DEPARTMENT OF ENVIRONMENTAL SERVICES
KA 'OIHANA LAWELAWE KAIĀPUNI
CITY AND COUNTY OF HONOLULU

1000 ULU'ŌHI'A STREET, SUITE 308 • KAPOLEI, HAWAI'I 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 25-034

September 16, 2025

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

Dear Ms. Evans:

SUBJECT: Wahiawā Wastewater Treatment Plant - Fuel Storage Tank Improvement
TMK 7-3-007:002
Wahiawā, O'ahu

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, Hawai'i Revised Statues, and Chapter 11-200.1, Hawai'i 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 12:05:16 -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: Wednesday, April 15, 2026 2:13:38 PM

Action Name

Fuel Storage Tank Improvements Wahiawā Wastewater Treatment Plant

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

Wahiawā, Oʻahu

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

(1) 7-3-007:002

Action type

Agency

Other required permits and approvals

None

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 Wahiawā Wastewater Treatment Plant has an underground storage tank that supplies fuel to a standby generator. The generator automatically activates during a power outage and provides electricity for the treatment plant, including the influent pumps, support equipment, HVAC, and lighting. To comply with current fuel storage regulations and strengthen environmental protection, the City Department of Environmental Services, Division of Wastewater Engineering and Construction, is proposing to replace the existing 6,000-gallon underground fuel storage tank with a new 6,000-gallon aboveground tank. The project also includes replacing the underground fuel piping, fuel monitoring panel, associated sensors, and 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-25-032_Wahiawa_WWTP_Ada1.pdf
- Wahiawa-WWTP-Draft-EA_Submittal-to-ERP_ADA1.pdf

Action location map

- Project-Site1.zip

Compliance certification (HRS §368-1.5):

The authorized individual listed below certifies that documents submitted are unlocked, searchable, and compliant with the Hawaii Electronic Information Technology Disability Access Standards (including, but not limited to transcripts, captions, and other descriptions accompanying audio/video files). The individual acknowledges that the submitter retains the responsibility for compliance after documents have been published and any compliance queries will be directed back to the agency and/or applicant.

Authorized individual

Aaron Teper

Authorized individual email
aaron@townscapeinc.com
Authorized individual phone
(808) 550-3893
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 Wahiawā Wastewater Treatment Plant in Wahiawā, 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

April 2026

This page intentionally left blank.

Draft Environmental Assessment
Fuel Storage Tank Improvements
Wahiawā Wastewater Treatment Plant
in Wahiawā,
Island of Oʻahu, Hawaiʻi

Tax Map Key (1) 7-3-007:002

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
Honolulu, Hawaiʻi 96707

Prepared By:

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

April 2026

This page intentionally left blank.

TABLE OF CONTENTS

1. Setting and Project Description 1-1
1.1. Background and Need 1-1
1.2. Proposed Action 1-2
1.3. Site Location and Description 1-2
1.4. Facility Description 1-2
1.5. Project Details 1-4
1.6. Project Schedule 1-7
2. Description of Existing Environment, Project Impacts, and Mitigation 2-1
2.1. Physical Environment 2-1
2.1.1. Climate and Rainfall 2-1
2.1.2. Topography, Geology and Soils 2-1
2.1.3. Natural Hazards 2-5
2.2. Archaeological, Architectural and Cultural Resources 2-6
2.3. Floral and Faunal Resources 2-8
2.4. Environmental Quality 2-11
2.4.1. Visual Resources 2-11
2.4.2. Acoustic Characteristics 2-11
2.4.3. Air Quality 2-12
2.4.4. Hazardous Materials 2-12
2.5. Public Infrastructure & Services 2-13
2.5.1. Site Access, Circulation and Traffic 2-13
2.5.2. Potable Water and Wastewater 2-14
2.5.3. Power and Communications 2-15
2.5.4. Emergency Service Facilities and Shelters 2-15
2.5.5. Recreational Resources 2-16
2.6. Socio-Economic Characteristics 2-17
3. Relationship to Plans, Policies, and Controls 3-1
3.1. Hawai‘i State Plan 3-1
3.2. State Land Use District 3-2
3.3. State Coastal Zone Management Program 3-2
3.4. Special Management Area 3-10
3.5. Shoreline Setback Area 3-10
3.6. City and County of Honolulu General Plan 3-10
3.7. Central O‘ahu Sustainable Communities Plan 3-12
3.8. City and County of Honolulu Land Use Ordinance 3-13
4. Possible Alternatives 3-14

4.1. No Action....4-1
4.2. Delayed Action....4-1
5. Permits and Approvals....5-1
6. Determination....6-1
7. Public Agency Review and Consultation....7-1
8. References....8-1

LIST OF FIGURES

Figure 1 Location and Vicinity Map....1-8
Figure 2 State Land Use Map....1-9
Figure 3 City Zoning Map....1-10
Figure 4 Existing Site Plan....1-11
Figure 5 Demolition Floor Plan....1-12
Figure 6 Demolition and Erosion Control Plan....1-13
Figure 7 Soils....2-4

LIST OF APPENDICES

Appendix A Archaeological Literature Review and Field Inspection Report
Appendix B Early Consultation Letter, Handout, and Responses

LIST OF ABBREVIATIONS

Abbreviation	Definition
AST	Aboveground Storage Tank
ATS	Automatic Transfer Switch
BMPs	Best Management Practices
CSH	Cultural Surveys Hawai‘i, Inc.
DLNR	Department of Land and Natural Resources
DOFAW	Division of Forestry and Wildlife
DOH	Department of Health
EA	Environmental Assessment
FONSI	Finding of No Significant Impact
HAR	Hawai‘i Administrative Rules
HECO	Hawaiian Electric Company, Inc.
HFD	City and County of Honolulu Fire Department
HPD	City and County of Honolulu Police Department
HRS	Hawai‘i Revised Statutes
kW	Kilowatt
LUO	Land Use Ordinance
MGD	Million gallons per day
NFPA	National Fire Protection Association
ROH	Revised Ordinances of Hawai‘i
SCADA	Supervisory Control and Data Acquisition
SCP	Sustainable Communities Plan
SHPD	State Historic Preservation Division
SMA	Special Management Area
UST	Underground Storage Tank
WWTP	Wastewater Treatment Plant

This page intentionally left blank.

PROJECT SUMMARY

Project Name:	Fuel Storage Tank Improvements Wahiawā Wastewater Treatment Plant
Proposing and Determining Agency:	City & County of Honolulu Department of Environmental Services 1000 Ulu‘ōhi‘a Street Suite 308 Kapolei, Hawai‘i 96707
HRS, Chapter 343 Trigger	Use of County lands and funds
Location:	Wahiawā, O‘ahu, Hawai‘i
Tax Map Key:	(1) 7-3-007:002
Project Address:	111 California Avenue Wahiawā, Hawai‘i 96792
Land Area:	8.164 acres (or 355,624 square feet) parcel area
Recorded Fee Owner:	City & County of Honolulu
Existing Use:	Wastewater Treatment Plant
Proposed Use:	Wastewater Treatment Plant
Community Plan Region:	Central O‘ahu Sustainable Communities Plan
Land Use Designations:	
State Land Use	Urban
County Zoning	I-2 Intensive Industrial District
Special Management Area:	Not in Special Management Area
Proposed Action:	The proposed project involves replacing the existing 6,000-gallon underground fuel storage tank with a new 6,000-gallon aboveground fuel storage tank. Additionally, the project includes replacing the underground fuel piping, fuel monitoring panel, and all associated sensors.
Agency Determination:	Anticipated Finding of No Significant Impact

This page intentionally left blank.

1. SETTING AND PROJECT DESCRIPTION

1.1. Background and Need

The Wahiawā Wastewater Treatment Plant (WWTP) is owned and operated by the City and County of Honolulu and has been in service since 1928, serving the communities of Wahiawā Town, Whitmore Village, and the U.S. Naval Computer and Telecommunications Area Master Station Pacific (NCTAMS PAC) (Parsons, 2018). Wastewater from these areas is collected and conveyed to the WWTP, via a 36-inch sewer line. The WWTP has a 6,000-gallon Underground Storage Tank (UST) that stores fuel for the 800 kilowatt (kW) standby generator, which automatically activates during a power outage. The generator provides full operational power to the treatment plant, including the influent pumps, support equipment, HVAC, and lighting (Limtiaco Consulting Group, 2013).

To comply with current fuel storage regulations, the City Department of Environmental Service's Division of Wastewater Engineering and Construction is proposing to upgrade the existing UST along with making other related improvements. Pursuant to Hawai'i Administrative Rules (HAR) 11-280.1, USTs and piping must provide secondary containment and must use interstitial monitoring as a method to detect release from the tanks and piping by July 15, 2028. Without the backup power system, the WWTP could experience 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 fuel level sensors that provide real-time data on fuel levels within the storage tanks. Placing the storage tanks aboveground allows for easier maintenance and faster detection of potential leaks.

Environmental review of this project is required by Hawai'i 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.

1.2. Proposed Action

The City proposes replacing the existing UST system and piping with a new 6,000-gallon aboveground storage tank (AST). The project will replace the underground fuel piping, fuel monitoring panel, and all associated sensors.

1.3. Site Location and Description

The Wahiawā WWTP facility is located at 111 California Avenue in the ahupuaʻa of Waiʻanae Uka, district of Waiʻanae, on the island of Oʻahu. It is located in Wahiawā Town near the west end of California Avenue, across from Kaʻala Elementary School, and near the confluence of the Kaukonahua stream (see Figure 1).

The property is situated between a residential subdivision to the north and slopes southward toward the Wahiawā Reservoir. It is surrounded by a chain-link fence on all sides, with a 40-foot grass buffer zone between the fence and residential housing (GMP Associates, Inc., 2005). The WWTP parcel is approximately eight acres. Vehicular access to the project site is via California Avenue.

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 I-2 Intensive Industrial District (see Figure 3). According to LUO §21-3.130, the purpose of the industrial districts is "to recognize the importance of industrial uses to the welfare of city residents by providing areas for industrial uses without undue competition from other uses and ensuring compatibility with nonindustrial areas."

1.4. Facility Description

This section includes information described in the Wahiawā WWTP Operations Manual prepared by Parsons (2018) and the Limtiaco Consulting Group (2013) for the City and County of Honolulu. An existing site plan for the WWTP facility is provided in Figure 4.

The Wahiawā WWTP facility services approximately 22,000 residents across an area of 1,600 acres. The WWTP has an average flow capacity of 2.3 million gallons per day (mgd) with a maximum peak capacity of 13.5 mgd. Originally constructed in 1927, the facility was upgraded in 1957 with secondary treatment capabilities.

Secondary treatment is a standard for wastewater treatment which adds biological processes directed at removing dissolved and non-settleable pollutants. In 2001 the facility was upgraded again to add sand filtration and UV disinfection, following tertiary treatment by a membrane bioreactor (MBR) system. Finally, treated wastewater is discharged through an outfall into the Wahiawā Reservoir, while sludge produced at the Wahiawā WWTP is digested, dewatered, and hauled by truck to the Honouliuli WWTP for further processing.

1.4.1. Power and Fuel Systems

The facility receives electrical service from Hawaiian Electric Company, Inc. (HECO). In the event of a HECO power outage, an automatic transfer switch detects the loss of utility power and signals the facility's 800 kW diesel standby generator to start and supply power to the station.

The generator is fueled by a 6,000-gallon, fiberglass-walled UST that supplies a 75-gallon day tank. A fuel monitoring panel continuously monitors the system for leaks within the fuel piping and the UST, and tracks fuel inventory by communicating with a sump monitor probe located in the UST manway and an inventory probe within the UST.

The existing UST is located west of the Generator Room, while the generator, day tank, and fuel monitoring panel are housed within the Generator Building, located in the Midwest region of the property. Supply and return fuel piping runs underground from the UST to the outside of the Generator Room. From there, the fuel piping runs aboveground and into the day tank, with the supply line passing through a fuel filter. Fuel piping from the day tank to the generator is concealed in a shallow covered trench in the Generator Building floor. The Generator Building is constructed of concrete masonry unit and is insulated for sound.

1.4.2. Electrical and Monitoring Systems

The WWTP is powered by the main switchgear (SW-6001) located in the Reclamation Facilities Building. Switchgear SW-6001 is rated at 1,600 amperes at 480V, 3-phase, 3-wire and distributes power to all electrical equipment in the Generator Building as well as MCC-6001A and MCC-6001B in the Reclamation Facilities Building.

Within the Generator Building, a 480V disconnect switch feeds Transformer E, a 15 kVA, 480V–208Y/120V, 3-phase, 4-wire transformer. Transformer E serves Panel E, which is rated at 208Y/120V, 3-phase, 4-wire with a 225-ampere bus.

In the Reclamation Facilities Building, MCC-6001B is rated at 480V, 3-phase, 3-wire with an 800-ampere bus and supplies Panel 6002, also located in the Reclamation Facilities Building. Panel 6002 is served by transformer T-6002, a 45 kVA, 480V–208Y/120V, 3-phase, 4-wire transformer. The panel is rated at 208Y/120V, 3-phase, 4-wire with a 150-ampere main circuit breaker and serves exterior lighting, cells, and receptacles associated with the existing sand filters located adjacent to the Generator Building and Reclamation Facilities Building.

Currently, there are no SCADA connections to the fuel monitoring panel, day tank/day tank control panel, UST sensors, or to the electrical equipment and control systems associated with the sand filters.

The fuel monitoring panel is supplied by Panel E and monitors the existing day tank control panel and associated UST sensors. Available record drawings do not provide kVA values for each existing load; however, based on estimated kVA values, the calculated demand does not exceed 29.3 amperes. Panel E currently has two spare breakers and sixteen provisions for future breakers.

Panel 6002 supplies power to the exterior lighting, cells, and receptacles serving the sand filters adjacent to the Generator Building and the Reclamation Facilities Building. As with Panel E, the available record drawings do not provide kVA values for each existing load. Based on estimated kVA values, the calculated demand does not exceed 179.2 amperes. Panel 6002 has no spare breakers, but includes four provisions for future breakers.

1.5. Project Details

The proposed project includes the following actions (see Figures 4 to 6):

Civil

- Excavate and trench area to remove the existing UST, including associated fuel lines and vent line. Backfill with select borrow to the bottom of the surface restoration layer.

- Excavate and trench area to install the new 6,000-gallon AST, fuel lines, conduits, housekeeping pad, and pipe bollards. Restore the surface of the excavated area to match adjacent surfaces including but not limited to the crushed gravel surface and asphalt pavement.
- Install five new steel pipe bollards to protect the AST from vehicular traffic.
- Cut backwash/drainage lines of the sand filters three feet below the existing grade to match the demolition of the structure. Any pipes penetrating through the remaining sand filter structure walls shall be cut and plugged per the specifications.
- Remove the aboveground influent piping to the sand filters, including all associated pipe supports, plates, concrete pads, and appurtenances.
- Remove the aboveground filtrate lines exiting the sand filters on the south side, removed down to the 90 degree elbow, and a blind flange installed to seal the line.
- Remove the aboveground compressed air line from the sand filters to the Reclamations Building. Realign the compressed air line underground to the building at the same wall penetration point.

Architectural

- Conduct various waterproof and architectural repairs throughout the Pump Room and the Generator Building incidental to scope.
- 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 the new day tank in the Generator Room. The AST requires 12-inch pedestals at the tank supports.
- Install galvanized steel tank stairs, handrails, and platform to access the top of the new AST.
- Demolish the existing sand filter structure to a depth of three feet below the existing grade. Drill 1-1/2” diameter holes through the full thickness of the

remaining bottom slab to allow drainage. Backfill the area with soil to finish grade and compact to 95 percent relative density.

Electrical

- Replace the conductors and electrical connections for the existing fuel monitoring panel.
- Demolish and abandon in place (if concealed or below grade) and/or remove associated conduits and conductors for the sand filters' electrical equipment and connections.
- Route new conduits and conductors to Panel E via shared undergound duct bank with the associated mechanical conduits.

Mechanical

- Replace the existing 6,000-gallon UST with a new 6,000-gallon AST. The AST will be a double wall steel tank encased in concrete measuring 17 feet 7.5 inches long, 8 feet 9.75 inches high, and 8 feet 0.5 inches wide.
- Install a new remote fill port adjacent to the new AST to facilitate safe and efficient refueling operations.
- Route fuel supply and fuel return piping from the AST to the day tank underground and aboveground to maintain or improve facility and equipment access. Existing pipe penetrations will be reused where feasible, otherwise, a new penetration will be made. New aboveground fuel piping will be type 316 stainless steel piping.
- Install a temporary fuel storage solution near the existing UST during construction.
- Replace the existing fuel monitoring panel with a new Veeder Root 450 Plus, capable of displaying fuel inventory levels and providing both audible and visual alarms in the event of a leak.
- Install interstitial monitoring and inventory sensors on the AST and integrated with the fuel monitoring panel.
- Replace the existing 120-gallon diesel day tank with a 150-gallon day tank equipped with two supply pumps, one return pump, and an auxiliary hand pump.

1.6. Project Schedule

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

Existing UST (at cement slab); proposed AST area in background

Figure 1 **Location and Vicinity Map**

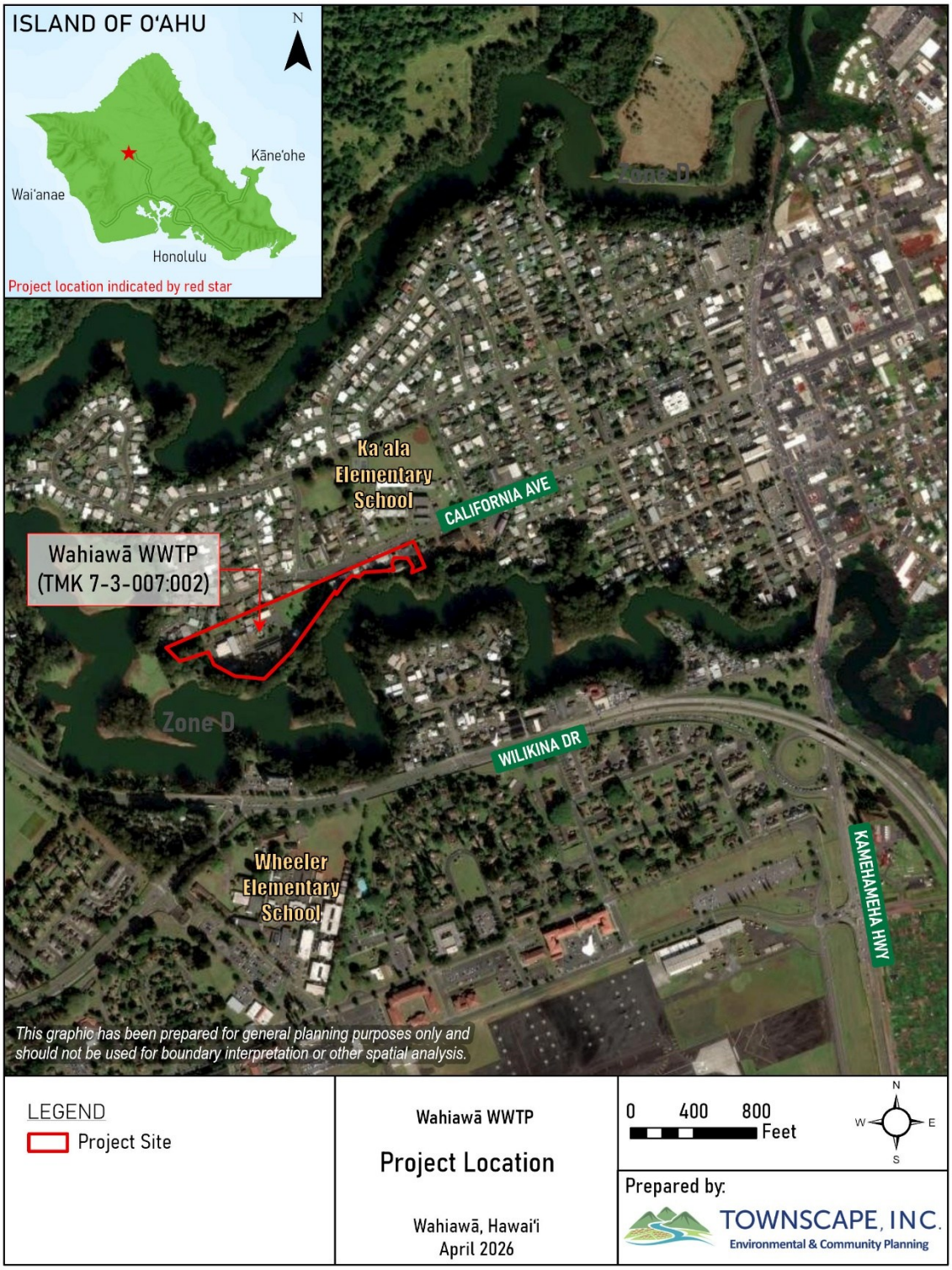


Figure 2 State Land Use Map

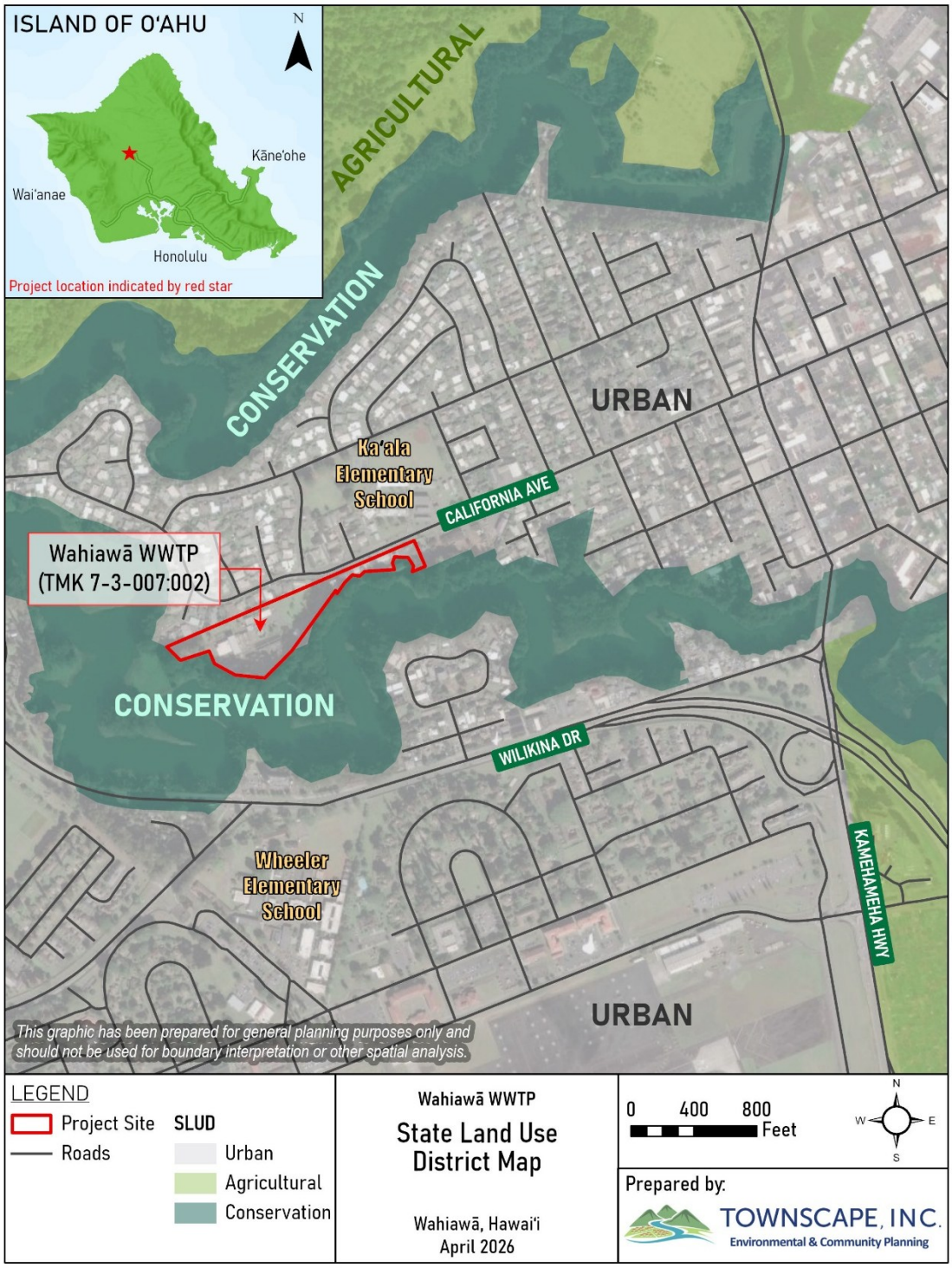


Figure 3 City Zoning Map

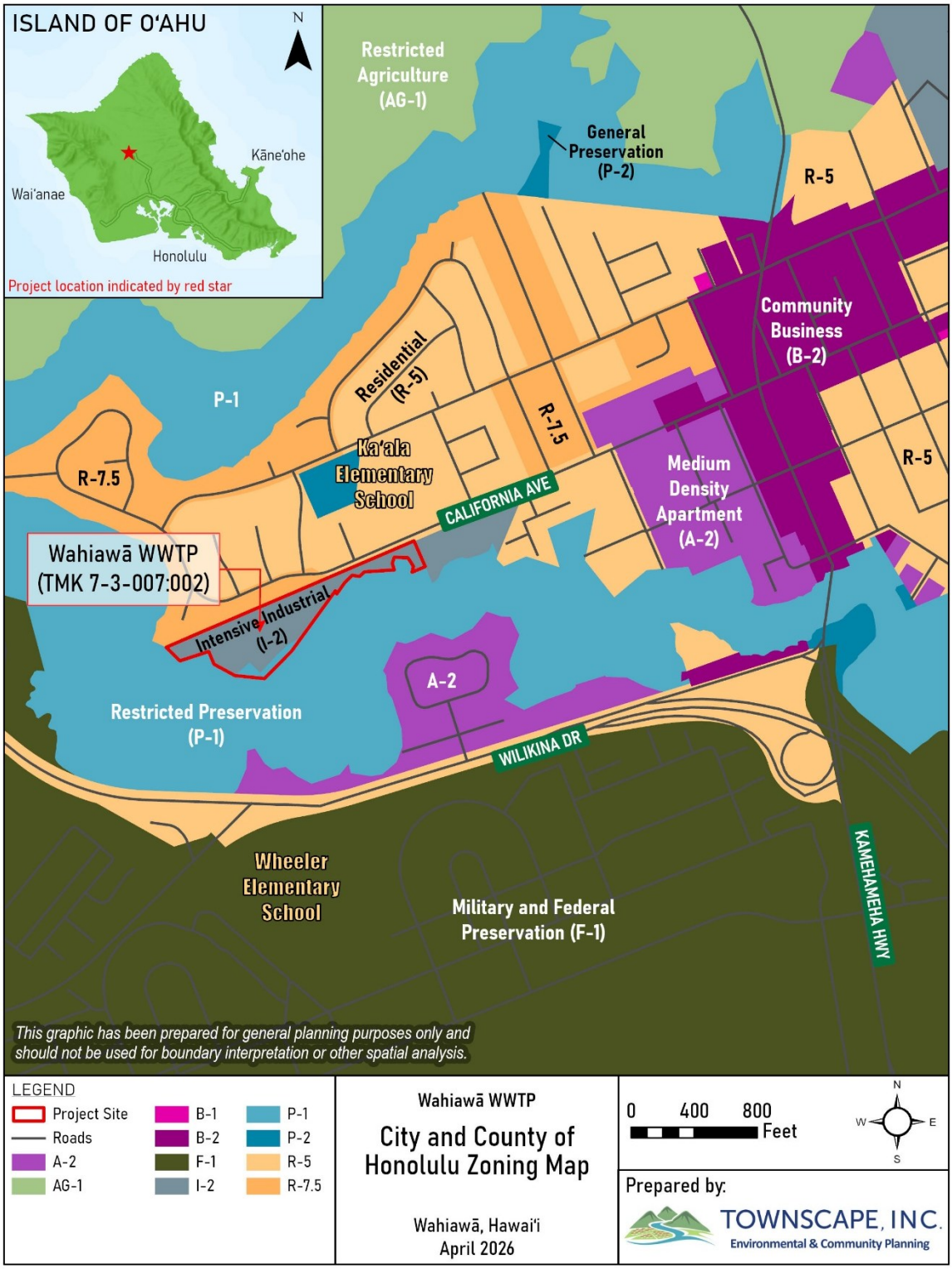
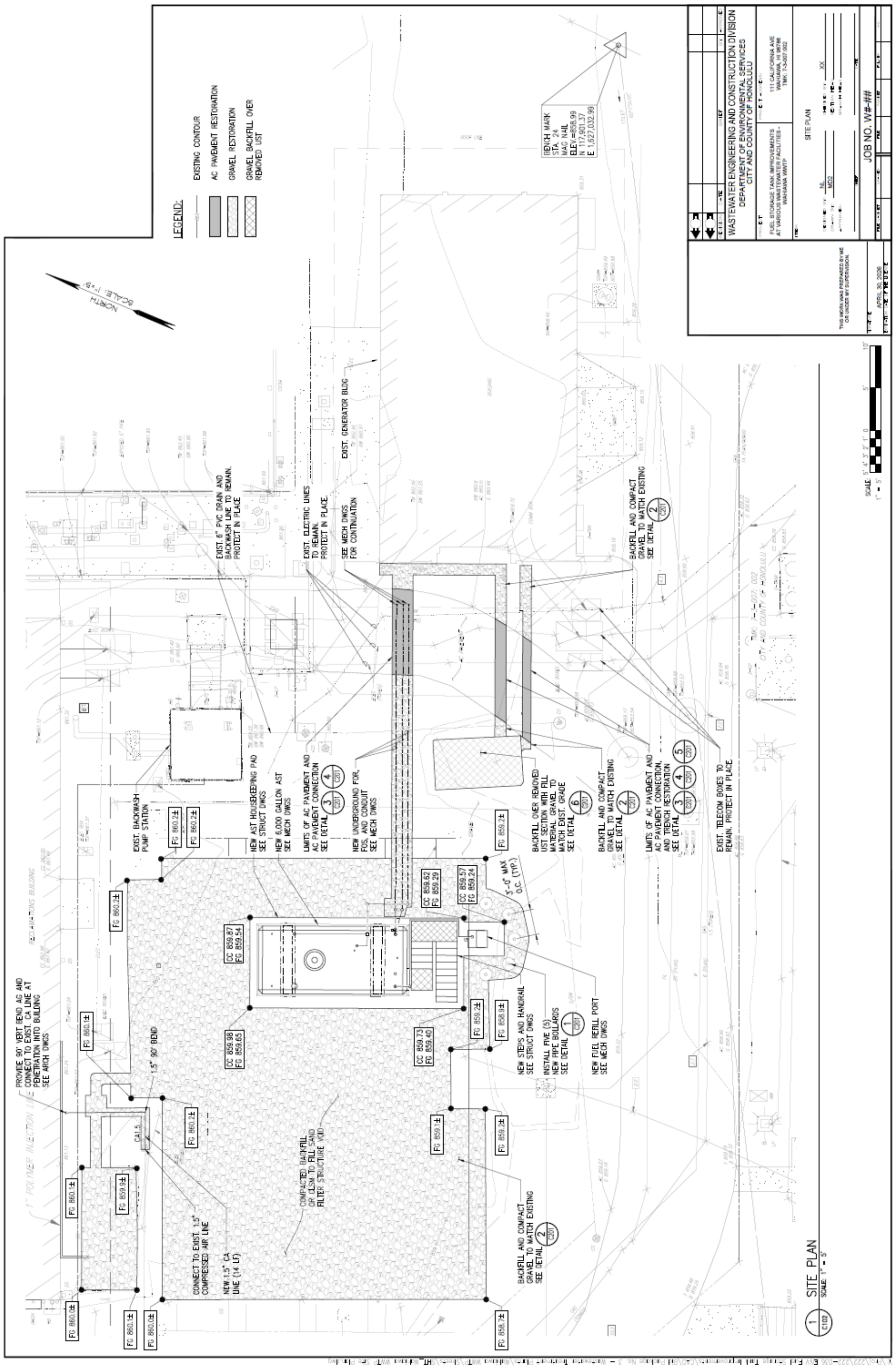
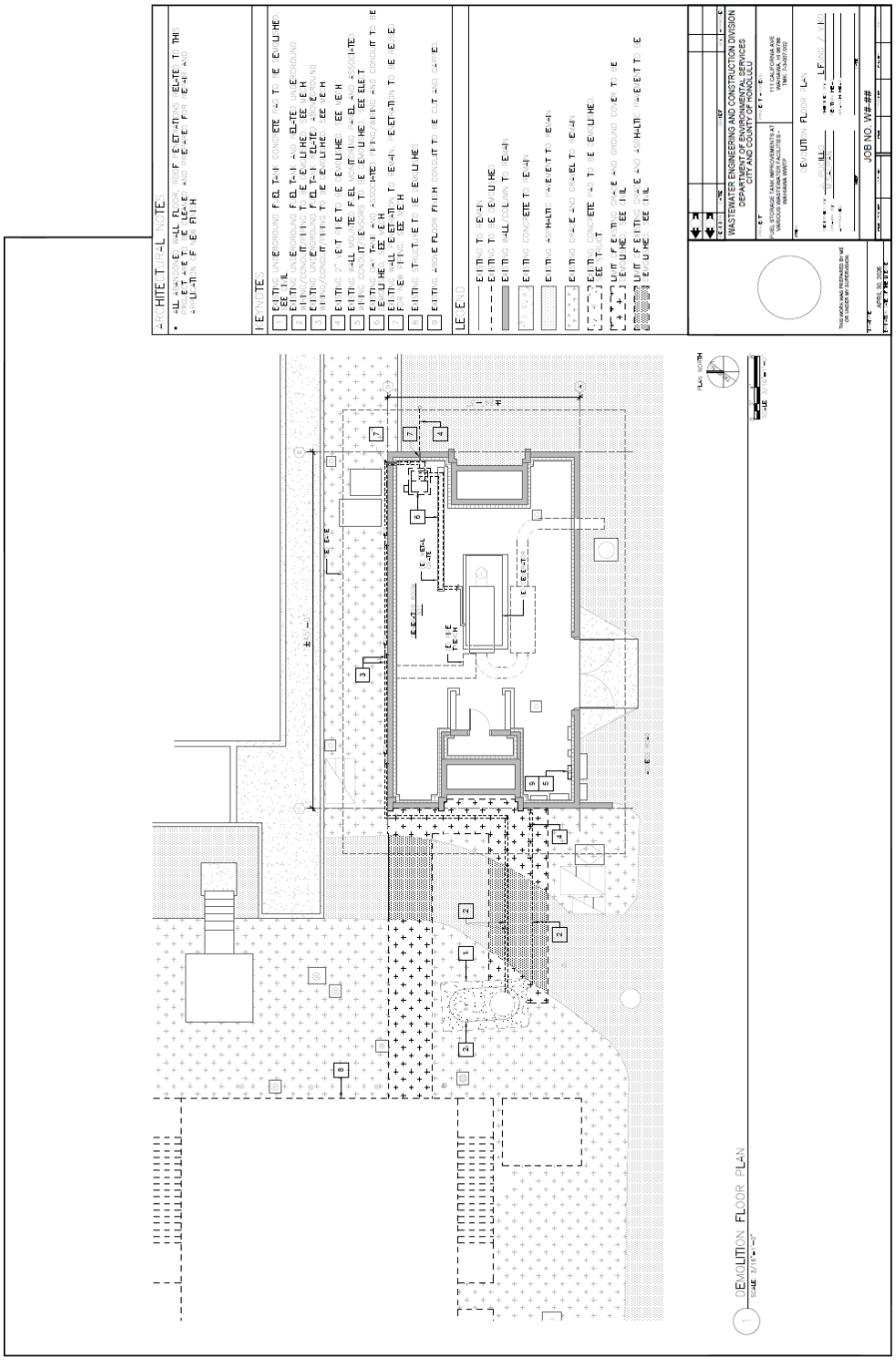


