consultation for this Project.

Sincerely,

Gabrielle Sham
Associate Planner

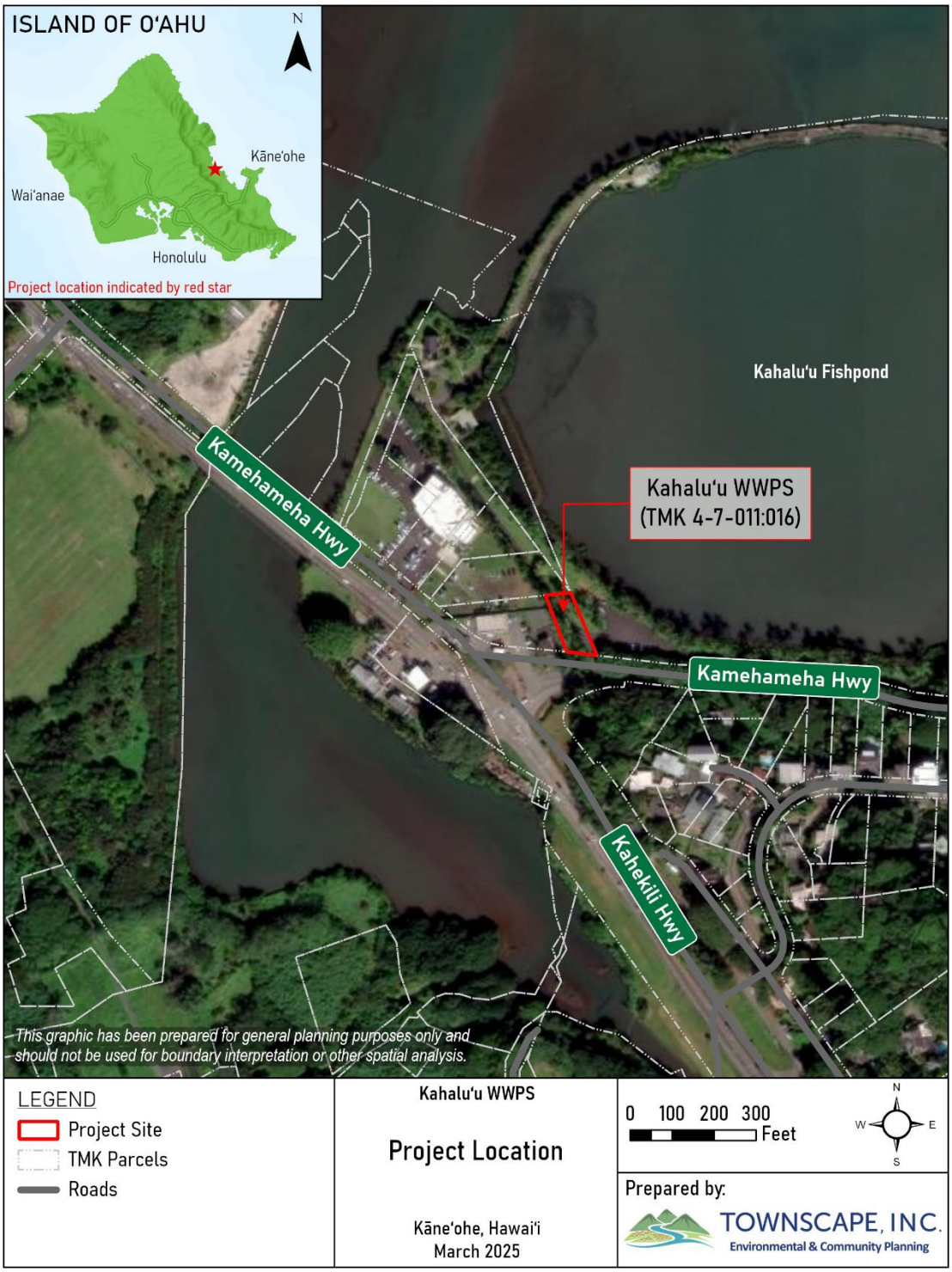
Enclosure: Early Consultation Handout

Fuel Storage Tank Improvements for the Kahalu'u Wastewater Pump Station
Early Consultation Handout for Draft Environmental Assessment

Project Name	Fuel Storage Tank Improvements for the Kahalu'u Wastewater Pump Station
Proposing and Determining Agency	City and County of Honolulu, Department of Environmental Services 1000 Ulu'ōhi'a Street Suite 308 Honolulu, Hawai'i 96707
Agent	Townscape, Inc. 900 Fort Street Mall, Suite 1160 Honolulu, Hawai'i 96813 Phone: (808) 550-3894 E-mail: gabrielle@townscapeinc.com
HRS, Chapter 343 Trigger	Use of County lands and funds
Project Location	47-511 Kamehameha Highway Kāne'ohe, Hawai'i 96744
Tax Map Key & Recorded Fee Owner	(1) 4-7-011:016, City & County of Honolulu
Project Area	0.2015 (or 8,778 square feet)
State Land Use District	Urban
Development Plan	Ko'olaupoko Sustainable Communities Plan
Special Management Area	In Special Management Area

Overview of Proposed Project

The Kahalu'u Wastewater Pump Station (WWPS) has been in service since 1993. The proposed project involves replacing the existing underground fuel storage tank with a new 1,000-gallon aboveground fuel storage tank. Additionally, the project includes replacing the underground fuel piping, fuel monitoring panel, and all associated sensors, as well as connecting the new fuel monitoring panel to the supervisory control and data acquisition (SCADA) system. This work must be completed by July 15, 2028, in compliance with Hawai'i Administrative Rules 11-280.1, which mandates that all underground storage tanks and piping installed before August 9, 2013 to provide secondary containment and utilize interstitial monitoring. The aboveground storage tank will supply the fuel required for the emergency backup generator to service the WWPS.


