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DEPARTMENT OF ENVIRONMENTAL SERVICES
CITY AND COUNTY OF HONOLULU

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APR 08 2019

KIRK CALDWELL
MAYOR



March 27, 2019

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DIRECTOR

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DEPUTY DIRECTOR

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DEPUTY DIRECTOR

IN REPLY REFER TO:
RE 19-019

Mr. Scott Glenn, Director
Office of Environmental Quality Control
Department of Health, State of Hawaii
235 S. Beretania Street, Room 702
Honolulu, Hawaii 96813

Dear Director Glenn:

Subject: Draft Environmental Assessment and Anticipated Finding of No Significant Impact for Kapaa Transfer Green Waste Handling Project, Kapaa Quarry Road, Oahu (Tax Map ID 4-2-015:005)

RECEIVED
19 MAR 25 10:52
OFFICE OF ENVIRONMENTAL
QUALITY CONTROL

With this letter, the City and County of Honolulu Department of Environmental Services hereby transmits the documents package for the Draft Environmental Assessment and Anticipated Finding of No Significant Impact for the Kapaa Transfer Station Renovation Project situated at TMK 4-2-015:005 in the Koolau Poko District, on the island of Oahu, for publication in the next available edition of the OEQC Environmental Notice

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

If there are any questions, please contact Josh Nagashima at (808) 768-3430 or by e-mail at josh.nagashima@honolulu.gov

Sincerely,

A handwritten signature in black ink, appearing to read "Lori", is written over a horizontal line.

Lori M.K. Kahikina, P.E.
Director

Enclosures

19-293

AGENCY PUBLICATION FORM

Project Name:	Kapaa Refuse Transfer Station Renovation
Project Short Name:	Green Waste Transfer Facility
HRS §343-5 Trigger(s):	The use of county or state funds and lands
Island(s):	Oahu
Judicial District(s):	Koolaupoko Oahu
TMK(s):	4-2-015:005
Permit(s)/Approval(s):	SMA Permit, Building Permit, Grading and Grubbing Permit, Department of Health - Solid Waste Management Permit (modifications), Noise Permit (if needed)
Proposing/Determining Agency:	Department of Environmental Services - Refuse Division; 1000 Uluohia Street, Suite 201, Kapolei, Hawaii 96707
Contact Name, Email, Telephone, Address	Josh Nagashima josh.nagashima@honolulu.gov tel: (808) 768-3430. Department of Environmental Services, 1000 Uluohia Street, Suite 201, Kapolei, Hawaii 96707
Accepting Authority:	(for EIS submittals only)
Contact Name, Email, Telephone, Address	
Consultant:	AECOM; 1001 Bishop St., Suite 1600, Honolulu, HI 96813
Contact Name, Email, Telephone, Address	Jeff Merz, jeff.merz@aecom.com tel: (808) 356-5318. 1001 Bishop Street 16 th Floor, Honolulu, Hawaii 96813

Status (select one) X DEA-AFNSI**Submittal Requirements**

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

 FEA-FONSI

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

 FEA-EISPN

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

 Act 172-12 EISPN
("Direct to EIS")

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

 DEIS

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

 FEIS

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

 FEIS Acceptance
Determination

The accepting authority simultaneously transmits to both the OEQC and the proposing agency a letter of its determination of acceptance or nonacceptance (pursuant to Section 11-200-23, HAR) of the FEIS; no comment period ensues upon publication in the Notice.

FEIS Statutory
Acceptance

Timely statutory acceptance of the FEIS under Section 343-5(c), HRS, is not applicable to agency actions.

 Supplemental EIS
Determination

The accepting authority simultaneously transmits its notice to both the proposing agency and the OEQC that it has reviewed (pursuant to Section 11-200-27, HAR) the previously accepted FEIS and determines that a supplemental EIS is or is not required; no EA is required and no comment period

ensues upon publication in the Notice.

- ____ Withdrawal Identify the specific document(s) to withdraw and explain in the project summary section.
- ____ Other Contact the OEQC if your action is not one of the above items.

Project Summary

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

The City and County of Honolulu, Department of Environmental Services (ENV) proposes to improve the existing green waste handling process at the Kapaa Transfer Station, Kailua, Oahu. Site improvements would include a new loading bay to be used exclusively for green waste, a new knuckle boom crane for compacting material in top-loaded trucks, an integral truck scale within the proposed loading bay, a metal frame building over the new loading bay and crane, a new concrete pad for public off-loading of green waste, construction and upgrading of retaining walls, upgraded stormwater control systems, and relocation of existing utilities as needed. The approximately one acre project site is part of the larger Corporation Yard Facility owned by the City and County of Honolulu. The project's use of county funds and lands triggers the environmental documentation requirements as set forth in HRS Chapter 343 and HAR 11-200.

**DRAFT
ENVIRONMENTAL ASSESSMENT FOR
PROPOSED KAPA'A REFUSE TRANSFER STATION
RENOVATION**



**City & County of Honolulu
Department of Environmental Services
Refuse Division**
1000 Ulu'ohia Street, Suite 201
Kapolei, Hawai'i 96707-2040

March 2019

**DRAFT
ENVIRONMENTAL ASSESSMENT FOR
PROPOSED KAPA'A REFUSE TRANSFER STATION
RENOVATION**

Prepared for:



**City & County of Honolulu
Department of Environmental Services
Refuse Division
1000 Ulu'ohia Street, Suite 201
Kapolei, Hawai'i 96707-2040**

Prepared by:

**AECOM Technical Services, Inc.
1001 Bishop Street, Suite 1600
Honolulu, Hawai'i 96813-3698**

March 2019

PROJECT SUMMARY

Agency	City and County of Honolulu Department of Environmental Services
Contact	Josh Nagashima, City and County of Honolulu Department of Environmental Services
Location	Ko‘olau Poko District, O‘ahu
Tax Map Key	4-2-015:005
Parcel Land Area	19.67 acres
Recorded Fee Owner	City and County of Honolulu
Existing Use	Kapa‘a Quarry Transfer Station
Proposed Use	Addition to a green waste handling facility
Community Plan	Ko‘olau Poko – Institutional
State Land Use	Urban District
County Zoning	P-2 General Preservation
Special Management Area	Yes
Flood Zone	<ul style="list-style-type: none"> • Zone D – Unstudied areas where flood hazards are undetermined, but flooding is possible. • Zone X – Area outside the 1% annual chance floodplain and areas protected from the 1% annual chance flood by levees.
Agency Determination	Anticipated Finding of No Significant Impact
Trigger for an Environmental Document under HRS 343	Use of County Lands, Use of County Funds
Proposing Agency	City and County of Honolulu Department of Environmental Services
Project Name	Kapa‘a Refuse Transfer Station Renovation
Project Location	The proposed project is located at the base of the former Kapa‘a Sanitary Landfill on a site formerly mined as a rock quarry. It is situated mauka of Kawainui Marsh and adjacent to Kapa‘a Quarry Road in the Ko‘olau Poko District, O‘ahu, Hawai‘i.
Proposed Action	Commitment of City funds for the design, construction, and operation of Kapa‘a Refuse Transfer Station – green waste handling facility. The estimated construction cost for the project is to be determined. It is estimated that the project will require 9 months to complete.

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ACRONYMS AND ABBREVIATIONS

°C	degree Celsius
°F	degree Fahrenheit
AAQS	ambient air quality standards
amsl	above mean sea level
BMP	best management practice
BWS	Board of Water Supply
CDP	census-designated place
City	City and County of Honolulu
CO	carbon monoxide
CRB	coconut rhinoceros beetle
CZM	Coastal Zone Management
dba	decibel (A-weighted scale)
DLNR	Department of Land and Natural Resources, State of Hawai'i
DOH	Department of Health, State of Hawai'i
DPP	Department of Planning and Permitting, City and County of Honolulu
DPR	Department of Parks and Recreation, City and County of Honolulu
DSP	Division of State Parks, Department of Land and Natural Resources, State of Hawai'i
EA	Environmental Assessment
EIS	Environmental Impact Statement
EMOP	Emergency Operations Plan
EMS	emergency medical services
ENV	Department of Environmental Services, City and County of Honolulu
EPA	Environmental Protection Agency, United States
FIRM	Flood Insurance Rate Map
GW	green waste
HAAQS	Hawai'i Ambient Air Quality Standards
HC&D	Honolulu Construction & Draying Company
HAR	Hawai'i Administrative Rules
HEPA	Hawai'i Environmental Policy Act
HRS	Hawai'i Revised Statutes
HSP	Hawai'i State Plan
LUO	Land Use Ordinance
LWCF	Land and Water Conservation Fund
mph	mile per hour
MSW	municipal solid waste
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
no.	number
NO ₂	nitrogen dioxide
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
O ₃	ozone
OEQC	Office of Environmental Quality Control

Pb	lead
ROH	Revised Ordinances of Honolulu
SHPD	State Historic Preservation Division
SIHP	State Inventory of Historic Properties
SMA	Special Management Area
SO ₂	sulfur dioxide
SOP	standard operating procedure
SWPCP	Storm Water Pollution Control Plan
U.S.	United States
UHI	urban heat island
USGS	United States Geological Survey

1.0 SETTING, PURPOSE AND NEED, AND PROJECT DESCRIPTION

1.1 SITE LOCATION AND SETTING

The project parcel is situated mauka of Kawainui Marsh, and accessible by Kapa'a Quarry Road to Kapa'a Quarry Place to the north, and to Kalaniana'ole Highway (Highway 61) approximately one mile to the south (Figure 1.1-1). Other properties near the project site include a large developed industrial area, a cleared field used for vehicle storage, and the Kawainui Model Airplane Field in Kawainui Marsh. These three properties are all near the intersection of Kapa'a Quarry Road and Kapa'a Quarry Place. Kailua town is across the marsh, approximately one mile makai of the project site.

While relatively flat near the Kapa'a Quarry Road frontage, the parcel slopes gradually, then abruptly, at its mauka boundary. This mauka boundary is located near the edge of the former Kapa'a Sanitary Landfill site that, prior to its use as a landfill, was a rock quarry. The project site itself once housed the Honolulu Construction & Draying Company (HC&D) quarry and rock crushing plant. The plant consisted of a conveyor system, gravel piles, a loading shed, lockers, steel hoppers and various shop buildings. Original maps of the facilities also show what appears to be a concrete tunnel extending below one gravel pile (Sanborn Map Company 1953). However, none of these facilities currently exist on the site and evidence of the tunnel cannot be found.

In addition to the existing 31,000-square-foot Refuse Transfer Station building (Photo 1.1-1), the 20-acre parcel is the site of the Corporation Yard Facility owned by the City and County of Honolulu (City). The Corporation Yard Facility consists of an Automotive Equipment Service Building, Refuse Collection Building, outdoor storage areas, and small accessory buildings (Photo 1.1-2). The grounds at the site are mostly cleared ground and some paved areas, and contain various buildings associated with City operations. Numerous open storage areas are located near the Refuse Transfer Station. These storage areas are designated for green waste (GW), household white bulk goods, and scrap metal. The remainder of the site is vegetated with grass, shrubbery, and some larger trees, with some cleared areas for vehicle maneuvering and parking.





Photo 1.1-1: Existing Refuse Transfer Station Building



Photo 1.1-2: Existing Corporation Yard Facility Buildings

1.2 CURRENT GREEN WASTE FACILITY OPERATIONS

The Kapa'a Refuse Transfer Station initially became operational in 1988. Among other uses, the Station serves as the main refuse collection and transfer station for the windward geographical area of the island of O'ahu, between the North Shore and Makapu'u Point. This transfer station accepts commercial, residential, and municipal solid waste (MSW) and GW. Most of the waste is collected, deposited, or stored within the covered Refuse Transfer Station building or in the aforementioned outdoor storage areas, and segregated by type of waste.