Figure 4 Existing Site Plan



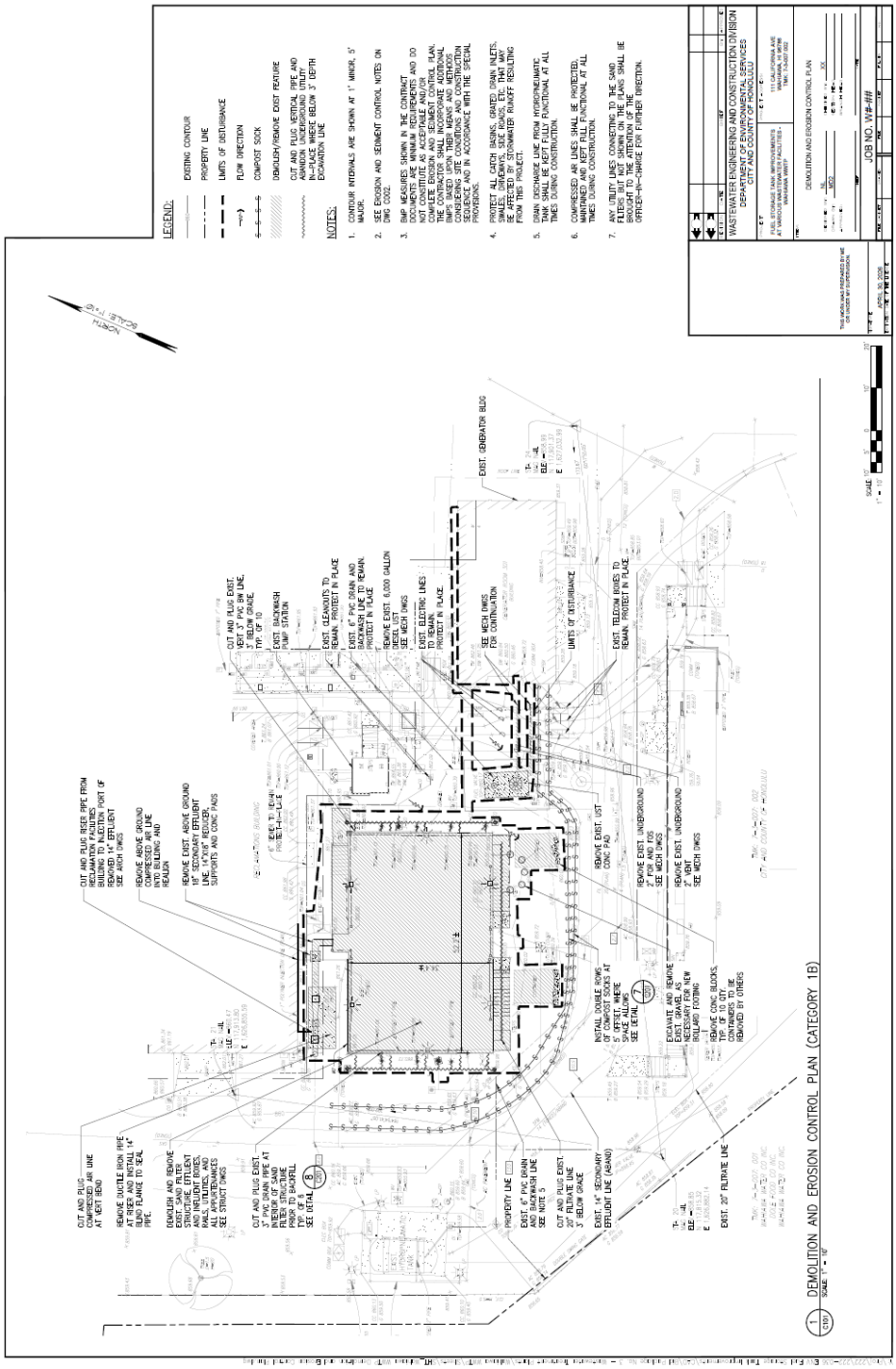
Source: Okahara and Associates, Inc., 2026

Figure 5 Demolition Floor Plan



Source: Okahara and Associates, Inc., 2026

Figure 6 Demolition and Erosion Control Plan



Source: Okahara and Associates, Inc., 2026

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 Hawai‘i 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 Hawai‘i varies greatly according to geographic conditions, elevation, and long-term climatic cycles.

The project site is in Central O‘ahu, which has a mild semi-tropical climate like the rest of the State of Hawai‘i. Average temperatures at the project site typically range from 61 degrees Fahrenheit in February to 83 degrees Fahrenheit in August, while the average annual rainfall at the project site is estimated to be 36.6 inches (Giambelluca, 2014). Trade winds in the project vicinity are generally from the northeast. 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 O‘ahu contains the Wai‘anae and Ko‘olau mountain ranges, which are connected by a central plateau. The older Wai‘anae mountain range spans approximately 20 miles across the western third of O‘ahu. The younger Ko‘olau mountain range extends for 37 miles in a northwest to southeast alignment across the eastern two thirds of the island.

The Wahiawā WWTP is located between the Wai‘anae and Ko‘olau mountain ranges, at approximately 860 feet above sea level (Shideler and Hammatt, 2025).

According to the U.S. Department of Agriculture Soil Conservation Service (1972), the project area primarily consists of Wahiawa silty clay, 0 to 3% slope (WaA) soils,

while a small, south-central portion of the project area consists of Helemano silty clay, 30 to 90% slope (HLMG) soils. Both soil types are well-drained. There is virtually no erosion risk for WaA soils, while HLMG soils have a high risk of erosion. WaA soils are typically found on smooth interfluves. By contrast, HLMG soils are typically found at the sides and base of gulches on O‘ahu (USDA Soil Conservation Service, 1972). Figure 7 depicts the soil classifications and topographic map.

Impacts and Mitigation Measures

Project actions are expected to retain the overall topographic profile of the site. The ground surface within the project area primarily consists of crushed gravel surfaces in the immediate work area. Asphalt paved roads surround the site, while soils with poor to average vegetated cover occurs along the perimeter. The general site drainage patterns sheet flows from the north to south direction along the site. Stormwater flows off the site onto a vegetated strip to the south, which discharges to the South Fork Kaukonahua Stream, immediately south of Wahiawa Reservoir.

Double rows of 12-inch compost filter socks along the south and west perimeters of the disturbed area are proposed to protect the site and prevent runoff from leaving the project site.

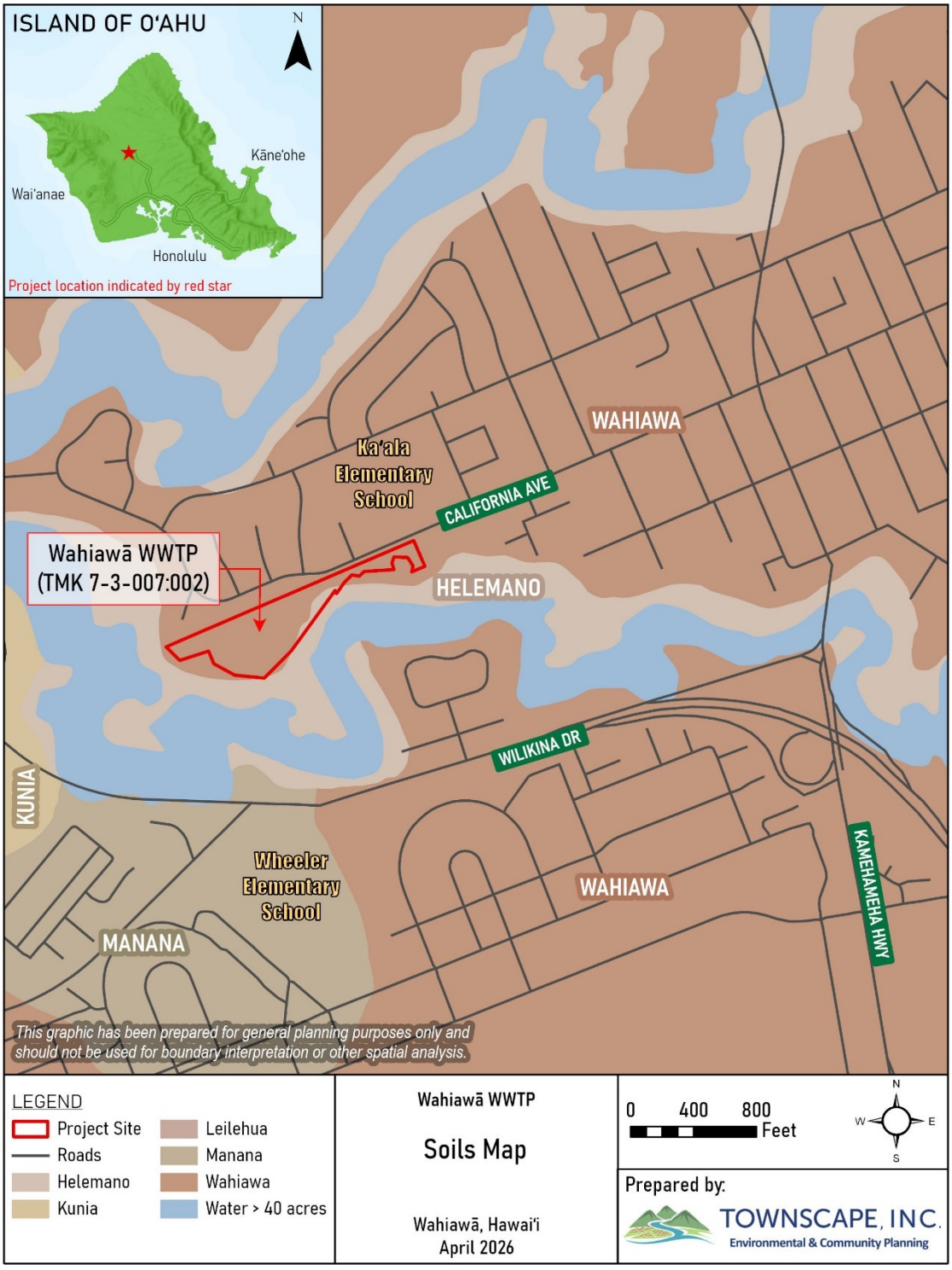
In a letter dated May 6, 2025, the State of Hawai‘i Department of Land and Natural Resources Division of Aquatic Resources (DAR) recommends that the following Best Management Practices (BMPs) be implemented to mitigate erosion and land-based sources of pollution (LBSP). It is also recommended by DOFAW and the State Commission on Water Resource Management (CWRM) that the Contractor employ Best Management Practices (BMPs) during and after construction to contain any soils and sediment to prevent polluted runoff which could cause damage to near shore waters and marine ecosystems, in accordance with HAR Chapter 11-54. The following BMPs are proposed:

- All exposed disturbed areas are to be permanently stabilized with ground covering such as vegetation, gravel, or pavers;
- Sediment fences or barriers will be used at the perimeter of all disturbed areas where there is potential for runoff from the project site.

- Consider the weather when timing construction work, preferably during low rain conditions. All construction should halt during storm conditions or when storm conditions threaten the watershed. Secure the site during storm conditions so that runoff into nearby waterbodies is unlikely.
- Consider the proximity of the proposed action to aquatic resources during design and construction. Landscape leveling should be such that long-term erosion and LBSP are minimized.
- During the construction phase of the proposed action, Applicant should utilize appropriate barriers (e.g., sediment barriers/bags, petroleum absorption diapers, etc.) to limit the amount of sediment or LBSP (e.g., petroleum products, chemicals, debris, etc.) to the maximum extent practicable.
- Utilize environmentally inert construction materials to the extent practicable.

Further, CWRM recommends that approvals for this project be conditioned upon a review by the State Department of Health and the developer's acceptance of any resulting requirements related to water quality.

Figure 7 Soils



2.1.3. Natural Hazards

Tsunami, Sea Level Rise, and Flooding

The Wahiawā WWTP project site is not susceptible to natural hazards including tsunamis, sea level rise (SLR), and flooding. The project area is not within the Tsunami Evacuation Zone, nor is it within the City's projected SLR exposure area (SLR-XA) that would be impacted by 5.8 feet of SLR by the year 2100. According to the DLNR Flood Hazard Assessment Tool (2025), the project site is located in Flood Zone D, which is designated as an undetermined flood risk by FEMA.

Hurricanes

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

Wildfires

The Division of Forestry and Wildlife (DOFAW) of the Department of Land and Natural Resources (DLNR) oversees a fire management program that classifies the project area as having a high wildfire risk. The likelihood of wildfire occurrence on the leeward side of the island is high due to the arid climate and the prevalence of grasses surrounding the project area.

Impacts and Mitigation Measures

The 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. The proposed project is not expected to affect or exacerbate the occurrence of naturally occurring hazards.

In a letter from the State of Hawai'i DLNR Department of Forestry and Wildlife (DOFAW) dated May 20, 2025, it is recommended that the Contractor engage

in BMPs to best prevent the risk of wildfire. These BMPs include wetting down the area before and continuously throughout the task as needed, having a fire extinguisher on hand during all activities, and having a spotter on hand while engaged in any activities that may impair vision (such as wearing welding goggles).

2.2. Archaeological, Architectural and Cultural Resources

On March 27, 2025, Cultural Surveys Hawai‘i (CSH) conducted a pedestrian survey of the Wahiawā WWTP. This effort was documented in a Literature Review and Field Inspection (LRFI) report that included a historical overview of the area and a review of prior archaeological studies completed in the surrounding area. The section below summarizes the Literature Review and Field Inspection report prepared by CSH (see Appendix A) unless otherwise noted.

The Wahiawā WWTP is situated within the ahupua‘a of Wai‘anae Uka in the Wai‘anae district of O‘ahu. The entire area known as Wahiawā today is situated in both the Waialua and Wai‘anae districts. This portion of central O‘ahu traditionally had a large population due to its abundant water resources and spiritual significance. The high altitude and many streams kept Wahiawā damp and well-watered. The streams provided irrigation to extensive terraces of lo‘i kalo (pondfield taro patches) throughout the region. The WWTP project site is located mauka of the Kaukonahua stream confluence, next to its southeastern tributary (Shideler and Hammatt, 2025). Kaukonahua is the longest stream in Hawai‘i and spans 33 miles (Pukui et al., 1974). Historically, the Kaukonahua stream was perennial.

Kūkaniloko, located 1 kilometer north of the project site towards Waialua, is a spiritually significant site that was established in the 12th century AD and named for its birthing stones that were used by chiefs with the highest lineages. High chiefs from O‘ahu as well as other islands would journey to Kūkaniloko to give birth at this sacred site so their children would be consecrated as divine. Some of the greatest chiefs of O‘ahu were born at Kūkaniloko, including Ma‘ilikūkahi and Kākuhihewa (McAllister, 1933). Two sacred drums, Opuku and Hāwea, were played to announce the birth of chiefs at Kūkaniloko. These drums were housed in the nearby Ho‘olonopahu heiau (McAllister, 1933).

While Kūkaniloko has been preserved and is still present today, the surrounding traditional agricultural land use in the area transitioned to grazing land when it was

leased from the Crown during the Kingdom period. This was followed by homestead uses by Anglo Americans following the devastating 1895 Land Act that was created shortly after the illegal overthrow of the Hawaiian Kingdom, which converted the protected Crown Lands into public lands that could easily be purchased by Anglo settlers. During this time, 1,300 acres in Wahiawā were purchased by settlers. Subsequently, Wahiawā Town and the Schofield Barracks U.S. military reservation were developed during the early Territorial period.

Previous archaeological studies conducted between the Kaukonahua tributaries and mauka of the Wahiawā WWTP project site include that of Colin and Hammatt (1994) and Liwosz et al. (2018). Colin and Hammatt (1994) identified no historic properties, and Liwosz et al. (2018) identified remnants of a cemetary on their project site which was developed into a subdivision. A traditional Hawaiian trail going from O‘ahu’s south shore to Waialua was situated approximately 1 kilometer south of the project area (Shideler and Hammatt, 2025). However, evidence of Hawaiian habitation in the immediate project vicinity was likely lost during the construction of the Wahiawā Reservoir in the early 1900s (Shideler and Hammatt, 2025). Therefore, no historic properties or archeological findings were identified within the project site.

Impacts and Mitigation Measures

No impacts to existing archaeological, architectural, or cultural resources are anticipated. The installation of the AST and removal of the existing tank will not require expansion of the existing site nor disturbance to the land beyond what has already been displaced. Functionally, the new installation will have generally the same use and properties.

In the event that any unexpected iwi or other historical remains are uncovered during the various phases of construction (e.g. excavation and trenching), the Contractor will be required to halt construction activities and to immediately notify the State Historic Preservation Division (SHPD) of the discovery. The Contractor will prevent the disturbance or taking of any discovered archaeological, historic, or cultural resources to the extent possible by instituting the described mitigation measures (i.e., halt construction and immediately notify SHPD) and enforcing their implementation by its contractors.

2.3. Floral and Faunal Resources

The project site was previously disturbed for the construction of the WWTP in 1928. A letter from DLNR DOFAW on May 20, 2025 states that the following State-listed species may occur within the project area: 1) ʻōpeʻapeʻa or Hawaiian hoary bat (*Lasiurus semotus*), 2) the pueo or Hawaiian short-eared owl (*Asio flammeus sandwichensis*), and 3) several species of waterbirds, including the aeʻo or Hawaiian stilt (*Himantopus mexicanus knudsem*), ʻalae keʻokeʻo or Hawaiian coot (*Fulica alai*), and the ʻalae ʻula or Hawaiian gallinule (*Gallinula chloropus sandvicensis*).

According to the U.S. Fish and Wildlife Service's (USFWS) map for the Information for Planning and Consultation (IPaC), there are several species 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 (ʻAlae keʻokeʻo) – *Fulica alai*
- Hawaiian Duck (Koloa maoli) – *Anas wyvilliana*
- Hawaiian Petrel – Pterodroma sandwichensis
- Hawaiian Stilt (Aeʻo) – Himantopus mexicanus knudseni
- Newell's Shearwater – *Puffinus newelli*

The following migratory bird is known to pass through the region:

- Oʻahu ʻAmakihi – *Chlorodrepanis Flava*

The following flora species have been identified for this region:

- ʻAiea – *Nothocestrum latifolium*
- ʻAkoko – *Euphorbia celastroides var. kaenana*
- ʻEnaʻena – *Pseudognaphalium sandwicensium var. molokaiense*
- Haha – *Cyanea truncata*
- Hala pepe – *Dracaena forbesii*
- Hawaiʻi scaleseed – *Spermolepis hawaiiensis*
- Hawaiian bonamia – *Bonamia menziesii*
- Kāmanomano – *Cenchrus agrimonioides*
- Kaulu – *Pteralyxia macrocarpa*
- Nīoi – *Eugenia koolauensis*
- Oʻahu cowpea – *Vigna owahuensis*
- Oha – *Delissea subcordata*

- Uhiuhi – *Mezoneuron kawaiense*

Impacts and Mitigation Measures

Construction will occur entirely within the existing City property on land that has been previously disturbed. Vegetation removal, if any, will be kept to a minimum, and the project is not expected to have a significant impact on flora and fauna in the area.

A letter from DLNR DOFAW dated May 20, 2025 recommends several best practices for preventing harm to the local ecosystem or to migratory species in the area. The following guidelines are provided to minimize environmental impacts:

Endangered Species:

- Barbed wire should be avoided in any construction as bats can become ensnared and killed by such fencing material during flight.
- 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 during seabird fledging season, 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.
- Out of concern for endangered species, measures should be taken to remove and exclude non-native mammals from the site (e.g., remove cats, place bait stations for rodents and mongoose, and provide covered trash receptacles).
- Before any potentially disturbing activities—like clearing vegetation, and especially ground-based disturbance—DOFAW recommends a qualified biologist conduct surveys during crepuscular hours to ensure that potential pueo nests will not be disturbed. Observation surveys should be done from vantage points where they can see the whole project area for 2-3 nights before construction is to start. If any breeding displays are

observed, it is likely there could be a nest. If pueo nests are detected in the area, a buffer zone should be established in which no activity occurs within a minimum buffer distance of 100 meters until the nesting cycle is complete, and the chicks are capable of flight.

- If any State-listed waterbirds are present during construction, all activities within 100 feet (30 meters) should cease. Work may resume after the bird leaves the area of their own accord. If a nest is discovered, the O‘ahu Branch DOFAW Office should be contacted at (808) 973-9778.
- If landscaping work is to be done, it is recommended that native species appropriate for the project area are used as opposed to invasive species. DOFAW recommends that contractors refer to www.plantpono.org for guidance in this process.

Invasive Species:

- DOFAW recommends minimizing movement of plant or soil material between worksites to prevent the transport of fungal pathogens, vertebrate, invertebrate pests, and invasive plant propagules. Additionally, all equipment and personal items, including clothing and footwear, should be cleaned of excess soil and debris to minimize the risk of spreading invasive species. Consultation is recommended with the O‘ahu Invasive Species Committee (OISC) to help design and plan the project.
- It is recommended that the import of soil or plant material from off-island that may contain fungi and other pathogens be avoided. Consultation is recommended with the Hawai‘i Interagency Biosecurity Plan in the construction process.
- To prevent infestation of the invasive Coconut Rhinoceros Beetle (CRB), the movement of CRB-host material, including a) entire dead trees, b) mulch, compost, trimmings, fruit and vegetative scraps, and c) decaying stumps, is prohibited under the Hawai‘i Department of Agriculture’s Plant Quarantine Interim Rule 22-1. In addition, host plants for CRB include the live palm plants of the following genera: *Washingtonia*, *Livistona*, and *Pritchardia* (all commonly known as fan palms), *Cocos* (coconut palms), *Phoenix* (date palms), and *Roystonea* (royal palms), all of which may contain CRB infestations.

2.4. Environmental Quality

2.4.1. Visual Resources

The Wahiawā WWTP has a 40-foot grass buffer zone between its fence line and the residential neighborhood. The project site in particular is located on the southern side of the WWTP property behind a building. The project site is not visible from the residential street on the north side of the property, as it is shielded by an existing facility building.

Impacts and Mitigation Measures

The proposed project is not expected to impact existing visual resources, as it will take up a relatively small space within a property that is already developed, and further the AST will be shielded from view by the existing facility building.

2.4.2. Acoustic Characteristics

Military activities are a prominent source of background noise in the area, contributing significantly to the overall sound environment. Noise from the project site is influenced by its proximity to the Wheeler Army Airfield and Schofield Barracks, a military base located across the Wahiawā Reservoir. Noise from weapons training and military aircraft are frequently heard and complained about throughout the district.

Impacts and Mitigation Measures

Temporary 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.

To mitigate noise impacts, construction work will be scheduled during daytime hours, thereby avoiding excessive noise during the nighttime. 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

The air quality at the WWTP is generally consistent with ambient conditions typical of Wahiawā Town. Emissions from nearby traffic as well as military aircraft may contribute to localized air pollutants. Since the WWTP is in an open area, prevailing trade winds typically help disperse odors and maintain good air circulation.

Impacts and Mitigation Measures

No significant impacts to air quality nor measurable adverse effect on climatic conditions 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. To prevent air pollution and dust control because of the demolition of structures, the Contractor shall sprinkle exposed soil with water to maintain moistness.

2.4.4. Hazardous Materials

The proposed AST will store up to 6,000 gallons of diesel fuel for the WWTP facility operations. Stored fuel is regulated under National Fire Protection Association (NFPA) 30 (Flammable and Combustible Liquids Code), the Honolulu Fire Code, ROH Chapter 66, and Clean Water Act Spill Prevention, Control and Counter Measures or SPCC rule (40 CFR 112).

Impacts and Mitigation Measures

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 secondary containment serves as a barrier between the steel and concrete. The double-walled tank will be encased in concrete to ensure corrosion, fire, and impact resistance.

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, Code of Federal Regulation 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 as a result of construction, the Contractor shall report it to the Hazard Evaluation and Emergency Response Unit of the Department of Health.

Five new steel pipe bollards will be installed around the AST to protect it from accidental vehicle collisions to reduce the risk of spills, leaks, or structural damage. 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 WWTP is provided via a gated entrance located on California Avenue. The gated entrance allows for controlled access to authorized personnel and service vehicles. Internal circulation within the WWTP facility is facilitated by paved roads that provide access to all the buildings, with ample room for large vehicles.

Impacts and Mitigation Measures

Construction vehicles hauling materials and workers to and from the WWTP may contribute to traffic volume on California Avenue. Temporary impacts to traffic may occur during construction of the proposed project, but the impacts are anticipated to be minimal. According to an early consultation letter dated April 28, 2025, the State Department of Education recommends early consultation with the Kaʻala Elementary School administration to identify and minimize any potential effects on vehicular and pedestrian traffic that may impact school operations due to its proximity to the project site on California

Avenue. It is recommended that construction deliveries be scheduled to avoid peak hours.

2.5.2. Potable Water and Wastewater

Treated UV effluent produced onsite serves as the primary source of water for facility operations. However, potable water supplied by the Honolulu Board of Water Supply (BWS) is used as a backup source. A 6-inch potable water line extends along the asphalt roads to the west and south of the sand filters. A 3-inch lateral runs south to north between the sand filters and the existing UST, providing service to the Reclamations Building. During the removal of the UST, excavation in this area will need to be performed with caution to avoid impacting this line.

Wastewater is conveyed to the Wahiawā WWTP by a 36-inch influent sewer line, and treated water is discharged through a 24-inch outfall pipe into the Wahiawā Reservoir.

Impacts and Mitigation Measures

In an early consultation letter dated May 2, 2025, the Board of Water Supply states that the existing water system is adequate to accommodate the proposed development. Final decision on the availability of water will be confirmed when the building permit application is submitted for approval. Where applicable, water efficient fixtures will be installed and water efficient practices implemented to reduce increasing demand on freshwater resources. Construction drawings should be submitted to the BWS and the construction schedule should be coordinated with them to minimize impacts to the water system.

The proposed upgrades will not alter the capacity or operations of the WWTP but will improve the reliability of service so the community can expect continued reliable wastewater services, which support the economic and social welfare of the communities served by the WWTP. Since no significant impacts to the utilities are anticipated, no additional mitigation is proposed.

2.5.3. Power and Communications

HECO provides power to the pump station via underground facilities from California Avenue and Lakeview Circle. These feed into two primary switches that power two pad-mounted transformers on the site. The transformers are owned and maintained by HECO.

An emergency power system is used to provide backup power when normal HECO service fails. The system consists of an 800 kW standby generator that is activated by an automatic transfer controller (Parsons, 2018).

Communication systems consist ofSCADA and telephone service. The SCADA system facilitates control and monitoring of the facility's various processes (Parsons, 2018). Telephone service is supplied by Hawaiian Telcom and Spectrum facilities routed on the north end of the property (Limtiaco Consulting Group, 2013).

Impacts and Mitigation Measures

No significant adverse impacts to power and communications are anticipated. In an e-mail response dated May 9, 2025 from HECO during the early consultation process, HECO states 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 be maintained at all times for safe operation, maintenance, and emergency response.