ISLAND OF O'AHU
N
Kāne'ohe
Wai'anae
Honolulu
Project location indicated by red star
Kahalu'u Fishpond
Kahalu'u WWPS
(TMK 4-7-011:016)
Kamehameha Hwy
Kamehameha Hwy
Kahekili Hwy
This graphic has been prepared for general planning purposes only and should not be used for boundary interpretation or other spatial analysis.
LEGEND
Project Site
TMK Parcels
Roads
Kahalu'u WWPS
Project Location
Kāne'ohe, Hawai'i
March 2025
0 100 200 300
Feet
N
W
E
S
Prepared by:
TOWNSCAPE, INC.
Environmental & Community Planning

JOSH GREEN, M.D.
GOVERNOR | KE KIAʻĀINA

SYLVIA LUKE
LIEUTENANT GOVERNOR | KA HOPE KIAʻĀINA

DAWN N. S. CHANG
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

STATE OF HAWAIʻI | KA MOKUʻĀINA ʻO HAWAIʻI
DEPARTMENT OF LAND AND NATURAL RESOURCES
KA ʻOIHANA KUMUWAIWAI ʻĀINA
LAND DIVISION

P.O. BOX 621
HONOLULU, HAWAII 96809

May 1, 2025

Townscape, Inc.
Attn: Gabrielle Sham
900 Fort Street Mall, Suite 1160
Honolulu, HI 96813

via email: gabrielle@townscapeinc.com

SUBJECT: Early Consultation Request for Draft Environmental Assessment (DEA) Fuel Storage Tank Improvements for the Kahaluʻu Wastewater Pump Station, Located in Kāneohe, Island of Oʻahu, TMK: (1)4-7-011:016

Dear Ms. Sham:

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

Please find enclosed comments from the Division of Boating & Ocean Recreation, and the Engineering Division on the subject matter. Should you have any questions, please feel free to contact Dayna Vierra at (808) 587-0423 or email: dayna.k.vierra@hawaii.gov.

Sincerely,

Ian Hirokawa
Acting Land Administrator

Enclosure(s)

JOSH GREEN, M.D.
GOVERNOR | KE KIA'ĀINA

SYLVIA LUKE
LIEUTENANT GOVERNOR | KA HOPE KIA'ĀINA

DAWN N. S. CHANG
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

STATE OF HAWAI'I | KA MOKU'ĀINA 'O HAWAI'I
DEPARTMENT OF LAND AND NATURAL RESOURCES
KA 'OIHANA KUMUWAIWAI 'ĀINA
LAND DIVISION

P.O. BOX 621
HONOLULU, HAWAII 96809

April 11, 2025

MEMORANDUM

TO: **DLNR Agencies:**
X Div. of Aquatic Resources (kendall.l.tucker@hawaii.gov)
X Div. of Boating & Ocean Recreation (richard.t.howard@hawaii.gov)
X Engineering Division (DLNR.ENGR@hawaii.gov)
X Div. of Forestry & Wildlife (rubyrosa.t.terrago@hawaii.gov)
__Div. of State Parks
X Commission on Water Resource Management (DLNR.CWRM@hawaii.gov)
__Office of Conservation & Coastal Lands
X Land Division – O'ahu District (barry.w.cheung@hawaii.gov)
X Land Division – Planner (dayna.k.vierra@hawaii.gov)
X Land Division – Planner (lauren.e.yasaka@hawaii.gov)
X Aha Moku Advisory Committee (leimana.k.damate@hawaii.gov)

FROM: FOR Russell Y. Tsuji, Land Administrator
SUBJECT: **Early Consultation Request for Draft Environmental Assessment Fuel Storage Tank Improvements for the Kahalu'u Wastewater Pump Station**
LOCATION: Kāne'ohe, Island of O'ahu; TMK: (1) 4-7-011:016
APPLICANT: Townscape, Inc. on behalf of the City and County of Honolulu, Department of Environmental Services

Transmitted for your review and comment is information on the above-referenced subject matter. Please submit comments to me by **April 30, 2025.**

If no response is received by this date, we will assume your agency has no comments. Should you have any questions about this request, please contact Dayna Vierra at dayna.k.vierra@hawaii.gov. Thank you.