GW from commercial and government generators is restricted or banned from disposal. Commercial and government trucks are limited to a maximum of

10% GW per load at H-POWER and the Kapa'a Refuse Transfer Station, and GW is completely banned from disposal at the Waimānalo Gulch landfill. Local composting facilities accept this material for a fee and process it into soil amendment products. Restrictions on GW began in 1994, and the ban became effective January 2003 (CCH ENV 2013).

The City commenced residential GW recycling at Kapa'a Refuse Transfer Station in 2009. Included are GW from City curbside collection, Lā'ie and Waimānalo Convenience Centers, and self-haul householders. Commercial GW generators, government agencies, homeowners' associations, and nonprofit organizations are required to use GW recycling facilities for the disposal of their GW. GW recycling at the Station is limited to receiving, storing, loading, and hauling of GW to the GW recycling facility. Approximately 3,175 tons per month of GW are received at the Station.

1.2.1 Curbside Collection and Convenience Center Loads

Curbside collection GW is received in the Station pit during the normal operating hours. Curbside MSW deliveries are completely cleared away from the drop-off wall prior to unloading of GW deliveries (to minimize GW contamination). Immediately after the GW is unloaded and before any MSW deliveries are allowed to unload, the wheel loader operator moves the GW into the designated GW storage area in the pit or loads the transfer trailer. The ramp attendants regulate incoming truck traffic to facilitate the above dumping sequence. Receiving curbside collection GW at the outdoor GW staging area or storing GW in the pit is often necessary when incoming volumes are greater than usual.

1.2.2 Self-Haul Householder Loads

An outdoor staging area south of the Station is available for receiving GW from self-haul householders. Concrete traffic barriers are used to demarcate the approximate 90 feet by 30 feet containment area. Householders are directed to reverse back to the containment area to dump their GW. A wheel loader, backhoe, or excavator is used to load the accumulated GW into a trailer. The trailer is hauled directly to the GW recycler or is emptied in the transfer station pit as necessary and stored, and then later loaded into a GW transfer trailer for hauling to Hawaiian Earth Recycling, a private GW recycler (currently in Wahiawā). The outdoor GW staging area is staffed by an equipment operator to maintain the containment, and a ramp attendant to screen, direct, and regulate the public (CCH DFM 2016).

1.3 PURPOSE AND NEED FOR PROJECT

The City Department of Environmental Services (ENV) mission is to "work in partnership with the residents of the City to make sure our island has a clean, safe environment" (CCH ENV 2019). Pursuant to Revised Ordinances of Honolulu (ROH) Section 9-1.7, the City has exercised its authority to control the flow of waste in the public interest by restricting certain wastes.

The purpose and need of the Proposed Action are to address current inefficiencies and constraints associated with handling of GW at the Station. The Proposed Action

will make the GW handling operations more mechanized, efficient, and expedient. Implementation of the Proposed Action would ensure that GW is moved more efficiently to haul trucks, as well as reduce the overflow pile of GW that accumulates outside of the Station due to lack of space. This enhanced GW process would result in reduced GW material handling efforts by City staff and provide a third direct top-loading mechanical boom crane in addition to the existing two, resulting in faster loading of haul trucks.

1.4 PROPOSED ACTION

The Proposed Action is primarily focused on the design and construction of a metal frame building to house the installation of a new knuckle boom crane, as well as a loading bay with a scale for trucks. Specifically, on the site where GW is currently loaded into top-loaded trucks, site improvements would include:

- One new knuckle boom crane for compacting material in top-loaded trucks
- Integral truck scale within the loading bay
- Metal frame and roofing over the new loading bay and crane
- New concrete retaining walls and foundations
- Adjacent concrete pad with areas for public off-loading of GW and pushing GW (with a city-operated loader) directly into the loading bay
- Restructuring of the existing retaining wall to improve access to the south entrance of the Refuse Transfer Station building
- Relocation of existing utilities
- New lighting
- Demarcation (paint, signage) to more clearly delineate controlled operating and staging areas
- Removal of 11 trees

Figure 1.4-1 shows the limits of the project area on this site and the existing facilities near the proposed project area.

A conceptual site layout providing detail on the configuration of the new metal building, its position in relation to the Refuse Transfer Station building, utilities, and drainage, and elevations of the proposed building is shown in Appendix B.



Figure 1.4-1: Site Plan

1.5 NEED FOR AN ENVIRONMENTAL ASSESSMENT

No federal funds, permits, or approvals are needed for this project, so compliance with the National Environmental Policy Act (NEPA) is not required. This Environmental Assessment (EA) was prepared in accordance with Hawaiʻi Revised Statutes (HRS) Chapter 343, as implemented by Hawaiʻi Administrative Rules (HAR) Title 11, Chapter 200. These requirements apply to the City's Proposed Action triggered by its use of City lands and funds. The Proposed Action is not an exempt action as defined in HAR § 11-200-8.

The HRS Chapter 343 process was initiated with the pre-assessment consultation process that occurred between December 2018 and January 2019. Comments and input from that pre-assessment consultation process identified specific issues and informed the subsequent level of analysis in this EA. Upon publication of this draft EA in the Office of Environmental Quality Control (OEQC) *Environmental Notice* bulletin, written public comments are requested and received over a 30-day review period. The subsequent final EA will contain all written comments received during the 30-day period, as well as responses to each. Concerns and topics raised from the draft EA will be addressed in their respective chapters in the final EA.

1.6 PREVIOUS ENVIRONMENTAL REVIEWS ON THE PROJECT SITE

In 1988, the Department of Public Works, Refuse Division of the City (predecessor to the ENV) completed an Environmental Impact Statement (EIS) for the construction of the original Refuse Transfer Station and accessory uses at the current project site (CCH DPW 1988). The larger 20-acre parcel on which the then-new Refuse Transfer Station was to be situated already contained an Automotive Equipment Service Building and Refuse Collection Building. The current project site would be located contiguous to the existing Refuse Transfer Station building.

1.7 REGULATORY OVERVIEW AND REQUIRED PERMITS

No federal funds are associated with this project and no federal permits are required. The following City permits are associated with this project:

- Solid Waste Management Permit Number (No.) TF-0015-15 Kapaʻa Refuse Transfer Station Kapaʻa Quarry Access Road, Kailua, Oʻahu (Tax Map Key 4-2-015:004 and 005). The City will be required to update the operating plans or amend the existing State of Hawaiʻi Department of Health (DOH) permit to construct and operate the facilities associated with the Proposed Action.
- The site currently has a National Pollutant Discharge Elimination System (NPDES) MS4 Permit No. HI S000002 and a 2016 Storm Water Pollution Control Plan (SWPCP). As the area planned for disturbance for the Proposed Action encompasses less than an acre, a new NPDES permit is not required. However, a SWPCP is required as this facility has been classified as industrial under the City's permit. The 2016 SWPCP will be updated in compliance with HAR 11-55 to accommodate for the new proposed development.

- The Proposed Action is within the Special Management Area (SMA) and will require the issuance of a SMA permit (major) based on the valuation of the proposed expansion to the waste handling facility expected to exceed the \$500,000 threshold. An SMA permit (87-SMA-88 Major) was issued for the original construction of the Refuse Transfer Facility building. A full discussion of the permit requirements and procedures is in Section 3.3 of this document.

Non-discretionary building, grading, and grubbing permits from the City will also be required as part of the construction phase.

1.8 ALTERNATIVES CONSIDERED – NO ACTION

The No Action alternative does not meet the present and future need for a safe, modern, and efficient work place to provide the designated public services. The Proposed Action would allow a more efficient, automated GW handling process. The No Action alternative is not deemed a viable alternative to meet the purpose and need of this project. However, the No Action alternative is discussed where appropriate in the various sections of this EA, primarily as the status quo from which to frame the discussion of impacts from the Proposed Action. Aside from the Proposed Action and No Action alternatives, no other feasible options could be formulated and are therefore not being considered.

1.9 PROJECT FUNDING AND COST

This project, like most capital improvement projects at City facilities, will be funded by the City Capital Improvement Program budget with eventual operational funding through the City operating program and budget. Funding sources from either federal or state sources are not anticipated. Estimated costs for implementation of this project have not been determined at this time.

1.10 PROJECT SCHEDULE

Table 1.10-1: Project Schedule

Task	Duration (Days)	Start	Finish
Draft Design	150	August 29, 2018	January 26, 2019
Final Design and Bid Package	95	January 26, 2019	May 1, 2019
Environmental Assessment	575	May 1, 2018	August 8, 2019
SMA Use Permit	155	June 3, 2019	October 25, 2019
Construction Services	180	September 2019	February 2020

Source: AECOM 2019 (this report).

2.0 DESCRIPTION OF THE AFFECTED ENVIRONMENT, POTENTIAL IMPACTS, AND PROPOSED MITIGATION

2.1 CLIMATE AND AIR QUALITY

2.1.1 Affected Environment

2.1.1.1 CLIMATE

The project area is located in the foothills of eastern O'ahu, within the Kailua area of the City and County of Honolulu. The climate in the project area is characterized by abundant sunshine, relatively constant temperature, infrequent storms, moderate humidity, and prevailing northeasterly trade winds. Average wind speeds range from 4.0 to 9.7 miles per hour (mph) throughout the year (Giambelluca et al. 2013). The two dominant seasons are summer from May to October, and winter from November to April. Generally, summer months are warmer (averaging 77.0 degrees Fahrenheit [°F] or 26 degrees Celsius [°C]), while winter months are cooler (averaging 71.1°F or 21.7°C). The site has an average annual rainfall of 47 inches per year, with highest rainfall occurring in the winter and the driest months occurring in the summer (Giambelluca et al. 2013). The relative humidity ranges between 68% and 72%. The northeasterly prevailing trade winds bring cool air from the north Pacific most of the year, with the occasional exception of Kona or southerly winds that bring warm and humid weather primarily during winter months.

Land cover in the project area is typified with Hawaiian Introduced Deciduous Shrubland and light industrial land use. High intensity development characterized by a high amount of impervious surfacing is known to create an urban heat island (UHI) effect. The UHI effect occurs as a result of impermeable and dry surfaces. The effect of UHIs is reduced with the use of vegetation, landscaping, and water features. Because the project site currently features grassy, permeable, and maintained landscaping with high heat capacity, the UHI is reduced in the project vicinity (EPA 2017).

2.1.1.2 AIR QUALITY

Both anthropogenic (human-induced) and natural sources generate air pollutants. Industrial sources such as power plants and refineries are among the most intensive producers of air pollution, while mobile sources like cars and trucks create diffused pollution over a broader area through volume. Additionally, volcanic eruptions and other climate-influencing natural processes can emit pollutants that harm our health. Most commercial, industrial, and transportation activities in Hawai'i and their associated air quality effects occur on the island of O'ahu, where the project area is located.

The United States (U.S.) Environmental Protection Agency (EPA) sets National Ambient Air Quality Standards (NAAQS) for detection of certain harmful pollutants using two standards for six contaminants, in compliance with the Clean Air Act of 1963. NAAQS regulates six criteria pollutants: carbon monoxide (CO), nitrogen dioxide (NO₂), ozone (O₃), particulate matter (PM₁₀ and PM_{2.5}), lead (Pb), and sulfur dioxide (SO₂). NAAQS have primary standards that encompass the health of vulnerable populations, namely asthmatics, children, and the elderly. The secondary standards maintain the public welfare, including the prevention of economic damage to animals, crops, vegetation, and buildings. DOH enforces the Clean Air Act through the Hawaiʻi Ambient Air Quality Standards (HAAQS).