2.5.4. Emergency Service Facilities and Shelters

Law enforcement services are provided by the Honolulu Police Department (HPD). The nearest police station is the Wahiawā Police Station, located at330 North Cane Street, approximately 1.5 miles from the project site.

The Honolulu Fire Department (HFD) provides fire protection and first responder emergency services. The nearest fire station is Wahiawā Fire Station 16, located at 640 California Avenue, approximately 0.8 miles from the project site.

Several medical facilities are located near the project site, including Wahiawā Health, located at 302 California Avenue, approximately 0.6 miles away; Central

Health located at 905 California Avenue, approximately 1.0 mile away; and the Queen's Medical Center and Wahiawā General Hospital located at 128 Lehua Street, approximately 1.2 miles away.

Impacts and Mitigation Measures

No significant adverse impacts to police, fire, or medical services are anticipated to occur from the proposed project at the Wahiawā WWTP. A letter from HPD dated April 28, 2025 states that they do not have any concerns at this time and a letter dated April 21, 2025 from the HFD requests that all applicable requirements of the ROH Chapter 20 be in effect at the time the building permit application for the project is issued.

2.5.5. Recreational Resources

The Wahiawā WWTP is located between a residential subdivision and a tributary of the Kaukonahua stream or Wahiawā Reservior. Specifically, the north side of the property is bordered by private backyards, and the south tributary side of the property is inaccessible to the public. There are no recreational resources surrounding the immediate vicinity of the project site.

Impacts and Mitigation Measures

The proposed project will be confined to the existing WWTP facility, which is a secured site not accessible to the public. No significant impacts to recreational resources are anticipated.

2.6. Socio-Economic Characteristics

The project site is situated in Central O‘ahu, within the Wahiawā Neighborhood Area. This region is predominately home to white, Asian, and African American populations. The area has a resident population of approximately 44,531 people and contains 13,038 total households, with an average household size of 3.42 individuals. The median household income is $68,069. (Department of Planning and Permitting, 2023).

Impacts and Mitigation Measures

The project will involve construction activities that will create short-term jobs in design and construction. The project will not affect population levels or housing. The proposed upgrades will not alter the capacity or operations of the WWTP. The community can expect continued reliable wastewater services, which support the economic and social welfare of the community served by the WWTP.

This page intentionally left blank.

3. RELATIONSHIP TO PLANS, POLICIES, AND CONTROLS

3.1. Hawai‘i State Plan

The Hawai‘i State Plan (Chapter 226, HRS) 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 Hawai‘i 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 Hawai‘i’s land, air, and water resources.

Policy 2. Promote the proper management of Hawai‘i’s land and water resources.

Policy 3. Promote effective measures to achieve desired quality in Hawai‘i’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.

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

Policy 1. Accommodate the needs of Hawai‘i’s people through coordination of facility systems and capital improvement priorities in consonance with state and county plans.

§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 Hawai‘i State Plan by providing essential upgrades to critical public infrastructure and enhancing its resiliency against future disruptions or disasters. 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 Hawai‘i’s people. All lands in the State are classified into four land use districts by the State of Hawai‘i, Land Use Commission: Urban, Rural, Agricultural, and Conservation.

The project site is entirely located within the State Urban District, which is regulated by county zoning (see Section 3.8 City and County of Honolulu LUO). The proposed project is a permissible public use and structure within the Urban District, which has residential neighborhoods, commercial enterprises, industrial development, and community facilities such as public buildings.

3.3. State Coastal Zone Management Program

In 1977, Hawai‘i enacted HRS Chapter 205A, Hawai‘i Coastal Zone Management Program, to implement the State’s coastal policies and regulations. The program was designed to coordinate federal, state, and county agency efforts in the comprehensive management of Hawai‘i’s coastal resources. It is administered by the State of Hawai‘i, Office of Planning and Sustainable Development, while the four individual counties are responsible for local implementation through the Special Management Area (SMA) permit.

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

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:
Water quality as well as coastal recreation activities are not expected to be adversely affected by the proposed project. The work will occur in a relatively flat area, and erosion and sediment BMPs will be in place. Further, access to shoreline recreation will not be affected as the project site is located several miles inland.

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

(A) Identify and analyze significant archaeological resources.

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

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

Discussion:
There are no known cultural or historic resources within the site boundary, which has been previously graded, but 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.

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

Discussion:
No adverse visual impacts are anticipated. The proposed project involves replacing an existing UST with an AST next to the existing generator building. The improvements will not be visible from the residential street.

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 and marine ecosystems. The AST will be equipped with built-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 are minimized; and

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

Discussion:

The proposed project supports a public utility facility that is essential for treating wastewater collected and conveyed from the communities of central O‘ahu. 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 tsunami, storm waves, stream flooding, erosion, subsidence, and pollution.*

Policies:

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

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

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

(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 comply with all applicable flood requirements, including locating equipment above BFEs and ensuring that anchoring and construction standards meet flood zone regulations. In addition, the project will not increase runoff or alter drainage patterns in a way that could contribute to stream or coastal flooding.

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;

(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.

BEACH PROTECTION
Objective: *Protect beaches for public use and recreation.*
Policies:

(A) Locate new structures inland from the shoreline setback to conserve open space, minimize interference with natural shoreline processes, and minimize loss of improvements due to erosion;

(B) Prohibit construction of private erosion-protection structures seaward of the shoreline, except when they result in improved aesthetic and engineering solutions to erosion at the sites and do not interfere with existing recreational and waterline activities;

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

(D) 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

(E) 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 mauka area, thus avoiding impacts to natural shoreline processes or public access.

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 for 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 Hawai‘i” (HRS §205A). Any action defined as “development,” pursuant to HRS §205A-22, requires an SMA (minor or major) Use Permit. On O‘ahu, the SMA permit is administered by Department of Planning and Permitting. The project site is not located in an SMA and thus an SMA permit is not required.

3.5. Shoreline Setback Area

The Shoreline Setback Area is a buffer zone inland from the certified shoreline, within which development is restricted or regulated to prevent adverse impacts. ROH Chapter 26 regulates the location and type of development allowed within shoreline setback areas to minimize hazards, protect coastal ecosystems, and preserve public shoreline access. The proposed project is not located in the shoreline setback area, therefore a Shoreline Setback Variance is not needed.

3.6. City and County of Honolulu General Plan

The O‘ahu General Plan (2021) 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 goals, objectives, policies, and actions 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 O‘ahu'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.

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.

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 Wahiawā WWTP 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. Central Oʻahu Sustainable Communities Plan

The City and County of Honolulu has divided Oʻahu into eight planning areas by ordinance, each with a Development Plan (DP) 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 Central Oʻahu SCP encompasses the central portion of Oʻahu from Kunia to Waiawa, an area that includes the Wahiawā WWTP.

The Central Oʻahu SCP was first adopted in 2002 and was updated in 2021. It incorporates input from representatives and community leaders from Central Oʻahu into broader statewide public and private objectives. The key elements of the vision for the Central Oʻahu SCP (2021) are summarized below:

- Protect agricultural lands and open space.
- Revitalize Wahiawā and Waipahu with transit-oriented development, particularly with the creation of new commercial centers and tax incentives to attract new businesses and job opportunities.
- Build master-planned communities that support walking, biking, and public transit use to reduce automobile dependence.
- Protect natural, historic, and cultural resources.
- Provide adequate infrastructure to meet the needs of existing and new developments.

The plan outlines several guidelines to promote the long-term well-being of existing and future communities, to preserve natural resources across Central Oʻahu, and to maintain the historic, rural qualities of Wahiawā in particular. These guidelines include:

- Adhere to the Community Growth Boundary to ensure protection of prime and unique agricultural lands and open space.
- Encourage infill commercial development on vacant or underutilized parcels to prevent urban expansion.
- Maintain the “small town” character of Wahiawā with compatible architectural styles and scale, and maintaining the quality of the living environment experienced by existing single-family neighborhoods.

Discussion:
The Wahiawā WWTP project supports the vision and guidelines outlined in the plan by upgrading vital community infrastructure to prevent future risk to the land and surrounding natural resources. The AST allows for easier access to the fuel tanks for necessary maintenance and repairs and avoids the risk of leakage into the soil. Additionally, as the project will occur in an inconspicuous area of an already developed site, it supports the preservation of open space and the historic character of Wahiawā.

3.8. 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 I-2 Intensive Industrial District (Figure 3). The proposed use is classified as a "Utility, Medium," which is permitted within the I-2 District, with applicable use standards outlined in §21-5.60-6(b).

The purpose of the I-2 Intensive Industrial District is "to set aside areas for the full range of industrial uses necessary to support the city. It is intended for areas with necessary supporting public infrastructure, near major transportation systems and with other locational characteristics necessary to support industrial centers."

The "Utility, Medium" use includes utility infrastructure, such as wastewater pump stations, that provides onsite utility services to a single commercial or industrial site or to a neighborhood.

The proposed project is consistent with the applicable development standards, including a minimum lot area of 7,500 square feet, minimum lot width and depth of 60 feet, a minimum front yard setback of 5 feet, and a maximum building height of 80 feet.

This page intentionally left blank

4. POSSIBLE ALTERNATIVES

4.1. No Action

The “no action” alternative would maintain the status quo. No improvements would be made to the WWTP. 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 unspecified future date. As with the “no action” alternative, this 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.

4.3. Replace Existing UST with a compliant UST

This alternative would replace the existing UST with a new, compliant UST to meet regulatory requirements. However, it is not a preferred alternative because USTs are more difficult to inspect, maintain, and monitor for leaks or structural damage compared to ASTs. USTs are also more vulnerable to groundwater infiltration, particularly as groundwater levels rise. While a UST would have no visual presence and would be less susceptible to damage from vehicles, it would pose a greater risk of soil contamination and potential impacts to water quality.

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 Hawai‘i

- AST Notification
- Community Noise Permit
- Community Noise Variance
- 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 Permit for Tank Installation
- Building Permit
- Grubbing, Grading, and Stockpiling Permit
- Erosion Control Plan/Best Management Practices
- Flammable/Combustible Liquid Permit

This page intentionally left blank.

6. DETERMINATION

According to HAR §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's Department of Environmental Services anticipates that the appropriate determination is a Finding of No Significant Impact (FONSI). The supporting rationale for this finding as set forth in HAR §11-200.1-13 is discussed below.

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

The proposed project 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 result from 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 WWTP facility construction. The proposed work is to take place within an existing facility and will not extend the footprint of the property. Biological resources may exist in the area and recommendations by 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 Hawai'i'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 an emergency 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. With BMPs during construction, disturbances to the surrounding community are expected to be minimal. The upgrades to the WWTP 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 WWTP. With 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 to result from 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 to result from the proposed project. The installation of the AST and removal of the existing UST will occur in a previously developed area. With 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. With 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 not situated in an environmentally sensitive area.

(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 is expected to result from the project. The proposed project will take place within a fenced parcel that is blocked from the public view.

(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. No mitigation is proposed for temporary impacts. In the long term, permanent fuel tank system infrastructure represents a continuation of current operations.

7. PUBLIC AGENCY REVIEW AND CONSULTATION

An Early Consultation Letter and Handout was sent on April 8, 2025 to initiate the environmental review process. A list of consulted agencies, organizations, and interest groups are listed below. There were eleven (11) formal responses to the early consultation letter, as indicated by the ✓ below. A copy of the Early Consultation Letter, Handout, and Responses are included in Appendix B.

State of Hawai‘i

- Department of Education ✓
- Department of Hawaiian Home Lands
- Department of Health
- Department of Land and Natural Resources
  - Aha Moku Advisory Committee
  - Commission on Water Resource Management ✓
  - Division of Aquatic Resources ✓
  - Division of Forestry and Wildlife ✓
  - Engineering Division ✓
  - Land Division
- Department of Transportation
- Hawai‘i Emergency Management Agency
- Office of Hawaiian Affairs
- Office of Planning and Sustainable Development
- Senate District 17 (Senator Donovan Dela Cruz)
- House District 46 (Representative Amy A. Perruso)

City and County of Honolulu

- Board of Water Supply ✓
- Department of Climate Change, Sustainability, and Resiliency
- Department of Design and Construction ✓
- Department of Emergency Management
- Department of Environmental Services
- Department of Land Management
- Department of Facilities Maintenance
- Department of Parks and Recreation
- Department of Planning & Permitting ✓
- Department of Transportation Services
- Honolulu City Council District 2 (Matt Weyer)

Honolulu Fire Department ✓
Honolulu Police Department ✓

Other

Hawaiian Electric Company ✓
Wahiawā Neighborhood Board No. 26

8. REFERENCES

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

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

Department of Planning and Permitting, City and County of Honolulu (2021). *Central Oʻahu sustainable communities plan.* City and County of Honolulu. https://www.honolulu.gov/dpp/wp-content/uploads/sites/56/2024/07/CentralOahuSCP_2021.pdf.

Department of Planning and Permitting, City and County of Honolulu (2023, November 8). *Neighborhood profiles*. City and County of Honolulu. Retrieved July 14, 2025. https://www.honolulu.gov/dpp/resources/neighborhood-profiles-by-plan-area/.

Giambelluca, T.W., X. Shuai, M.L. Barnes, R.J. Alliss, R.J. Longman, T. Miura, Q. Chen, A.G. Frazier, R.G. Mudd, L. Cuo, and A.D. Businger. (2014). *Evapotranspiration of Hawaii.* Final report submitted to the U.S. Army Corps of Engineers - Honolulu District, and the Commission on Water Resource Management, State of Hawaiʻi. “Interactive Map.” Accessed May 20, 2022, from http://evapotranspiration.geography.hawaii.edu/.

GMP Associates, Inc. (2005). *Operation and maintenance manual: Wahiawā Wastewater Treatment Plant (final submittal).* Department of Wastewater Management, City and County of Honlulu.

Handy, E. S. C. and Handy, E. G. (1972). *Native planters in old Hawaiʻi: Their life, lore, and environment*. Bishop Museum.

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

Hawaiʻi - National Flood Insurance Program (n.d.). “Flood Hazard Assessment Tool.” Accessed July 6, 2025, from http://gis.hawaiinfip.org/fhat/.

Hawai‘i Climate Change Mitigation and Adaptation Commission *(2021). State of Hawai‘i Sea Level Rise Viewer* Version 1.07. Prepared by the Pacific Islands Ocean Observing System for the University of Hawai‘i Sea Grant College Program and the State of Hawai‘i 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 Hawai‘i Department of Land and Natural Resources Contract No. 64064. http://hawaiisealevelriseviewer.org.

Hawai‘i State Civil Defense (n.d.). “Tsunami Evacuation Zone Mapping Tool”. Accessed July 6, 2025. https://dod.hawaii.gov/hiema/public-resources/tsunami-evacuation-zone/.

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

Limtiaco Consulting Group (2013). *Operations and maintenance manual volume I: Operating instructions – Wahiawā Wastewater Treatment Plant Influent Pump Station and Equalization Facility.* City and County of Honolulu.

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

Parsons (2018). *City and County of Honolulu operation and maintenance manual for Wahiawā Wastewater Treatment Plant.* City and County of Honolulu.

Pukui, M. K., Elbert, S. H., and Mo‘okini, E. (1974). *Place names of Hawai‘i: Revised and expanded edition.* University of Hawai‘i Press.

Shideler, D. W. and Hammatt, H. H. (2025). *Draft archaeological literature review and field inspection for the Wahiawa Wastewater Treatment Plant improvements project, Wai‘anae (Uka) ahupua‘a, Wai‘anae district, O‘ahu, TMK (1) 7-3-007:002 por.* Cultural Surveys Hawai‘i, Inc.

State of Hawai‘i Emergency Management Agency (2023). *State of Hawai‘i 2023 hazard mitigation plan.* Prepared by Tetra Tech, Inc. https://dod.hawaii.gov/hiema/files/2023/01/2023_Hawaii_SHMP_Final_Approved_Adopted _508Compliant-10.27.23.pdf.

U.S. Census Bureau (2019). *2013-2017 American Community Survey 5-Year Estimates.*

U.S. Department of Agriculture, Soil Conservation Service, in cooperation with the University of Hawai‘i Agricultural Experiment Station (1972). *Soil Survey of the Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii.* August.

U.S. Fish and Wildlife Service (2025). *IPAC - Information for Planning and Consultation*. U.S. Department of the Interior. Available from: https://ipac.ecosphere.fws.gov/.

Appendix A

Archaeological Literature Review and Field Inspection Report

This page intentionally left blank.

Draft

Archaeological Literature Review and Field Inspection for the Wahiawa Wastewater Treatment Plant Improvements Project, Waiʻanae (Uka) Ahupuaʻa, Waiʻanae District, Oʻahu TMK: (1) 7-3-007:002 por.

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.,
and
Hallett H. Hammatt, Ph.D.

Cultural Surveys Hawaiʻi, Inc.
Kailua, Hawaiʻi
(Job Code: WAHIAWA 14)

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 Wahiawa Wastewater Treatment Plant Improvements Project, Wai‘anae (Uka) Ahupua‘a, Wai‘anae District, O‘ahu, TMK: (1) 7-3-007:002 por. (Shideler and Hammatt 2025)
Date	April 2025
Project Number(s)	Cultural Surveys Hawai‘i, Inc. (CSH) Job Code: WAHIAWA 14
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, City and County of Honolulu (C&C) Department of Environmental Services (ENV)
Project Proponent	C&C ENV
Project Funding	C&C
Project Location	The project is located within the central west portion of the Wahiawa Wastewater Treatment Plant (WWTP) at 111 California Avenue, Wahiawā, Hawai‘i 96786 in (according to the state system) Wai‘anae (Uka) Ahupua‘a, Wai‘anae District on the Island of O‘ahu (TMK: [1] 7-3-007:002). The Wahiawa WWTP is located near the southwest end of Wahiawā town, near the west end of California Avenue, near the confluence of the North Fork and the South Fork of Kaukonahua Stream (impounded to form the Wahiawā Reservoir). The Wahiawa WWTP and the project area is depicted on portions of the 2017 Haleiwa, Hauula, Schofield Barracks, and Waipahu U.S. Geological Survey (USGS) 7.5-minute series topographic quadrangles (Figure 1), a tax map plat (Figure 2), and a 2022 aerial photograph (Figure 3). The specific project area is located immediately east of an existing sand filter (not in use) and immediately west of a generator building (Figure 4).
Land Jurisdiction	C&C
Project Acreage	The project area is approximately 6.17 acres (2.50 hectares).

Project Description and Ground Disturbance	The City Department of Environmental Services proposes the following site improvements: • Replace an underground storage tank (UST) with aboveground storage tank (AST) • Replace fuel piping • Replace fuel monitoring panel and all sensors A Fuel Storage Tank Improvements Plan (Figure 4) confirms the new 6,000-gallon AST will be placed immediately north of the existing (to-be-removed) UST. It is understood that new piping will connect with the neighboring generator 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. For the purposes of this archaeological literature review and field inspection (LRFI) study, the study area is the Wahiawa WWTP (fieldwork focused on the specific project area).
Natural and Built Environment	The vast majority of the Wahiawa WWTP is in Wahiawa silty clay, 0 to 3% slope (WaA) soils with a small south central portion of the project area indicated as in Helemano silty clay, 30 to 90% slope (HLMG) soils. > This [Wahiawa soil] series consists of well-drained soils on uplands on the island of Oahu. These soils developed m residuum and old alluvium derived from basic igneous rock.[…] These soils are used for sugarcane, pineapple, pasture, and homesites. The natural vegetation consists of bermudagrass, guava, honohono, koa haole, and lantana. [Foote et al. 1972:124] WaA soil is further described as: “occurs on smooth, broad interfluves […] Permeability is moderately rapid. Runoff is slow, and the erosion hazard is no more than slight” (Foote et al. 1972:124–125). The Helemano soil: > series consists of well-drained soils on alluvial fans and colluvial slopes on the sides of gulches. These soils are on the island of

	Oahu. They developed in alluvium and colluvium derived from .basic igneous rock. They are steep to extremely steep […] These soils are used for pasture, woodland, and wildlife habitat. The natural vegetation consists of bermudagrass, Christmas berry, eucalyptus, Formosa koa, guava, Japanese tea, Java plum, and koa haole. [Foote et al. 1972:40] HLMG soils are further described as “on the sides of V-shaped gulches [..] Permeability is moderately rapid. Runoff is medium to very rapid, and the erosion hazard is severe to very severe” (Foote et al. 1972:40). The project area is adjacent to the Wahiawā Reservoir to the south which is a flooded portion of the South Fork of Kaukonahua Stream—the longest stream in the state at 53 km (Pukui et al. 1974:92–93). This is understood to have been a perennial stream prior to water withdrawal. The project area receives approximately 929 mm (36.6 inches) annual rainfall (Giambelluca et al. 2013) which is regarded as marginal for non-irrigated agriculture.
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	As a sweeping generalization the population density in pre-Contact times for central O‘ahu and the vicinity of the Wahiawa WWTP is regarded as quite low (Figure 6). Use of the uplands of the central valley of O‘ahu is understood to have been focused in the valleys. Handy and Handy suggest a “sizable population” filled the Wahiawā area in traditional Hawaiian times, based on the “various areas of *lo‘i* northwest of the present town of Wahiawā”: There were extensive terraces that drew water from Wahiawa Stream, both above and below the present town. There were many small terrace areas along the sides of the valleys of all the streams of this general area. These streams tap the southwest slopes of the Ko‘olau range where it begins to lose altitude but it is still very wet in the hinterland. The peculiarity of this area, apart from distance from the sea, is that it is the only extensive level area on [O‘ahu] that is quite high. [Handy and Handy 1972:465]

	The Wahiawa WWTP is close to, but not immediately adjacent to, the south fork of the Kaukonahua Stream. Adjacent portions of Kaukonahua Stream were flooded relatively early (1905/1906) to create the Wahiawā Reservoir. Most evidence of traditional Hawaiian activity in the immediate vicinity would have been expected to be in the margins of the floodplain of the stream, which have been lost to reservoir construction. A main trail from the south shore of O‘ahu to Waialua would have passed close to the project area (Figure 7), but on the west (opposite) side of the south fork of Kaukonahua Stream which would have focused travelers away from the vicinity of the project area. Located a little more than a kilometer to the north, Kūkaniloko, popularly understood as a 5-acre state monument as “birth stones of *ali‘i* (royalty)” is celebrated by the Hawaiian Civic Club of Wahiawā as a 36,000-acre *pu‘uhonua* (“place of peace and safety”), a *wahi kapu* (place of sacredness), and a *piko*, (navel) “the center of our Nation” (Hawaiian Civic Club of Wahiawā 2025).
Land Commission Awards (LCAs)	The nearest native tenant Land Commission Awards (LCAs) were in a cluster well to the southeast of the Wahiawa WWTP in Waipi‘o Ahupua‘a; no native tenant LCAs were present within 2 km of the WWTP (Figure 8).
Historical Background Focused on a Review of Historic Maps and Aerial Photographs	In the Māhele division of lands in 1848, Wai‘anae Uka was claimed by the king and designated as Crown Lands (Tomonari-Tuggle and Bouthiller 1994:18) The entirety of Wahiawā was leased to James Robinson, an O‘ahu businessman who is understood to have grazed cattle throughout the area from 1847 (Nedbalek 1984:18, 89). In 1889 the approximately 20,000-acre Leilehua Ranch was sold (as a long-term lease) to James I. Dowsett for $41,500 (Nedbalek 1984:14–15). The Land Act of 1895 designated much of Wahiawā as homestead land (Nedbalek 1984:18). Byron O. Clark seized the opportunity to form a settlement association and in 1898, a month before annexation, he took control of nearly 1,300 acres. (Nedbalek 1984:18–19). The favorable homesteading terms required settlers to live on, and cultivate the land for three years, and toward this end Clark sought “pioneers” (mostly Americans of European ancestry) from the mainland, mostly from California. Our earliest detailed map of the vicinity appears to be the 1901 Wall map (Figure 9). The Government Road passing to the west of the project area (on the far side of the south fork of the Kaukonahua Stream) is understood to approximate a traditional Hawaiian trail alignment. Large grants of land have been recently sold off (overwhelmingly to people with Caucasian names). The Wahiawa WWTP lies within a 67-acre “Parcel 1A,” Grant 4616 to Mary E.

	Clark (who also owned a 118-acre Parcel 1B, adjacent to the northeast). Mary Clark was the wife of Byron Clark. The 1904 Newton map (Figure 10) shows much the same scene confirming the area was known at the time as part of a 14,700-acre “Area of Waianae Uka.” The 1906 Donn map (Figure 11) shows the Wahiawa WWTP was at the southwest end of an extensive area of homesteads within an “Approximate area of pineapple lands.” An extensive U.S. Military Reservation lay just to the west, south, and southeast. The 1919 U.S. Army map (Figure 12) shows the extensive development of Schofield Barracks in the neighboring military reservation. Wahiawā town is shown expanding westward but streets within a kilometer are unimproved with few houses indicated. Sugarcane cultivation symbols dominate the area between the converging North and South forks of the Kaukonahua Stream and are shown within the future Wahiawa WWTP lands. The Wahiawā Reservoir has been created flooding the confluence of the forks of Kaukonahua Stream. The 1924 Evans map (Figure 13) shows the Wahiawa WWTP within the Wahiawa Homesteads with extensive areas of pineapple cultivation indicated just to the south. An extensive grid of developed streets of Wahiawā town is 500 m to the northeast. The 1925 Evans map (Figure 14) shows branches of the Oahu Railway & Land Company (OR&L) railroad to the south and to the west. The immediate vicinity of the future Wahiawa WWTP is undeveloped. Across the street from the entrance to the Wahiawa WWTP lies a modern shrine memorializing the former historic location of a place of religious pilgrimage. Until as recently as 2010, a couple of large monoliths deemed “healing stones” occupied an unaddressed position between 108 and 110 California Avenue. Accounts vary, and what were in the late 1920s described as two stones of different color were photographed in recent decades as three stones all of reportedly the same material and origin. In 1927, the Daughters of Hawaii moved the Healing Stones—named Keaniniulaolani or Keanianileihuaokalani in Hawaiian—from Kūkaniloko to the California Avenue location in Wahiawā (Adamski 2005). A newspaper account (*Honolulu Star-Advertiser* 26 October 2017) notes that in 1927 the Daughters of Hawaii “had the stone moved to the edge of a cemetery at what is now the California Avenue site […]” Soon thereafter, people of Chinese, Japanese, Filipino, and Korean origins reportedly took religious interest in the purported healing properties of the stones. A *Honolulu Star-Bulletin* newspaper article dated 3 October 1927 (see Appendix A) speculated the stones’ adoration arose out of what amounts to syncretism from primarily Filipinos observing and engaging in Native Hawaiian religious ceremonies at Kūkaniloko. Revenues generated by visitor donations and sales of sacraments both drew interest from those seeking to develop tourism, and criticism from the Native Hawaiian community.

	A several-decades-long lull in interest broke in 1971, when the Wahiawa Community and Businessmen's Association sought assistance from the Hawai‘i Visitors Bureau to once again revive public curiosity in the Healing Stones (Adamski 2005). With renewed interest gathering, Kaua‘i-based Hindu organization Lord of the Universe Society (LOTUS) began worshipping regularly at the site of the Healing Stones in 1988. LOTUS members believed the stones to be a potent manifestation of Shiva. Effectively taking stewardship of the site, LOTUS began holding regular ceremonies and renovated a concrete and marble structure (dated to 1996) enshrining the *pōhaku* (stone). Aspects and misperceptions about the Hindu practices drew ire from Native Hawaiian activists, who saw the former's treatment of the stones as an affront to indigenous practices connected with similar monuments. Negotiation and uneasy cooperation between these two primary vested interests eased tensions for the following decade. The shaky truce eventually crumbled, however, and in 2010 Hawaiian cultural practitioners relocated the Keanianileihuaokalani stones to an undisclosed location, where they presently remain (Tsai 2010). The LOTUS shrine for the Healing Stones remains in place, and the 90-year saga of the "Wahiawā Healing Stones" remains an intriguing anthropological case of religious expression and social tensions in a multicultural context. The 1929 USGS map (Figure 15) shows a great deal of development within and neighboring Wahiawā town. California Avenue is indicated as paved almost to the Wahiawa WWTP—which is indicated as already established with three structures. The establishment of Leilehua School (300 m to the south, across the reservoir) speaks to population growth. The extensive regular grid of streets to the north indicates pineapple cultivation. The 1935/36 U.S. Army map (Figure 16) shows continuing growth of Wahiawā, Schofield Barracks, and Leilehua School. The Wahiawa WWTP is still indicated with three structures. A power line connects the WWTP to Wahiawā town and extends across the reservoir to Kamehameha Highway. The 1943 U.S. Army map (Figure 17) shows a spur of the power line extending into the WWTP. Runways of Wheeler Field are prominent to the south. In the 1953 USGS map (Figure 18) much of Schofield Barracks and Wahiawā town are shown within a reddish wash indicating urban development and California Avenue is labeled as such. The Wahiawa WWTP appears to have been substantially re-developed with four rectangular ponds and three buildings. A large plantation cemetery is shown just to the northeast. The 1953 USGS map (Figure 18) and a 1959 "File Plan Map 646, Homelani Acres Unit 2-A" (see Liwosz et al. 2018:24) indicate the presence of a cemetery toward the west end of California Avenue, along the north side of the street. Deeded to the "Big Five" company Castle and Cooke, Inc., the cemetery lot at 110 California Avenue apparently was established sometime

	prior to 1927. The property at 110 California Avenue remained a cemetery through at least the early 1960s, as indicated by aerial photography (Figure 20). Division of the 110 California Avenue cemetery into ten housing plots occurred in 1978, and housing construction presumably commenced shortly thereafter. Presently, the ten modern-period houses are arranged along California Avenue and along a short cul-de-sac. The 1960s USGS map (Figure 19) indicates further re-development of the Wahiawa WWTP (now labeled “Sewage Disposal”) with five round tanks, five rectangular ponds and four buildings. Adjacent lands are indicated as totally urbanized with a new, neighboring large school (“Ka‘ala School”). The cemetery is still shown just to the northeast. The 1962 USDA aerial photograph (Figure 20) conveys the extent of surrounding housing development. The 1977 USGS aerial photo (Figure 21) shows further development within the Wahiawa WWTP. The T-shaped road within the neighboring cemetery suggests the cemetery is still extant. The 1992 map again shows a different layout for the “Sewage Disposal” facility. The neighboring cemetery has been re-developed into housing. The C&C ENV Wahiawa facilities website lists the “Year in service” for the Wahiawa Wastewater Treatment Plant as 1927. The oldest plans identified for the Wahiawa Sewage Treatment Plant date from 1948, with subsequent plans dated 1949, 1950, 1952, and 1955 with a “General Plant Layout” dated 1958, and subsequent plans dated 1959, 1960, 1967 1970, 1972, 1985, 1986, 1987, 1990, 1991, 1998, 1991, 1998, 1999, and 2010 suggesting frequent alterations of the facility.
Synopsis of Previous Archaeological Work in the Vicinity	Previous archaeological studies in the vicinity are depicted in Figure 23 and summarized in Table 1. Previously identified historic properties in the vicinity are located on Figure 24 and summarized in Table 2. The relatively undeveloped areas in the vicinity have been relatively well-studied archaeologically but the areas that were developed prior to modern historic preservation laws are relatively undocumented. We show only two prior archaeological studies (Collin and Hammatt 1994 and Liwosz et al. 2018) in west Wahiawā town (between the forks of the Wahiawā Reservoir). The Collin and Hammatt (1994) study for a well site identified no surface historic properties and no further historic preservation work was recommended. The Liwosz et al. (2018) study noted a former cemetery was located within a portion of their project area along Ka‘alalo Place that is now a subdivision and recommended archaeological monitoring there due to the prospect of previously unrecovered human skeletal remains. No historic properties have been formally recorded in western Wahiawā town. We do note the Wahiawā healing stones, formerly located just across

	California Avenue from the entrance to the Wahiawa WWTP, had a remarkable history (see Appendix A), but they are no longer present.
Fieldwork Effort	A brief field inspection of the project area was conducted by CSH archaeologist David W. Shideler, M.A., on 27 March 2025. A map showing the archaeologist's track log with a key indicating the general location and orientation of the subsequent photographs is provided in Figure 25. 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 with subsequent photographs of the general Wahiawa WWTP campus. The compact project area located immediately east of an existing sand filter (not in use) and immediately west of a generator building (Figure 4) was quickly identified. The immediate vicinity of the to-be-removed 6,000-gallon diesel UST (under a concrete slab with two access ports) is provided in Figure 26 and Figure 27. The immediately adjacent area to the northwest proposed for a new, 6,000-gallon diesel AST is depicted in Figure 28 and Figure 29. A new fuel line connection will extend to the adjacent generator building to the east (Figure 30). It was evaluated in the field that the fuel line connection will have no significant effect to the generator building as a potential historic property (a view of the front of the generator building is provided in Figure 31). An open excavation (unrelated to the present project) was actively being undertaken within 20 m of the project area (Figure 32). Because the excavation was in progress, detailed documentation was not attempted but casual observation indicated a 10-cm thick concrete slab, overlying 20 cm of compacted crushed coral base course, overlying 70 cm of silty clay consistent with the indicated WaA soils to the base of excavation. The opportunity was taken to examine the rest of the Wahiawa WWTP campus. General views are provided from the north corner (Figure 33), east corner (Figure 34), south corner (Figure 35), and northwest corner (Figure 36). General views are provided from a central location to the north-northeast (Figure 37), southeast (Figure 38), southwest (Figure 39), and northwest (Figure 40). The entire Wahiawa WWTP campus appeared to have been previously graded. No potential historic properties were observed. The potential for significant subsurface historic properties was evaluated in the field as low. While the Wahiawa WWTP is indicated as relatively old ("Year in service" as 1927), no structure was observed that appeared to predate modernity. General observations were consistent with the review of plans and historic maps and aerial photographs (discussed above) in suggesting a pattern of frequent and substantial utilitarian alteration of the campus over time.
Historic Properties Potentially Affected	No historic properties have been identified previously within the Wahiawa WWTP and none were observed during the present fieldwork. The prospect for significant subsurface deposits in the Wahiawa WWTP was evaluated in the field as low. It was evaluated in the field that the present project would

	have no effect on the Wahiawa WWTP as a potential historic property in and of itself.
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.