BRIEF COMMENTS:

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

Signed: Richard Howard
Print Name: Richard Howard
Division: DOBOR
Date: 4/14/2025

Attachments

JOSH GREEN, M.D.
GOVERNOR | KE KIA'ĀINA

SYLVIA LUKE
LIEUTENANT GOVERNOR | KA HOPE KIA'ĀINA

DAWN N. S. CHANG
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

STATE OF HAWAI'I | KA MOKU'ĀINA 'O HAWAI'I
DEPARTMENT OF LAND AND NATURAL RESOURCES
KA 'OIHANA KUMUWAIWAI 'ĀINA
LAND DIVISION

P.O. BOX 621
HONOLULU, HAWAII 96809

April 11, 2025

MEMORANDUM

FROM: ~~TO:~~

DLNR Agencies:
_X_ Div. of Aquatic Resources (kendall.l.tucker@hawaii.gov)
_X_ Div. of Boating & Ocean Recreation (richard.t.howard@hawaii.gov)
_X_ Engineering Division (DLNR.ENGR@hawaii.gov)
_X_ Div. of Forestry & Wildlife (rubyrosa.t.terrago@hawaii.gov)
__ Div. of State Parks
_X_ Commission on Water Resource Management (DLNR.CWRM@hawaii.gov)
__ Office of Conservation & Coastal Lands
_X_ Land Division – O'ahu District (barry.w.cheung@hawaii.gov)
_X_ Land Division – Planner (dayna.k.vierra@hawaii.gov)
_X_ Land Division – Planner (lauren.e.yasaka@hawaii.gov)
_X_ Aha Moku Advisory Committee (leimana.k.damate@hawaii.gov)

TO: ~~FROM:~~ FOR Russell Y. Tsuji, Land Administrator

SUBJECT: **Early Consultation Request for Draft Environmental Assessment Fuel Storage Tank Improvements for the Kahalu'u Wastewater Pump Station**

LOCATION: Kāne'ohe, Island of O'ahu; TMK: (1) 4-7-011:016

APPLICANT: Townscape, Inc. on behalf of the City and County of Honolulu, Department of Environmental Services

Transmitted for your review and comment is information on the above-referenced subject matter. Please submit comments to me by **April 30, 2025.**

If no response is received by this date, we will assume your agency has no comments. Should you have any questions about this request, please contact Dayna Vierra at dayna.k.vierra@hawaii.gov. Thank you.

BRIEF COMMENTS:

( ) We have no objections.
( ) We have no comments.
( ) We have no additional comments.
(✓) Comments are included/attached.

Signed:
Print Name: Dina U. Lau, Acting Chief Engineer
Division: Engineering Division
Date: Apr 30, 2025

Attachments

DEPARTMENT OF LAND AND NATURAL RESOURCES
ENGINEERING DIVISION

LD/Russell Y. Tsuji

Ref: Early Consultation Request for Draft Environmental Assessment Fuel Storage Tank Improvements for the Kahaluʻu Wastewater Pump Station
Location: Kāneʻohe, Island of Oʻahu
TMK(s): (1) 4-7-011:016
Applicant: Townscape, Inc. on behalf of the City and County of Honolulu, Department of Environmental Services

COMMENTS

The rules and regulations of the National Flood Insurance Program (NFIP), Title 44 of the Code of Federal Regulations (44CFR), are in effect when development falls within a Special Flood Hazard Area (high-risk areas). Be advised that 44CFR, Chapter 1, Subchapter B, Part 60 reflects the minimum standards as set forth by the NFIP. Local community flood ordinances may stipulate higher standards that can be more restrictive and would take precedence over the minimum NFIP standards.

The owner of the project property and/or their representative is responsible for researching the Flood Hazard Zone designation for the project. Flood zones subject to NFIP requirements are identified on FEMA's Flood Insurance Rate Maps (FIRM). The official FIRMs can be accessed through FEMA's Map Service Center (msc.fema.gov). Our Flood Hazard Assessment Tool (FHAT) (fhat.hawaii.gov) could also be used to research flood hazard information.

If there are questions regarding the local flood ordinances, please contact the applicable County NFIP coordinating agency below:

- Oahu: City and County of Honolulu, Department of Planning and Permitting (808) 768-8098.
- Hawaii Island: County of Hawaii, Department of Public Works (808) 961-8327.
- Maui/Molokai/Lanai County of Maui, Department of Planning (808) 270-7139.
- Kauai: County of Kauai, Department of Public Works (808) 241-4849.

Signed: _____
DINA U. LAU, ACTING CHIEF ENGINEER

Date: Apr 30, 2025

STATE OF HAWAI'I
OFFICE OF PLANNING
& SUSTAINABLE DEVELOPMENT

235 South Beretania Street, 6th Floor, Honolulu, Hawai'i 96813
Mailing Address: P.O. Box 2359, Honolulu, Hawai'i 96804

JOSH GREEN, M.D.
GOVERNOR

SYLVIA LUKE
LT. GOVERNOR

MARY ALICE EVANS
DIRECTOR

Telephone: (808) 587-2846
Fax: (808) 587-2824
Web: https://planning.hawaii.gov/

Coastal Zone Management Program

Environmental Review Program

Land Use Commission

Land Use Division

Special Plans Branch

State Transit-Oriented Development

Statewide Geographic Information System

Statewide Sustainability Branch

DTS202504041658HE

April 16, 2025

Ms. Gabrielle Sham
Townscape, Inc.
900 Fort Street Mall, Suite 1160
Honolulu, HI 96813

Dear Ms. Sham:

Subject: Early Consultation Environmental Assessment for the Proposed Fuel Storage Tank Improvements for the Kahaluu Wastewater Pump Station at Kaneohe, Oahu; Tax Map Key (1) 4-7-011:016

The Office of Planning and Sustainable Development (OPSD) is in receipt of your early consultation request, received April 4, 2025, on the preparation of an Environmental Assessment (EA), for the proposed fuel storage tank improvements for the Kahaluu Wastewater Pump Station (WWPS).