The DOH monitors ambient air quality conditions across the State. Although the DOH lacks air monitoring stations on the windward side of Oʻahu, two DOH monitoring stations are located in downtown Honolulu, within 10 miles of the site. One exists on the roof of the DOH building at Kīnaʻu Hale; the other is situated at the Ānuenue Fisheries Research Center of the State of Hawaiʻi Department of Land and Natural Resources (DLNR), Division of Aquatic Resources. The EPA designates those areas where measured ambient levels of a criteria pollutant concentration are below the NAAQS as being in “attainment,” per the Clean Air Act. Where a criteria pollutant level equals or exceeds the NAAQS, the EPA categorizes that area as being in “nonattainment.” For all criteria pollutants, the published monitoring data note no exceedances of the NAAQS or HAAQS in the past 3 years.

2.1.2 Potential Environmental Consequences and Mitigation Measures

2.1.2.1 CONSTRUCTION

Short- and long-term impacts to air quality in the project area could result from the temporary operation of machinery associated with vegetation clearing, vegetation processing and disposal, site grading, and construction activities. Long-term impacts may be associated with vehicle emissions.

Federal ambient air quality standards (AAQS) have been established by the EPA for six criteria pollutants: CO, NO₂, SO₂, Pb, O₃, and concentrations of particulate matter less than 10 microns (PM₁₀) and 2.5 microns (PM_{2.5}). The State of Hawaiʻi has established AAQS for these pollutants that are somewhat more stringent than federal standards under HAR Title 11, Chapter 59. Table 2.1-1 compares state and federal AAQS.

Table 2.1-1: State and Federal Primary Ambient Air Quality Standards

Air Pollutant	Hawai'i Standard	Federal Primary Standard
Carbon Monoxide		
1-hour average	9 ppm	35 ppm
8-hour average	4.4 ppm	9 ppm
Lead		
3-month average	1.5 µg/m ³	0.15 µg/m ³ (running 30-month)
Nitrogen Dioxide		
1-hour average	None	100 ppb
Annual average	0.04 ppm	53 ppb
Particulate Matter (PM₁₀)		
24-hour block average	150 µg/m ³	150 µg/m ³
Annual average	50 µg/m ³	None
Particulate Matter (PM_{2.5})		
24-hour block average	None	35 µg/m ³
Annual average	None	12 µg/m ³
Ozone		
8-hour rolling average	0.08 ppm	0.070 ppm
Sulfur Dioxide		
1-hour average	None	75 ppb
3-hour block average	0.5 ppm	—
24-hour block average	0.14 ppm	None
Annual average	0.03 ppm	None
Hydrogen Sulfide		
1-hour average	25 ppb	None

Source: DOH CAB 2015.

— no data

µg/m³ microgram per cubic meter

ppb part per billion

ppm part per million

Air quality in the project area is primarily affected by vehicular CO emissions, and to a lesser extent by nearby industrial uses. CO emissions are generated by traffic on the roads surrounding the project area and vehicles traveling into the project site. Dominant northeasterly trade winds may push on-site vehicular emissions downwind, along with emissions from nearby industrial and commercial uses, away from the project area. The Air Quality Study within the 1988 EIS for the transfer station elaborates further on the lack of air pollution (CCH DPW 1988).

All construction work would be in conformance with the air pollution control standards contained in HAR Title 11, Chapter 59, Ambient Air Quality Standards, and Chapter 60.1, Air Pollution Control, which would minimize air quality emissions.

Additionally, the Proposed Action should not exceed standards set forth in Chapter 11-60 (Sections 11-60-55 and 11-60-4). Dust from short-term construction activities would be controlled by watering the construction site. In addition, the prevailing northeast trade winds would carry airborne particles towards the mauka landfill area. Paving improvements related to the Station would mitigate present dust generation at the site due to existing barren undeveloped lands and unpaved roadways. In addition to the lack of significant impacts on air quality due to the construction phase, the construction of the Proposed Action would have a less than significant impact on the climate on or around the project site.

2.1.2.2 OPERATION

Once construction is completed, the Proposed Action would not generate a major direct source of air pollutants. Future levels of traffic entering and leaving the project site are expected to remain the same as current levels. Operation of the new knuckle boom crane would not generate any emissions as it is electrically powered. Along with no anticipated changes to air quality, operation of the Proposed Action would have a less than significant impact on the climate.

2.1.2.3 NO ACTION ALTERNATIVE

Under existing circumstances, future daily volume of vehicles entering the transfer facility site is expected to remain the same. No significant impact to air quality and climate would result from the No Action alternative.

2.2 TOPOGRAPHY, GEOLOGY, AND SOILS

2.2.1 Affected Environment

2.2.1.1 TOPOGRAPHY

As described in the 1988 EIS for the original waste transfer facility, the entire project area has been extensively altered by the nearby former quarrying operation and landfill activity. The Corporation Yard Facility is at an elevation ranging from 25 to 30 feet above mean sea level (amsl), with the elevation dropping to about 10 feet amsl along Kapa'a Quarry Road and rising to 40 feet along the service road leading to the former landfill disposal area. Natural slopes are 1% or less across the former quarry/landfill area, according to the *Hawaii Soil Atlas* (UHM 2018). Soils and topography at the site are shown on Figure 2.2-1.

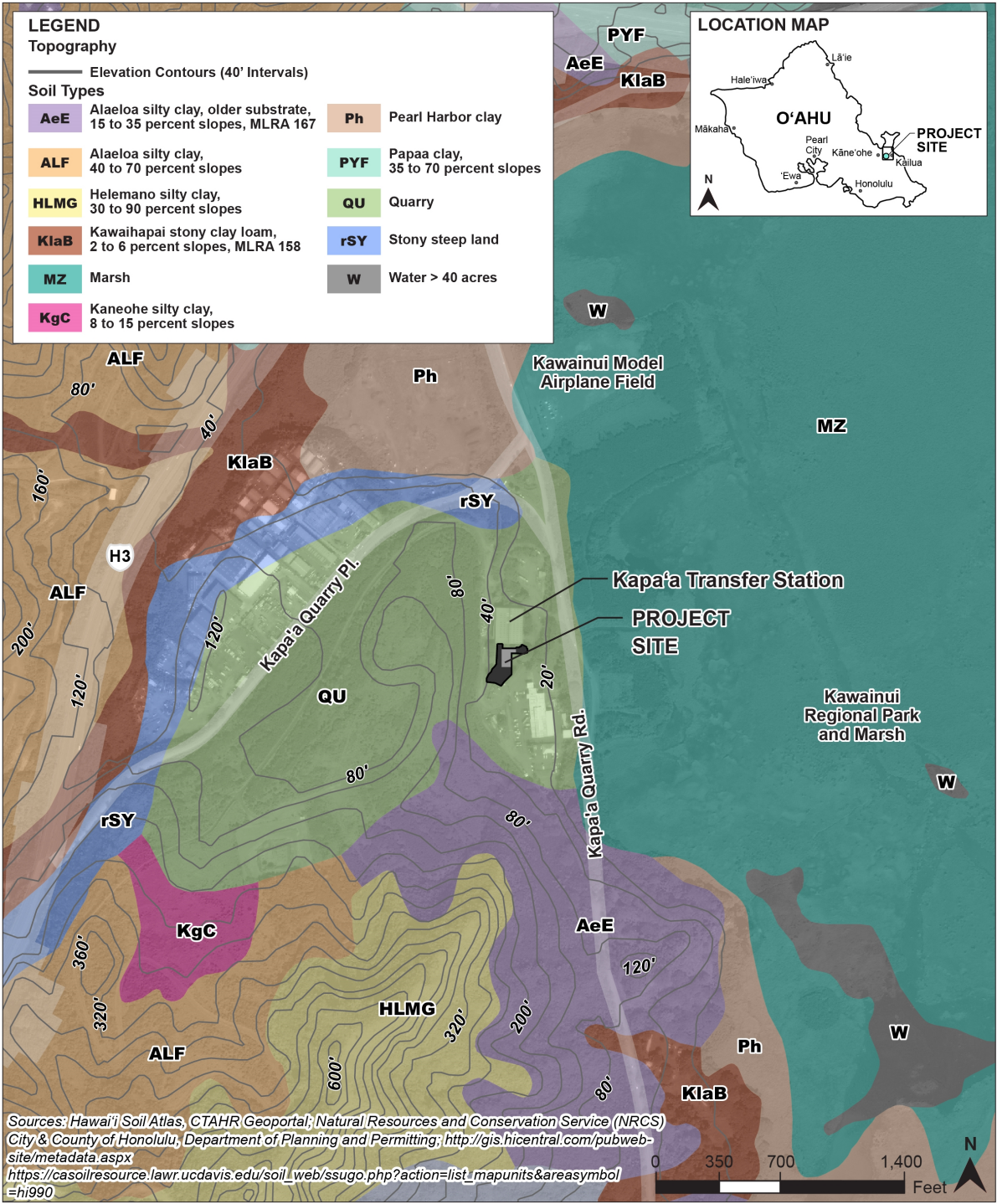


Figure 2.2-1: Topography and Soil Types

2.2.1.2 GEOLOGY/SOILS

The Proposed Action is located in the caldera of the extinct Ko'olau volcano on O'ahu island. Formed 2.9 million years ago, the immense volcano once topped 6,000–9,000 feet in height and stretched 8 miles long by 4 miles wide (Carson and Clague 1995). Owing to cataclysmic slope failures and subsidence over successive millennia, it eroded into its remaining basalt and derived features that comprise the Ko'olau Range today (Hunt 1996). The caldera reaches from the border of Waimānalo to Kāne'ohe (CCH DPW 1988); the caldera's mass is approximately underneath Kawainui Marsh. The castle vent is an eroded cinder cone. The old Kapa'a Quarry and the current Transfer Station are located on this basalt flow, with the quarry area considerably reduced from its original 100 feet in depth due to landfill deposits.

The site's underlying structure is a continuation of the surrounding hills and slopes. Over geologic time, hot water and volcanic gases weathered the parent basalts. As a vesicular basalt flow, silica and other minerals fill old vesicles and openings in the basalt flow as amygdules and irregular masses. Native pyroxene transforms into chlorite and clay, displaying green and gray hues (CCH DPW 1988). Silica that was released during the alteration is redeposited as varying opal, chalcedony, and quartz. Currently, these are primarily exposed bedrock and rock outcrops that are further altered by recent industrial land use.

Histosols predominant among soil orders on the project site (UHM 2018). Two major characteristics define Histosol soils: no permafrost and high organic matter in the surface horizon. Histosols drain poorly because of organic matter within them. The 1988 EIS indicates that some ultisol (reddish, clay-rich, acidic) soils called Alaeloa silty clays may be present where native slopes range between 15 and 35%.

2.2.2 Potential Environmental Consequences and Mitigation Measures

The Proposed Action would require industry-standard best management practices (BMPs) to preserve geologic structure, slope stability, and soil retention. After construction, slopes would be stabilized with retaining walls surrounding the new two-story enclosed structure and paved access areas. Standard BMPs such as compost filter socks, retaining-settling basins, on-site swales, and contouring would help to retain the soil as well as curb sedimentation and erosion both on- and off-site.

2.2.2.1 CONSTRUCTION

Earthwork grading would be undertaken to prevent siltation and unnecessary runoff. During construction, a sediment and erosion control plan would alleviate impacts to the underlying soils and topography. This sediment and erosion control plan would contain standard construction BMPs for the construction phase such as erosion screens and sediment fencing. Retaining walls upslope from the existing service and drop-off road, and improved storm-water infrastructure, would be added to the Transfer Station's project area. All features of the construction phase would be in compliance with provisions of the City Grading Ordinance ROH Section 14-13 and the

Drainage, Flood and Pollution Control Ordinance ROH 14-12. All retaining walls and paved areas would be designed and engineered to the latest building codes to ensure stability and retention of the surrounding sloped areas. Impacts to topography or soils are expected to be less than significant during the construction period.