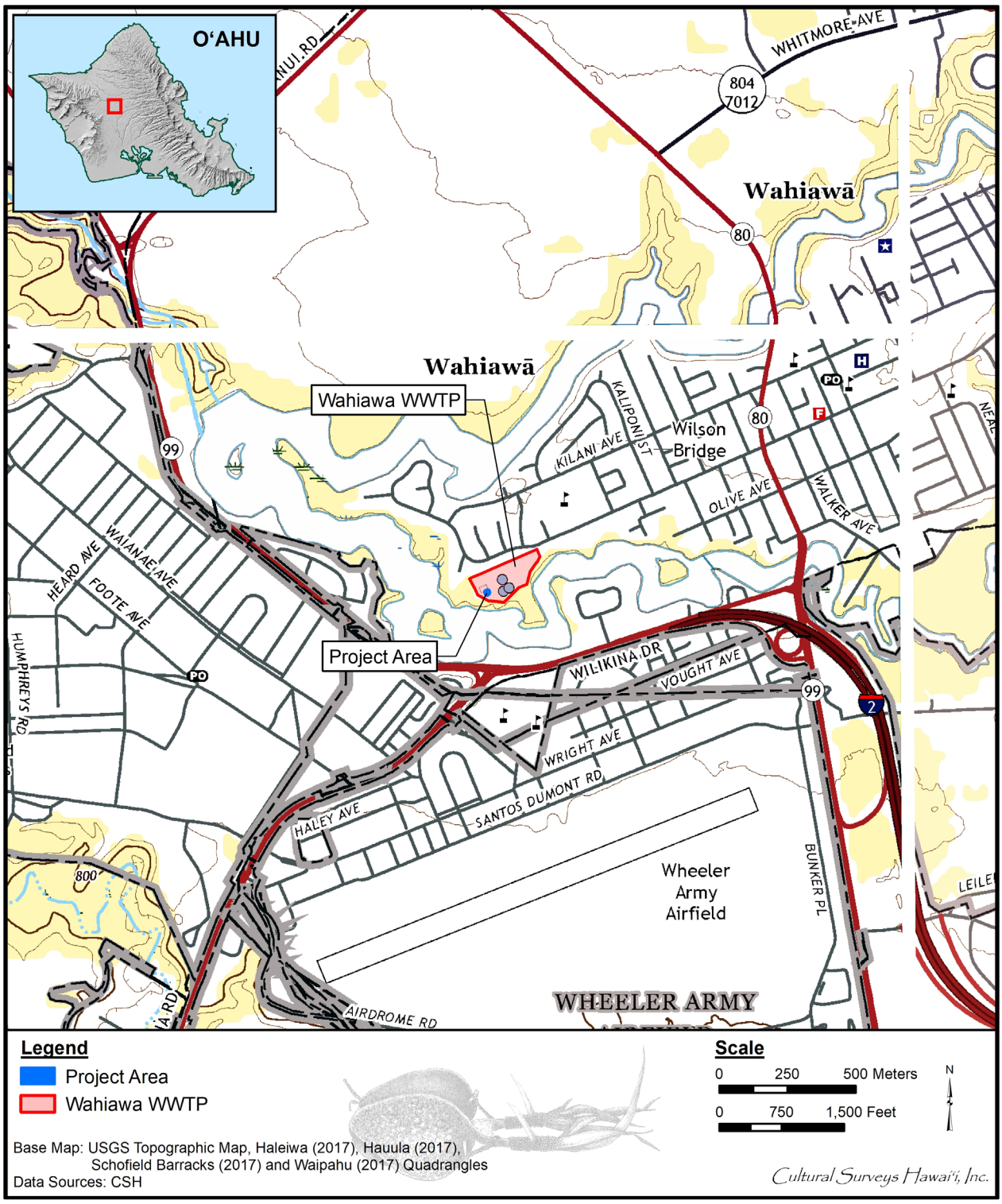


Figure 1. Portions of the 2017 Haleiwa, Hauula, Schofield Barracks, and Waipahu USGS 7.5-minute topographic quadrangles showing the Wahiawa WWTP and improvements project area

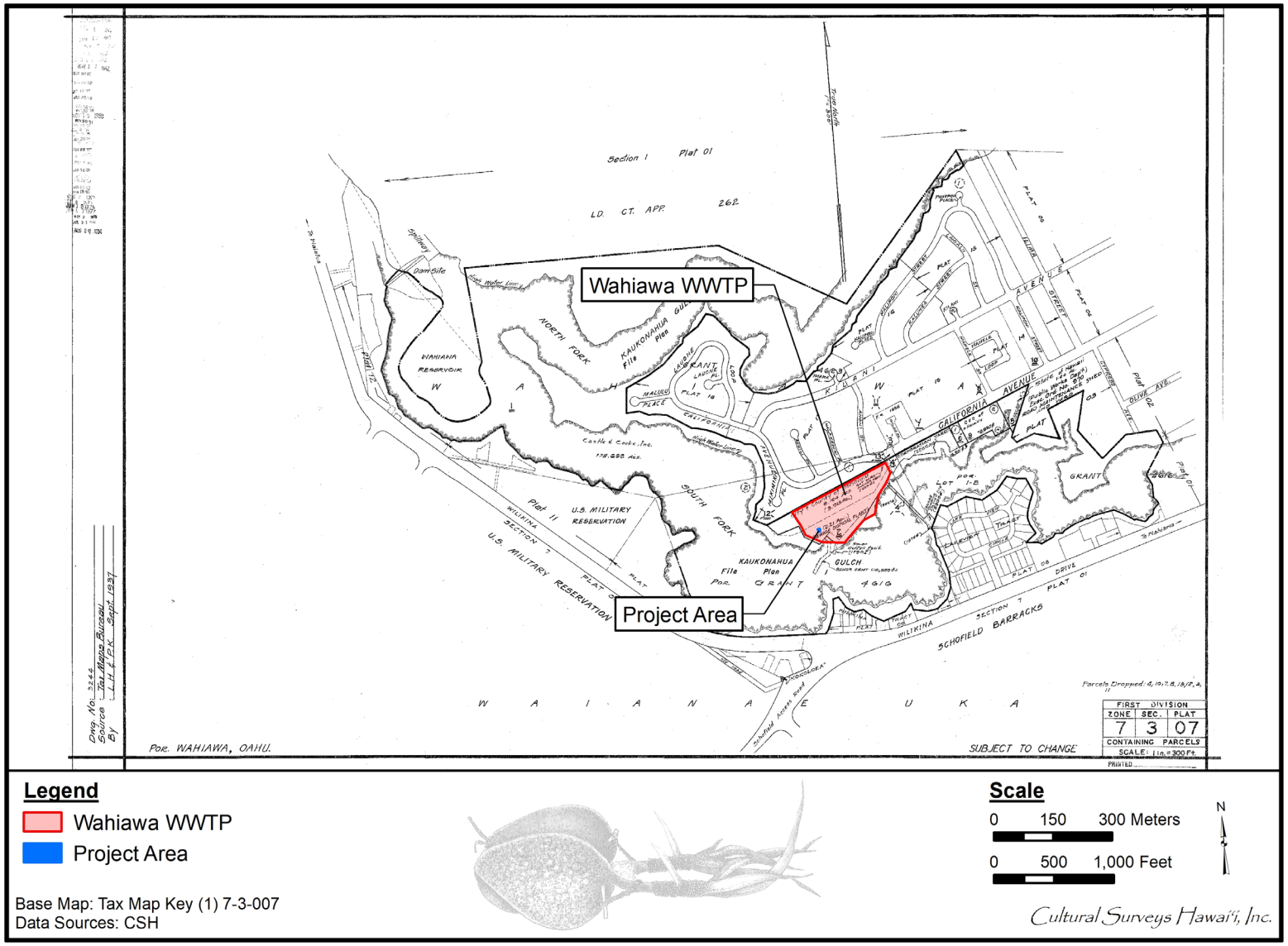


Figure 2. TMK: (1) 7-3-007 showing the WWTP and improvements project area (Hawai‘i TMK Service 2025)

Figure 3. Aerial photograph (Google Earth 2022) showing the Wahiawa WWTP and improvements project area

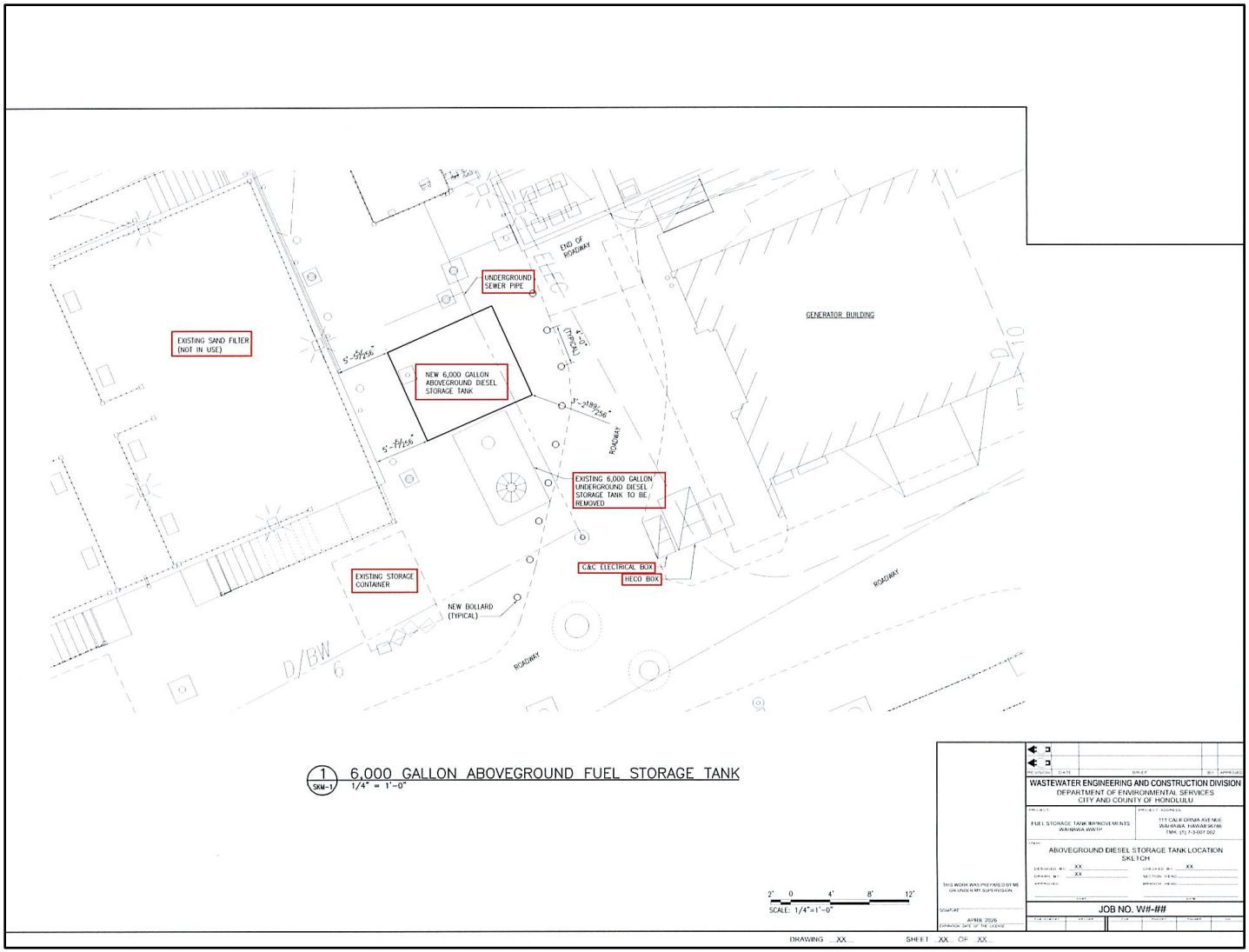


Figure 4. Fuel Storage Tank Improvements Plan showing the location of the proposed new 6,000-gallon above-ground diesel storage tank (Okahara and Associates, Inc.; courtesy of client)

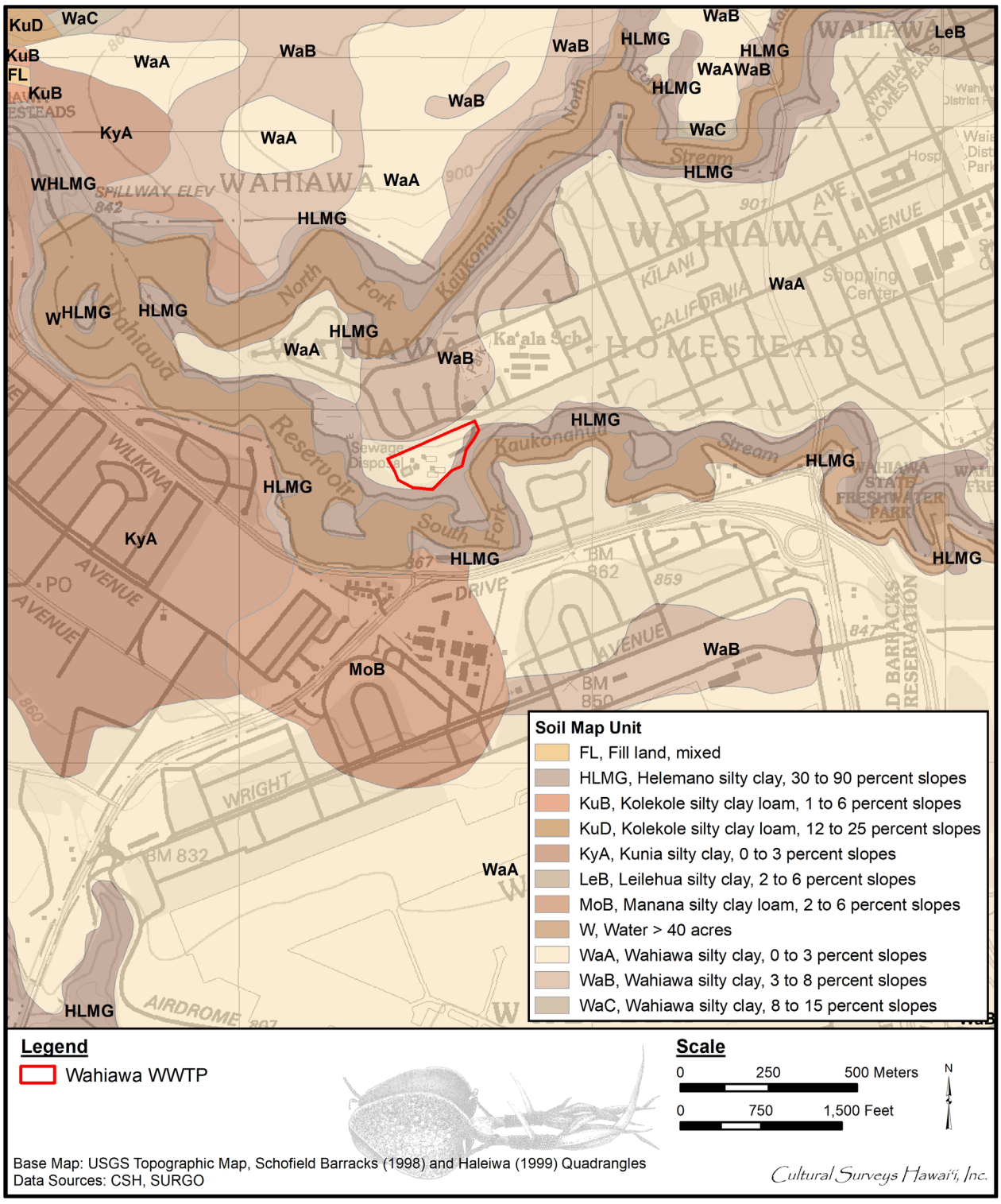


Figure 5. Portion of the 1998 Schofield Barracks, and 1999 Haleiwa USGS topographic quadrangles with overlay of *Soil Survey of the Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii.* (Foote et al. 1972), indicating soil types within and surrounding the Wahiawa WWTP (USDA SSURGO 2001)

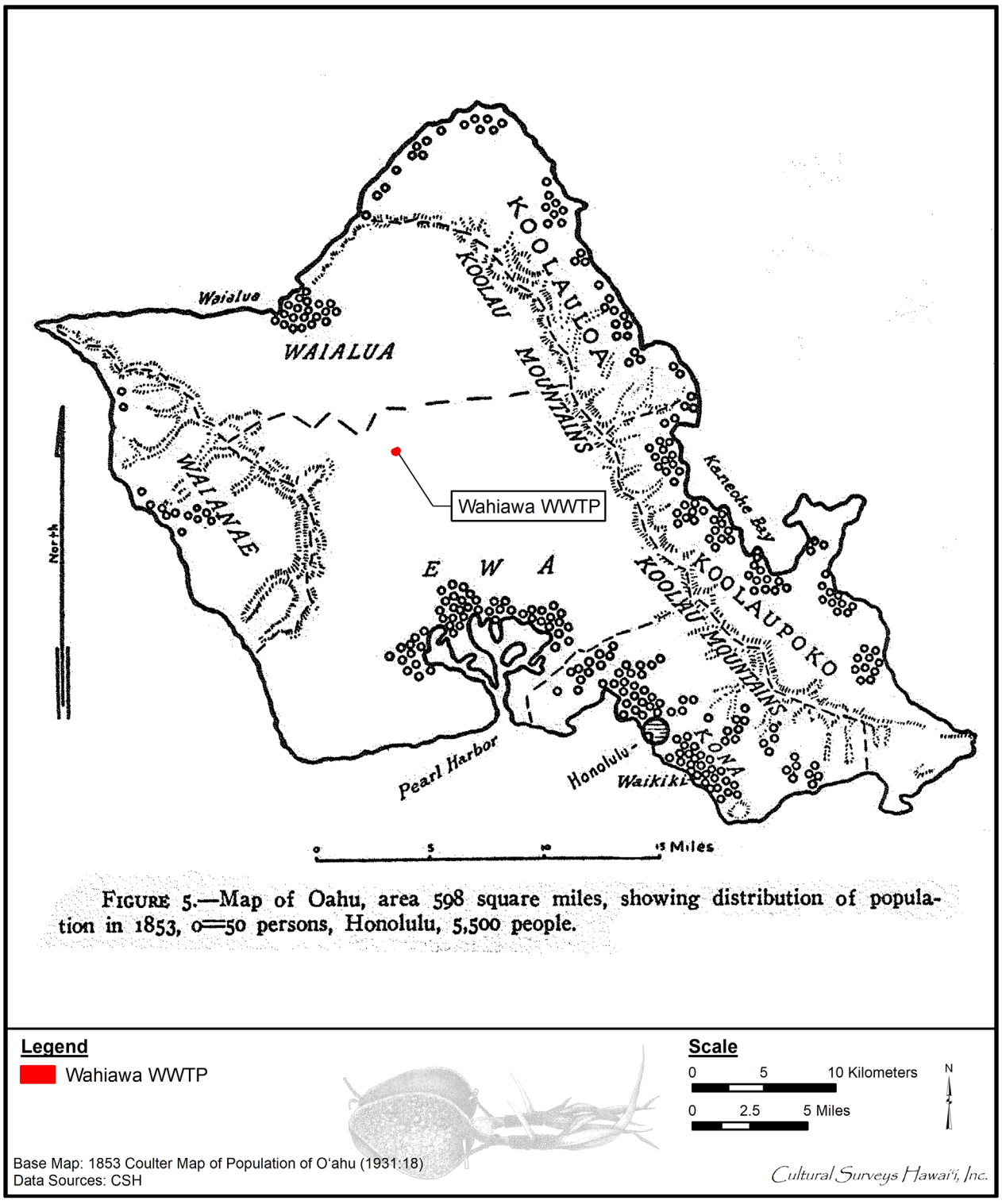


Figure 6. Coulter (1931:18) recreation of the distribution of the population of O‘ahu in 1853, showing the location of the Wahiawa WWTP

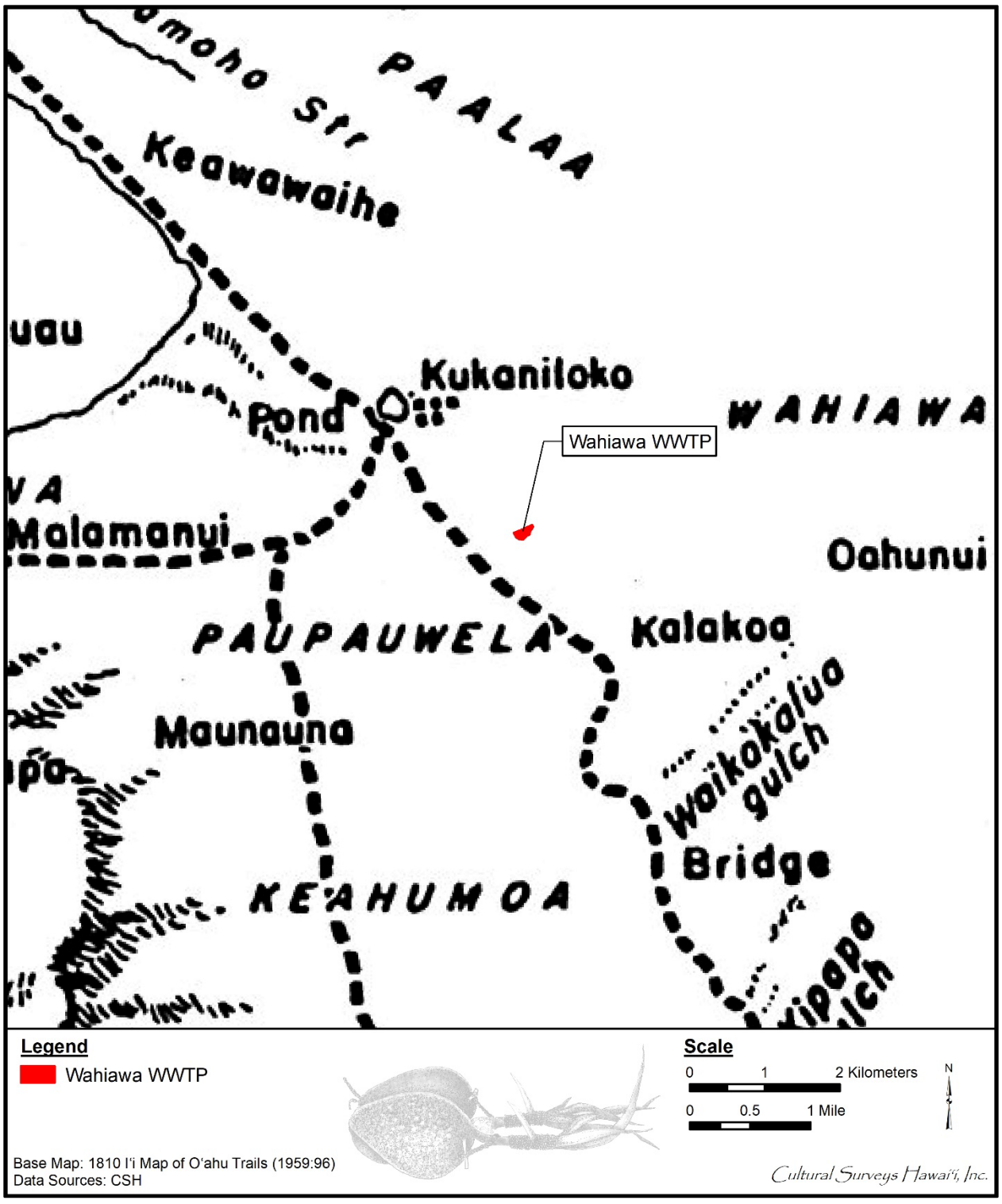


Figure 7. Portion of a map of O‘ahu trails in 1810 in the vicinity of the Wahiawa WWTP (from ‘Ī‘ī 1959:96)

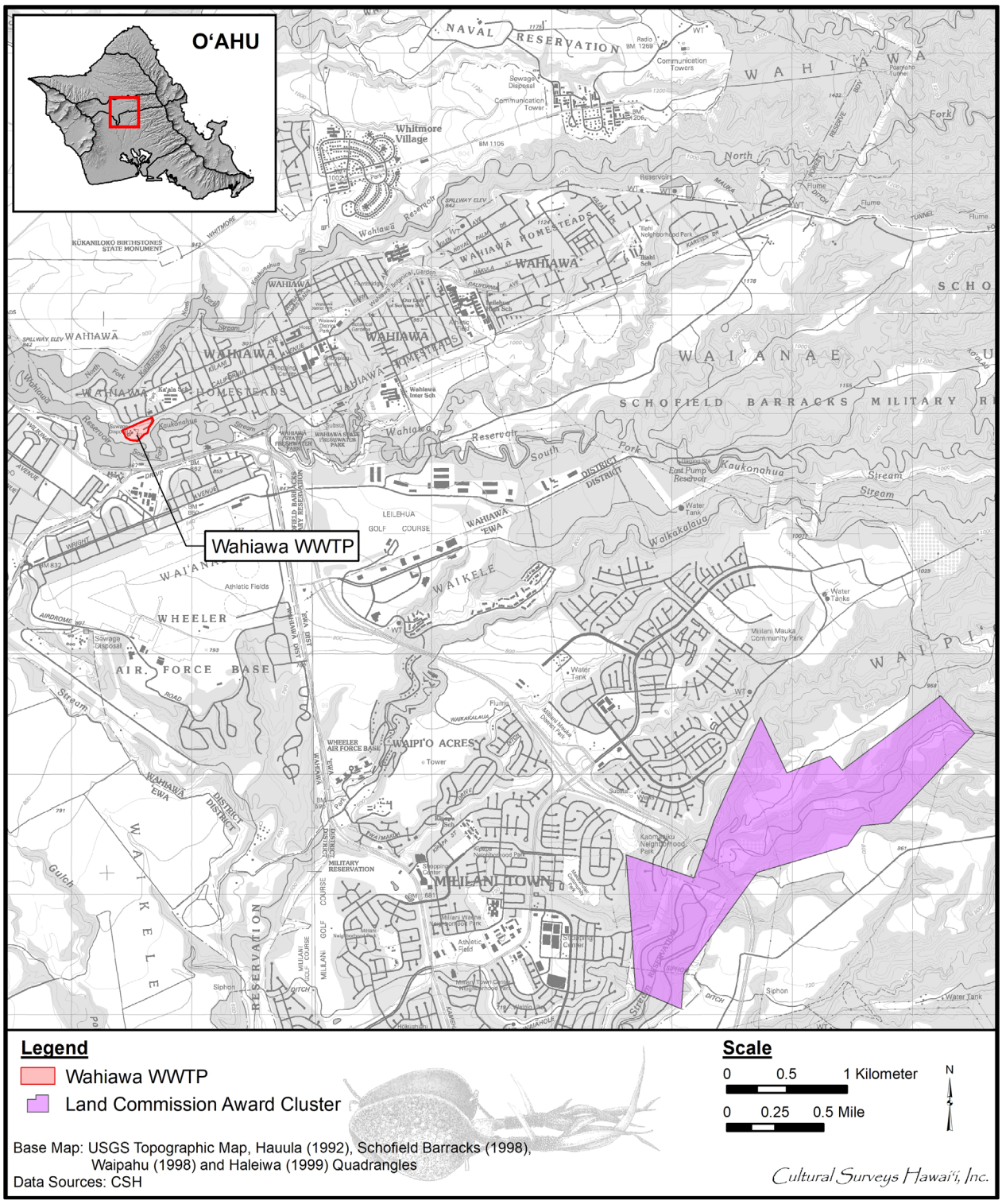


Figure 8. Map showing the nearest LCAs in a cluster 2 km to the southeast of the Wahiawa WWTP; no native tenant LCAs were present within 2 km of the WWTP (base map: 1992 Hauula, 1998 Schofield Barracks and Waipahu, and 1999 Haleiwa USGS topographic quadrangles)