The proposed project involves replacing the existing underground fuel storage tank with a new 1,000-gallon aboveground fuel storage tank. Additionally proposed is replacing the underground fuel piping, fuel monitoring panel, and all associated sensors. The aboveground storage tank will supply the fuel required for the emergency backup generator to service the WWPS. This project must be completed by July 15, 2028, the deadline set forth in Hawaii Administrative Rules (HAR) Section 11-280.1-21 that requires all underground storage tanks and piping installed before August 9, 2013, must be provided with secondary containment design.

The OPSD has reviewed the subject request and has the following comments to offer:

1) The EA shall discuss all triggers of the preparation of an EA set forth in Hawaii Revised Statutes (HRS) Chapter 343, and list all required permits and approvals from the state, federal, and county for the proposed fuel storage tank improvements.

2) The Hawaii Coastal Zone Management (CZM) Law, HRS Chapter 205A, requires all state and county agencies to enforce the CZM objectives and policies. The subject EA should include an assessment with mitigation measures, if needed, as to how the proposed project will conform to each

of the CZM objectives and supporting policies set forth in HRS section 205A-2, as amended.

3) The project is located within the City and County of Honolulu's designated Special Management Area (SMA). The Department of Planning and Permitting, City and County of Honolulu, should be consulted for the requirements of SMA permitting and shoreline setbacks. As the supporting document for the SMA permit application, the OPSD suggests that the EA discusses compliance with the requirements of SMA use and shoreline setbacks pursuant to the county SMA and shoreline ordinances.

4) The OPSD recommends that the site-specific Best Management Practices shall be developed and implemented to prevent any runoff, sediment, soil and debris potentially resulting from associated construction activities from adversely impacting the coastal ecosystems and the State waters as specified in HAR Chapter 11-54.

5) To assess potential impacts of sea level rise on the project area, the OPSD suggests the EA review the findings of the Hawaii Sea Level Rise Vulnerability and Adaptation Report, 2017 as well as its 2022 update and Guidance for Using the Sea Level Rise Exposure Area in Local Planning and Permitting Decisions: all documents may be found at https://climate.hawaii.gov/hi-adaptation/state-sea-level-rise-resources/.

If you respond to this comment letter, please include DTS202504041658HE in the subject line. For any questions regarding this letter, please contact Rachel Beasley of our office at (808) 587-2831 or by email at rachel.e.beasley@hawaii.gov.

Sincerely,

Mary Alice Evans

Mary Alice Evans
Director

DEPARTMENT OF PLANNING AND PERMITTING
KA 'OIHANA HO'OLĀLĀ A ME NĀ PALAPALA 'AE
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 7TH FLOOR • HONOLULU, HAWAI'I 96813
PHONE: (808) 768-8000 • FAX: (808) 768-6041 • WEBSITE: honolulu.gov/dpp

RICK BLANGIARDI
MAYOR
MEIA

DAWN TAKEUCHI APUNA
DIRECTOR
PO'O

BRYAN GALLAGHER, P.E.
DEPUTY DIRECTOR
HOPE PO'O

REGINA MALEPEAI
2ND DEPUTY DIRECTOR
HOPE PO'O KUALUA

April 17, 2025

2025/ELOG-605(SF)

Ms. Gabrielle Sham
Townscape, Inc.
900 Fort Street Mall, Suite 1160
Honolulu, Hawaii 96813

Dear Ms. Sham:

SUBJECT: Pre-Assessment Consultation
Draft Environmental Assessment (EA)
Kahaluu Wastewater Pump Station (WWPS) Fuel Storage Tank Improvements
47-511 Kamehameha Highway – Kahaluu
Tax Map Key 4-7-011: 016 (Parcel 16)

This letter responds to your request, received on April 7, 2025, for early consultation comments on the upcoming Draft EA for the proposed Kahaluu Wastewater Pump Station Fuel Storage Tank Improvements. Pursuant to Hawaii Revised Statutes (HRS) Chapter 343, the Draft EA is required due to the use of county lands and funds.

Parcel 16 is currently developed with the Kahaluu WWPS. The proposed work includes replacement of the existing underground fuel storage tank with a new 1,000-gallon aboveground fuel storage tank (Project). The Project also includes replacement of the underground fuel piping, fuel-monitoring panel, and all associated sensors, as well as connection of the new infrastructure to remote systems. The submittal states that this work must be completed by July 15, 2028, in compliance with Hawaii Administrative Rules 11-280.1, which mandates that all underground storage tanks and piping installed before August 9, 2013 provide secondary containment and utilize interstitial monitoring. The submittal also states that the new, proposed aboveground storage tank and associated improvements will supply the fuel required for the emergency backup generator to service the WWPS.

Parcel 16 is 8,778 square feet (0.202 acres) in area and is located within the B-1 Neighborhood Business District (B-1 District), State Land Use Urban District, and

Special Management Area (SMA).

Additionally, please address the following comments in the Draft EA:

1. Consistency with Long-Range Plans: Describe the Project's consistency with the Oahu General Plan, Koolau Poko Sustainable Communities Plan, and the Kahaluu Community Master Plan. The Draft EA should address how the proposed Project is consistent, inconsistent, or implements each of the relevant statements from the respective plans.