2.2.2.2 OPERATION

Operation of the Station would continue to feature waste management services typified by pickups and drop-offs in commercial and private vehicles, on gravel and paved roads, loading bays, and parking lots. The Proposed Action would likely result in a more stable geological and soil environment as the project involves a reduction in sloped areas and the fortification of the geological environment through use of retaining walls and paved area. In addition to infrastructure improvements requiring some ground disturbance for such things as improvement drainage and laying of utility lines, new paved pads and asphalt pavement areas would be added to allow all-weather access to the Station building. After completion of construction, operation of the Proposed Action would have a less than significant impacts on soils, geology, or topography of the site.

2.2.2.3 NO ACTION ALTERNATIVE

Under the No Action alternative, site conditions would not change. Conditions would be perpetuated through the continuation of current operations and procedures. The No Action alternative would have no impact to topography, geology, and soils.

2.3 WATER RESOURCES

2.3.1 Affected Environment

2.3.1.1 HYDROLOGY

A detailed hydrologic study was not performed for the purposes of this project. The current project area is a sub-area within the existing site and is described in detail in the 1988 EIS as follows:

The site is part of Kapa'a Valley which drains into Kawainui Marsh. The marsh provides 3,000 acre-feet of flood storage as part of the Oneawa Channel (Kawainui Channel) design which conveys the runoff to Kailua Bay. Two perennial streams enter Kawainui Marsh from Maunawili Valley, with average total discharge of about 7 mgd [million gallons per day]. Kapa'a Valley is drained by the intermittent Kapa'a Stream. Its flow consists of storm runoff. Sizeable continuous aquifers do not occur in the area; in general, the groundwater saturates flow basalts compartmentalized by dikes and other intrusives. The surface of Kawainui Marsh represents the general groundwater table in the region. (CCH DPW 1988)

2.3.1.2 DRAINAGE CHARACTERISTICS

Based on visual site investigations, storm water runoff from the site enters two main drainage structures (Figure 2.3-1). The first drainage structure is a grated drain inlet that intercepts runoff from the site and is conveyed through an 8-inch drain line which connects to the second larger grated drain inlet. An 18-inch drain line exits the second grated drain inlet and travels through a drain manhole structure, discharges through a culvert that passes underneath Kapa'a Quarry Road, and eventually drains into Kawainui Marsh. Storm water runoff from the site that may bypass these two main drainage structures is expected to sheet flow over land and eventually drain into Kawainui Marsh. The Corporation Yard Facility is at an elevation ranging from 25 to 30 feet amsl, with the elevation dropping to about 10 feet amsl along Kapa'a Quarry Road and rising to 40 feet along the service road leading to the former landfill disposal area.

2.3.1.3 FLOOD PLAIN MANAGEMENT

The project site is mainly located in Zone D based on the DLNR Flood Hazard Assessment Tool. A small portion of the project area is located in Zone X for the proposed construction staging area. Zone D is designated as unstudied areas where flood hazards are undetermined, but possible. Zone X is designated as areas of low flood risk, outside of the 0.2% annual chance floodplain (DLNR 2019).

2.3.2 Potential Environmental Consequences and Mitigation Measures

2.3.2.1 CONSTRUCTION

All construction vehicles would be washed down in designated contained areas prior to leaving the site. Crushed coarse aggregate for construction ingress/egress would be installed to help reduce sediment tracking and runoff from construction vehicles. Compost filter socks would be in-place around the perimeter of the disturbed areas to filter contaminants from runoff prior to leaving the site. Protection of existing drain inlets within and around the project site would be installed to reduce the amount of sediment and contaminants from entering the site's drainage infrastructure. All stockpile material resulting from the Contractor's operations and construction equipment would be contained and lined with impervious material to prevent percolation of contaminants into the ground surface or migration of contaminants due to surface water runoff.

The construction operations for this project are not anticipated to have less than significant impact on the quality of the water leaving the site.

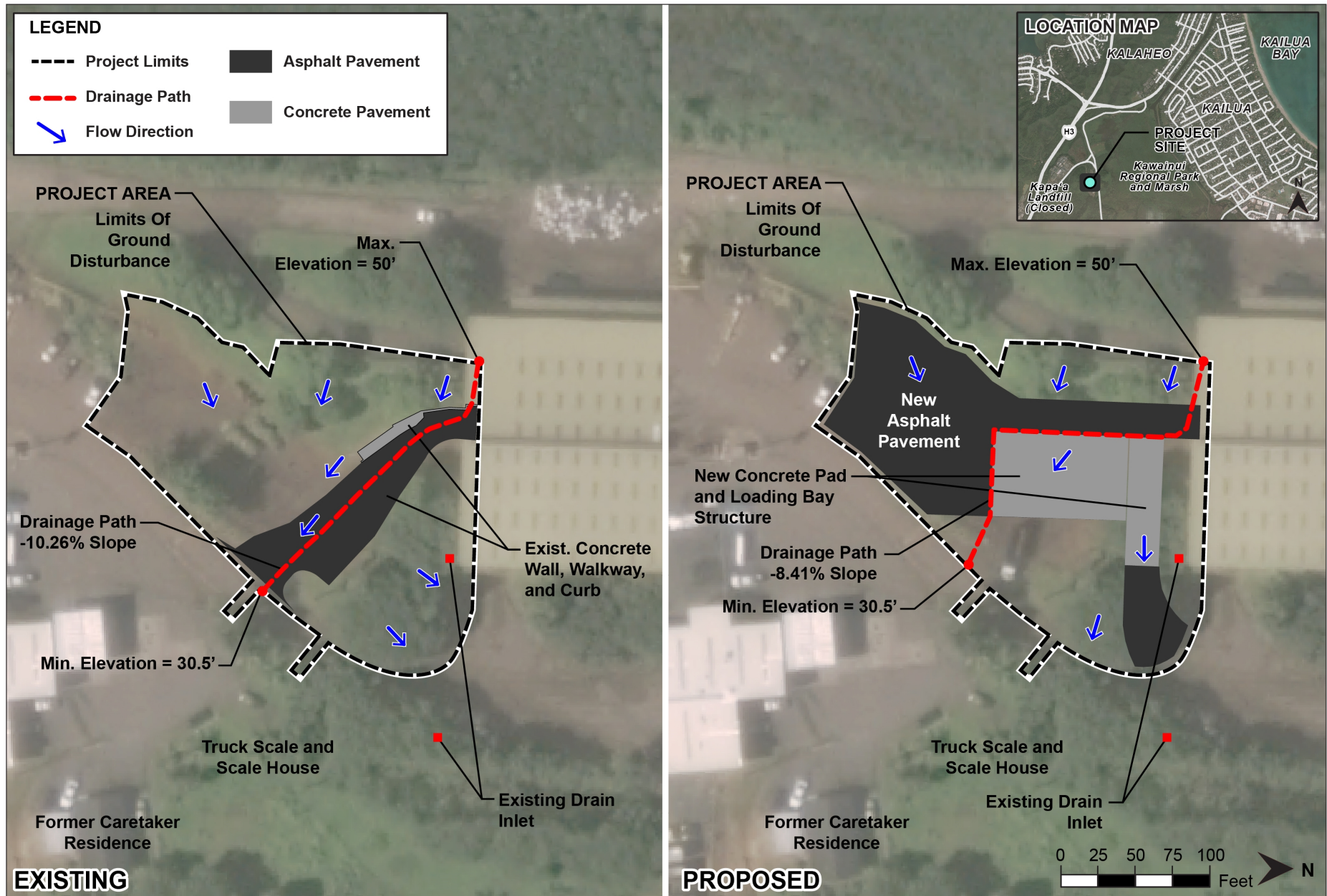


Figure 2.3-1: Drainage Plan

Source: AECOM 2019 (this report).

2.3.2.2 OPERATION

The one acre project area is relatively small compared to the entire site and even further minimized in comparison to the entire drainage basin of approximately 7,100 acres estimated in the 1988 EIS (CCH DPW 1988). Total runoff is expected to have a slight increase due to an increase in impervious areas in the project area for structures, concrete, and asphalt pavement. The existing project site is estimated to generate a peak runoff value of 2.47 cubic feet per second based on an equation including ground condition, rainfall intensity, and area associated within a storm of an intensity occurring every 10 years. After the proposed improvements are in place, the project site is estimated to generate a minor increase with a peak runoff value of 3.36 cubic feet per second. The existing and proposed drainage plan is shown on Figure 2.3-1, and calculations are shown on Table 2.3-1. Operation of the Proposed Action would reduce the possibility of pollutants from entering the drainage system and potentially the Kawainui Marsh. The Proposed Action would allow faster loading and transport of GW from the site to the recycling facility. This expedited process would reduce the quantity of exposed GW currently stored in the outdoor storage area.

Due to the increase in impervious area, the rate of sediment and silt entering the City drainage system from the site is expected to decrease. Based on analysis and the drainage calculations shown below in Table 2.3-1, the net impact of any increase in storm water runoff from the Proposed Action is expected to be less than significant.

2.3.2.3 NO ACTION ALTERNATIVE

The No Action alternative would not result in any change to the current hydrology or drainage at the site. There would be no change in quantity or velocity of drainage on or off the site. However, the No Action Alternative will result in the continuation of stormwater runoff of GW into water resources off-site, as GW will continue to be stored in its current stockpile.

Table 2.3-1: Existing and Proposed Drainage Calculations

Calculation (Unit)	Drainage Area	
	Existing	Proposed
Impervious Area, A_1 (acres)	0.11	0.35
Pervious Area, A_2 (acres)	0.61	0.38
Total Area (acres)	0.72	0.72
C	0.48	0.64
Length of Drainage Path (ft)	190	232
Percent Slope	10.26	8.41
T_c (min)	6.25	5.5
Correction Factor, X	2.65	2.69
I	2.7	2.7
I_c	7.16	7.26

Calculation (Unit)	Drainage Area	
	Existing	Proposed
Q (cfs)	2.47	3.36
% Impervious	15.5	48.1
% Pervious	84.5	51.9

Source: AECOM 2019 (this report).

% percent

A₁ impervious area (e.g., pavement, asphalt)

A₂ pervious area (e.g., soil)

C runoff coefficient value based on surface type of ground/soil (e.g., grass, bare soil, hard rock)

cfs cubic foot per second

ft foot or feet

I rainfall intensity based on storm year and location on island

I_c rainfall intensity correction factor based on the time of concentration

min minute

T_c time of concentration, the duration of runoff travel from the highest part in a watershed to the discharge point

Q peak flow

2.4 SOLID WASTE AND HAZARDOUS MATERIALS

2.4.1 Affected Environment

2.4.1.1 SOLID WASTE

As described in the DOH Solid Waste Management Permit No. TF-0015-15 issued in February 2016, the Kapa'a Refuse Transfer Station is approved to operate as a 500-tons-per-day household and commercial solid waste transfer station (DOH 2016). No industrial, hazardous, or infectious waste is accepted at the facility. Recyclables and special waste are accepted from residential sources only. The permit further outlines treatment and handling of various types of waste to prevent harm to humans and the environment. Provisions and requirements for the handling of GW are also outlined in the permit.

2.4.1.2 GREEN WASTE

Beginning in September 2009, the Station incorporated a GW recycling program to its existing operations. GW includes grass, leaves, branches, tree and hedge trimmings, stumps, logs, banana cuttings, coconuts, palm fronds, untreated lumber, and untreated pallets (CCH ENV 2005a). More details on the GW program and current facility operations, specifically how the two waste streams (GW and solid waste) are kept separate, are in Chapter 1.0, as well as in the DOH Permit No. TF-0015-15.

2.4.1.3 POTENTIAL POLLUTANTS AND HAZARDOUS MATERIALS

Table 2.4-1 lists the potential pollutants present at the Station by their sources. These potential pollutants have been identified based on the predominant activities conducted at the Station. These items have the potential to release pollutants off-site and eventually into surface water (CCH DFM 2016).