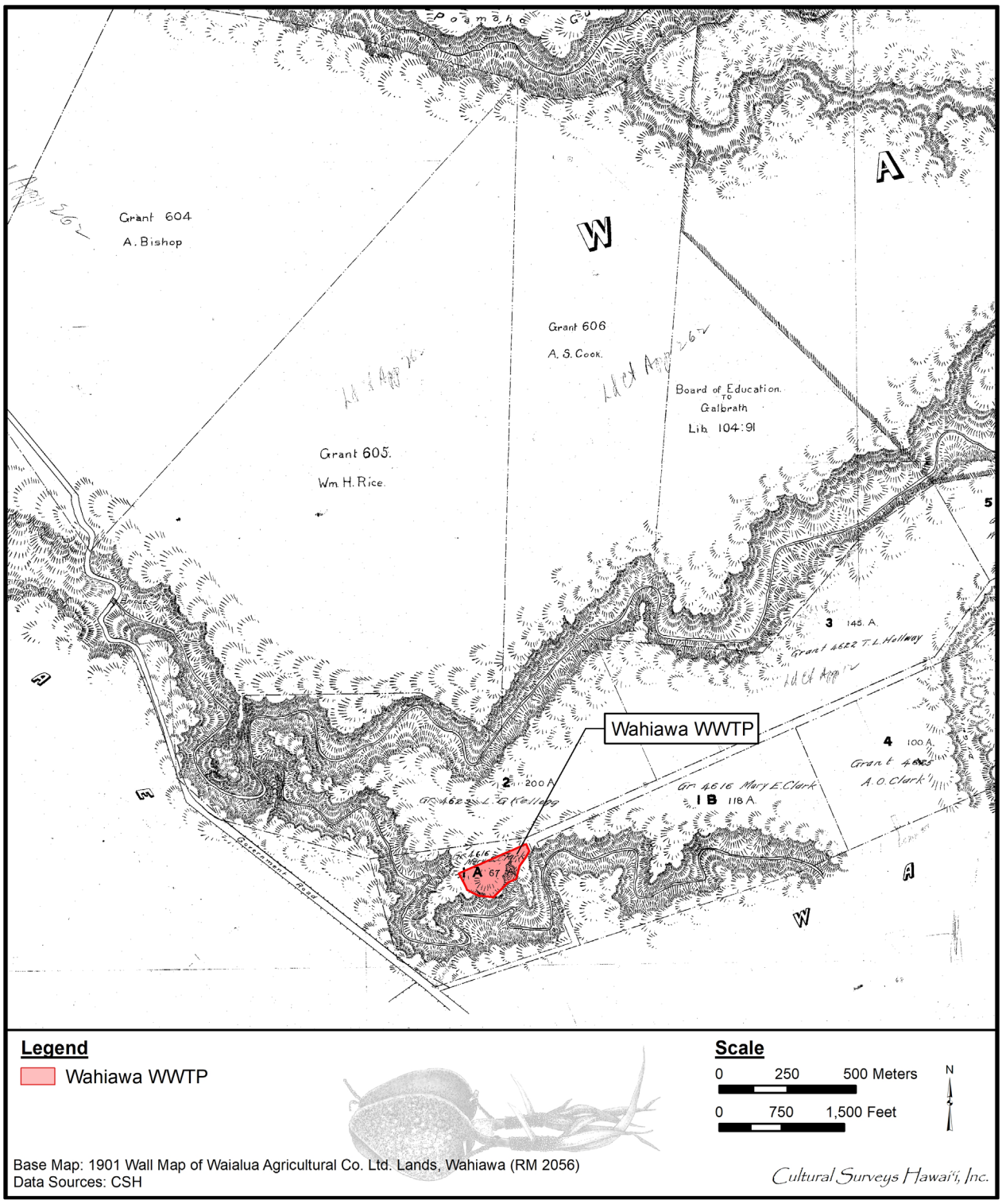


Figure 9. Portion of the 1901 Waialua Agricultural Company, Ltd. map by W.A. Wall (RM 2056), showing the location of the Wahiawa WWTP

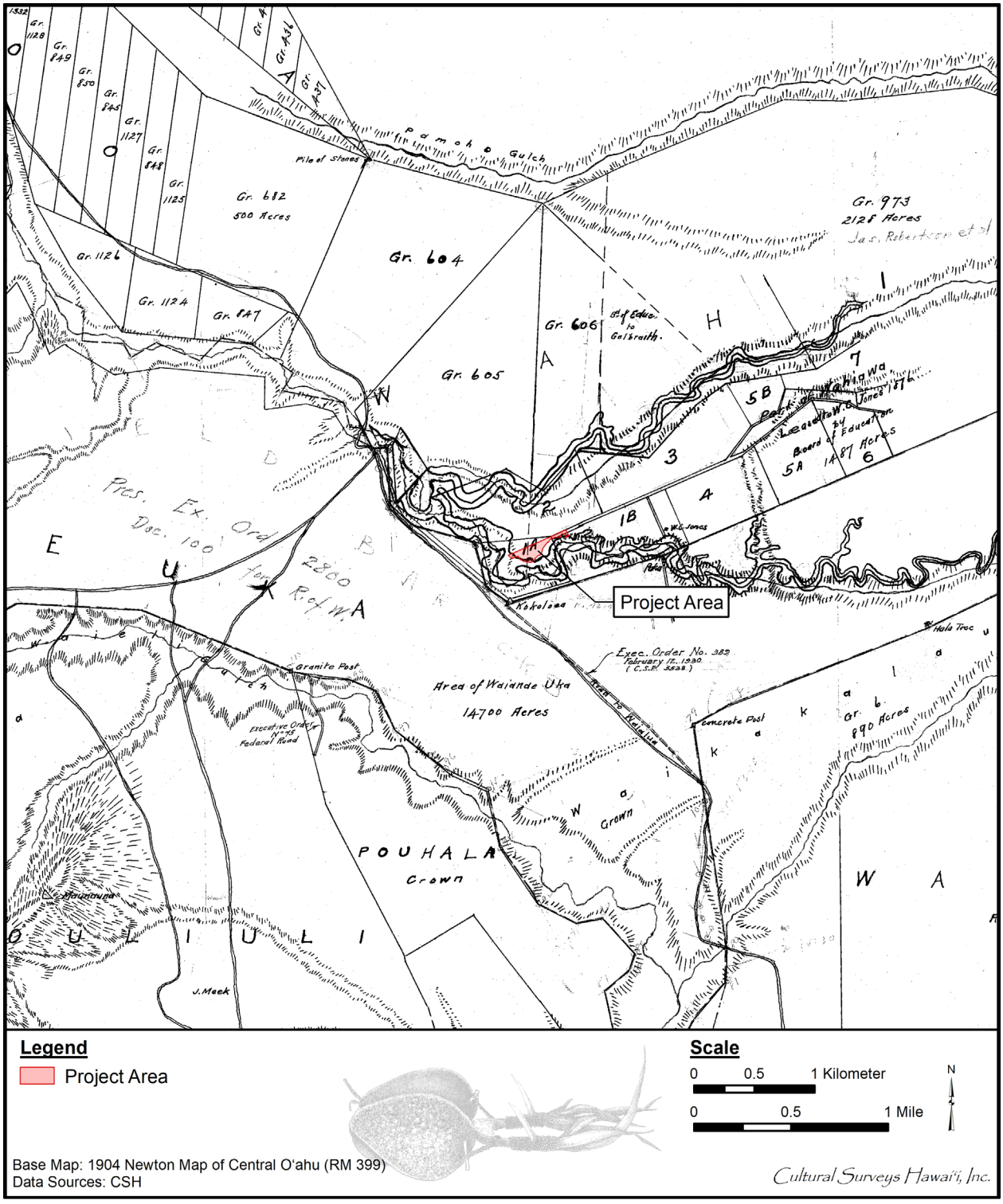


Figure 10. Portion of the 1904 Newton map of Central O‘ahu (RM 399) showing the location of the Wahiawa WWTP

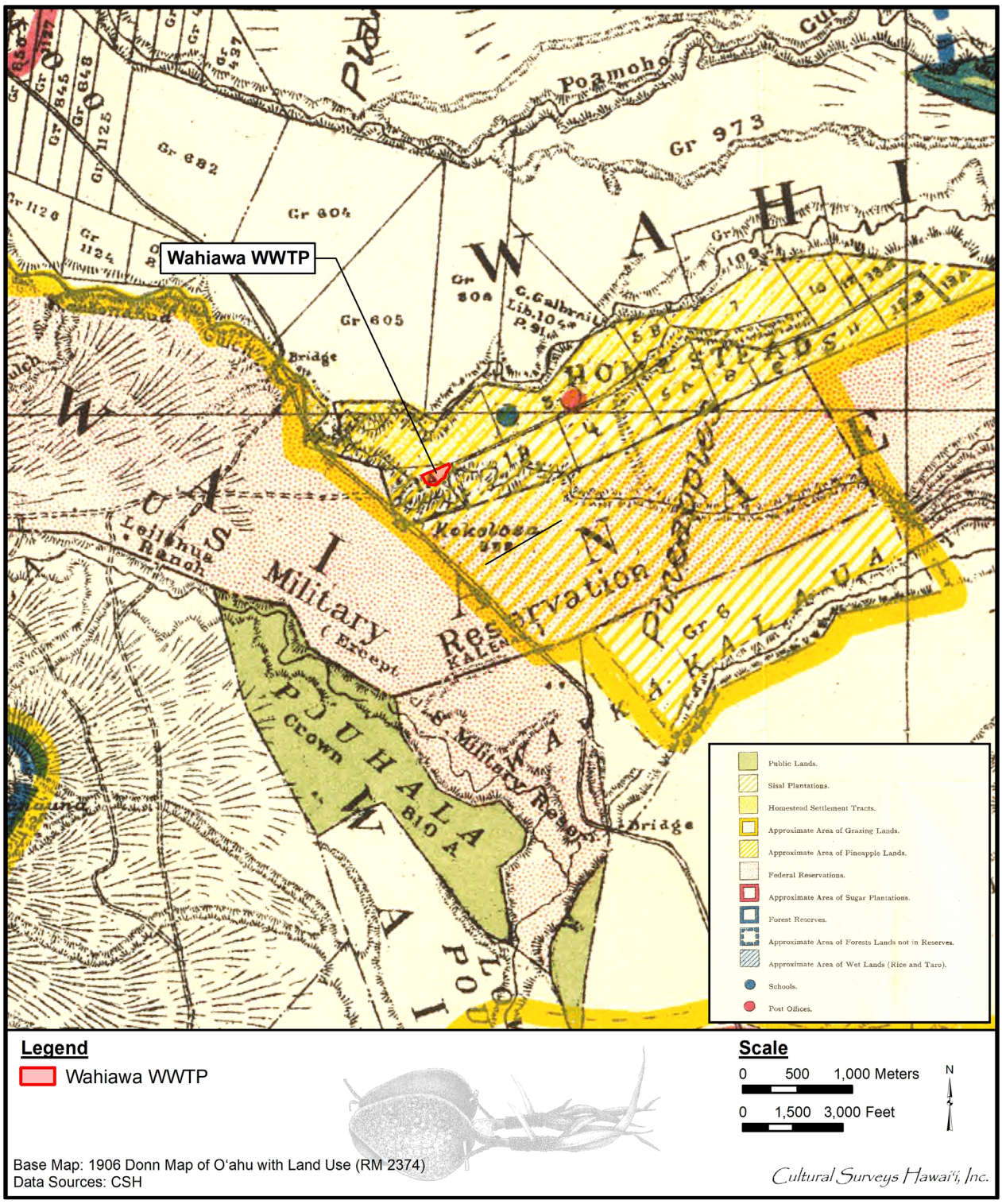


Figure 11. Portion of the 1906 O‘ahu, Hawaii Territory Survey map by John M. Donn (RM 2374), showing the location of the Wahiawa WWTP within “Homesteads” and “pineapple lands” (yellow diagonal lines)

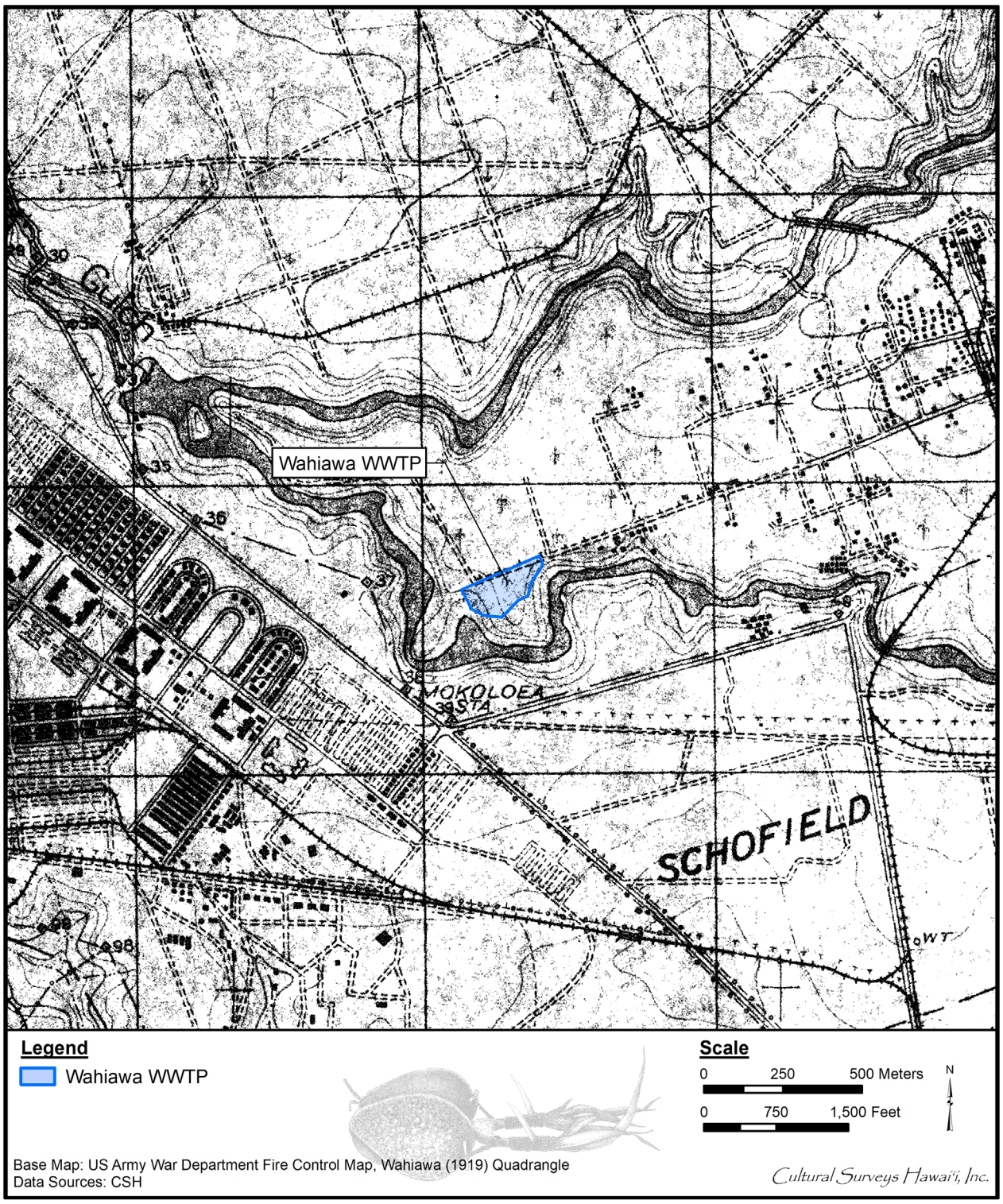


Figure 12. Portion of the 1919 U.S. Army War Department fire control map, Wahiawa quadrangle showing the location of the Wahiawa WWTP within the early development of Wahiawā town

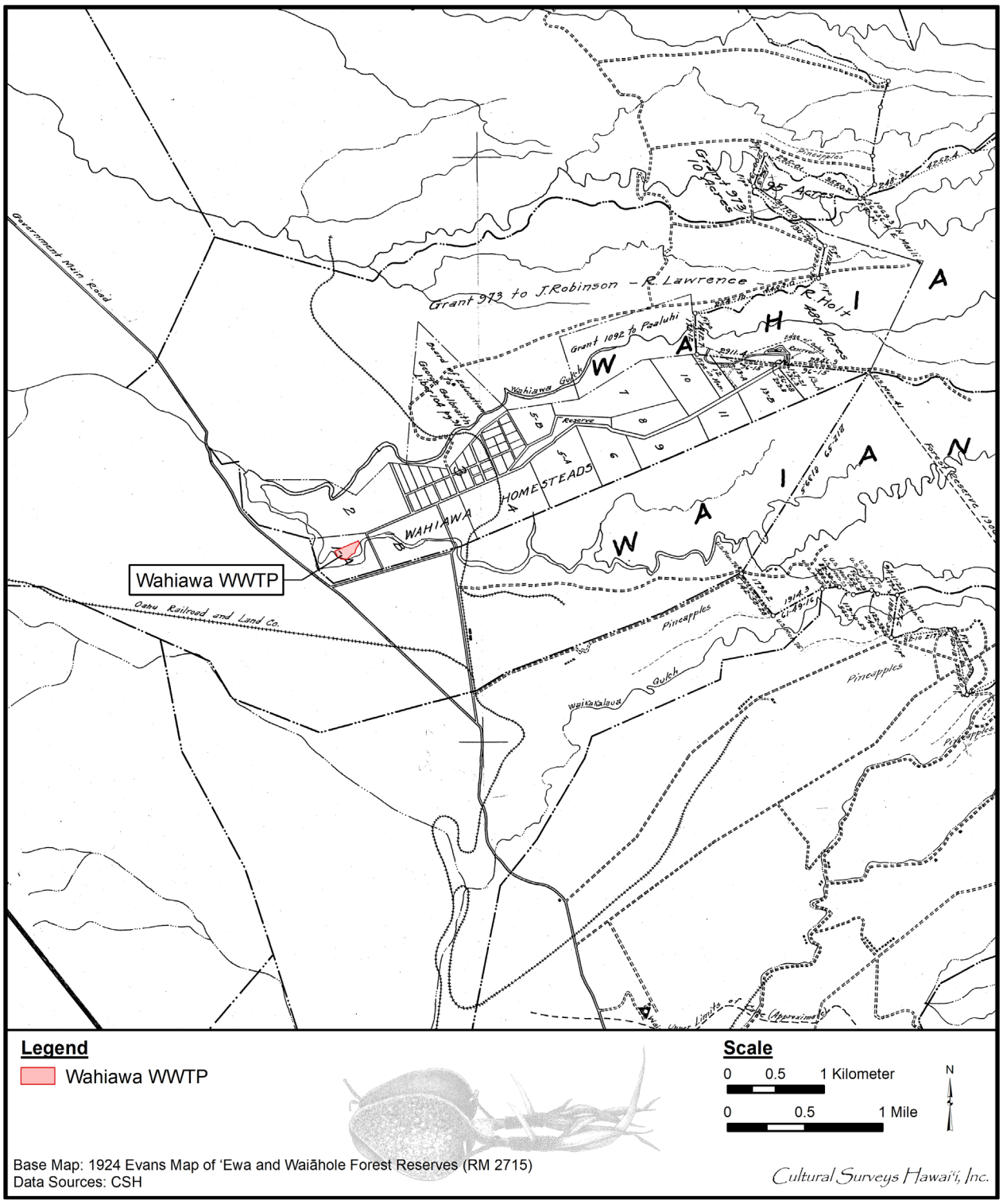


Figure 13. Portion of the 1924 Evans map of Ewa and various forest reserves (RM 2715) showing the showing the location of the Wahiawa WWTP

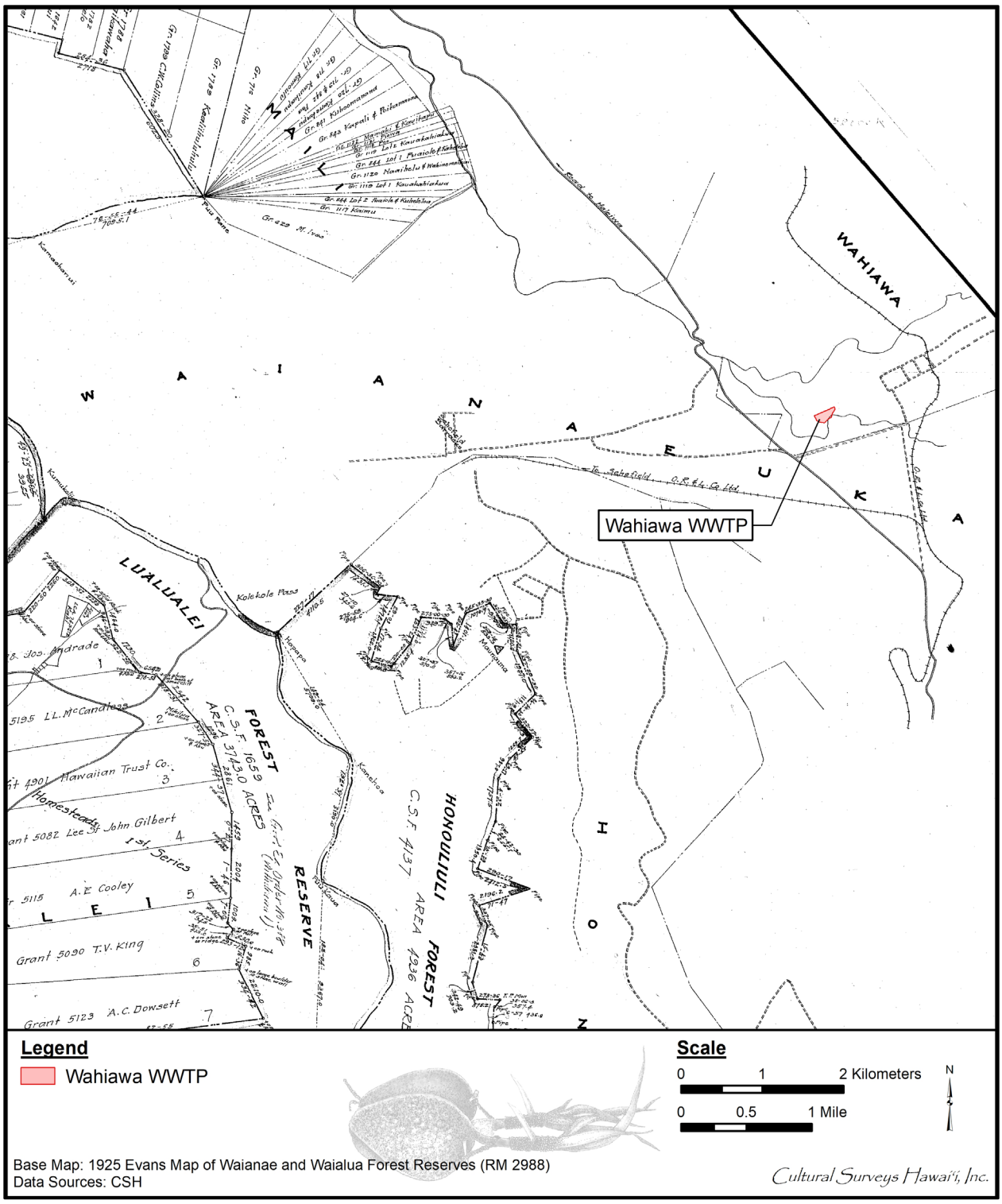


Figure 14. Portion of the 1925 Evans map of Waianae and Waialua forest reserves (RM 2988) showing the location of the Wahiawa WWTP

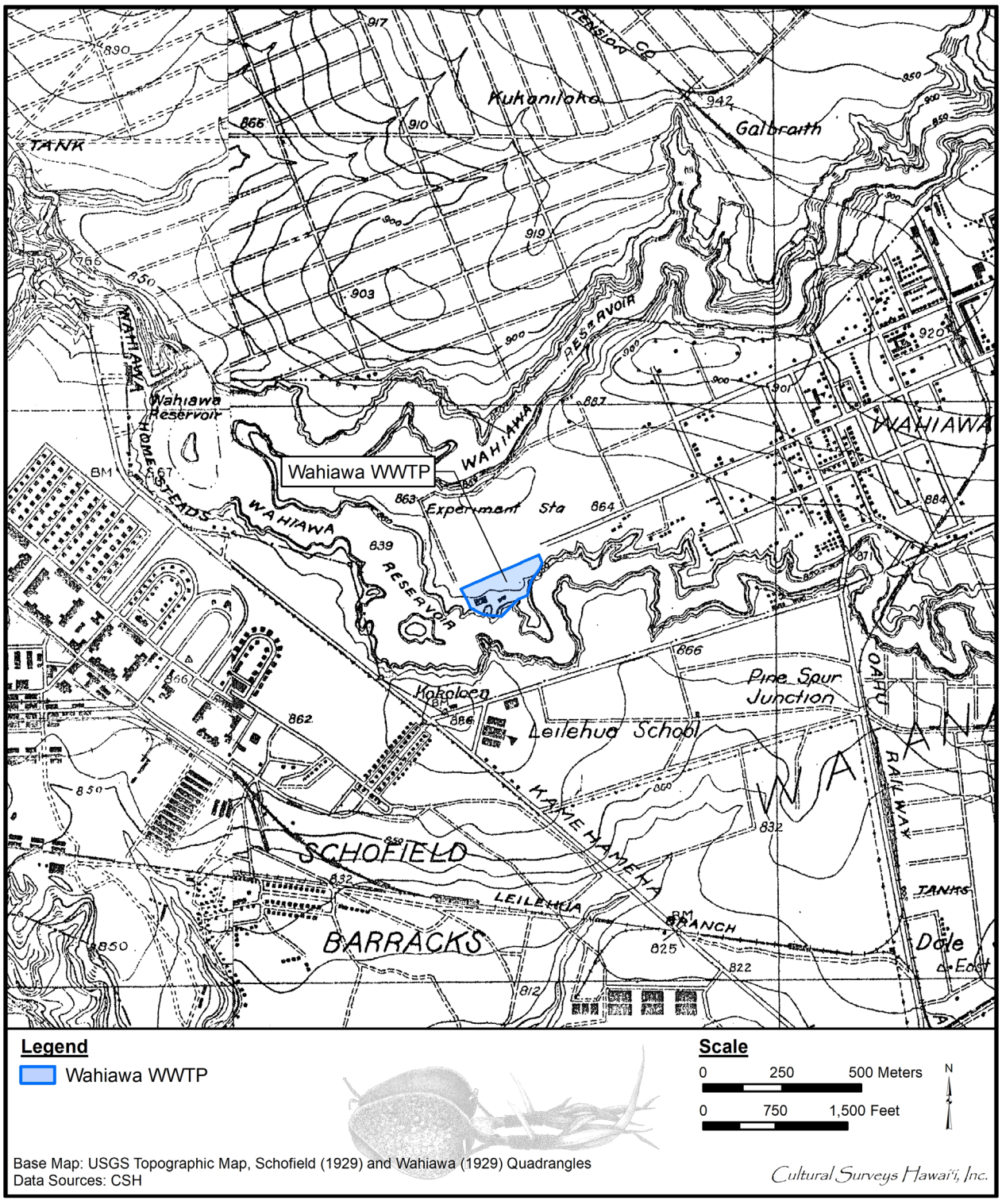


Figure 15. Portion of the 1929 Schofield Barracks and Wahiawa USGS topographic quadrangles showing the location of the Wahiawa WWTP

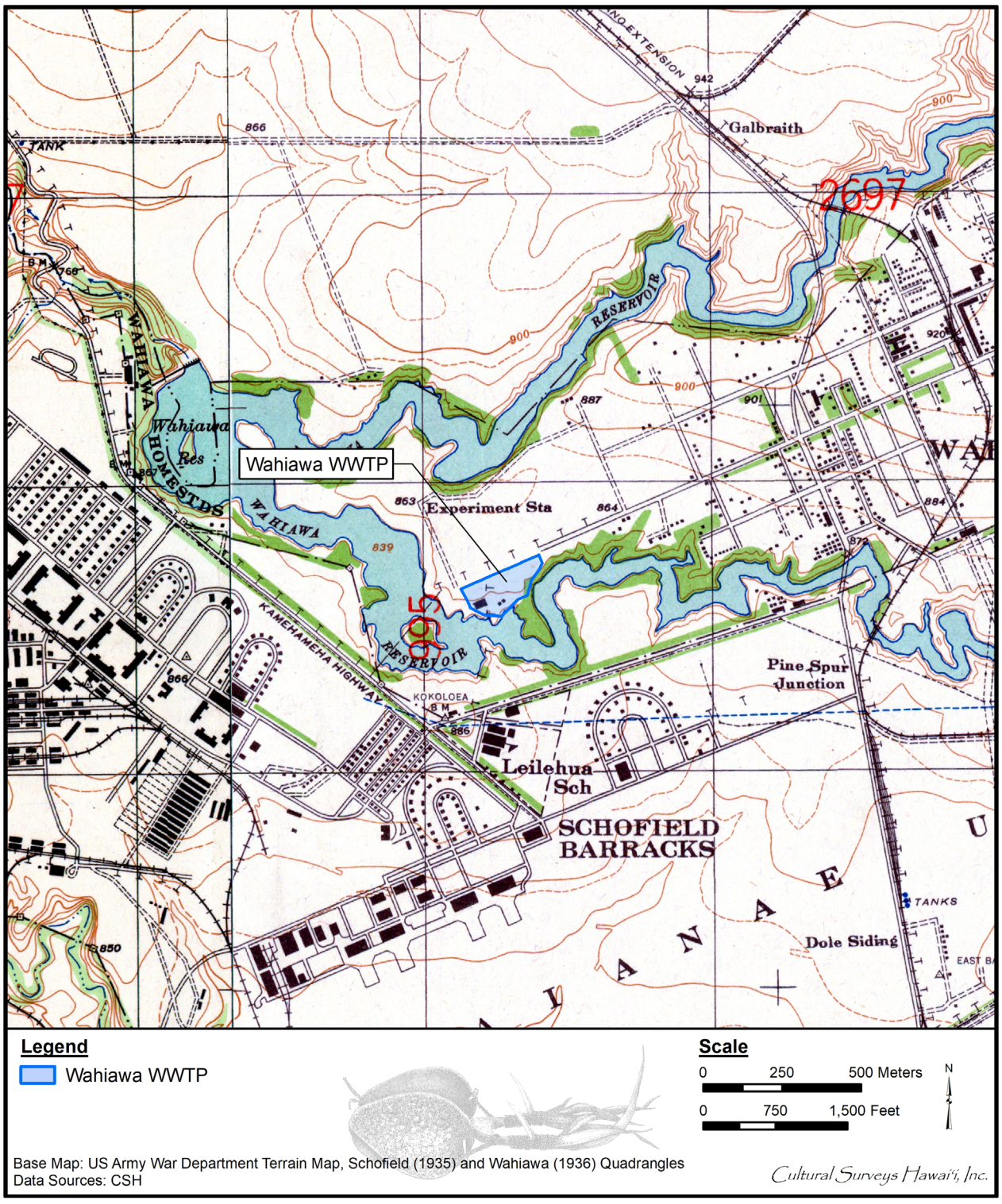


Figure 16. Portion of the 1935-1936 U.S. Army War Department terrain map, Schofield Barracks (1935) and Wahiawa (1936) quadrangles showing the location of the Wahiawa WWTP