2. Compliance with City and County of Honolulu Land Use Regulations: Discuss compliance with Revised Ordinances of Honolulu (ROH) Chapter 21, the Land Use Ordinance (LUO). The Draft EA should identify the Project's consistency with the development standards of the B-1 District and discuss the facility's designated use, per LUO Master Use Table 21-3, as well as any other applicable LUO regulations. The LUO is available online at:

   https://codelibrary.amlegal.com/codes/honolulu/latest/honolulu/0-0-0-18777

3. Compliance with HRS Chapter 205A and ROH Chapter 25: The proposed Project meets ROH Chapter 25 definition of "development," and requires an SMA Permit. If the cost valuation is less than $500,000, an SMA Minor Permit is required. If the cost valuation is or exceeds $500,000, an SMA Major Permit is required, including an EA, pursuant to ROH Section 25-5.3(a). In this case, it should be noted that the Draft EA is also being prepared pursuant to ROH Chapter 25.

   Describe compliance with the objectives and policies of HRS Chapter 205A, Coastal Zone Management, and ROH Chapter 25, the SMA Ordinance. The Draft EA should include in its analysis an assessment of whether an SMA Use Permit would be required as part of the proposed Project. HRS Chapter 205A and ROH Chapter 25 are available at:

   https://www.capitol.hawaii.gov/hrscurrent/Vol04_Ch0201-0257/HRS0205A/

   https://codelibrary.amlegal.com/codes/honolulu/latest/honolulu/0-0-0-35056

4. Shoreline Setbacks Ordinance: The Draft EA should describe how the Project complies with ROH Chapter 26, the Shoreline Setbacks Ordinance. ROH Chapter 26 is available online at:

   https://codelibrary.amlegal.com/codes/honolulu/latest/honolulu/0-0-0-35456

5. Coastal Hazards: The Project site is susceptible to coastal hazards, such as storm surge and tsunamis. Therefore, proposed development activities must be evaluated not only for potential impacts to sensitive SMA resources, but also for current and future susceptibility to these coastal hazards. As such, we recommend the proposed development be designed to minimize potential risk of structure loss. The analysis in the Draft EA should evaluate the site's existing topographic, geologic, and shoreline environment, and propose mitigation measures, as appropriate, to reduce potential impacts related to coastal hazards.

6. Sensitive Species: Identify the presence or potential presence of any sensitive habitat, flora, or fauna. The DPP recommends reaching out to the U.S. Fish and Wildlife Service to obtain a list of species that are known to occur or may potentially occur in the Project vicinity.

7. Historic and Cultural Resources: Discuss the presence and/or potential impacts to cultural, historic, or archaeological resources, identify any related research conducted within the Project site and outlying areas, and propose mitigation measures, as necessary, to reduce potential impacts to these resources.

8. Early Public Outreach: In order to facilitate understanding of the current Project proposal within the surrounding community, the Applicant should contact the Kahaluu Neighborhood Board No. 29, as well as any relevant neighborhood associations or commissions to request an opportunity to present the Project proposal at the board and association meeting(s). A summary of the outreach efforts and actions taken to address any community concerns should be included in the Draft EA.

The Department of Planning and Permitting (DPP) has instructions for the preparation of an EA, which can be found on our website at the link below. Please utilize this resource as you prepare the Draft EA:

https://www8.honolulu.gov/dpp/permitting/zoning-permits/

The DPP may have further comments regarding the Draft EA when more detailed plans and information are provided. Should you have any questions, please contact Shelby Frangk, of our Land Use Approval Branch, at (808) 768-8019 or via email at shelby.frangk@honolulu.gov.

Very truly yours,

for Dawn Takeuchi Apuna
Director

HONOLULU FIRE DEPARTMENT
KA 'OIHANA KINAI AHI O HONOLULU
CITY AND COUNTY OF HONOLULU

636 SOUTH STREET • HONOLULU, HAWAI'I 96813
PHONE: (808) 723-7139 • FAX: (808) 723-7111 • WEBSITE: honolulu.gov

RICK BLANGIARDI
MAYOR
MEIA

SHELDON K. HAO
FIRE CHIEF
LUNA NUI KINAI AHI

JASON SAMALA
DEPUTY FIRE CHIEF
HOPE LUNA NUI KINAI AHI

April 21, 2025

Ms. Gabrielle Sham, Associate Planner
Townscape, Inc.
900 Fort Street Mall, Suite 1160
Honolulu, Hawai'i 96813

Dear Ms. Sham:

Subject: Early Consultation Request for Draft Environmental Assessment
Fuel Storage Tank Improvements for the Kahalu'u Wastewater Pump Station
Kāne'ohe, Island of O'ahu
Tax Map Key: 4-7-011: 016

In response to your letter received on April 7, 2025, regarding the abovementioned subject, the Honolulu Fire Department (HFD) reviewed the submitted information and requires that this project follow all applicable codes in the Revised Ordinances of Honolulu Chapter 20 regarding Flammable and Combustible Liquid Storage Tanks.

The requirements above are required by the HFD. This project may have additional requirements to be met as determined by other agencies.

Should you have questions, please contact Battalion Chief Pao-Chi Hwang of our Fire Prevention Bureau at 808-723-7151 or hfdfpb1@honolulu.gov.