Table 2.4-1: List of Potential Pollutants by Source

Potential Pollutant	Source(s)
Small capacity petroleum product containers (e.g., unleaded gasoline, motor oil, hydraulic fluid)	Stored in original manufacturer's containers or fuel containers with a 5-gallon capacity or less. Containers are stored within the Transfer Station.
Vehicle and equipment fluid leaks	Vehicle transferring waste in the Transfer Station.
Small capacity cleaning agent products	Stored in original manufacturer's containers or clearly labeled dispenser bottles. Containers are stored within the Transfer Station.
Sediment, soot, and natural debris	Unpaved ground and natural outdoor vegetation throughout the site.
Trash	Building personnel waste. Trash receptacles are located throughout the site.

Source: CCH DFM 2016.

The Station currently receives and stores some of its overflow GW in an outdoor, uncovered storage area outside of the Station building. Outdoors, the GW is exposed to storm and weather events, which may contribute to stormwater runoff into the drainage system and potentially downstream into the Kawainui Marsh.

2.4.2 Potential Environmental Consequences and Mitigation Measures

As noted above, no industrial, hazardous, or infectious waste is accepted at the Station. However, in the event of an intentional or accidental disposal of prohibited materials resulting in a leak or spill of hazardous materials, the Spill Response Plan from the 2016 SWPCP will be implemented (CCH DFM 2016). The Spill Response Plan outlines detailed procedures to be followed in the event of a spill, including notifying appropriate authorities and documenting the event. Following any spill cleanup, a review is conducted to assess the effectiveness of the spill response plan and determine areas for improvement.

2.4.2.1 CONSTRUCTION

Waste generated or introduced during construction activities, such as oil leaks from vehicles, would be handled and disposed of properly in compliance with the DOH Permit No. TF-0015-15 and, if applicable, the existing NPDES permit. In addition to the site-specific BMPs developed in the 2016 SWPCP, BMPs would be put in place prior to any construction activities. Spill prevention and response procedures are outlined in the SWPCP to prevent and minimize the discharge of pollutants off the

site during the construction phase. Impacts from the construction phase would be less than significant with implementation of these procedures and controls.

2.4.2.2 OPERATION

The operation of the Proposed Action would not alter any current procedures in place to manage hazardous waste events, nor would it change the hazardous materials ban at the Station. The mix, quantity, and type of refuse at the site will not change with operation of the Proposed Action. The Proposed Action is expected to have less than significant impacts on the site associated with hazardous materials.

2.4.2.3 NO ACTION ALTERNATIVE

Under the No Action alternative, the Kapa'a Refuse Transfer Station would continue to operate in compliance with the DOH Permit No. TF-0015-15 as well as the SWPCP, which details site-specific BMPs for containing pollutants and preventing the release of hazardous materials. The Station has operated under a SWPCP since 2006 and has not had discharges of a reportable quantity. If any reportable leaks or spills of solid and hazardous waste occur in the future, the procedures outlined in the SWPCP would be followed for documenting these events and implementing corrective/mitigation measures.

2.5 NATURAL HAZARDS

2.5.1 Affected Environment

2.5.1.1 EARTHQUAKES

Earthquakes in Hawai'i are typically a result of volcanic activity caused by the inflation or shrinkage of magma reservoirs, or the shifting of tectonic plates due to seismic activity. The island of O'ahu is subject to tectonic activity capable of generating hazardous earthquakes. Most of the recent earthquakes recorded on O'ahu have been volcanic earthquakes which caused little to no damage to the other islands. The U.S. Geological Survey's (USGS) *Atlas of Natural Hazards in the Hawaiian Coastal Zone* (USGS 2002) assigns seismic hazard intensity ratings for all Hawaiian islands on a scale of 1 to 5, with 1 representing the lowest hazard and 5 the highest. The Kapa'a Refuse Transfer Station is situated within the southern half of O'ahu and has a risk ranking of 3 due to the region's proximity to the Moloka'i Seismic Zone. In the most recent 2014 USGS long-term model of seismic hazards, which shows the probability of earthquake ground motions occurring, the earthquake hazard for the island of O'ahu has remained the same (USGS 2019).

2.5.1.2 HURRICANES

Hurricanes are a type of tropical cyclone that can produce three life-threatening effects: winds equal to or greater than 74 mph, storm surges that can exceed 40 feet, and heavy rains that can exceed flash flood conditions (CCH DEM 2018). Each of these effects pose a serious threat to life and property (NOAA 2019a). Although hurricane season in the Hawaiian Islands runs from June to November, hurricanes may occur at any time of the year. Hurricanes have affected every island in the State

of Hawai'i, but hurricanes that actually make landfall on the Hawaiian Islands have been rare according to the modern record. Near-misses from hurricanes can still have devastating effects as they can generate large swells and high winds, and cause flooding (NOAA 2019b).

2.5.1.3 TSUNAMIS

Earthquakes and volcanic activity can generate tsunamis as they can cause the displacement of water, resulting in a series of waves that travel across the ocean until they reach a coastline. The high degree of volcanism and seismic instability in and around the Pacific Ocean has contributed to a history of tsunami occurrences among the Hawaiian Islands (USGS 2016). Tsunamis can cause great destruction to homes and other standing structures once they crash on shore. The City Department of Emergency Management last updated the O'ahu Evacuation Maps in April 2015. In the Waimānalo to Kailua map, the Kapa'a Refuse Transfer Station is located at the edge of the *Extreme Tsunami Evacuation Zone*. In the case of an extreme tsunami warning, waves may move further inland and affect the area (CCH DEM 2019b).

2.5.1.4 FLOODING

Flash floods are a common occurrence in Hawai'i, with the state averaging around 11 flash flood events per year. Most of these events take place between October and April, defined as the wet season (CCH DEM 2019a). Heavy rainfall may also occur prior to the wet season during hurricane season from June to November.

The DLNR Flood Hazard Assessment Tool generates figures displaying flood zone areas. Based on the tool, the project site is located in Zones D and X of the Flood Insurance Rate Map (FIRM) of O'ahu. Zone D is designated as unstudied areas where flood hazards are undetermined, but possible. Zone X is designated as areas of low flood risk, outside of the 0.2% annual chance floodplain (DLNR 2019).

2.5.2 Environmental Consequences and Mitigation Measures

Earthquakes can cause structural damage, ground instability, and in some cases liquefaction. Large storm events, hurricanes, tsunamis, and floods can all impact structures, undermine foundations, and compromise water quality in and around the site by increasing the amount of storm water discharge and disrupting drainage flow. The ENV Division of Refuse Collection and Disposal maintains an Emergency Operations Plan (EMOP), which is designed to protect people and assets of the Department, and details preparation measures, standard operating procedures (SOPs), notifications, and evacuation plans in the event of a natural hazard.

2.5.2.1 CONSTRUCTION

Although the likelihood of natural hazards occurring would not increase during construction activities, the effects of natural hazards may impact the site more during the disruptive construction phase. Removing trees would dislodge the soil and remove some of the natural buffer that vegetation provides in filtering pollutants from storm water and stabilizing soils. Excavating for the retaining walls would further destabilize the soil and ground. However, as directed by the City Department

of Parks and Recreation (DPR), and consistent with the mayor's proclamation described below in Section 2.6.2.1, new trees would be planted and maintained as part of a revegetation plan approved by the City. SWPCP BMPs as well as construction BMPs would help mitigate the potential increase in pollutants carried off-site by storms, tsunamis or flooding, siltation, and clogging of drainage swales due to destabilized soils and vegetative cover. As part of the construction process, the site would be graded and filled consistent with engineering plans, the City Grading Ordinance ROH Section 14-13, and the Drainage, Flood and Pollution Control Ordinance ROH Section 14-12. This will ensure that the site is stabilized, drainage infrastructure is adequate, and appropriate vegetation and ground cover is installed. While natural hazards cannot be avoided during the construction phase, the impacts would be less than significant and reduced to the degree possible with the incorporation of the actions and practices outlined above.

2.5.2.2 OPERATION

To address potential earthquake hazards on the site, all structures would be built according to the current building code and in compliance with its provision for construction in Seismic Risk Zone 3 areas. After construction, the Proposed Action would operate under the same level of risk of all natural hazards. However, the impact from natural hazards would be alleviated by the application of the building code, grading ordinance, revegetation plan, EMOP, and adherence to applicable SOPs and BMPs. The Proposed Action would not significantly increase or exacerbate risks to human health or property from natural hazards, and the impacts would be less than significant.

2.5.2.3 NO ACTION ALTERNATIVE

Under the No Action alternative, the risk of natural hazards occurring and the damage associated with natural hazards at the Kapa'a Refuse Transfer Station would remain the same as they are today.

2.6 BIOLOGICAL RESOURCES

2.6.1 Affected Environment

2.6.1.1 FLORA

The project site includes asphalt pavement areas, compacted bare dirt areas, and vegetated slopes. Trees in the project area include Formosa koa (*Acacia confusa*), monkeypod (*Samanea saman*), and weeping fig (*Ficus benjamina*). Vegetation along the slopes includes slender amaranth (*Amaranthus viridis*), wedelia (*Sphagneticola trilobata*), Guinea grass (*Megathyrsus maximus*), koa haole (*Leucaena leucocephala*), and other ruderal (plant species that are first to colonize disturbed lands) herb and grass species. Outside of the proposed project area and along the west side of Kapa'a Quarry Road is an open drainage ditch that receives storm water runoff from the project site. Vegetation growing along the sides of the ditch includes koa haole and Guinea grass. No federal or state listed threatened or endangered plant species or native plant species are present at the project site.

2.6.1.2 FAUNA

Hawaiian Hoary Bat

The federal and state endangered Hawaiian hoary bat or 'ōpe'ape'a (*Lasiurus cinereus semotus*) could potentially use habitat at the site. Hawaiian hoary bats roost in both non-native and native trees (USFWS 2011a). These bats generally roost and rear pups in trees and other woody vegetation that are over 15 feet in height.

Hawaiian Short-Eared Owl

The state endangered Hawaiian short-eared owl or pueo (*Asia flammeus sandwichensis*) has the potential to occur in the project vicinity. This species may feed on small mammals (e.g., rats, mice, and mongoose) at both the Kapa'a Refuse Transfer Station and nearby Kawainui Marsh. Nests for this species are comprised of simple scrapes in the ground lined with grasses and feather down. Pueo are a crepuscular species, most active at dusk and twilight.

Endangered Hawaiian Waterbirds

Federal and state endangered Hawaiian waterbirds include the Hawaiian duck (*Anas wyvilliana*), Hawaiian stilt (*Himantopus mexicanus knudseni*), Hawaiian coot (*Fulica alai*), and Hawaiian moorhen (*Gallinula chloropus sandvicensis*). Due to hybridization with invasive mallards, it is unlikely that any true Hawaiian ducks are on the island of O'ahu (USFWS 2011b). Hawaiian stilts, coots, and moorhen are known to use the nearby Kawainui Marsh for feeding, nesting, and rearing young (USFWS 2011b). However, no suitable habitat for these species are within the proposed project area.

An open drainage ditch is located on the property outside of the proposed project area. This ditch is covered by a dense, tangled canopy of tall grasses, vines, shrubs, and trees. It is unlikely that any Hawaiian waterbirds would access or use this ditch.

Hawaiian Seabirds

Protected Hawaiian seabirds include the threatened Newell's shearwater (*Puffinus auricularis newelli*), endangered Hawaiian petrel (*Pterodroma sandwichensis*), endangered band-rumped storm-petrel (*Oceanodroma castro*), and native wedge-tailed shearwater (*Ardenna pacifica*). Hawaiian seabirds may traverse the proposed project area at night during the breeding season from March 1 to December 15.

Invasive Species

As the facility receives, stores, and transfers waste, it is likely that invasive mammals such as rats, cats, and mongoose may feed and reproduce at the Station. The City currently traps and poisons rats on this property.