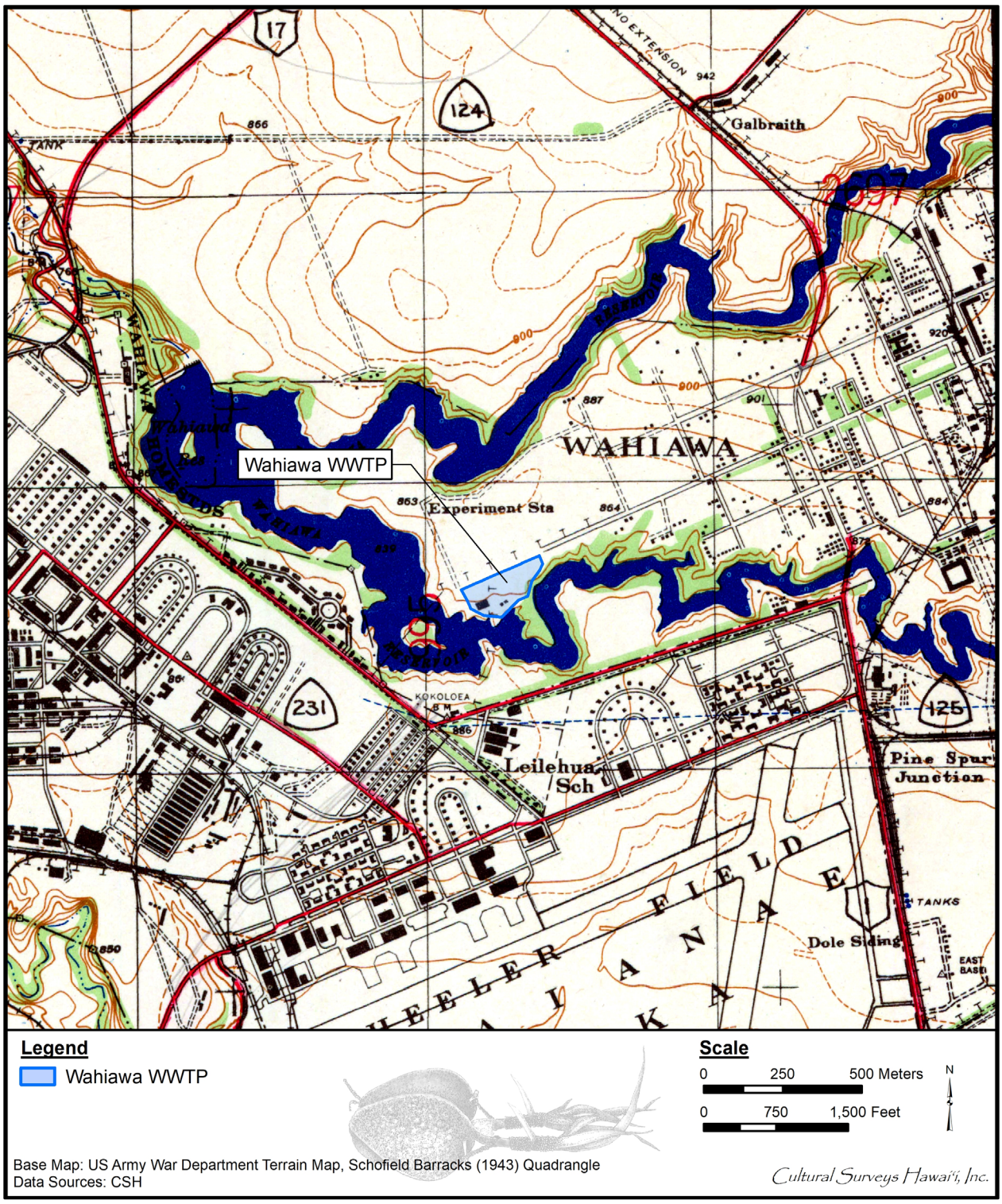


Figure 17. Portion of the 1943 U.S. Army War Department terrain map, Schofield Barracks quadrangle showing the location of the Wahiawa WWTP

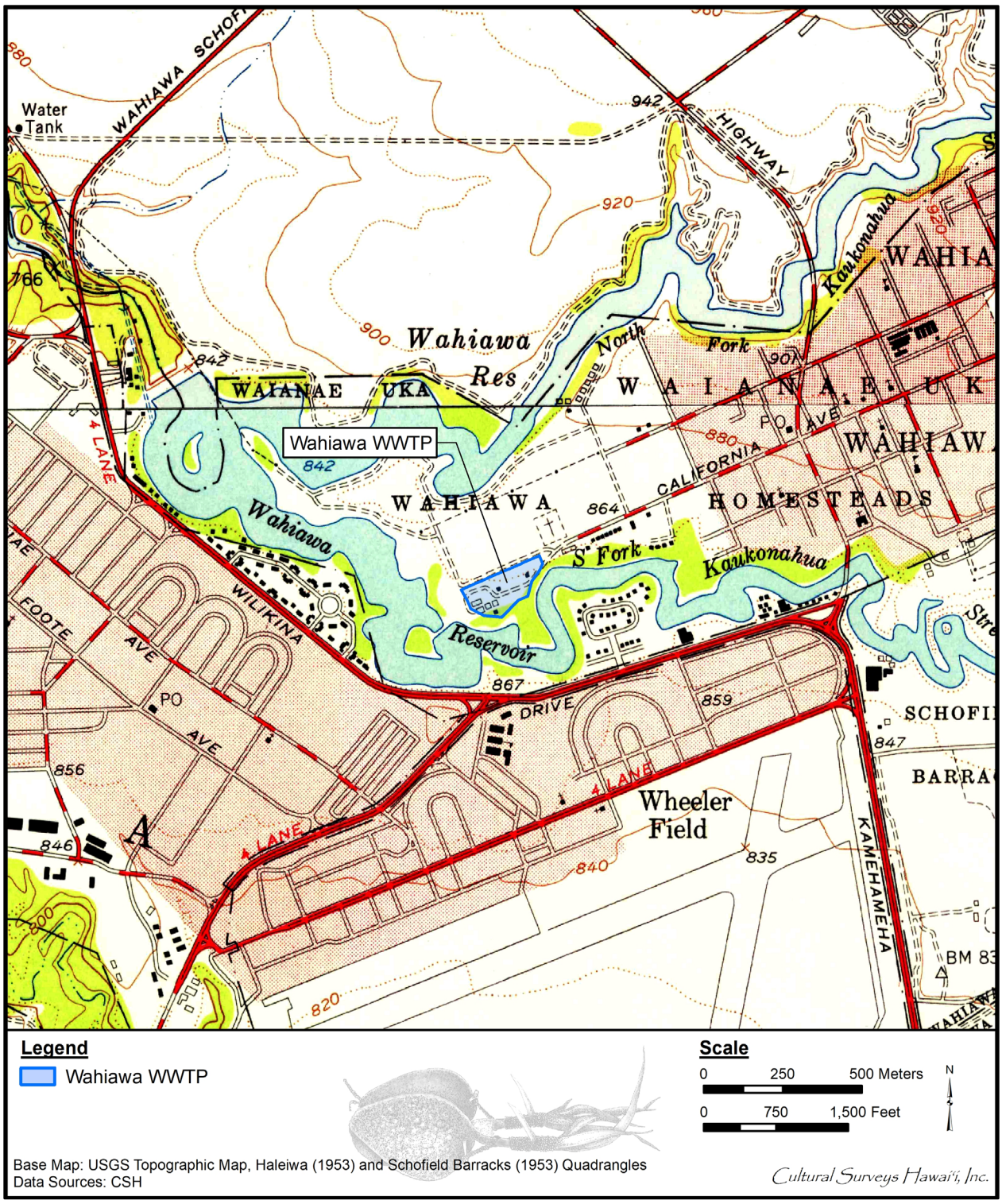


Figure 18. Portion of the 1953 Haleiwa and Schofield Barracks USGS topographic quadrangles showing the location of the Wahiawa WWTP

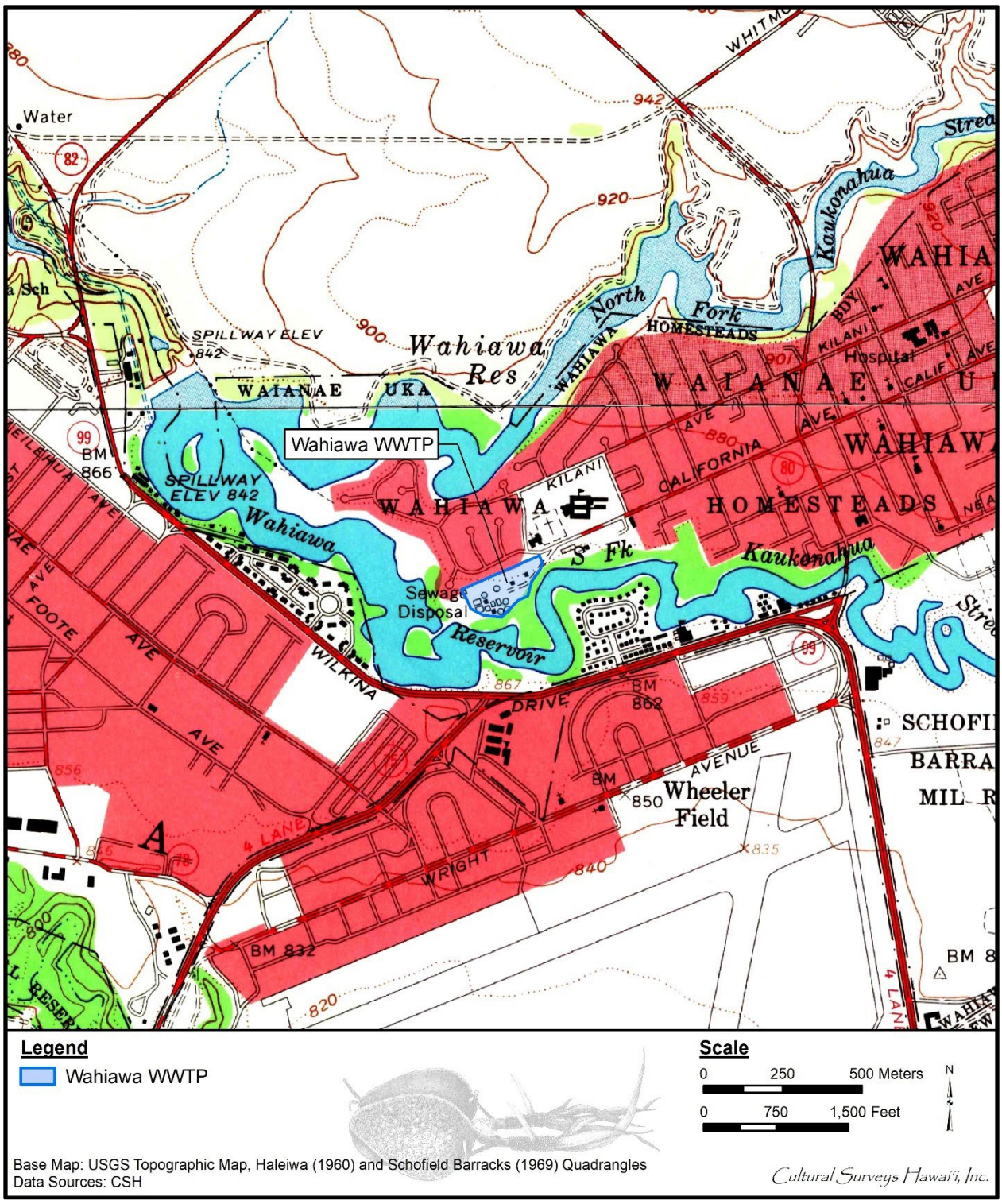


Figure 19. Portion of the 1960 Haleiwa and 1969 Schofield Barracks USGS topographic quadrangles showing the location of the Wahiawa WWTP

Figure 20. 1962 USDA aerial photograph of Wahiawa showing the location of the Wahiawa WWTP

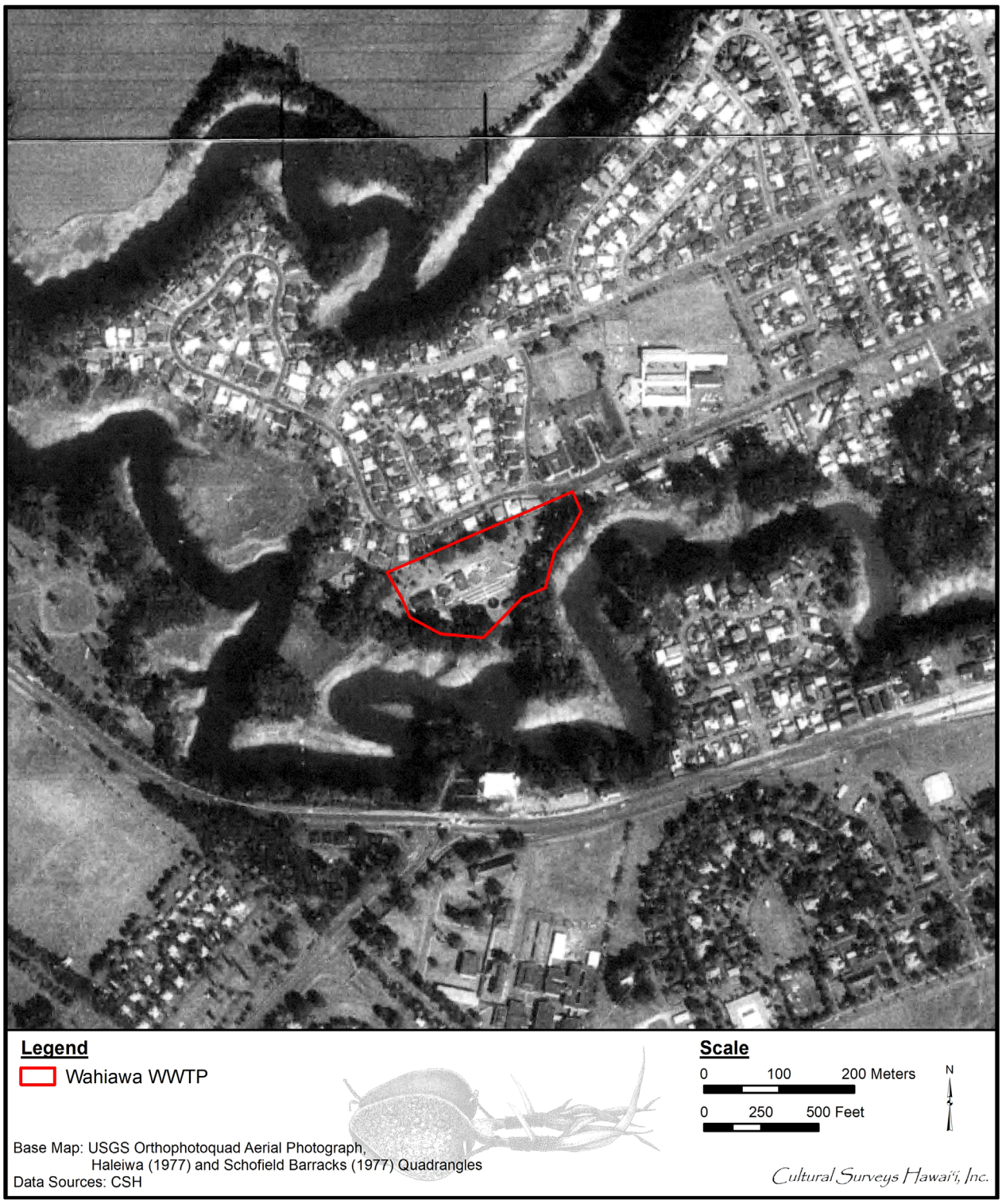


Figure 21. Portion of the 1977 Haleiwa and Schofield Barracks USGS orthophotoquad quadrangles showing the location of the Wahiawa WWTP

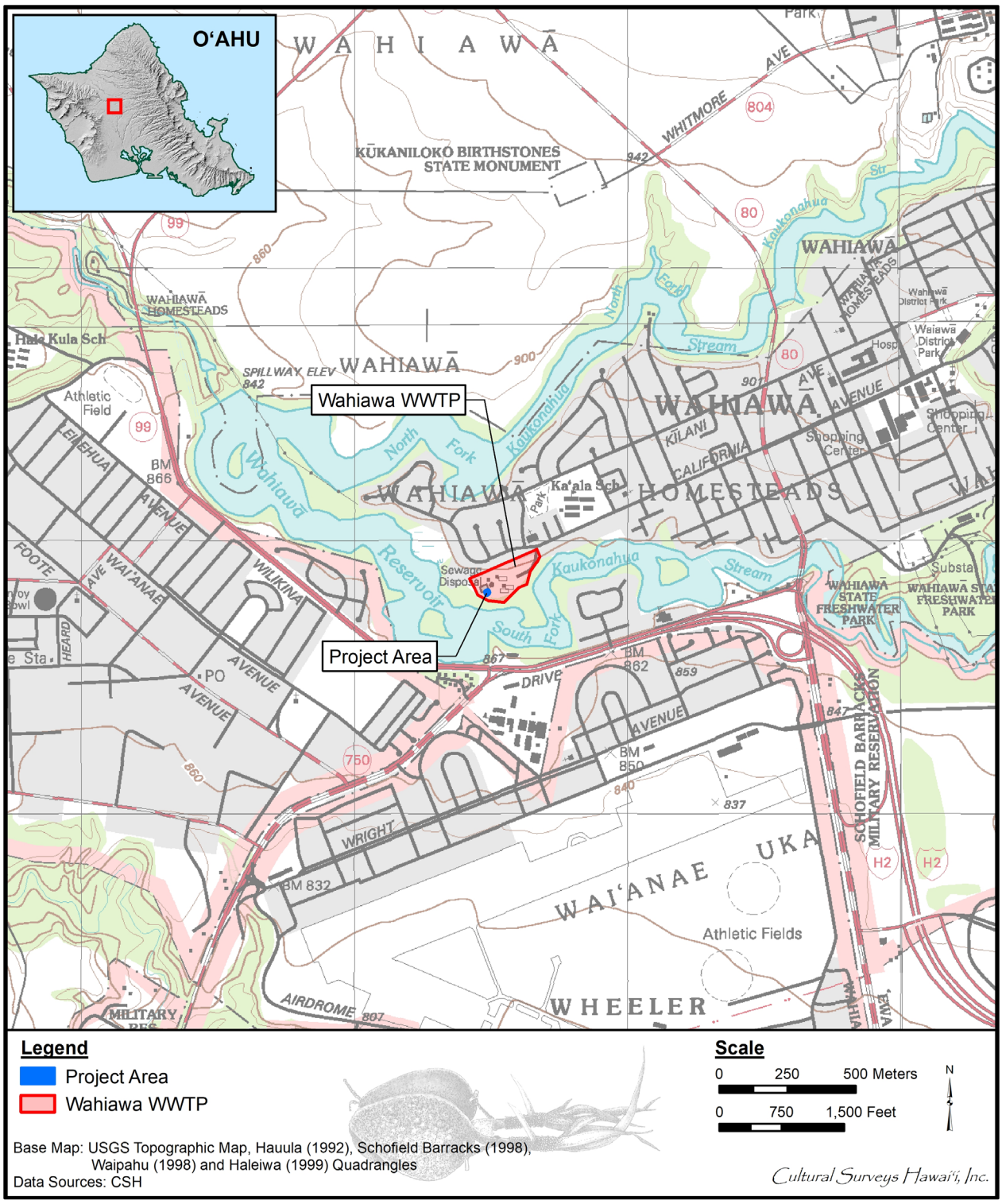


Figure 22 . Portion of the 1992 Hauula, 1998 Schofield Barracks and Waipahu, and 1999 Haleiwa topographic quadrangles showing the location of the Wahiawa WWTP

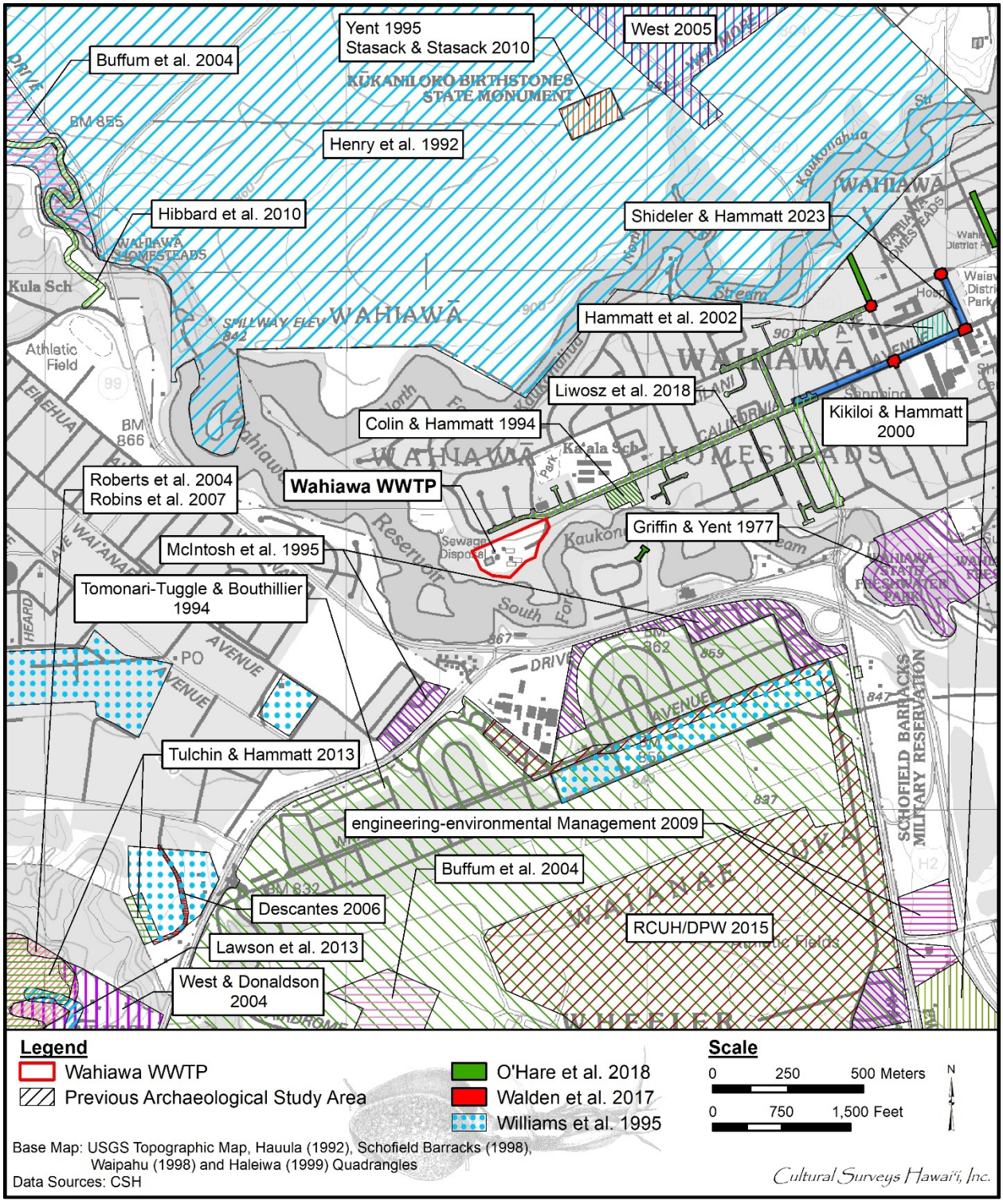


Figure 23. Previous archaeological studies within approximately 1.5 km of the Wahiawa WWTP (base map: 1992 Hauula, 1998 Schofield Barracks and Waipahu, and 1999 Haleiwa USGS topographic quadrangles)

Table 1. Previous archaeological studies within approximately 1.5 km of the Wahiawa WWTP

Reference	**Type of Study**	**Location**	**Results (SIHP # 50-80-) (not all within scope of** Figure 23**)**
McAllister 1933	Island survey	O‘ahu Island	Discusses Site 218 Kūkaniloko, and Site 219 Ho‘olonopahu Heiau, both more than 1.0 km north of Wahiawa WWTP
Griffin and Yent 1977	Archaeological survey	Wahiawā Fresh Water Park	Documented remains of railway trestle and associated roadbed, small complex of four terraces and rock alignment; broken concrete and coral blocks found in terrace complex; no SIHP numbers assigned
Henry et al. 1992	Archaeological inventory survey	Kamananui and Wahiawā (Galbraith Trust Lands)	Fieldwork resulted in relocation of Kūkaniloko birthstones (SIHP # 04-00218) and identification of stacked stone agricultural wall (SIHP # 04-04571); Poamoho Heiau (SIHP # 04-01605) not confirmed; no findings in shovel test units
Colin and Hammatt 1994	Archaeological literature review and field inspection	Well Site at Wahiawā, O‘ahu, West California Ave, TMK: (1) 7-3-007:009	No surface historic properties identified; no further work recommended
Tomonari-Tuggle and Bouthillier 1994	Cultural resources assessment	Wheeler Army Airfield	Five archaeological sites found; of these, only remnants of OR&L Waipahu-to-Wahiawa line evaluated as historically significant; identified 54 buildings for historical architectural value; recommended portion of Wheeler Army Airfield north of main runway be designated National Register Historic District
McIntosh et al. 1995	Archaeological inventory survey with subsurface testing	Four discrete project areas at Wheeler Army Airfield and Schofield Barracks	One significant historic site encountered; Building 1414 (abandoned bunker)

Reference	Type of Study	Location	Results (SIHP # 50-80-) (not all within scope of Figure 23)
Williams et al. 1995	Historic preservation measures (archaeological and architectural survey)	Schofield Barracks	No intact buried cultural remains found anywhere during project but many historically significant buildings discussed
Yent 1995	Site description	Kūkaniloko Birthstones	Recording of damage and vandalism to site since 1992 (Henry et al. 1993) mapping and recording
Kikiloi and Hammatt 2000	Literature review and field inspection	162-acre parcel bounded to west by Kamehameha Hwy, to NE by H-2, to south by Waikakalaua gulch	Documented two boulder constructions (Features 1 and 2, functioning for erosion control), and one road cut (Feature 3); no further archaeological research related to three features appeared warranted
Hammatt et al. 2002	Archaeological assessment and cultural impact evaluation	Wahiawā Community Transit Center	No evidence of traditional Hawaiian activity; determined no adverse impact on historical or cultural resources by project implementation
Buffum et al. 2004	Archaeological survey	Schofield Barracks Military Reservation (SBMR), Kahuku Training Area, Wheeler Army Airfield (WAAF), military vehicle trails from SBMR to Dillingham Training Area and to Helemano Military Reservation, O‘ahu; and at Pohakuloa Training Area, Hawai‘i Island	No historic properties identified at any of six areas studied
Roberts et al. 2004	Archaeological reconnaissance survey	Schofield Barracks Military Reservation, South Range Land Purchase	Identified 37 new sites and six previously recorded sites through Phase I survey; 29 sites interpreted to have traditional Hawaiian affiliation, and 14 sites interpreted as historic

Reference	Type of Study	Location	Results (SIHP # 50-80-) (not all within scope of Figure 23)
West and Donaldson 2004	Archaeological reconnaissance survey	Naval Computer and Telecommunications Area Master Station	No significant historic properties identified, and no evidence of traditional Hawaiian activities
West 2005	Archaeological survey (addendum)	Hawaii Regional Security Operations Center (HRSOC), sprawling project area of north Wahiawā pineapple fields	No historic properties identified
Descantes 2006	Archaeological monitoring	Duckfield Water Line Installation at Schofield Barracks	Fill feature and three artifacts (Coke bottle and two horseshoes) reported
Robins et al. 2007	Intensive survey	South Range Land Acquisition for Stryker Brigade Combat Team, at Schofield Barracks Military Reservation	Project sites include 28 traditional Hawaiian sites, 12 commercial pineapple (plantation) sites, two U.S. military training sites, and three sites with undetermined cultural affiliations; Hawaiian sites include structural components indicative of dryland agriculture, habitation, ceremony, and possible burial interment
engineering-environmental Management 2009	Historic buildings survey and evaluation	Ten Army National Guard Facilities, O‘ahu	Evaluated five buildings at Wahiawā Armory (current study area): assessed Buildings 1–3 as older than 50 years but ineligible for National Register of Historic Place (NRHP) listing due to lack of integrity
Hibbard et al. 2010	Documentation of bridge and ford recordation	Along Helemano Military Trail; TMKs: (1) 6-4-003, 6-5-002, and 7-1-001	Six stream crossings documented including bridges and fords; “Stream Crossing 2” actually a diversion flume over plantation irrigation ditch
Stasack and Stasack 2010	Site description	Kūkaniloko Birthstones	Provides record of petroglyphs and other rock art at Kūkaniloko
Lawson et al. 2013	Archaeological monitoring	Schofield Barracks	No significant historic properties identified; observed isolated ceramic and bottle glass fragments

Reference	Type of Study	Location	Results (SIHP # 50-80-) (not all within scope of Figure 23)
Tulchin and Hammatt 2013	Archaeological inventory survey	Schofield Barracks	Only two sites discussed, a historic trash deposit within Duck Field previously identified by Bouthillier et al. (1997) and “Site 3,” mid-20h century drainage control feature consisting of post-Contact (20h century) features associated with water control and transportation
RCUH/DPW 2015	Archaeological monitoring	Wheeler Army Airfield	No significant historic properties identified
Walden et al. 2017	Literature review and field inspection	Four curb installation locations in Wahiawā	No archaeological findings within 500 m of any of four locations
Liwosz et al. 2018	Literature review and field inspection	Wahiawā Water System Improvements Part 1A and 1B project, Wahiawā and Wai‘anae Uka Ahupua‘a	No potential historic properties identified during field inspection; former cemetery located within portion of project area along Ka‘alalo Place; area now a subdivision, unclear what happened to associated burials
O’Hare et al. 2018	Literature review and field inspection	Wahiawā Water System Improvements, Part IV project	Discusses mortared cement curbing identified along portions of seven streets possibly dating to early to mid-20th century
Shideler and Hammatt 2023	Literature review and field inspection	Portions of California Ave and North Cane St (HT Cable project, Route A)	No significant historic properties identified

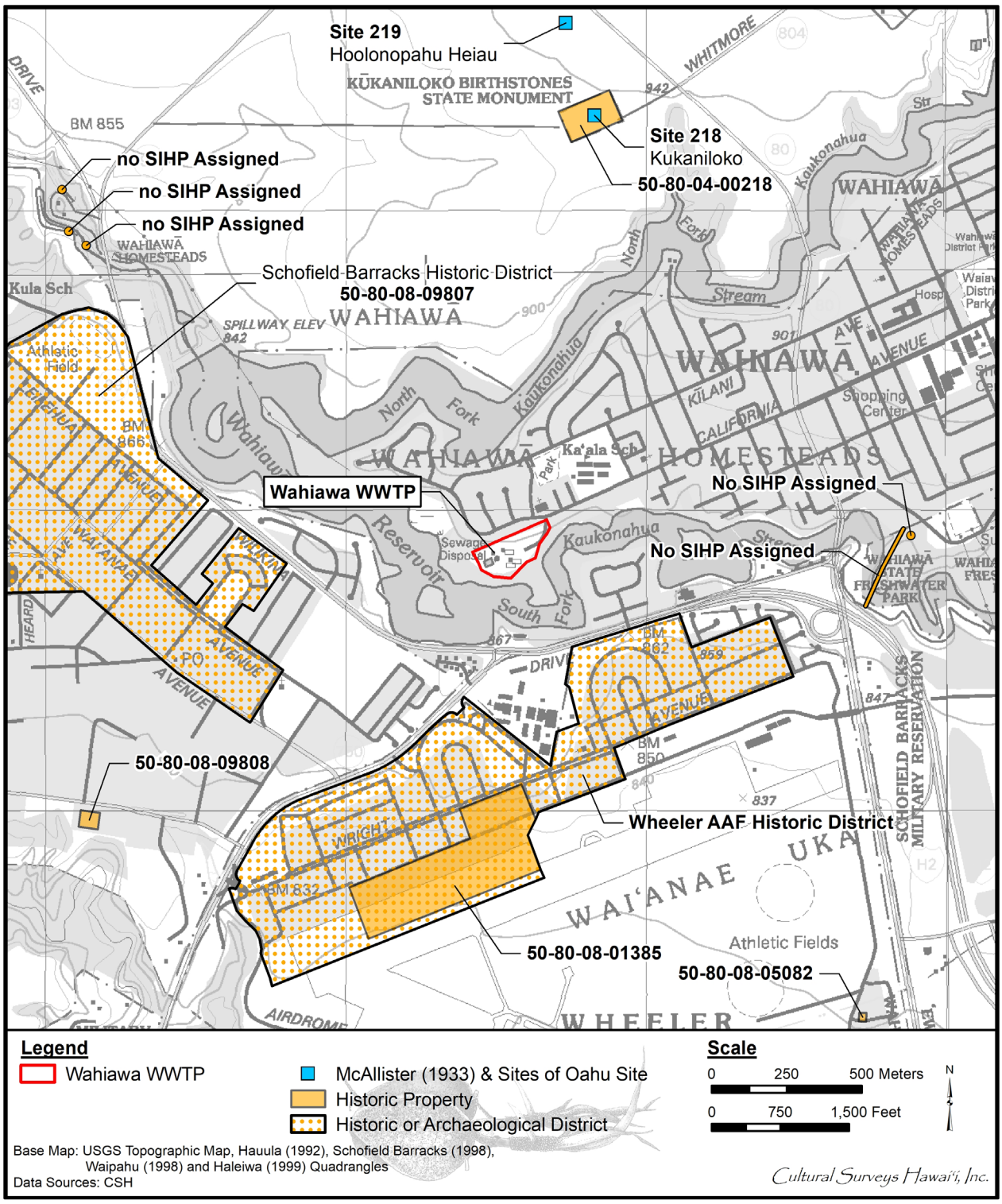


Figure 24. Previously identified historic properties within approximately 1.5 km of the Wahiawa WWTP (base map: a portion of a 1992 Hauula, 1998 Schofield Barracks and Waipahu, and 1999 Haleiwa USGS topographic quadrangles)

Table 2. Previously identified historic properties within approximately 1.5 km of the Wahiawa WWTP

SIHP # (50-80-XX-)	Formal Type	Source	Comment
04-00218 (McAllister Site 218)	Birthing stones (Kūkaniloko)	McAllister 1933:134–137, Yent 1995, Stasack and Stasack 2010	"Site 218. Kukaniloko, located near Wahiawa, on the Waialua side of Kaukonahua Gulch, one of the two famous places in the Hawaiian islands for the birth of children of tapu chiefs. […]"
McAlister Site 219	*Heiau* (Hoolonopahu Heiau)	McAllister 1933:137	Hoolonopahu heiau, near Wahiawa. Hoolonopahu was a heiau which functioned in connection with Kukaniloko. Here were kept the sacred drums of Opuku and Hawea which announced the birth of an alii. Nothing now remains of the temple. The land is planted in pineapples.
08-01385	Wheeler Army Airfield historic structures	Tomonari-Tuggle and Bouthillier 1994	It was recommended that a portion of Wheeler Army Airfield north of the main runway be designated a National Register Historic District.
08-05082	Bunker	McIntosh et al. 1995	Building 1414 (an abandoned bunker) built in 1941
08-09807	Schofield Barracks Historic District	NRHP Registration form (Bouthillier 1996)	Established in 1908, construction began in 1916, maintains historic significance in areas of military history and architecture; Schofield Barracks played primary role in training troops for Pacific Theater of Operations in WWII, as well as Korean and Vietnam conflicts; additionally, physical development of permanent post typifies early Army base planning
08-09808	Schofield Barracks Stockade	NRHP Registration Form (Bouthillier 1997)	Constructed in 1918, the building is a one-story structure having an L-shape plan. Exterior walls enclose the inner portion of the L, creating two exterior courtyards.
No SIHP # Railroad bed	Roadbed	Griffin and Yent 1977	Roadbed for railroad tracks which ran along edge of reservoir and over stream by means of the trestle

SIHP # (50-80-XX-)	Formal Type	Source	Comment
No SIHP # Terrace complex	Terrace complex	Griffin and Yent 1977	Four terraces and rock alignment, all made of mostly basalt rocks plus a few broken concrete blocks and coral blocks; cemented to this terrace, a concrete stair block 60 cm in height with three stairs; possibly traditional Hawaiian and later modified
No SIHP # Kaukonahua Stream Bridge	Bridge	Hibbard et al. 2010	“Stream Crossing # 0” Government Highway Bridge, Kaukonahua Stream, a 20-ft high, three-span, reinforced concrete structure
No SIHP # Kaukonahua Stream Ford	Ford	Hibbard et al. 2010	“Stream Crossing # 1” Kaukonahua Stream Ford, a vented concrete ford with three culverts
No SIHP # Stream Diversion Flume	Flume spanning the Wahiawā ditch	Hibbard et al. 2010	“Stream Crossing # 2” a reinforced concrete diversion flume spans the rock and concrete-lined Wahiawā ditch, which transports water the 4 miles from Lake Wilson to Waialua Agricultural Company’s upper sugarcane fields.