Sincerely,

CRAIG UCHIMURA
Assistant Chief

CU/MD:sk

HONOLULU POLICE DEPARTMENT
KA 'OIHANA MĀKA'I O HONOLULU
CITY AND COUNTY OF HONOLULU
801 SOUTH BERETANIA STREET • HONOLULU, HAWAI'I 96813
TELEPHONE: (808) 529-3111 • WEBSITE: www.honolulupd.org

RICK BLANGIARDI
MAYOR
MEIA

ARTHUR J. LOGAN
CHIEF
KAHU MĀKA'I

KEITH K. HORIKAWA
RADE K. VANIC
DEPUTY CHIEFS
HOPE LUNA NUI MĀKA'I

OUR REFERENCE EO-SH

April 21, 2025

SENT VIA EMAIL

Ms. Gabrielle Sham
gabrielle@townscapeinc.com

Dear Ms. Sham:

This is in response to your letter dated April 1, 2025, requesting input for the Draft Environmental Assessment for the proposed City and County of Honolulu, Department of Environmental Services, Fuel Storage Tank Improvements for the Kahalu'u Wastewater Pump Station in Kāne'ohe.

Based on the information provided, The Honolulu Police Department (HPD) recommends that all necessary lights, signs, barricades, and other safety equipment be installed and maintained by the contractor during the construction phase of the project. Additionally, adequate notification should be made to area businesses and residents prior to possible road closures, as any impact to pedestrian and/or vehicular traffic or construction-related debris could lead to complaints. Lastly, the HPD recommends a long-term plan to migitate the tracking of dirt, gravel, and debris to minimize potential environmental impacts from all affected areas.

If there are any questions, please call Major Randall Platt of our District 4 (Kāne'ohe, Kailua, Kahuku) at (808) 723-8640.

Sincerely,

GLENN HAYASHI
Assistant Chief of Police
Support Services Bureau

DEPARTMENT OF DESIGN AND CONSTRUCTION
KA 'OIHANA HAKULAU A ME KE KĀPILI
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 11TH FLOOR • HONOLULU, HAWAI'I 96813
PHONE: (808) 768-8480 • FAX: (808) 768-4567 • WEBSITE: honolulu.gov

RICK BLANGIARDI
MAYOR
MEIA

HAKU MILLES, P.E.
DIRECTOR
PO'O

MARK YONAMINE, P.E.
DEPUTY DIRECTOR
HOPE PO'O

April 22, 2025

SENT VIA EMAIL

Ms. Gabrielle Sham
gabrielle@townscapeinc.com

Dear Ms. Sham:

Subject: Early Consultation Request for Draft Environmental Assessment (DEA)
Fuel Storage Tank Improvements for the Kahalu'u Wastewater Pump Station – Kāne'ohe, Island of O'ahu
Tax Map Key 4-7-011:016

Thank you for the opportunity to review and comment. The Department of Design and Construction has no comments to offer at this time.

Should you have any questions, please contact me at (808) 768-8480.

Sincerely,

Haku Milles, P.E., LEED AP
Director

HM:krn (937875)

BOARD OF WATER SUPPLY
KA ʻOIHANA WAI
CITY AND COUNTY OF HONOLULU

630 SOUTH BERETANIA STREET • HONOLULU, HAWAIʻI 96843
Phone: (808) 748-5000 • www.boardofwatersupply.com

RICK BLANGIARDI
MAYOR
MEIA

ERNEST Y. W. LAU, P.E.
MANAGER AND CHIEF ENGINEER
MANAKIA A ME KAHU WILIKĪ

ERWIN KAWATA
DEPUTY MANAGER
HOPE MANAKIA

NĀʻĀLEHU ANTHONY, Chair
JONATHAN KANESHIRO, Vice Chair
BRYAN P. ANDAYA
LANCE WILHELM
KĒHAULANI PUʻU
EDWIN H. SNIFFEN, Ex-Officio
GENE C. ALBANO, P.E., Ex-Officio

April 29, 2025

Ms. Gabrielle Sham
Townscape, Inc.
900 Fort Street Mall, Suite 1160
Honolulu, Hawai'i 96813

Dear Ms. Sham:

Subject: Your Letter Dated April 1, 2025, Requesting Comments on the Draft Environmental Assessment Early Consultation for Fuel Storage Tank Improvements at the Kahaluʻu Wastewater Pump Station off Kamehameha Highway, Tax Map Key: 4-4-037:014

Thank you for your letter regarding the proposed replacement of the existing underground fuel storage tank with an aboveground fuel storage tank.

The existing water system is adequate to accommodate the proposed project. However, please be advised that this information is based upon current data, and therefore, the Board of Water Supply (BWS) reserves the right to change any position or information stated herein up until the final approval of the building permit application. The final decision on the availability of water will be confirmed when the building permit application is submitted for approval.

When water is made available, the applicant will be required to pay our Water System Facilities Charges for resource development, transmission, and daily storage.

Water conservation measures are required for all proposed developments. These measures include utilization of nonpotable water for irrigation using rain catchment, drought tolerant plants, xeriscape landscaping, efficient irrigation systems, such as a drip system and moisture sensors, and the use of Water Sense labeled ultra-low flow water fixtures and toilets.

The proposed project is subject to BWS Cross-Connection Control and Backflow Prevention requirements prior to the issuance of the Building Permit Applications.

The construction drawings should be submitted for our approval, and the construction schedule should be coordinated to minimize impact to the water system.

The on-site fire protection requirements should be coordinated with the Fire Prevention Bureau of the Honolulu Fire Department.

If you have any questions, please contact Daniel Koge, Project Review Branch of our Water Resources Division at (808) 748-5444.