GW received and stored at the Station may contain seeds and propagules of invasive plant species, as well as insect pests. Coconut rhinoceros beetles (CRB) (*Oryctes rhinoceros*) chew into the emerging fronds of palm trees to feed on sap, killing the tree if it eats into the meristem. Once the palm dies, the CRB lays eggs. These beetles may also attack and feed on Pandanus species, banana, pineapple, and sugar cane.

Breeding populations and larvae of this species are often found in mulch and GW piles. It is possible that the Station may receive GW containing adult CRB, eggs, and/or larvae. To avoid the spread of this species, personnel working at the facility have received CRB awareness and identification briefings. The State Department of Agriculture has installed and periodically inspects and maintains CRB traps around the site. If CRB are discovered at the facility, personnel have been directed to notify the appropriate personnel with the College of Tropical Agriculture and Human Resources at the University of Hawai'i at Mānoa. GW piles containing the pest would be isolated from the other GW at the site and hauled to H-POWER for incineration.

2.6.2 Potential Environmental Consequences and Mitigation Measures

2.6.2.1 CONSTRUCTION

Flora

Native, Threatened, and Endangered Plant Species

No federal or state threatened or endangered plant species or native plant species are found in the project area. Therefore, construction activities would have no effect on plant species protected under HRS Chapter 195D.

Trees

To allow for construction of the Proposed Action, eleven existing trees would be removed. These include eight Formosa koa (*Acacia confuse*), two monkeypod (*Samanea saman*), and one weeping fig (*Ficus benjamina*). A number of other Formosa koa and monkeypod trees are present at the Station that are not proposed for removal. The trees located along the perimeter of the property that provide a visual screen of the facility are not proposed for removal.

In 2017, the Mayor of Honolulu signed the U.S. Conference of Mayors' Climate Protection Agreement to fight climate change and combat global warming. The Mayor committed the City to planting 100,000 trees by 2025 and achieving 35% urban tree canopy coverage by 2035. To accomplish this initiative, it is imperative that the City take every opportunity to increase tree plantings. With this objective, the City proposes the following measures to protect existing trees at the site and mitigate the loss of those to be removed:

- The City will enlist the services of a qualified arborist approved by the DPR, Division of Forestry, Urban Forestry Administration.
- The qualified arborist will prepare a Tree Assessment Report and Tree Protection Zone Fencing Plan, to provide mitigation measures for the protection of trees to be retained.
- The removal of trees will be mitigated through replacement tree planting. Due to existing operations at the site, which include the movement of large trucks and equipment, opportunities for replacement tree planting on-site are limited. Therefore, some replacement planting may be proposed off-site at locations that provide a greater benefit to the community. The number, species, and location

of tree planting will be determined by the qualified arborist in coordination with DPR, The Outdoor Circle, the neighborhood board, district councilmember, and other interested parties.

Fauna

Hawaiian Hoary Bat

To avoid mortality to Hawaiian hoary bat pups that may be present in trees and cannot yet fly, trees and woody plants greater than 15 feet tall would not be disturbed, removed, or trimmed during the bat birthing and pup rearing from June 1 through September 15. Therefore, with this avoidance measure, construction activities would have a less than significant impact on the Hawaiian hoary bat.

Hawaiian Short-Eared Owl

While Hawaiian short-eared owls may traverse the proposed project area or forage for small mammals at the site, no suitable nesting habitat for this species is located at the site. The entire proposed project area to be disturbed during construction is highly active on a daily basis with heavy equipment and truck traffic related to ongoing transfer station operations. The narrow, vegetated slopes in the proposed project area are regularly mowed. Therefore, no suitable nesting habitat for this species is located within the proposed project area. It is assumed that adult birds would avoid construction activities as they avoid current transfer station operations. Therefore, the construction activities would have a less than significant impact on the Hawaiian short-eared owls.

Endangered Hawaiian Waterbirds

As discussed above, no suitable habitat for Hawaiian waterbirds is located at the project site. Therefore, construction activities would have no direct effects on Hawaiian waterbirds. The open drainage ditch, outside of the proposed project area and running along the west side of Kapa'a Quarry Road, receives storm water runoff from the project site and discharges to Kawainui Marsh, which provides important habitat for Hawaiian waterbirds. While no in-water work is proposed, construction activities could mobilize sediments and cause turbidity; discharges and spills of other pollutants could occur which, if uncontained, could reach the open ditch and impact water quality in Kawainui Marsh. Construction site BMPs including standards for handling and disposal of waste, erosion and sediment control measures (e.g., drain inlet protection, compost filter socks, stabilized ingress/egress, and spill kits), BMP inspections, and required pollution prevention plans would make it extremely unlikely that the discharge of pollutants to Kawainui Marsh would occur. Therefore, construction activities would have a less than significant impact on endangered Hawaiian waterbirds.

Hawaiian Seabirds

Outdoor lighting can result in disorientation, fallout, and injury or mortality of Hawaiian seabirds. Seabirds are attracted to lights and, after circling the lights, may become exhausted and collide with nearby wires, buildings, or other structures, or may land on the ground. Downed seabirds are subject to increased mortality due to collision with automobiles, starvation, and predation by dogs, cats, and other

predators. Young birds (fledglings) traversing the project area between September 15 and December 15, in their first flights from their mountain nests to the sea, are particularly vulnerable (USFWS 1983).

All construction activities would take place during daylight hours. No night construction or construction lighting is proposed. In the unlikely event that nighttime construction lighting is required, any lights used would be downward-facing and fully shielded to minimize impacts to seabirds. This would reduce the lighting impacts during the construction activities to a less than significant impact on Hawaiian seabirds.

Invasive Species

Proposed construction activities would have no effect on invasive species at the site.

2.6.2.2 OPERATION

Flora

Native, Threatened, and Endangered Plant Species

No federal or state threatened or endangered plant species or native plant species are found in the proposed project area. Therefore, operation of the Proposed Action would have a less than significant impact on plant species protected under HRS Chapter 195D.

Trees

Operation of the facility would have no impact to existing trees. The trees fringing the eastern boundary of the property would be preserved to continue to minimize views of the facility from Kapa'a Quarry Road. The replanting of trees in compliance with the mayor's proclamation as described in Section 2.6.2.1, will ensure the operational impacts on trees will be less than significant.

Fauna

Hawaiian Hoary Bat

Bat mortality has been documented in Hawaii as a result of ensnarement in barbed wire. No barbed wire is currently in place at the Station and no new barbed wire is proposed. Operation of the Proposed Action would not require regular disturbance to, or trimming of, trees at the site that have the potential to be used by hoary bats for roosting. Any required tree maintenance and trimming would be performed outside of the bat birthing and pup rearing periods from June 1 through September 15. Therefore, with these proposed measures, operation of the Proposed Action would have a less than significant impact on Hawaiian hoary bat.

Hawaiian Short-Eared Owl

While Hawaiian short-eared owls may traverse the project area and forage for small mammals at the site, no suitable nesting habitat for this species is located at the project site. The entire project area to be disturbed during construction is highly active on a daily basis with heavy equipment and truck traffic related to ongoing

transfer station operations. The narrow, vegetated slopes in the project area are also regularly mowed. It is assumed that adult pueo would continue to avoid the project area due to the ongoing transfer station operations. With these proposed measures, operation of the Proposed Action would have a less than significant impact on Hawaiian short-eared owl.

Endangered Hawaiian Waterbirds

No suitable habitat for Hawaiian waterbirds is located at the project site. Therefore, operation would have no direct effects on Hawaiian waterbirds. The open drainage ditch along the west side of Kapa'a Quarry Road receives storm water runoff from the site and discharges to Kawainui Marsh, which provides important habitat for Hawaiian waterbirds. If a discharge or spill of pollutants were to occur, and if uncontained, the discharge or spill could reach the open ditch and impact water quality in Kawainui Marsh. The 2016 SWPCP includes spill prevention and pollution control strategies, a spill response plan, storm water monitoring and inspection procedures, and training procedures that are followed during operation to prevent the discharge of pollutants and impacts to water quality (CCH DFM 2016). With these proposed measures, operation of the Proposed Action would have a less than significant impact on endangered Hawaiian waterbirds.

Hawaiian Seabirds

Outdoor lighting can result in seabird disorientation, fallout, and injury or mortality of Hawaiian seabirds. Seabirds are attracted to lights and, after circling the lights, may become exhausted and collide with nearby wires, buildings, or other structures, or may land on the ground. Downed seabirds are subject to increased mortality due to collision with automobiles, starvation, and predation by dogs, cats, and other predators. Young birds (fledglings) traversing the site between September 15 and December 15, in their first flights from their mountain nests to the sea, are particularly vulnerable. All operational activities would take place during daylight hours. The project includes proposed installation of new security lighting that would operate during nighttime. These lights would be downward-facing and fully shielded to minimize impacts to seabirds. With these proposed measures, operation of the Proposed Action would have a less than significant impact on Hawaiian seabirds.

Invasive Species

The City currently traps and poisons rats on this property and will continue to do so.

To avoid the spread of CRB, personnel working at the facility have received CRB awareness and identification briefings. The State Department of Agriculture has installed and periodically inspects and maintains CRB traps around the site. If CRB are discovered at the facility, personnel have been directed to notify the appropriate personnel with the College of Tropical Agriculture and Human Resources at the University of Hawai'i at Mānoa. GW piles containing the pest would be isolated from the other GW at the site and hauled to H-POWER for incineration. With the measures currently in place, the proliferation and spread of invasive species would be controlled and minimized.

2.6.2.3 NO ACTION ALTERNATIVE

Under the No Action alternative, no construction activities would occur, and no concerns would be associated with impacts to biological resources. Potential environmental consequences and mitigation measures for operation of the facility under the No Action alternative would be the same as those presented for the Proposed Action.

2.7 HISTORIC AND CULTURAL RESOURCES

Historic and cultural resources include archaeological sites, historic buildings and structures, places of cultural and architectural importance, and sites associated with cultural practices.

2.7.1 Affected Environment

2.7.1.1 HISTORICAL BACKGROUND

The project area is located in the Oneawa 'Ili, Kailua Ahupua'a, Ko'olau Poko Moku, on the island of O'ahu. Prior to the arrival of Polynesians, which is believed to have occurred around 1000 AD, these lands were along the margin of a large, brackish lagoon enclosed by a sandbar (which would later become the community of Kailua). The lagoon area was used by Hawaiians as a fishpond, and the stream mouths that feed it were developed for wet taro cultivation. The high ground to the northwest of the project area was one of several in the region used as a quarry, taking advantage of the presence of good quality basalt rock. In the 1300s, Chief 'Olopana constructed the Pahukini Heiau. By the 1700s, Kailua became a political and population center of the Ko'olau Poko District, the seat of powerful chiefs including Kākuhihewa and Kūali'i, and known for its abundant resources (Pacific Consulting Services, Inc. 2016). The area became part of the Kingdom of Hawai'i in 1795 after Kamehameha I gained control of O'ahu.

After European contact in the late 18th century, the area continued to be an important population center, and traditional property boundaries and land uses persisted until the mid-1800s. The Māhele 'Āina (land division) of 1846–1850 introduced private property ownership and transformed land use throughout Hawai'i. During the Māhele, the parcel where the project area is located was awarded in 1870 to T. Tute (Royal Patent No. 5642), but the record does not include descriptive information. By the early 20th century, a large amount of land including the project area was under the ownership of the Castle family as part of Kaneohe Ranch (Pacific Consulting Services, Inc. 2016). Extensive rice farming in Kawainui created the marshy conditions present today.

In 1949, the HC&D leased 100 acres, including the project area, from Kaneohe Ranch for industrial rock quarrying (Pacific Consulting Services, Inc. 2016). The quarry expanded in 1964, with its leased area encompassing the entire Kapa'a Valley (Pacific Consulting Services, Inc. 2016). By 1957, the project area was the site of a large rock crusher operation providing gravel production for the HC&D. The crusher plant was removed in the 1970s and the original quarry was filled beginning in 1972, when the land was transferred to the City for use as a municipal waste landfill (CCH ENV 2005b).