Figure 25. Archaeologist's track log with a key to the following photographs (showing the general location and orientation) within the Wahiawa WWTP on a 2019 aerial photograph (Google Earth 2019)

Figure 26. Photo A: View of the immediate area of the 6,000-gallon diesel UST (at cement slab) to be removed (proposed AST area in background), view to northwest

Figure 27. Photo B: View of the immediate area of the 6,000-gallon diesel UST (at cement slab) to be removed, view to southeast

Figure 28. Photo C: Immediate area proposed for new 6,000-gallon diesel AST (existing UST in foreground), view to northwest

Figure 29. Photo D: Immediate area proposed for new 6,000-gallon diesel AST in foreground (existing UST in background), view to southeast

Figure 30. Photo E: Indicated route for fuel piping to generator building (in background), view to east

Figure 31. Photo F: Front of generator building, (project area at left), view to northwest

Figure 32. Photo G: Open in-progress excavation within 20 m of project area, view to northwest

Figure 33. Photo H: General view of the Wahiawa WWTP from the north corner (near the entrance gate), view to southwest

Figure 34. Photo I: General view of the Wahiawa WWTP from the east corner, view to southwest

Figure 35. Photo J: General view of the Wahiawa WWTP from the south corner, view to northeast

Figure 36. Photo K: General view of the Wahiawa WWTP from the northwest corner, view to southeast

Figure 37. Photo L: General view from the central portion of the Wahiawa WWTP, view to north-northeast

Figure 38. Photo M: General view from the central portion of the Wahiawa WWTP, view to southeast

Figure 39. Photo N: General view from the central portion of the Wahiawa WWTP, view to southwest

Figure 40. Photo O: General view of the central portion of the Wahiawa WWTP, view to northwest

References Cited

Adamski, Mary
2005 Hindus and Hawaiians build truce. *Honolulu Star-Bulletin*, Honolulu.

Bouthillier, Katherine S.
1997 National Register of Historic Places Registration Form – Schofield Barracks Stockade (other name: Building 3010) (January 1997). Honolulu.

1996 National Register of Historic Places Registration Form – Schofield Barracks Historic District (November 1996). Honolulu.

Buffum, Amy L., Michael Desilets, Stephen Roberts, Jennifer J. Robins, and Alice K.S. Roberts
2004 *Archaeological Surveys of Proposed Training Areas for the Stryker Brigade Combat Team (SBCT) U.S. Army Hawaii, Schofield Barracks Hawaii Contract No. DACA83-01-D-0013, Task Order No. 0012*. Garcia and Associates, Honolulu.

City and County of Honolulu
2025 Honolulu.gov ENV website for Wastewater Management Facilities in the Wahiawa Region: Wahiawa Wastewater Treatment Plant https://www.honolulu.gov/rep/site/env/wwm_docs/wwm_wahiawa.pdf

Colin, Brian and Hallett H. Hammatt
1994 *Archaeological Assessment of the Exploratory Well Site at Wahiawa, Oahu (TMK 7-3-07:09).* Cultural Surveys Hawai‘i, Inc., Kailua, Hawai‘i.

Coulter, John Wesley
1931 *Population and Utilization of Land and Sea in Hawaii, 1853*, Bernice. P. Bishop Museum Bulletin 88. B.P. Bishop Museum. Honolulu.

Descantes, Christophe
2006 *Archaeological Monitoring Report of the Duckfield Water-Line Installation at Schofield Barracks Military Reservation*. U.S. Army Garrison, Hawai‘i (USAG-HI), Honolulu.

Donn, John M.
1906 Hawaii Territory map of Oahu. Registered Map 2374. Hawai‘i Land Survey Division, Department of Accounting and General Services, Honolulu. Available online at http://dags.hawaii.gov/survey/search.php

engineering-environmental Management, Inc.
2009 *Historic Buildings Survey and Evaluation Report of Ten Facilities Hawai‘i Army National Guard*. engineering-environmental Management, Inc., Englewood, Colorado.

Evans
1924 Map of Ewa and Various Forest Reserves. Registered Map 2715. Hawai‘i Land Survey Division, Department of Accounting and General Services, Honolulu. Available online at http://dags.hawaii.gov/survey/search.php

1925 Map of Waianae and Waialua Forest Reserves. Registered Map 2988. Hawai‘i Land Survey Division, Department of Accounting and General Services, Honolulu. Available online at http://dags.hawaii.gov/survey/search.php

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.

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.

Google Earth Aerial Imagery

2019, 2022 Aerial photographs of Hawai‘i. Google Inc., Mountain View, California. Available online at www.google.com/earth.html

Griffin, Agnes E. and Martha Yent

1977 *Results of Archaeological Survey of Phase I of Wahiawa Fresh Water Park*. Department of Land and Natural Resources, Division of State Parks, Kapolei, Hawai‘i.

Hammatt, Hallett H., David W. Shideler, and Melanie M. Mann

2002 *An Archaeological and Cultural Impact Evaluation for the Proposed Wahiawā Community Transit Center, Wahiawā Ahupua‘a, Wahiawā District, Island of O‘ahu (TMK: 7-4-06 por. 2 and por. 12).* Cultural Surveys Hawai‘i, Inc., Kailua, Hawai‘i.

Handy, E.S. Craighill and Elizabeth G. Handy

1972 *Native Planters of Old Hawaii: Their Life, Lore, and Environment*. Bishop Museum Press, Honolulu.

Hawaiian Civic Club of Wahiawā

2025 Kukaniloko.org, available online at https://www.kukaniloko.org/hawaiian-civic-club-of-wahiawa.html

Hawai‘i TMK Service

2025 Tax Map Key (1) 7-3-007. Hawai‘i TMK Service, Honolulu.

Henry, Jack D., Alan T. Walker, and Paul H. Rosendahl

1992 *Archaeological Inventory Survey Galbraith Trust Lands, Lands of Kamananui and Wahiawa Waialua and Wahiawa Districts, Island of Oahu*. Paul H. Rosendahl, Ph.D., Inc., Hilo, Hawai‘i.

1992 *Archaeological Inventory Survey Galbraith Trust Lands, Lands of Kamananui and Wahiawa Waialua and Wahiawa Districts, Island of Oahu.* Paul H. Rosendahl, Ph.D., Inc., Hilo, Hawai‘i.

Hibbard, Don, Alexander Hazlett, and Hallett H. Hammatt
2010 *Final Report on the Bridge and Ford Recordation along Helemano Military Trail, Wai‘anae Uka, Kamananui, Pa‘ala‘a, and Wahiawā Ahupua‘a, Wahiawā and Waialua Districts, O‘ahu, Hawai‘i TMKs: [1] 6-4-03, 6-5-02, & 7-1-01*. Cultural Surveys Hawai‘i, Inc., Kailua, Hawai‘i.

Honolulu Star-Advertiser
2017 Article. *Honolulu Star-Advertiser*, 26 October.

Honolulu Star-Bulletin
1927 Article. *Honolulu Star-Bulletin*, 3 October.

‘Ī‘ī, John Papa
1959 *Fragments of Hawaiian History As recorded by John Papa Ii.* Translated by Mary Kawena Pukui; edited by Dorothy B. Barrere. Bishop Museum Press, Honolulu.

Kikiloi, Scott T. and Hallett H. Hammatt
2009 *Archaeological Assessment of a 162 Acre Parcel in Central Oahu, Waikele Ahupua‘a, Island of O‘ahu (TMK 09-15-02:por.3).* Cultural Surveys Hawai‘i, Inc., Kailua, Hawai‘i.

Lawson, Amanda K., David W. Shideler, and Hallett H. Hammatt
2013 *Archaeological Monitoring Report for the Grow the Army Project in Schofield Barracks, Honouliuli Ahupua‘a, ‘Ewa District, Island of O‘ahu, Hawaii‘, TMK: [1] 7-7-001: 001; [1] 9-2-005:020 & 022; [1] 9-4-012:001, 003, & 006.* Cultural Surveys Hawai‘i, Inc., Kailua, Hawai‘i.

Liwosz, Chester R., Lisa Manirath, and Hallett H. Hammatt
2018 *Archaeological Literature Review and Field Inspection Report for the Wahiawa Water System Improvements Part 1A & 1B Project, Wahiawā and Wai‘anae Uka Ahupua‘a, Wahiawā District, O‘ahu TMKs: [1] 7-3-001–005, 007, 014, 017, 019, and 7-6-001 (multiple parcels).* Cultural Surveys Hawai‘i, Inc., Kailua, Hawai‘i.

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

McIntosh, James, Timothy Denham, and Paul L. Cleghorn
1995 *Report of Archaeological Inventory Survey with Subsurface Testing for Work Area 1 of the Proposed Family Housing Project at Wheeler Army Airfield and Schofield Barracks Military Reservation, Wahiawa District, O‘ahu Island, Hawai‘i (TMK: 7-7-01).* Biosystems Analysis, Honolulu.

Nedbalek, Lani
1984 *Wahiawā: From Dream to Community*. Wonder View Press, Mililani, Hawai‘i.

Newton
1904 Map of Central Oahu. Registered Map 399. Hawai‘i Land Survey Division, Department of Accounting and General Services, Honolulu. Available online at http://dags.hawaii.gov/survey/search.php

O’Hare, Constance R., Gina Farley, and Matthew McDermott

2018 *Archaeological Literature Review and Field Inspection Report for the Wahiawā Water System Improvements, Part IV Project, Wahiawā Ahupua‘a, Wahiawā District, O‘ahu TMKs: [1] 7-3, 7-4, 7-5*. Cultural Surveys Hawai‘i, Inc., Kailua, Hawai‘i.

Pukui, Mary K., Samuel H. Elbert, and Esther Mookini

1977 *Place Names of Hawai‘i.* Revised and expanded edition. University of Hawai‘i Press, Honolulu.

RCUH/DPW (Research Corporation of the University of Hawai‘i Pacific Cooperative Studies Unit and Directorate of Public Works Environmental Division)

2015 *Archaeological Monitoring Report for Ground-Disturbing Work During the Construction of the Army’s New Combat Aviation Brigade (CAB) Complex at Wheeler Army Airfield, Wahiawa District, O‘ahu Island, Hawai‘i TMK: (1) 7-7-001.* U.S. Army Garrison, Hawai‘i (USAG-HI).

Roberts, Alice, Stephen Roberts, Michael Desilets, Amy L. Buffum, and Jennifer J. Robins

2004 *Archaeological Reconnaissance Survey of U. S. Army Schofield Barracks Military Reservation, South Range Land Purchase, Oahu Island, Hawaii Contract No. DACA83-01-D-0013, Task Order No 0011 TMK 9-2-05:2, 13, 14 Final Report.* Garcia & Associates, Honolulu.

Robins, Jennifer, Stephen Roberts, and Laura Gilda

2007 *Intensive Phase II Investigation of Cultural Resources within the South Range Land Acquisition for the Stryker Brigade Combat Team, Schofield Barracks Military Reservation, Oahu Island, Hawaii TMK: 9-2-05.* Garcia & Associates, Honolulu.

Shideler, David W. and Hallett H. Hammatt

2023 *Archaeological Literature Review and Field Inspection Report for the Hawaiian Telcom Interoffice Underground Cable Project, Route A2, Wahiawā Ahupua‘a, Wahiawā District, O‘ahu, TMKs: (1) 7-4-004:999 (California Avenue); 7-4-006:999 (California Avenue); 7-4-008:999 (North Cane Street).* Cultural Surveys Hawai‘i, Inc., Kailua, Hawai‘i.

Stasack, Edward A. and Diane S. Stasack

2010 *Kūkaniloko Birthstones State Monument, Wahiawā, O‘ahu, Hawai‘i. Rock Art (Petroglyph) Report.* Prepared for Nana I Ka Piko with Support from Office of Hawaiian Affairs, Honolulu.

Tsai, Michael

2010 Storied Stone Taken Away. *Honolulu Star-Advertiser*.

Tomonari-Tuggle, M.J. and Katherine Bouthillier

1994 *Archaeology and History on the Central O‘ahu Plateau: A Cultural Resources Assessment of Wheeler Army Airfield*. International Archaeological Research Institute, Inc., Honolulu.

Tulchin Jon and Hallett H. Hammatt

2013 *Archaeological Inventory Survey for the Grow the Army Project in Schofield Barracks, Honouliuli, Ahupua‘a, ‘Ewa District, Island of O‘ahu, Hawai‘i, TMK: [1] 7-7-001: 001; [1] 9-2-005:020, & 022; [1] 9-4-012: 001, 003, & 006.* Cultural Surveys Hawai‘i, Inc., Kailua, Hawai‘i.

U.S. Army War Department

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

1935 U.S. Army War Department terrain map, Schofield Barracks quadrangle. USGS Information Services, Denver, Colorado.

1936 U.S. Army War Department terrain map, Wahiawa quadrangle. USGS Information Services, Denver, Colorado.

1943 U.S. Army War Department terrain map, Schofield Barracks, quadrangle. USGS Information Services, Denver, Colorado.

USDA (U.S. Department of Agriculture)

1962 USDA Aerial Survey Photograph. University of Hawaii Maps, Aerial Photographs, and Geographic Information Systems (UH MAGIS) (http://guides.library.manoa.hawaii.edu/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)

1929 Schofield Barracks and Wahiawa USGS 7.5-minute series topographic quadrangles. USGS Information Services, Denver, Colorado.

1953 Haleiwa and Schofield Barracks USGS 7.5-minute series topographic quadrangles. USGS Information Services, Denver, Colorado.

1960 Haleiwa USGS 7.5-minute series topographic quadrangle. USGS Information Services, Denver, Colorado.

1969 Schofield Barracks USGS 7.5-minute series topographic quadrangle. USGS Information Services, Denver, Colorado.

1977 USGS Orthophotoquad, Haleiwa and Schofield Barracks quadrangles. (Aerial photograph). USGS Information Services, Denver, Colorado.

1992 Hauula USGS 7.5-minute series topographic quadrangle. USGS Information Services, Denver, Colorado.

1998 Schofield Barracks and Waipahu USGS 7.5-minute series topographic quadrangles. USGS Information Services, Denver, Colorado.

1999 Haleiwa USGS 7.5-minute series topographic quadrangle. USGS Information Services, Denver, Colorado.

2017 Haleiwa, Hauula, Schofield Barracks, and Waipahu USGS 7.5-minute topographic quadrangles. USGS Information Services, Denver, Colorado.

Waihona ‘Aina
2025 *The Māhele Database*. Electronic document, http://waihona.com.

Walden, Jackie, Melanie Mintmier, and Sara Collins
2017 *Archaeological Assessment in Support of Curb Ramps at Various Locations, FY2016(A), Transition Plan Project, O‘ahu Island, Hawai‘i Job No. 06-16 TMK (1) Various*. Pacific Consulting Services, Inc., Honolulu.

Wall, Walter A.
1901 Waialua Agricultural Company, Ltd. map. Registered Map 2056. Hawai‘i Land Survey Division, State of Hawai‘i, Department of Accounting and General Services, Honolulu. Available online at http://dags.hawaii.gov/survey/search.php.

West, Eric
2005 *Addendum to: Phase 1 Archaeological Survey of Hawaii Regional Security Operations Center (HRSOC) Project Site, Naval Computer and Telecommunications Center Area Master Station (NCTAMS PAC) and Vicinity, Wahiawa, O‘ahu, Hawai‘i, TMK: 7-1-02:7 Portion*. Department of the Navy, Naval Facilities Engineering Command, Pacific, Pearl Harbor, Hawai‘i.

West, Eric and Emily Donaldson
2004 *Phase 1 Archaeological Survey of Hawaii Regional Security Operations Center (HRSOC) Project Site, Naval Computer and Telecommunications Center Area Master Station (NCTAMS PAC) and Vicinity, Wahiawa, O‘ahu, Hawai‘i, TMK: 7-1-02:7 Portion.* Department of the Navy, Naval Facilities Engineering Command, Pacific, Pearl Harbor, Hawai‘i.

Williams, Scott S., Tomasi Patolo, Barbara Shideler, and Allan J. Schilz
1995 *Historic Preservation Measures FY 1995-2006 Whole Barracks Renewal Program at Various U.S. Army Installations and the FY95/96 New Infantry Brigade Complex, Schofield Barracks, Oahu Island, Hawaii*. Ogden Environmental and Energy Services, Inc., Honolulu.

Yent, Martha
1995 *Kukaniloko Birthstones State Monument, Wahiawa, Oahu (State Site No. 50-80-04-218), TMK: 7-1-01: 4. September 1995*. Division of State Parks, Department of Land and Natural Resources, State of Hawai‘i, Honolulu.

Appendix A *Honolulu Star-Bulletin* 3 October 1927 article regarding “Wahiawa Phenomena”

SCIENCE SHOWS AN INTEREST IN HEALING STONES

Wahiawa Phenomena Draws Anthropologists; Many Study Condition There

Thousands Still Flocking To Rocks Said To Have Marvelous Powers

A line of automobiles moving down the main street —at the end a crowd of parked cars—people wandering about and at one side a dense mass—five or six hundred, perhaps at times 1000 — such is the first glimpse of the astounding condition around the “stone god” of Wahiawa.

Scientists, particularly anthrpologists, are declaring that this is one of the most interesting conditions it has even been their good fortune to see. The endowment of an object with supernatural powers has usually originated and been lost in the mists of the past. Here is is taking place right under their eyes. To the layman the sight presents one of the most astounding spectacles imaginable.

Briefly, there is a small lava monolith, about six feet high and beside it a smaller low white rock. Both are in a little fenced inclosure at the end of the Wahiawa road. The conviction has spead like wildfire over the islands that these rocks are endowed with marvelous healing powers and now they are constantly besieged by a mass of people come to be cured of their ailments.

SCIENCE SHOWS AN INTEREST IN HEALING STONES

(Continued from Page 1)

purpose. Money is dropped in the box standing there.

At the edge of the crowd are those taking commercial advantage of the situation. There are lei sellers, fruit peddlers, a hot dog stand, sellers of punk and joss. They are doing a thriving business.

The early history is a bit uncertain, but by some it is velieved to be the rock known to Hawaiians as Keaniniulaolani. This person was a character of Hawaiian legend who coming to the islands in search of his wife, was overtaken by the dawn and changed into a stone.

At any rate, this particular stone was used as a milestone many years ago until George Galbraith, a resident of the Waialua district, had a dream in which the stone informed him that it had been turned on its head and asked to be righted. Galbraith caused the stone to be moved to Kukaniloko, the famous place of maternity where many Hawaiian chiefs were born.

First to Make Offerings

A theory of the origin of the belief in the healing power of the stones which is an entirely modern growth and completely dissociated from any legendary interest it may have to Hawaiians, is believed by one scientist to have begun at the time Kukaniloko was cleared. Small ceremonies were held on this occasion and one of the members, Mrs. Lahilahi Webb, recalls having draped a lei by chance over the pinacle rock which, although it was extraneous to the place, was the most conspicuous rock there. Kukaniloko is entirely surrounded by pineapple fields and it is believed that some of the Filipino field hands, watching the ceremonies and noting the lei attributed special powers to this rock. It is certain that Filipinos were the first to make offerings before the rock was moved.

Although stories of the origin of the belief in the healing power fly through the crowd about it, as thick as rumors at a fire, one of the most credible seems to be that a certain Chinese had a dream that if he would touch the rock he would be healed of a sickness. He did and the miracle took place. Several of the best known Chineses residents of Honolulu claim to have been healed since by the stone and its cult has spread correspondingly among these people.

Perfect Seriousness

The crowd is mostly Chinese but there are Japanese, Filipinos, Koreans, Hawaiians and Portuguese. Homage is being paid to the stone by each of these peoples, every individual in the way that appeals to him or her most. The supplicants go about their business totally unconcerned by the others watching them. There is perfect seriousness on the part of all. If among the onlookers there are those who do not believe, it is not manifested in any way.

The rock is almost concealed with leis and hung among the leis are a few crucifixes. Flowers and fruits are piled knee-high about the base. Outside the small iron fence boxes have been arranged to hold sticks of punk and burning candles. The pungent odors of Chinese wax and joss swirl about the crowd.

The worshipers are of every class and kind. Among the autos in which they come are glistening sedans and tumble-down flivvers. There are old Chinese women in black silk trousers and coats, younger women with babies, men and girls, some of the latter with French heels and marcelled hair, children wide-eyed at it all.

They climb the fence by means of a box, rub the stone and then th parts of their bodies afflicted. Most of the crowd appear to be quite well, but there are some with obvious ailments. A girl with glasses touches her eyes. A paralytic is carefully lifted over the fence by friends. A mother touches the stone and then rubs her hands over her child.

Money Goes Into Box

Outside the inclosure the prayers still go on. A Japanese woman kneels, folds her hands and bows nearly to the ground in silence. Chinese move their folded hands rhythmically. Prayers are burnt in a barrel that has appeared for the

(Continued on Page 3)

In regard to the cures effected physicians state they are of the sort, perfectly well known to doctors, arising from auto suggestion. Nervous disorders not infrequently find a physical expression such as paralysis, blindness and other ailments and when medical men are unable to find a pathological condition the patient may be cured sometimes by psychoanalysis, sometimes by faith in such an object as this rock. The well known shrines of Europe offer frequent examples of such cures. One doctor of the city has stated that if the "stone god" has brought about just one such cure of a nervous disorder, its existence has been justified.

The European shrines are the cause of bringing thousands of visitors to the towns in which they are located, and it is possible that the "stone god" of Wahiawa may become an object of interest even to the tourist bureau.

Here it rested in comparative oblivion until 1925, when Kukaniloko was taken over by the Daughters of Hawaii as one of the historic spots on Oahu which should be preserved.

Power of Healing

When this plot, containing many stones, each of legendary interest, was cleared of brush about two years ago, it was found that this stone, the pinacle rock, was the most prominent one in the enclosure, most of the others being low and flat. At this time began its transference into a local deity and its endowment with the power of healing.

Visitors to Kukaniloko, the place of maternity, soon noticed that offerings were being made in a small way to the pinnacle rock, of flowers and food, burned candles and occasionally money. These increased until they became objectionable in their debris. Other stones in the vicinity were damaged by the candles and decaying offerings.

Less Conspicuous Place

"It was felt by the Daughters of Hawaii that this condition was alien to the locality and so it was decided to move the pinnacle rock to a less conspicuous place," stated Mrs. Julie Judd Swanzy, regent of the stone was moved to a less commanding position in Kukaniloko.

But still the offerings continued and it was decided to move the stone once more, this time to a much more obscure position. Alfred A. Wilson, manager of the Wahiawa Water Co., who also looks after Kukaniloko for the Daughters, took charge of it and had it placed in its present position. This was about 18 months ago.

But change did not affect belief. The miraculous healing powers of the stone were becoming more widely known and the money offerings increased. Children of Wahiawa found this a rich spot for forage. This was thought to be undesirable and Wilson caused a box to be built to receive the money.

Within the last three months there has been a tremendous "boom" in the popularity of the stone god. It is now said that on a weekend visitors number into the thousands and the offerings, two weeks ago, were over $200.

All the money has been deposited by Wilson in the Schofield bank and now totals $600. It is anticipated that it will be used to improve the surrounding grounds or in some sort of welfare work in Wahiawa.

A small white stone now rests beside the rock. This stone appears to be slightly different in composition from any others in the vicinity and as far as known has no legendary association. It is roughly in the form of a shoe and formerly was in a gulch near Wahiawa. At the time the rock was last moved, one of the Hawaiian workmen told Wilson that in a vision he thought that the white stone was the shoe of the rock and should be placed near it, which was done. The crowd rubs this stone as well as the taller one.

Appendix B

Early Consultation Letter, Handout, and 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 8, 2025

Subject: Early Consultation Request for Draft Environmental Assessment (DEA)
Fuel Storage Tank Improvements for the Wahiawā Wastewater Treatment Plant – Wahiawa, Island of Oʻahu
Tax Map Key 7-3-007:002

Dear Participant,

On behalf of the City and County of Honolulu, Department of Environmental Services, Townscape, Inc. is preparing a DEA, pursuant to Hawaiʻi Revised Statues, Chapter 343, and Hawaiʻi Administrative Rules (HAR), Chapter 11-200.1 for the Fuel Storage Tank Improvements for the Wahiawā Wastewater Treatment Plant ("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 9, 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.