Very truly yours,

ERNEST Y. W. LAU, P.E.
Manager and Chief Engineer

JOSH GREEN, M.D.
GOVERNOR | KE KIA'ĀINA

SYLVIA LUKE
LIEUTENANT GOVERNOR | KA HOPE KIA'ĀINA

DAWN N. S. CHANG
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

STATE OF HAWAI'I | KA MOKU'ĀINA 'O HAWAI'I
DEPARTMENT OF LAND AND NATURAL RESOURCES
KA 'OIHANA KUMUWAIWAI 'ĀINA
LAND DIVISION

P.O. BOX 621
HONOLULU, HAWAII 96809

May 19, 2025

Townscape, Inc.
Attn: Gabrielle Sham
900 Fort Street Mall, Suite 1160
Honolulu, HI 96813

via email: gabrielle@townscapeinc.com

SUBJECT: Early Consultation Request for Draft Environmental Assessment (DEA) Fuel Storage Tank Improvements for the Kahalu'u Wastewater Pump Station, located in Kāne'ohe, Island of O'ahu, TMK: (1) 4-7-011:016.

Dear Ms. Sham:

Thank you for the opportunity to review and comment on the subject matter. In addition to our previous comments dated May 1, 2025, enclosed are comments from the Division of Forestry and Wildlife on the subject matter. Should you have any questions, please feel free to contact Dayna Vierra at (808) 587-0423 or email: dayna.k.vierra@hawaii.gov.

Sincerely,

Ian C. Hirokawa
Acting Land Administrator

Enclosures

JOSH GREEN, M.D.
GOVERNOR | KE KIA'ĀINA

SYLVIA LUKE
LIEUTENANT GOVERNOR | KA HOPE KIA'ĀINA

DAWN N. S. CHANG
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

STATE OF HAWAI'I | KA MOKU'ĀINA 'O HAWAI'I
DEPARTMENT OF LAND AND NATURAL RESOURCES
KA 'OIHANA KUMUWAIWAI 'ĀINA
LAND DIVISION

P.O. BOX 621
HONOLULU, HAWAII 96809

MAY 07 2025

MAY 07 2025
REC.

April 11, 2025

MEMORANDUM

FROM: **DLNR Agencies:**
X Div. of Aquatic Resources (kendall.l.tucker@hawaii.gov)
X Div. of Boating & Ocean Recreation (richard.t.howard@hawaii.gov)
X Engineering Division (DLNR.ENGR@hawaii.gov)
X Div. of Forestry & Wildlife (rubyrosa.t.terrago@hawaii.gov)
__Div. of State Parks
X Commission on Water Resource Management (DLNR.CWRM@hawaii.gov)
__Office of Conservation & Coastal Lands
X Land Division – O'ahu District (barry.w.cheung@hawaii.gov)
X Land Division – Planner (dayna.k.vierra@hawaii.gov)
X Land Division – Planner (lauren.e.yasaka@hawaii.gov)
X Aha Moku Advisory Committee (leimana.k.damate@hawaii.gov)

TO: FOR Russell Y. Tsuji, Land Administrator

SUBJECT: **Early Consultation Request for Draft Environmental Assessment Fuel Storage Tank Improvements for the Kahalu'u Wastewater Pump Station**

LOCATION: Kāne'ohe, Island of O'ahu; TMK: (1) 4-7-011:016

APPLICANT: Townscape, Inc. on behalf of the City and County of Honolulu, Department of Environmental Services

Transmitted for your review and comment is information on the above-referenced subject matter. Please submit comments to me by **April 30, 2025.**

If no response is received by this date, we will assume your agency has no comments. Should you have any questions about this request, please contact Dayna Vierra at dayna.k.vierra@hawaii.gov. Thank you.

BRIEF COMMENTS:

( ) We have no objections.
( ) We have no comments.
( ) We have no additional comments.
(☑) Comments are included/attached.

Signed:
Print Name: JASON D. OMICK, Wildlife Program Mgr.
Division: Forestry and Wildlife
Date: May 5, 2025

Attachments

STATE OF HAWAI'I | KA MOKU'ĀINA 'O HAWAI'I
DEPARTMENT OF LAND AND NATURAL RESOURCES
KA 'OIHANA KUMUWAIWAI 'ĀINA

DIVISION OF FORESTRY AND WILDLIFE
1151 PUNCHBOWL STREET, ROOM 325
HONOLULU, HAWAII 96813

May 2, 2025

Log no. 4973

MEMORANDUM

TO: RUSSELL Y. TSUJI, Land Administrator
Land Division

FROM: JASON D. OMICK, Wildlife Program Manager
Division of Forestry and Wildlife

SUBJECT: Early Consultation Request for Draft Environmental Assessment (DEA) Fuel Storage Tank Improvements for Kahalu'u Wastewater Pump Station; Kāne'ohe, O'ahu, TMK: (1) 4-7-011:016

The Department of Land and Natural Resources, Division of Forestry and Wildlife (DOFAW) has received your early consultation request regarding the DEA for proposed fuel storage tank improvements at the Kahalu'u Wastewater Pump Station within TMK (1) 4-7-011:016. The proposed project is located within the Urban State Land Use District and is in a Special Management Area. The proposed project involves replacing the existing underground fuel storage tank with a new 1,000-gallon aboveground fuel storage tank. The aboveground storage tank will supply the fuel required for the emergency backup generator to service the wastewater pump station.The project also includes replacing the underground fuel piping, fuel monitoring panel, and all associated sensors, as well as connecting the new fuel monitoring panel to the supervisory control and data acquisition system. This work must be completed by July 15, 2028.