2.7.1.2 CULTURAL AND HISTORIC RESOURCES

No cultural or historic resources have been identified or documented within or close to the project area in past surveys. One archaeological survey undertaken in the project area by Bordner in 1977 did not identify any archaeological sites (Bordner 1997). The project area and surrounding 67-acre City property has been extensively altered since the 1940s through a period of industrial rock quarrying and processing, followed by years of municipal waste disposal and landfilling activity.

Known cultural and historic properties are located within a half mile of the project area as listed in Table 2.7-1 below. They include Pahukini Heiau, a restored heiau (traditional pre-contact Hawaiian temple) structure listed in the National Register of Historic Places (NRHP) in 1972, which is located about one quarter mile mauka of the project site. Visible as a series of terraces, the heiau is surrounded by protective fencing.

In March 1980, the Kawainui Marsh Archaeological Complex was determined eligible for listing in the NRHP. The boundary of the historic property associated with the marsh, documented as State Inventory of Historic Properties (SIHP) No. 50-80-11-2029, encompasses only the southern reaches of the present-day marsh, beginning more than half a mile to the south of the project area. Several other documented historic and archaeological features lie within and at the margins of the marsh.

Three other archaeological sites are listed in the SIHP, namely the Kapa'a boundary wall and mound and Kapa'a linear mound sites, which are approximately 160 to 500 feet south of the project area; and the Kawainui Cluster, a group of features at the edge of the marsh approximately 1,000 feet outside of the project area.

Table 2.7-1: Cultural and Historical Properties

Property Type	Name	Address/TMK; Relationship to Project Area	Listing Status
Structure	Pahukini Heiau	(1) 4-2-0015:003, approximately 1,476 feet outside of the project area	NRHP and HRHP listed; SIHP No. 50-80-11-00359
Archaeological complex	Kawainui Marsh	(1) 4-2-016:015, approximately 1,968 feet outside of the project area	NRHP and HRHP eligible; SIHP No. 50-80-11-02029
Archaeological site	Kapa'a Boundary Wall and Mound	(1) 4-2-014:002, approximately 492 feet outside of the project area	SIHP No. 50-80-11-02035
Archaeological site	Kapa'a Linear Mound	(1) 4-2-014:002, approximately 656 feet outside of the project area	SIHP No. 50-80-11-02036
Archaeological site	Kawainui Cluster	(1) 4-2-013:010, approximately 1,050 feet outside of the project area	SIHP No. 50-80-11-02023

Source: OHA 2018.

HRHP Hawai'i Register of Historic Places

TMK tax map key

2.7.2 Potential Environmental Consequences and Mitigation Measures

The evaluation of environmental consequences considers impacts to the eligibility status of historic properties based on the standard historic significance and integrity criteria described under HRS Chapter 6E and the NRHP. Actions that diminish or destroy the integrity of a historic property are considered to have an adverse impact. Actions that restore, repair, and sustain a historic property are considered to have beneficial impacts.

2.7.2.1 CONSTRUCTION

No known cultural and historic properties are located in the project area. Therefore, construction would have no short-term impacts to cultural and historic properties.

If human remains or subsurface archaeological resources are encountered during construction, work would immediately stop, and the State Historic Preservation Division (SHPD) would be contacted in accordance with State law and rules.

2.7.2.2 OPERATION

No known cultural and historic properties are located in the project area. Therefore, operation would have no short-term impacts to cultural and historic properties.

If human remains or subsurface archaeological resources are encountered during operations, work would immediately stop, and SHPD would be contacted in accordance with State law and rules.

2.7.2.3 NO ACTION ALTERNATIVE

No known cultural and historic properties are located in the project area. Therefore, the No Action alternative would likely have no impacts to cultural and historic properties.

2.8 RECREATION

2.8.1 Affected Environment

The primary current recreational sites located within the project vicinity are Kawainui Model Airplane Field, and the Pōhakea and Nā Pōhaku O Hauwahine sites.

The Kawainui Model Airplane Field is a 5-acre park approximately a quarter mile northeast of the project area on Kapaʻa Quarry Road (HHF Planners 2006). It is located atop the former Kapaʻa Landfill stockpile area on the northwestern boundary of Kawainui Marsh (HHF Planners 2006, 2014). The park is owned by the City and operated by DPR and has been used to fly radio-controlled model aircraft since 1972.

The Nā Pōhaku O Hauwahine (the Rocks of Hauwahine) site, located 0.3 mile southeast of the project area, is a 12-acre site owned by the DLNR, Division of State Parks (DSP) and is part of the Kawainui State Park Reserve (HHF Planners 2017;

Guinther 2012). This site, along with the rest of the Kawainui State Park Reserve, was purchased by the State with the Land and Water Conservation Fund (LWCF) (HHF Planners 2017). To be compliant with Section 6(f) of the LWCF Act, this site would be preserved for public outdoor recreation use only. Featuring rich cultural significance such as the landscape of native Hawaiian plants, the site offers day-hike trails, viewing areas for passive recreational use, and occasional educational programs organized by the nonprofit group, ‘Ahahui Mālama I Ka Lōkahi.

The Pōhakea area is contiguous to the south of Nā Pōhaku and is part of the Kawainui State Park Reserve (HHF Planners 2017). A nonprofit group, Ke Kahua O Kūaliʻi, works with DSP to clean up and revitalize the Pōhakea area for public enjoyment (Ke Kahua O Kūaliʻi 2016). Under the mission of “inspiring cultural and environmental conservation”, Ke Kahua O Kūaliʻi focuses their work on replacing selected vegetation with native plants, delineating parking areas and trails, installing passive park facilities, and developing educational programs to improve the public recreational experience.

The 1988 EIS for the original refuse transfer station notes that the Kapaʻa Sanitary Landfill had been designated for future park use on the Public Facilities Development Plan (CCH DPW 1988). Subsequently, the future park designation was removed from a 28-acre portion north of the project site; this portion was then rezoned from Preservation to Industrial. This site now houses an industrial park. The former landfill is designated for a future park in the *Koʻolau Poko Sustainable Communities Plan* (CCH DPP 2017). This latest plan adopted by the City Department of Planning and Permitting (DPP) in August 2017 encourages the expansion of active recreational facilities in the former sanitary landfill lands around Kapaʻa (CCH DPP 2017). Land use designations and project consistency with adopted goals and policies for the area are discussed further in Chapter 3.0.

2.8.2 Potential Environmental Consequences and Mitigation Measures

Significant impacts to recreation are any action that curtails the range of beneficial uses of recreational areas. This curtailment may result from actions directly impacting the size of or affecting user experience in the existing recreational areas. Examples of significant impacts to recreation could include development encroaching onto recreational sites, construction, or other project-related activities that create noise or visual impacts to users of recreational sites or create impacts to the accessibility of the recreational areas.

2.8.2.1 CONSTRUCTION

The overall acreage available to users of the Kawainui Model Airplane Field and the Pōhakea and Nā Pōhaku O Hauwahine sites would not be impacted by the construction activities at the Kapaʻa Refuse Transfer Station. The construction and staging areas would be limited to within the property boundaries of the facility and not encroach onto Kapaʻa Quarry Road. Noise levels would increase slightly during construction from mechanical equipment used for vegetation clearing, grading, and other construction activities. The noise may be audible at the property line during

some times of the day (Section 2.10, *Noise*). The Kawainui Model Airplane Field, the Pōhakea and Nā Pōhaku O Hauwahine sites are located more than 1,300 feet away from the proposed construction area. Because of the topography and relatively dense vegetation around the project site, the construction area would not be visible from recreational areas. Access to recreational areas would not be impacted by the temporary construction activities. Therefore, construction at the Kapaʻa Refuse Transfer Station would have a less than significant impact on the recreational areas or user experience at the recreational areas.

2.8.2.2 OPERATION

The Proposed Action would not result in any decrease in acreage of recreational areas. The only new additional noise generator after completion of the construction phase is the operation of the knuckle boom crane. As noted in Section 2.10, *Noise*, this equipment generates a negligible level of noise within a few feet of the equipment and would be further muffled by the placement of the crane within a metal shed. The newly constructed structure would be shorter than the existing Refuse Transfer Station building, which is not visible from the Kawainui Model Airplane Field, or the Pōhakea and Nā Pōhaku O Hauwahine sites. The operation of the Proposed Action would not result in an increase in traffic flow in the area nor increased congestion along Kapaʻa Quarry Road. Therefore, the operation of the Proposed Action would have a less than significant impact on recreational resources as well as on the user experience based on noise, visual, or accessibility impacts.

2.8.2.3 NO ACTION ALTERNATIVE

The No Action alternative would not have any impacts on the recreational area or user experience of the recreational areas.

2.9 VISUAL RESOURCES

2.9.1 Affected Environment

The Kapaʻa Refuse Transfer Station is located in the Koʻolau Poko area, where potential residential and commercial growth and expansion are planned to be limited and scenic views of the ocean, bays, beaches, mountain ridges, and valley slopes would be preserved (CCH DPP 2017). Among other documents, development within the Koʻolau Poko area is governed by the *Koʻolau Poko Sustainable Communities Plan* (CCH DPP 2017), which specifically identifies the following significant scenic views and vistas:

- Scenic views and the scenic beauty of the ocean, bays, and beaches
- Scenic views of ridges, upper-valley slopes, shoreline areas from trans-Koʻolau and coastal highways; from coastal waters looking mauka; and from popular hiking trails that extend toward the Koʻolau Mountain Range and mauka from Kawainui Marsh

Scenic views of the Ko'olau ridges and upper-valley slopes are those requiring specific protection, as they pertain to changes that may occur from the Proposed Action. The ocean and shoreline are not visible from the project area.

Because of the topography of the former sanitary landfill's finished grade and the relatively dense vegetation around the project area, the Kapa'a Refuse Transfer Station facilities are only visible from the edge of the top of the former landfill, with the exception of the Refuse Transfer Station building (CCH DPW 1988). The existing 45-foot-tall Refuse Transfer Station building is the tallest structure at the Kapa'a Refuse Transfer Station. This building is obscured by the surrounding vegetation, but the upper portion of the building (painted green) is inconspicuously visible from a small segment of public right-of-way along Kapa'a Quarry Road north of the Kawainui Marsh, from part of Kailua Road southeast of the Kawainui Marsh (Photo 2.9-1), and from the pedestrian trail along the makai side of the Kawainui Marsh.



Photo 2.9-1: View of the Ko'olau mountain ridges from Kailua Road, with obscured Refuse Transfer Station building in the middle ground

2.9.2 Potential Environmental Consequences and Mitigation Measures

Significant impacts to visual resources include any development that impairs the existing significant public views or breaks the horizon or mountain ridge line as identified by the *Ko'olau Poko Sustainable Communities Plan* (CCH DPP 2017). The tallest proposed structure at the project site is a new metal frame building that will be used to house a new knuckle boom crane. This proposed new building would be approximately 10–15 feet shorter than the abutting Refuse Transfer Station building. The roof footprint of this proposed new building is approximately 50 feet long by

25 feet wide. The upper portion of this new building would have the same green or appropriate earth-tone color to blend in with its surrounding natural environment. Because of its height, size, and color, this proposed new building would not be visible from public roadways, trails, or residential neighborhoods around the Kawainui Marsh.

2.9.2.1 CONSTRUCTION

Construction activities would be contained within the Kapa'a Refuse Transfer Station project site. The presence of heavy equipment, construction materials and construction activities may impact the aesthetics of the property during the construction phase. However, due to the industrial nature of the site, the aesthetic impact from construction would be negligible. In addition, any impacts would be temporary and limited to the construction phase. Construction equipment and proposed construction activities are not anticipated to obstruct or impair the significant scenic views of the Ko'olau mountain ridges and upper valley slopes from the roadways, trails, or residential areas around the Kawainui Marsh. Therefore, the proposed construction at the Station would have less than significant impact on visual resources.