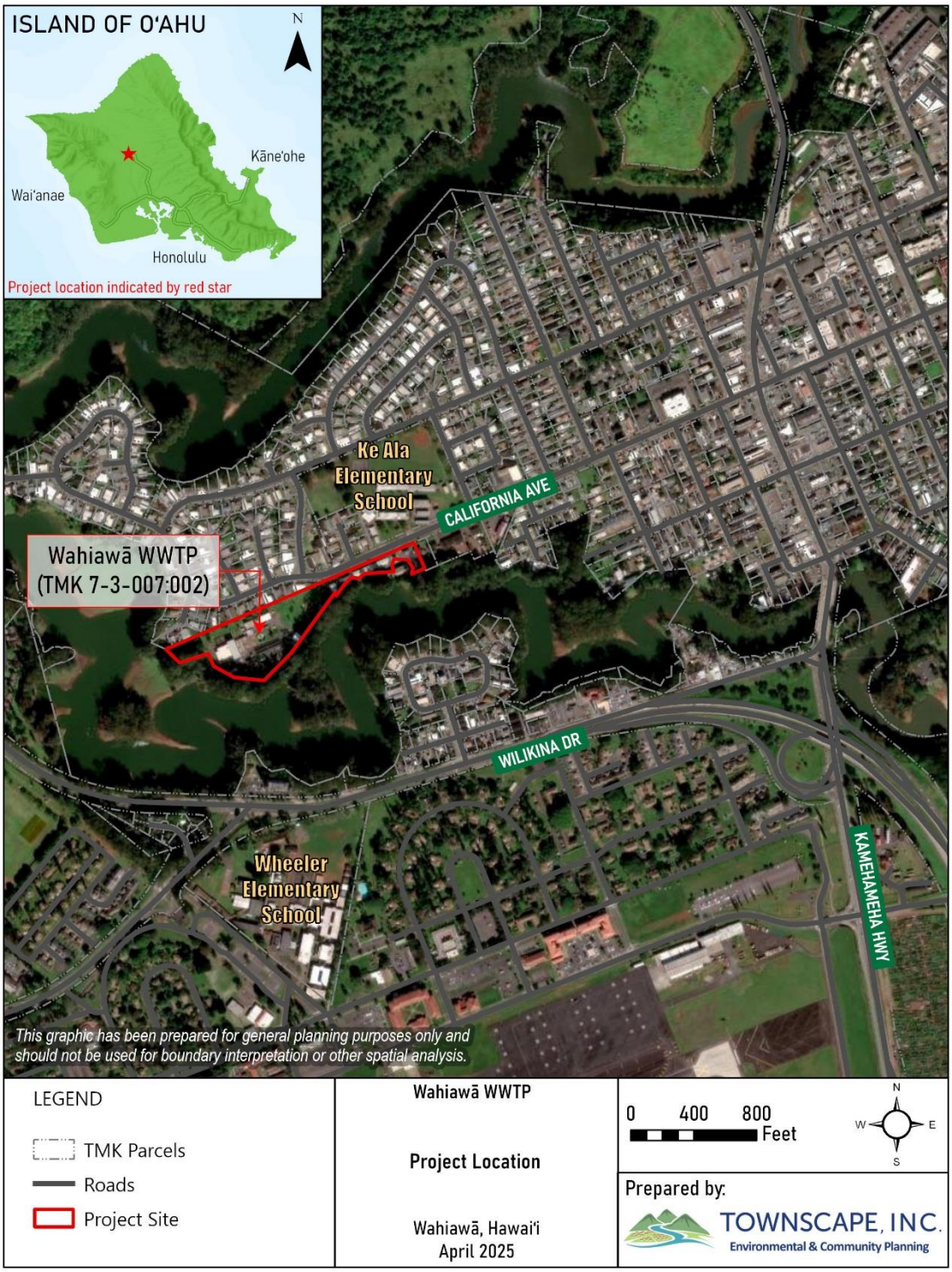
Gabrielle Sham
Associate Planner

Enclosure: Early Consultation Handout

Project Name	Fuel Storage Tank Improvements for the Wahiawā Wastewater Treatment Plant
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	111 California Avenue Wahiawā, Hawai'i 96786
Tax Map Key & Recorded Fee Owner	(1) 7-3-007:002, City & County of Honolulu
Project Area	8.1640 acres (or 355,624 square feet)
State Land Use District	Urban
Development Plan	Central O'ahu Sustainable Communities Plan
Special Management Area	Not in Special Management Area

Overview of Proposed Project

The Wahiawā Wastewater Treatment Plant (WWTP) has been in service since 1927. The proposed project involves replacing the existing underground fuel storage tank with a new 6,000-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
Ke Ala Elementary School
CALIFORNIA AVE
Wahiawā WWTP (TMK 7-3-007:002)
WILIKINA DR
Wheeler Elementary School
KAMEHAMEHA HWY
This graphic has been prepared for general planning purposes only and should not be used for boundary interpretation or other spatial analysis.
LEGEND
TMK Parcels
Roads
Project Site
Wahiawā WWTP
Project Location
Wahiawā, Hawai'i
April 2025
0 400 800
Feet
N
W
E
S
Prepared by:
TOWNSCAPE, INC.
Environmental & Community Planning

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 Wahiawā Wastewater Pump Station
Wahiawā, Island of O'ahu
Tax Map Key: 7-3-007: 002

In response to your letter received on April 15, 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

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 23, 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 Wahiawā Wastewater Treatment Plant – Wahiawā, Island of O'ahu
Tax Map Key 7-3-007:002

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 (938238)

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 8, 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) Storage Tank Improvements for the Wahiawā Wastewater Treatment Plant, TMK: (1) 7-3-007:002

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 following divisions: Aquatic Resources, Engineering, and the Commission on Water Resource Management 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)

STATE OF HAWAI'I | KA MOKU'ĀINA 'O HAWAI'I
DEPARTMENT OF LAND AND NATURAL RESOURCES | KA 'OIHANA KUMUWAIWAI 'ĀINA
COMMISSION ON WATER RESOURCE MANAGEMENT | KE KAHUWAI PONO
P.O. BOX 621
HONOLULU, HAWAII 96809

May 6, 2025

REF: RFD.6426.3

TO: Mr. Russell Tsuji, Administrator
Land Division

FROM: Ciara W.K. Kahahane, Deputy Director
Commission on Water Resource Management

SUBJECT: Fuel Storage Tank Improvements for Wahiawa, Oahu

FILE NO.: RFD.6426.3
TMK NO.: (1) 7-3-007:002

Thank you for the opportunity to review the subject document. The Commission on Water Resource Management (CWRM) is the agency responsible for administering the State Water Code (Code). Under the Code, all waters of the State are held in trust for the benefit of the citizens of the State, therefore all water use is subject to legally protected water rights. CWRM strongly promotes the efficient use of Hawaii's water resources through conservation measures and appropriate resource management. For more information, please refer to the State Water Code, Chapter 174C, Hawaii Revised Statutes, and Hawaii Administrative Rules, Chapters 13-167 to 13-171. These documents are available via the Internet at http://dlnr.hawaii.gov/cwrm.

Our comments related to water resources are checked off below.

- [ ] 1. We recommend coordination with the county to incorporate this project into the county's Water Use and Development Plan. Please contact the respective Planning Department and/or Department of Water Supply for further information.
- [ ] 2. We recommend coordination with the Engineering Division of the State Department of Land and Natural Resources to incorporate this project into the State Water Projects Plan.
- [ ] 3. We recommend coordination with the Hawaii Department of Agriculture (HDOA) to incorporate the reclassification of agricultural zoned land and the redistribution of agricultural resources into the State's Agricultural Water Use and Development Plan (AWUDP). Please contact the HDOA for more information.
- [ ] 4. We recommend that water efficient fixtures be installed and water efficient practices implemented throughout the development to reduce the increased demand on the area's freshwater resources. Reducing the water usage of a home or building may earn credit towards Leadership in Energy and Environmental Design (LEED) certification. More information on LEED certification is available at http://www.usgbc.org/leed. A listing of fixtures certified by the EAP as having high water efficiency can be found at http://www.epa.gov/watersense.
- [X] 5. We recommend the use of best management practices (BMP) for stormwater management to minimize the impact of the project to the existing area's hydrology while maintaining on-site infiltration and preventing polluted runoff from storm events. Stormwater management BMPs may earn credit toward LEED certification. More information on stormwater BMPs can be found at http://planning.hawaii.gov/czm/initiatives/low-impact-development/
- [ ] 6. We recommend the use of alternative water sources, wherever practicable.
- [ ] 7. We recommend participating in the Hawaii Green Business Program, that assists and recognizes businesses that strive to operate in an environmentally and socially responsible manner. The program description can be found online at http://energy.hawaii.gov/green-business-program.
- [ ] 8. We recommend adopting landscape irrigation conservation best management practices endorsed by the Landscape Industry Council of Hawaii. These practices can be found online at http://www.hawaiiscape.com/wp-content/uploads/2013/04/LICH_Irrigation_Conservation_BMPs.pdf.

- [X] 9. There may be the potential for ground or surface water degradation/contamination and recommend that approvals for this project be conditioned upon a review by the State Department of Health and the developer's acceptance of any resulting requirements related to water quality.
- [ ] 10. The proposed water supply source for the project is located in a designated water management area, and a Water Use Permit is required prior to use of water. The Water Use Permit may be conditioned on the requirement to use dual line water supply systems for new industrial and commercial developments.
- [ ] 11. The Hawaii Water Plan is directed toward the achievement of the utilization of reclaimed water for uses other than drinking and for potable water needs in one hundred per cent of State and County facilities by December 31, 2045 (§174C-31(g)(6), Hawaii Revised Statutes). We strongly recommend that this project consider using reclaimed water for its non-potable water needs, such as irrigation. Reclaimed water may include, but is not limited to, recycled wastewater, gray water, and captured rainwater/stormwater. Please contact the Hawai'i Department of Health, Wastewater Branch, for more information on their reuse guidelines and the availability of reclaimed water in the project area.
- [ ] 12. A Well Construction Permit(s) is (are) are required before the commencement of any well construction work.
- [ ] 13. A Pump Installation Permit(s) is (are) required before ground water is developed as a source of supply for the project.
- [ ] 14. There is (are) well(s) located on or adjacent to this project. If wells are not planned to be used and will be affected by any new construction, they must be properly abandoned and sealed. A permit for well abandonment must be obtained.
- [ ] 15. Ground-water withdrawals from this project may affect streamflows, which may require an instream flow standard amendment.
- [ ] 16. A Stream Channel Alteration Permit(s) is (are) required before any alteration can be made to the bed and/or banks of a steam channel.
- [ ] 17. A Stream Diversion Works Permit(s) is (are) required before any stream diversion works is constructed or altered.
- [ ] 18. A Petition to Amend the Interim Instream Flow Standard is required for any new or expanded diversion(s) of surface water.
- [ ] 19. The planned source of water for this project has not been identified in this report. Therefore, we cannot determine what permits or petitions are required from our office, or whether there are potential impacts to water resources.

- [ ] OTHER:

If you have any questions, please contact Ryan Imata of the Groundwater Regulation Branch at (808) 587-0225 or Katie Roth of the Planning Branch (808) 587-0216.

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 23, 2025

MEMORANDUM

TO: **DLNR Agencies:**
X Div. of Aquatic Resources (kendall.l tucker@hawaii.gov)
__Div. of Boating & Ocean Recreation
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 Aha Moku Advisory Committee (leimana.k.damate@hawaii.gov)

FROM: FOR Russell Y. Tsuji, Land Administrator
SUBJECT: Early Consultation Request for Draft EA Fuel Storage Tank Improvements for the Wahiawā Wastewater Treatment Plant
LOCATION: Wahiawā, Island of O'ahu; TMK: (1) 7-3-007:002
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 **May 7, 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: Brian J. Neilson- Administrator
Division: Aquatic Resources
Date: 05/07/2025

Attachments

STATE OF HAWAI'I | KA MOKU'ĀINA 'O HAWAI'I
DEPARTMENT OF LAND AND NATURAL RESOURCES DIVISION OF AQUATIC RESOURCES
1151 PUNCHBOWL STREET, ROOM 330
HONOLULU, HAWAII 96813

Date: 5/6/2025
DAR # 6865

MEMORANDUM

TO: Brian J. Neilson
DAR Administrator

FROM: Kate Gonzalez, Aquatic Biologist

SUBJECT: Early Consultation Request for Draft EA Fuel Storage Tank Improvements for the Wahiawa Wastewater Treatment Plant

Request Submitted by: Townscape, Inc.
111 California Avenue, Wai'anae, Island of O'ahu, 96786

Location of Project: TMK: 7-3-007:002

Brief Description of Project:

The Wahiawa Wastewater Treatment Plant (WWTP) has been in service since 1927. The proposed project involves replacing the existing underground fuel storage tank with a new 6,000-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

Comments:

☐ No Comments ☑ Comments Attached

Thank you for providing DAR the opportunity to review and comment on the proposed project. Should there be any changes to the project plan, DAR requests the opportunity to review and comment on those changes.

Comments Approved: _____ Date: 05/07/2025

Brian J. Neilson
DAR Administrator

DAR# 6865

Brief Description of Project

monitoring. The aboveground storage tank will supply the fuel required for the emergency
backup generator to service the WWPS.

DAR# 6865

Comments

Erosion/LBSP:

DAR recommends that Applicant implement the following mitigation measures for mitigation of erosion and land-based sources of pollution (LBSP).

Mitigation Measure 1. Applicant should consider the proximity of the proposed action to aquatic resources during design and construction. Landscape leveling should be such that long-term erosion and LBSP are minimized.

Mitigation Measure 2. During the construction phase of the proposed action, Applicant should utilize appropriate barriers (e.g., sediment barriers/bags, petroleum absorption diapers, etc.) to limit the amount of sediment or LBSP (e.g., petroleum products, chemicals, debris, etc.)
to the maximum extent practicable.

Mitigation Measure 3. Applicant should utilize environmentally inert construction materials to the extent practicable.

Mitigation Measure 4. Applicant should consider the weather while performing construction. Some work may be performed during low rain conditions, but all construction
should be halted during storm conditions or when storm conditions threaten the watershed. The
site should be secured during storm conditions so that runoff into nearby natural waterbodies is
unlikely.

DAR would like to request notification, photo documentation, and GPS coordinates for any occurrence where above-average amounts of sediment or pollution have entered the water or drainage systems, to assess the impact, if any.

Native Biota:

Artificial lighting from construction sites can disorient and confuse marine wildlife such as sea turtles, fish, crabs, and birds. The disruption of their natural rhythms can have long-lasting consequences on their survival and population dynamics.

DAR# 6865

Comments

DAR recommends that construction activities occur during the daylight hours to the extent possible. All outdoor lighting should be fully shielded and pointed downward. Outdoor lighting should be turned off when not necessary, and automatic sensors are recommended.

All on-site workers should be trained on recognizing State-listed waterbirds and seabirds (https://dlnr.hawaii.gov/wildlife/birds/). Should any State-listed waterbirds or seabirds be observed amid construction operations, all activities within a 100-foot radius (30 meters) must halt, and proximity to the bird must be avoided. Once the bird departs the area on its own, work can resume as usual.

Sedimentation:

Sedimentation can introduce suspended solids, nutrients, and pollutants into aquatic ecosystems, leading to turbidity, reduced light penetration, and impaired water quality. Implement erosion and sediment control measures such as silt fences, sediment traps, and erosion control blankets to minimize soil disturbance and sediment runoff during construction activities.

Vegetation buffers: Maintain vegetative buffers along coastal areas to stabilize soil, reduce erosion, and filter sediment-laden runoff before it reaches the ocean.

Stormwater management: Implement stormwater management practices such as permeable pavement, vegetated swales, and retention ponds to reduce stormwater runoff volume and pollutant loads.

Monitoring and compliance: Consider establishing monitoring protocols to assess sedimentation levels, water quality parameters, and compliance with regulatory requirements throughout the project lifecycle.

DAR# 6865

Comments

DAR would like to request notification, photo-documentation, and GPS-coordinates for any occurrence where above-average amounts of sediment have entered the water, in order to assess impact, if any.

Protected Marine Species:

In the event that protected species such as the Hawaiian monk seal, other marine mammal, or sea-turtle is observed in close proximity to the construction site, and the activities being conducted may be considered as a "negligent or intentional act which results in disturbing or molesting a marine mammal", contractors should take appropriate action to modify activities in order to avoid disturbance to the regular behavior and activities of the animal. Appropriate action would include but is not limited to ceasing construction activity until the animal leaves the area of its own accord. If a pup is observed in the area, particular caution should be taken including creating a larger buffer between construction and the animals.
All staff working on-site will receive training to recognize the Hawaiian monk seal and sea turtles, as well as learn the necessary procedures to follow if these species are observed.
Any interaction between a protected species and the construction and repair activity proposed should be reported to the NOAA Protected Species Division and State of Hawaii DOCARE:

NOAA Marine Mammal Response Coordinators (Oahu): 808-220-7802

NOAA Sea Turtles (Oahu): Monday-Friday, 7:30am-4pm NOAA National Marine Fisheries Service - PIFSC Marine Turtle Biology and Assessment Program: (808) 725-5730

State of Hawaii Department of Land and Natural Resources (DLNR) Division of Conservation and Resources Enforcement (DOCARE): 808-643-3567

Seabirds may nest near coastal areas. Prior to initiating construction and before restarting construction after a delay, qualified personnel with seabird biology experience conduct surveys of nearby areas for signs of active nesting or brooding. If a nest or brood is found, create a 100ft buffer around the area until it is no longer active.

DAR# 6865

Comments

DAR recommends that the applicant utilize best management practices to eliminate any potential for incidental entanglement of any marine organism. Entanglement prevention practices will include but are not limited to: minimizing the amount of in-water structures or components that may potentially cause entanglement during operations (loops, holes, slack lines).
At the end of each day and upon completion of the construction project, all construction-related debris that could potentially endanger species by causing entanglement shall be cleared from the construction area.

Barbed wire poses a large hazard for seabirds, especially fledgelings. Fences should not have barbed wire.

If incidental entanglement of protected species occurs DAR and the appropriate federal agency should be notified immediately.

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 23, 2025

MEMORANDUM

FROM: ~~TO:~~

DLNR Agencies:
_X_ Div. of Aquatic Resources (kendall.l.tucker@hawaii.gov)
__ Div. of Boating & Ocean Recreation
_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_ Aha Moku Advisory Committee (leimana.k.damate@hawaii.gov)

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

SUBJECT: Early Consultation Request for Draft EA Fuel Storage Tank Improvements for the Wahiawā Wastewater Treatment Plant

LOCATION: Wahiawā, Island of O'ahu; TMK: (1) 7-3-007:002

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 **May 7, 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: May 6, 2025

Attachments

DEPARTMENT OF LAND AND NATURAL RESOURCES
ENGINEERING DIVISION

LD/Russell Y. Tsuji
Ref: Early Consultation Request for Draft EA Fuel Storage Tank Improvements for the Wahiawā Wastewater Treatment Plant
Location: Wahiawā, Island of O'ahu
TMK(s): (1) 7-3-007:002
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: May 6, 2025

From: Castillo, Carlos <carlos.castillo@hawaiianelectric.com>
Sent: Thursday, April 24, 2025 4:52 PM
To: Gabrielle Sham <Gabrielle@townscapeinc.com>
Cc: Kakazu, Lisa <lisa.kakazu@hawaiianelectric.com>; Liu, Rouen <rouen.liu@hawaiianelectric.com>; Kuwaye, Kristen <kristen.kuwaye@hawaiianelectric.com>
Subject: Early Consultation Response – Draft Environmental Assessment - Fuel Storage Tank Improvements for the Wahiawā Wastewater Treatment Plant – Wahiawā, O'ahu

Dear Ms. Sham,

Thank you for the opportunity to review and comment on the proposed Fuel Storage Tank Improvements for the Wahiawā Wastewater Treatment Plant (WWTP), located at 111 California Avenue, Wahiawā, O'ahu (TMK: (1) 7-3-007:002). Hawaiian Electric Company has no objections to the proposed project.

We understand that the project, proposed by the City and County of Honolulu, Department of Environmental Services, includes replacing the existing underground fuel storage tank with a new 6,000-gallon aboveground fuel storage tank, replacing underground fuel piping, sensors, and the fuel monitoring panel, and integrating the system with the facility's SCADA network. The work is being undertaken in compliance with HAR 11-280.1, with a completion deadline of July 15, 2028.

The project area is currently served by Hawaiian Electric infrastructure. Depending on the final design and electrical load requirements, coordination may be required for system extensions or service upgrades. We recommend early engagement during the design phase to ensure adequate planning and service coordination.

If Hawaiian Electric facilities are located within or adjacent to the site, we respectfully request that access be maintained at all times for safe operation, maintenance, and emergency response.

We appreciate your continued coordination with Hawaiian Electric during the environmental review process and respectfully request to be kept informed as the project advances, particularly regarding any changes that may affect electrical infrastructure or service requirements.

If you have any questions or require further information, please contact me directly at (808) 285-6284.

Sincerely,
Carlos Castillo (WA3 – PTA)
Permits Planner
Hawaiian Electric Company
PO Box 2750
Honolulu, HI 96840-0001

Carlos Castillo
Permits Planner, T&D Engineering

C: 808.285.6284
Carlos.castillo@hawaiianelectric.com

Hawaiian Electric
PO Box 2750, Honolulu, HI 96840

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 28, 2025

2025/ELOG-691 (DC)

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

Dear Ms. Sham:

SUBJECT: Pre-Assessment Consultation
Draft Environmental Assessment (EA)
Wahiawā Wastewater Treatment Plant
111 and 127 California Avenue – Wahiawā
Tax Map Key: 7-3-007:002

This is in response to your letter, received April 10, 2024, requesting the Department of Planning and Permitting (DPP) provide comments on the upcoming Draft EA, as required under Chapter 343, Hawai'i Revised Statutes for the construction of an aboveground fuel storage tank at the above Project site. The subject parcel is eight acres and spilt zoned I-1 Intensive Industrial District (I-1 District) and P-1 Restricted Preservation District. The subject parcel is also in the State Land Use Urban District. The proposed work is within the I-1 District and inlcudes replacing the existing underground tank with a new 6,000-gallon aboveground fuel storage tank; and replacing the underground fuel piping, fuel monitoring panel, and all associated sensors (Project). The DPP has the following comments that should be included in the Draft EA:

1. Consistency with Long-Range Plans: The EA should address the proposed Project's consistency with the O'ahu General Plan and Central O'ahu Sustainable Communities Plan. The Draft EA should address how the proposed Project is consistent, inconsistent, or implements each of the relevent statements from the respective plans.

2. Compliance with the Land Use Ordinance (LUO): The Draft EA should ensure compliance with Revised Ordinances of Honolulu (ROH) Chapter 21, the LUO:

www.honolulu.gov/dpp/resources/ordinances.html

The Draft EA should identify the Project's consistency with the development standards of the I-1 District development standards and other applicable LUO regulations, including but not limitied to the following:

- Maximum allowable heights and building area;
- Required yard and height setbacks;
- Parking, loading, and vehicular circulation and maneuvering areas;
- Impervious surface coverage; and
- Landscape screening.

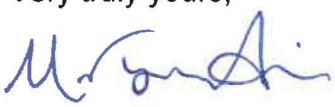
The Wahiawā Wastewater Treatment Plant is considered a public use and structure. The Project qualifies for a Zoning Waiver under ROH Section 21-2.130. In the case that any of the above-mentioned development standards are not met, a Zoning Waiver may be required. The Draft EA should state whether the Project will likely require a Zoning Waiver Permit.

3. Flood Zone: The Draft EA should identify the subject property's Zone as mapped by the Federal Emergency Management Agency and evaluate the proposed Project's compliance with the City's Flood Hazard Areas Ordinance (ROH Chapter 21A).

4. Alternatives: The Draft EA must include potential development alternatives and provide reasons why the proposed action is the most practical approach.

Thank you for the opportunity to comment. We may have comments regarding the Draft EA when more detailed plans are provided. Should you have any other questions, please contact David Cholak, of the Zoning Regulations and Permits Branch, at (808) 768-8026 or via email at david.cholak@honolulu.gov.

Very truly yours,



FOR Dawn Takeuchi Apuna
Director

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 28, 2025

SENT VIA EMAIL

Ms. Gabrielle Sham
gabrielle@townscapeinc.com

Dear Ms. Sham:

This is in response to your letter dated April 8, 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 Wahiawā Wastewater Treatment Plant.

Based on the information provided, The Honolulu Police Department does not have any concerns at this time.

If there are any questions, please call Major Robert Towne of our District 2 (Wahiawā) at (808) 723-8700.

Sincerely,

F— GLENN HAYASHI
Assistant Chief of Police
Support Services Bureau

JOSH GREEN, M.D.
GOVERNOR

KEITH T. HAYASHI
SUPERINTENDENT

STATE OF HAWAIʻI
DEPARTMENT OF EDUCATION
KA ʻOIHANA HOʻONAʻAUAO
P.O. BOX 2360
HONOLULU, HAWAIʻI 96804

OFFICE OF FACILITIES AND OPERATIONS

April 28, 2025

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

Re: Early Consultation for Draft Environmental Assessment Fuel Storage Tank Improvements for the Wahiawa Wastewater Treatment Plant, Wahiawa, Island of Oahu, Tax Map Key No.: (1) 7-3-007:002

Dear Ms. Sham:

Thank you for your letter dated April 8, 2025. The Hawaii State Department of Education (Department) has reviewed the information provided and offers the following comments regarding the fuel storage tank improvements for the Wahiawa wastewater treatment plant (Project).

Due to the proximity of Kaala Elementary School to the Project, the Department requests early consultation with the school administration to identify and minimize any potential effects on pedestrian and vehicular traffic that may impact school operations.

Should you have any questions, please contact Cori China of the Facilities Development Branch, Planning Section, at (808) 784-5080 or via email at cori.china@k12.hi.us.
We appreciate the opportunity to comment.

Sincerely,

Roy Ikeda
Interim Public Works Manager
Planning Section

RI:ctc

c: Ernest Muh, Complex Area Superintendent, Leilehua-Mililani-Waialua Complex Area
Facilities Development Branch

BOARD OF WATER SUPPLY
KA 'OIHANA WAI
CITY AND COUNTY OF HONOLULU

630 SOUTH BERETANIA STREET • HONOLULU, HAWAI'I 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

NĀ'ĀLEHU ANTHONY, Chair
JONATHAN KANESHIRO, Vice Chair
BRYAN P. ANDAYA
LANCE WILHELM
KĒHAULANI PU'U
EDWIN H. SNIFFEN, Ex-Officio
GENE C. ALBANO, P.E., Ex-Officio

May 2, 2025

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

Dear Ms. Sham:

Subject: Your Letter Dated April 8, 2025 Requesting Comments on the Draft Environmental Assessment Early Consultation for the Proposed Fuel Storage Tank Improvements for the Wahiawā Wastewater Treatment Plant at 111 California Avenue in Wahiawā – Tax Map Key: 7-3-007: 002

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 development. 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 29, 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 Wahiawā Wastewater Treatment Plant, located in Wahiawā, Island of O'ahu, TMK: (1) 7-3-007:002

Dear Ms. Sham:

Thank you for the opportunity to review and comment on the subject matter. In addition to our previous comments dated May 8, 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 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 23, 2025

MEMORANDUM

FROM: **DLNR Agencies:**
_X_ Div. of Aquatic Resources (kendall.l.tucker@hawaii.gov)
__ Div. of Boating & Ocean Recreation
_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_ Aha Moku Advisory Committee (leimana.k.damate@hawaii.gov)

TO: FOR Russell Y. Tsuji, Land Administrator
SUBJECT: Early Consultation Request for Draft EA Fuel Storage Tank Improvements for the Wahiawā Wastewater Treatment Plant
LOCATION: Wahiawā, Island of O'ahu; TMK: (1) 7-3-007:002
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 **May 7, 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 Prog. Mgr.
Division: Forestry and Wildlife
Date: May 20, 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

RYAN K.P. KANAKA'OLE
FIRST DEPUTY

CIARA W.K. KAHAHANE
DEPUTY DIRECTOR - WATER

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

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 20, 2025

Log no. 4985

MEMORANDUM

TO: IAN HIROKAWA, Acting Land Administrator
Land Division

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

SUBJECT: Early Consultation Request for Draft EA for Fuel Storage Tank Improvements for the Wahiawā Wastewater Treatment Plant; Wahiawā, O'ahu; TMK: (1) 7-3-007:002.

The Department of Land and Natural Resources, Division of Forestry and Wildlife (DOFAW) has received your early consultation request regarding the proposed fuel storage tank improvements for the Wahiawā Wastewater Treatment Plant located at 111 California Avenue, Wahiawā, O'ahu, within TMK: (1) 7-3-007:002. The proposed project involves replacing the existing underground fuel storage tank with a new 6,000-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 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 wastewater treatment plant. The proposed project area is 8.164 acres and is located location is within State Land Use District Urban and is not within in the Special Management Area.

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

The State listed 'ōpe'ape'a or Hawaiian hoary bat (*Lasiurus semotus*) could potentially occur at or in the vicinity of the project and may roost in nearby trees. Any required site clearing should be timed to avoid disturbance to bats during their birthing and pup rearing season (June 1 through September 15). During this period, woody plants greater than 15 feet (4.6 meters) tall should not be disturbed, removed, or trimmed.

Barbed wire should also be avoided in any construction as bats can become ensnared and killed by such fencing material during flight.

Artificial lighting can adversely impact seabirds which may pass through the area at night by causing them to become disoriented. This disorientation can result in seabird collision with manmade structures or the grounding of birds. For nighttime work that might be required, DOFAW recommends all lights used be fully shielded to minimize the attraction of seabirds. 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.

The State endangered pueo or Hawaiian short-eared owl (*Asio flammeus sandwichensis*) could potentially occur in the project vicinity. Pueo are most active during dawn and dusk twilights. Remove and exclude non-native mammals such as mongoose, cats, dogs, and ungulates from the nesting area. Minimize habitat alterations and disturbance during pueo breeding season. These birds nest on the ground, and active nests have been found year-round. Before any potentially disturbing activities—like clearing vegetation, especially ground-based disturbance, DOFAW recommends a qualified biologist conduct surveys during crepuscular hours. Observation surveys should be done at those times from vantage points where they can see the whole project area for 2-3 nights before construction is to start. If any breeding displays are observed, it is likely there could be a nest. If pueo nests are detected in the area, a buffer zone should be established in which no activity occurs within a minimum buffer distance of 100 meters until the nesting cycle is complete, and the chicks are capable of flight. O‘ahu Branch DOFAW staff should be notified at (808) 973-9778 of any nests or adult displayed breeding behavior.

State-listed waterbirds such as ae‘o or Hawaiian stilt (*Himantopus mexicanus knudseni*), ‘alae ke‘oke‘o or Hawaiian coot (*Fulica alai*), ‘alae ‘ula or Hawaiian gallinule (*Gallinula chloropus sandvicensis*), could potentially occur at or in the vicinity of the proposed project site. It is against State law to harm or harass these species. If any of these species are present during construction, all activities within 100 feet (30 meters) should cease and the bird or birds should not be approached. Work may continue after the bird or birds leave the area of their own accord. If a nest is discovered at any point, please contact the O‘ahu Branch DOFAW Office at (808) 973-9778 and establish a buffer zone around the nest.

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.

We recommend consulting the Oʻahu 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. Soil and plant material may contain detrimental fungal pathogens (like rapid ʻōhiʻa death), vertebrate and invertebrate pests (e.g. little fire ants, and coconut rhinoceros beetle), or invasive plant propagules (e.g. albizia, pampas grass, fireweed, etc.) that will harm our native ecosystems, and the unique native found within them. Therefore, DOFAW advances the guidance that all equipment and personal items—to include clothing and foot ware should be cleaned of excess soil and debris to minimize the risk of spreading invasive species. Additionally, DOFAW recommends minimizing the movement of plant or soil material between worksites. Suspect pests should be reported through the statewide pest hotline. Photos, videos, and locations can be shared at www.643pest.org or call: 743-PEST. All equipment, materials, and personnel should be cleaned of excess soil and debris to minimize the risk of spreading invasive species.

To prevent the spread of rapid ʻōhiʻa death (ROD), DOFAW requests that removal, pruning/trimming, and potentially injury to ʻōhiʻa trees be avoided as much as possible. Wounds serve as entry points for ROD fungus and increase the odds that the tree will be infected and die. Also, clean gear/tools, clothes, footwear, and vehicles before and after use. Make sure to removal all loose soil from the aforementioned items, spray gear/tools with 70% rubbing alcohol, and wash clothes with hot water and soap. Wash tires and undercarriages of all vehicles/machinery with a high-pressure water source. If ʻōhiʻa trees must be removed or pruned/trimmed, please conduct these activities on a still day to minimize blown sawdust and use a sharp saw to create chips rather than dust. Seal all wounds to these trees with a stump seal product (e.g. Spectricide, etc.). For more information, please consult https://cms.ctahr.hawaii.edu/rod.

The invasive coconut rhinoceros beetle (*Oryctes rhinoceros*) or CRB is widespread on the island of Oʻahu. CRB have been detected on other islands with moderate infestation on Kauaʻi, one incipient site on Hawaiʻi Island, and only one positive site on Maui in 2023. Hawaiʻi Department of Agriculture interim rule 24-1 restricts the movement of CRB-host material from the island of Oʻahu, 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 1) entire dead trees; 2) mulch, compost, trimmings, fruit and vegetative scraps, and 3) 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. Inspection and/or treatment approved by HDOA is mandatory before inter-island transport. For more information regarding CRB, please visit https://dlnr.hawaii.gov/hisc/info/invasive-species-profiles/coconut-rhinoceros-beetle/.

You should avoid importing to Oʻahu soil or other plant material from off-island. Soil and plant material may contain fungi (e.g., rapid ʻōhiʻa 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, high fine fuel load (grasses) surrounding the worksite, and risks of wildfire to listed species and native habitats, 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—like wielding in/near tall grass, it is recommended that you: 1) wet down the area before starting your task, 2) continuously wet down the area as needed, 3) have a fire extinguisher on hand, and 4) in the event that your vision is impaired, (i.e. welding goggles) have a spotter to watch for fire ignitions. Additionally, do not park any vehicles in or near tall grass as heat from the engine/exhaust may ignite dry vegetation.

DOFAW is concerned about impacts to vulnerable birds from nonnative predators such as cats, rodents, and mongooses. We recommend taking action to minimize predator presence; remove cats, place bait stations for rodents and mongoose, and provide covered trash receptacles.

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 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