DOFAW provides the following comments regarding the potential for the proposed work to affect listed species in the vicinity of the project area.

Artificial lighting can adversely impact seabirds which may pass through the area at night by causing them to become disoriented. The disorientation can result in seabird collision with manmade structures or the grounding of birds. Nighttime work which requires outdoor lighting should be avoided during the seabird fledging season from September 15 through December 15, when young seabirds make their maiden voyage to sea. If nighttime construction is required during the seabird fledgling season, we recommend a qualified biologist be present at the project site to monitor and assess the risk of seabirds being attracted or grounded due to the lighting. If seabirds are seen circling the area, lights should be turned off. If a downed seabird is detected, please

follow DOFAW's recommended response protocol by visiting https://dlnr.hawaii.gov/wildlife/seabird-fallout-season/

Permanent lighting also poses a risk of seabird attraction, and as such should be minimized or eliminated to protect seabird flyways and preserve the night sky. For illustrations and guidance related to seabird-friendly light styles that also protect seabirds and the dark starry skies of Hawai'i please visit https://dlnr.hawaii.gov/wildlife/files/2016/03/DOC439.pdf.

Cats prey on native birds, including State-listed endangered waterbirds, seabirds, and forest birds. Predation is instinctive and means that even well-fed cats will hunt and kill wildlife. Therefore, DOFAW recommends no feeding of feral cats should occur on the premises.

We recommend that Best Management Practices are employed during and after construction to contain any soils and sediment with the purpose of preventing damage to near-shore waters and marine ecosystems.

DOFAW recommends minimizing the movement of plant or soil material between worksites. Soil and plant material may contain detrimental fungal pathogens (e.g., rapid 'ōhi'a death), vertebrate and invertebrate pests (e.g., little fire ants, coconut rhinoceros beetles, etc.), or invasive plant parts (e.g., miconia, pampas grass, etc.) which could harm our native species and ecosystems. We recommend consulting the O'ahu Invasive Species Committee (OISC) at (808) 266-7994 to help plan, design, and construct the project, learn of any high-risk invasive species in the area, and ways to mitigate their spread. All equipment, materials, and personnel should be cleaned of excess soil and debris to minimize the risk of spreading invasive species.

The invasive coconut rhinoceros beetle (CRB) or *Oryctes rhinoceros* is found on the islands of O'ahu, Hawai'i Island, Maui, and Kaua'i. On July 1, 2022, the Hawai'i Department of Agriculture (HDOA) approved Plant Quarantine Interim Rule 22-1. This rule restricts the movement of CRB-host material within or to and from the island of O'ahu, which is defined as the Quarantine Area. Regulated material (host material or host plants) is considered a risk for potential CRB infestation. Host material for the beetle specifically includes a) entire dead trees, b) mulch, compost, trimmings, fruit and vegetative scraps, and c) decaying stumps. CRB host plants include the live palm plants in the following genera: *Washingtonia*, *Livistona*, and *Pritchardia* (all commonly known as fan palms), *Cocos* (coconut palms), *Phoenix* (date palms), and *Roystonea* (royal palms). When such material or these specific plants are moved there is a risk of spreading CRB because they may contain CRB in any life stage. For more information regarding CRB, please visit https://dlnr.hawaii.gov/hisc/info/invasive-species-profiles/coconut-rhinoceros-beetle/.

You should avoid importing to O'ahu soil or other plant material from off-island. Soil and plant material may contain fungi (e.g., rapid 'ōhi'a death) and other pathogens which could harm our native species and ecosystems. We recommend consulting the Hawai'i Interagency Biosecurity Plan at http://dlnr.hawaii.gov/hisc/plans/hibp/ in the planning, design, and construction of the project.

DOFAW recommends using native plant species for landscaping that are appropriate for the area; i.e., plants for which climate conditions are suitable for them to thrive, plants that historically occurred there, etc. Please do not plant invasive species. DOFAW also recommends referring to www.plantpono.org for guidance on the selection and evaluation of landscaping plants and to determine the potential invasiveness of plants proposed for use in the project.

Due to the arid climate and risks of wildfire to listed species, we recommend coordinating with the Hawai'i Wildfire Management Organization at (808) 850-0900 or admin@hawaiiwildfire.org, on how wildfire prevention can be addressed in the project area. When engaging in activities that have a high risk of starting a wildfire (i.e. welding in grass), it is recommended that you:

- Wet down the area before starting your task,
- Continuously wet down the area as needed,
- Have a fire extinguisher on hand, and
- In the event that your vision is impaired, (i.e. welding goggles) have a spotter to watch for fire starts.

We appreciate your efforts to work with our office for the conservation of our native species. These comments are general guidelines and should not be considered comprehensive for this site or project. It is the responsibility of the applicant to do their own due diligence to avoid any negative environmental impacts. Should the scope of the project change significantly, or should it become apparent that threatened or endangered species may be impacted, please contact our staff as soon as possible. If you have any questions, please contact Kelli Yamaguchi, Protected Species Habitat Conservation Planning Associate via email at kelli.yamaguchi.researcher@hawaii.gov.

Sincerely,

JASON D. OMICK
Wildlife Program Manager