2.9.2.2 OPERATION

After construction, the project would permanently alter the appearance of the site. However, due to the industrial nature of the site, the aesthetic impact from construction would be negligible. The Proposed Action would not compromise the existing significant views identified by the *Ko'olau Poko Sustainable Communities Plan*. Therefore, the operation would have a less than significant impact on visual resources.

2.9.2.3 NO ACTION ALTERNATIVE

The No Action alternative would not alter the appearance of the project site, and therefore would have no impacts on visual resources.

2.10 NOISE

2.10.1 Affected Environment

This noise section references the Y. Ebisu and Associates "Noise Impact Study for the Proposed Kapa'a Refuse and Transfer Station Project" which was appended to the 1988 EIS (CCH DPW 1988, Appendix C). Generally, for the purposes of determining noise acceptability, an exterior noise level of 65 decibels (dBA) is determined to be acceptable. Based on the noise impact study, background ambient noise levels in the project area resulted in average noise levels of 47 to 52 dBA. Minimum background ambient noise levels ranged from 39 to 40 dBA, which is considered to be very quiet. No residential or developed areas are contiguous to the project parcel that would act as noise receptors.

2.10.2 Potential Environmental Consequences and Mitigation Measures

2.10.2.1 CONSTRUCTION

Noise levels would increase slightly during construction activities. Proposed construction activities would generate some noise primarily from mechanical equipment used for vegetation, grading, clearing and other construction activities. The noise may be audible at the property line intermittently and some noise may be audible on adjoining properties during the construction phase. None of the construction proposed at the site would be audible to the closest residential area of Kailua, which is approximately one mile from the site across Kawainui Marsh.

2.10.2.2 OPERATION

Employees would continue to use hearing protection as they currently do at the load out area. The only new additional noise generator after completion of the construction phase is the operation of the knuckle boom crane. To ascertain noise impacts of this crane, a site visit was completed in December 2018 to observe another knuckle boom crane in operation at the Station building. The crane is electrically operated and generates a negligible level of noise within a few feet of the equipment. This equipment noise would be further muffled by the placement of the crane within a metal shed. Noise impacts from the operation of the Proposed Action would be undetectable from the property line as well as from any surrounding land uses on adjacent property. The noise from the operation of the Proposed Action would be less than significant and the lack of noise receptors in the project area would further reduce noise impacts.

2.10.2.3 NO ACTION ALTERNATIVE

No changes or new impacts from noise are anticipated with the No Action alternative.

2.11 SITE ACCESS, CIRCULATION, AND TRAFFIC

2.11.1 Affected Environment

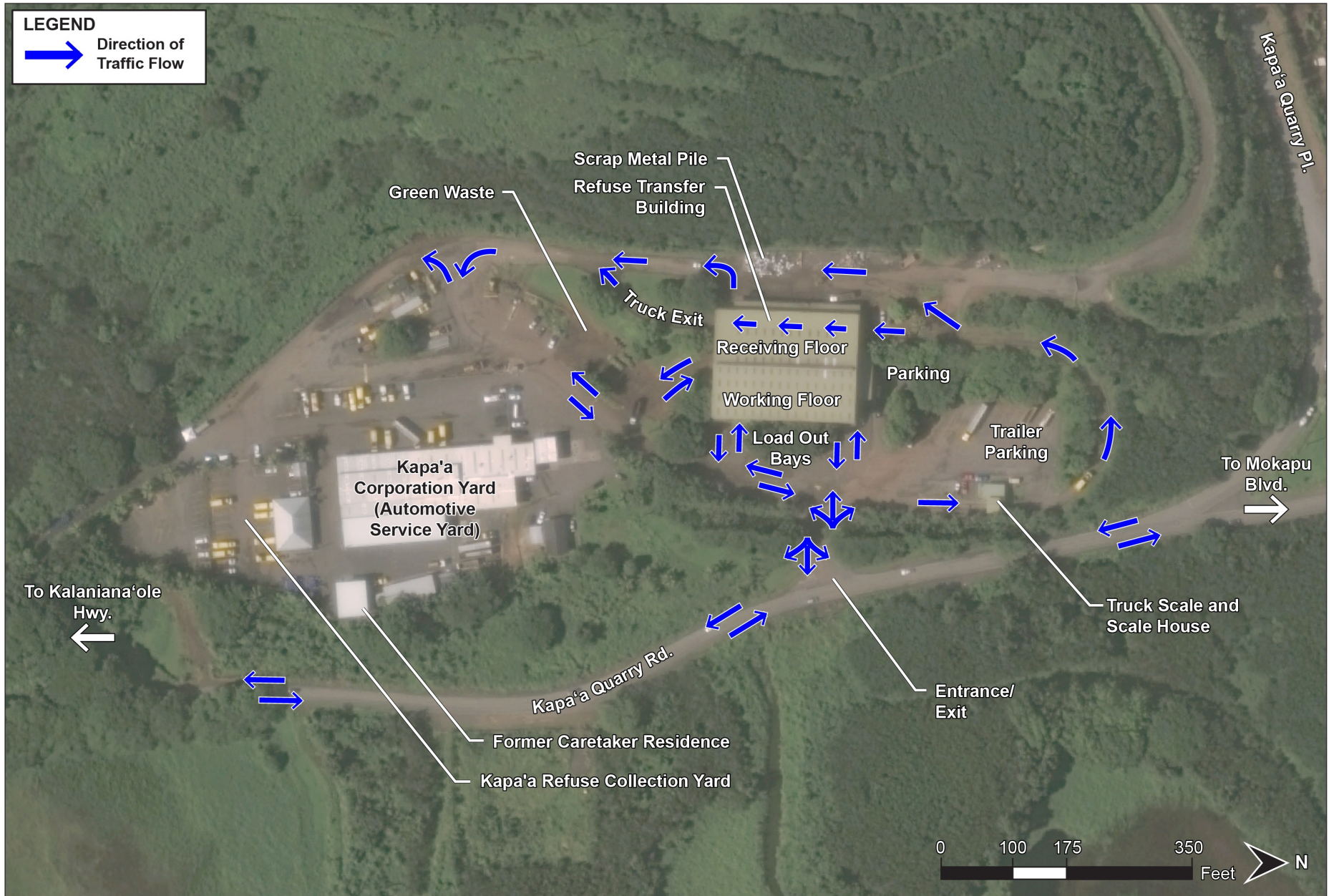
2.11.1.1 EXISTING TRAFFIC CIRCULATION AND CONDITIONS IN THE AREA

Access to the existing facility is from Kapa'a Quarry Road which runs from Kalaniana'ole Highway to Mokapu Saddle Road, near Kalaheo High School. While a traffic count study has not been completed for this section of roadway, observation and discussions with employees at the Station confirm that traffic on Kapa'a Quarry Road flows freely and at the speed limit at all times. Based on anecdotal evidence and non-scientific measures, Kapa'a Quarry Road appears to consist largely of free-flowing vehicular traffic during normal operating hours. The vehicular traffic mix consists of passenger vehicles using Kapa'a Quarry Road as a cutoff between Mokapu Saddle Road and Kalaniana'ole Highway, as well as employee, residential, and commercial truck traffic bound for the Kapa'a Refuse Transfer Station, or the industrial area and quarry mauka of the project site.

2.11.1.2 EXISTING TRAFFIC FLOW ON THE PROJECT SITE

The existing traffic flow pattern at the site is shown on Figure 2.11-1. Commercial and public traffic currently accesses the Station from the main entrance off Kapa'a Quarry Road. Haul vehicles entering the site turn right just after the entrance and check in at the truck scale and scale house, where traffic begins to queue during normal operating hours. Upon acceptance into the facility, vehicles continue to follow the access road and make a hard left (U-turn) maneuver while ascending the hill. Depending on the type of refuse material being delivered, vehicles continue into the Refuse Transfer Station building, or pull to the scrap metal stockpile site nearby. Upon tipping of the refuse, vehicles continue forward and make a hard left (U-turn) maneuver descending the hill and turn to the right to return to the facility entrance.

For bulky items or GW, vehicles enter the property in the same manner as described above. They follow the same initial route, but then continue past the scrap metal pile site and Station building. Upon completing the hard left (U-turn) maneuver, vehicles unload either bulk items or GW into their respective stockpile sites located on the left side of the vehicle driveway. As described above, the vehicles would then proceed down the hill and turn to the right to the facility entrance to exit.

**Figure 2.11-1: Existing Traffic Flow**

Source: AECOM 2019 (this report).

2.11.2 Potential Environmental Consequences and Mitigation Measures

2.11.2.1 CONSTRUCTION

Existing vehicular traffic flow and circulation in and around Kapa'a Quarry Road and outside of the Kapa'a facility would remain largely unaffected by the proposed construction and future operations. Minimal impacts would occur only within the facility during the construction and operation phases, and the type or quantity of vehicles currently circulating within the area would not be affected.

During the construction phase, all vehicles entering the site would be subject to warning signs advising caution. Appropriate barriers would further demarcate active construction zones restricting access to vehicles entering the property. Public access traffic during the construction phase would be generally unaffected. All access and vehicle movements would adhere to safety provisions outlined in the Traffic Control Plan prepared as part of the construction plans. While the construction impacts to circulation off-site would be minimal, impacts to vehicular circulation on the project site would occur during the construction phase. However, with implementation of the Traffic Control Plan, impacts from the construction phase would be less than significant.

2.11.2.2 OPERATION

The quantity of GW entering the facility and the amount of GW handling are not anticipated to change under the new operation. The proposed physical improvements for this project would not obstruct or hinder the existing traffic flow pattern. Refuse-laden vehicles would continue utilizing the same access road and transfer areas. However, whereas the GW loading operator currently enters the existing Refuse Transfer Station building to load GW into transfer vehicles, GW transfer vehicles would gain access through the newly constructed concrete loader bay and the vehicles top-loaded by the knuckle boom crane located in the new GW loading structure. Upon completion of the construction of the project, impacts to traffic flow associated with operational tipping and transferring of waste would be less than significant.

2.11.2.3 NO ACTION ALTERNATIVE

No changes or new impacts to circulation or traffic patterns are anticipated with the No Action alternative.

2.12 UTILITIES AND PUBLIC SERVICES

2.12.1 Affected Environment

This section summarizes and outlines utilities and public services in the project's general vicinity. Potable water, power, and communications utilities are present on the site. Wastewater infrastructure consists of an on-site cesspool. Storm drainage and drainage infrastructure are discussed in Section 2.3, *Water Resources*.

2.12.1.1 UTILITIES

Potable water to the site is provided by the Honolulu Board of Water Supply (BWS). All potable water serving the Transfer Facility is pumped from various sources in the Ko'olau Poko District. The water system near the Station has transmission mains and service to various buildings on-site, mostly serving restroom facilities. In the past, outdoor landscaping received potable water via irrigation, but the underground irrigation infrastructure is no longer used.

Currently, aboveground electrical lines on poles extend from off-site to the project site. These are complemented by underground electric services conduits leading to various structures on the site. Electricity is used to operate the two existing knuckle boom cranes, as well as lighting and other less intensive electrically powered uses on the property.

Hawaiian Telcom provides telephone service to the site, while cellular service is available from various private carriers. Wastewater to the site is managed on-site through a cesspool system. The cesspool is located on the front side of the Refuse Transfer Station building and outside of the area of disturbance for the Proposed Action.

2.12.1.2 PUBLIC SERVICES

Protective services including police and fire response, schools, and hospitals all serve the area. The Honolulu Police Department provides public safety services to the area. The project is located within Honolulu Police Department's District 4, Kailua Patrol District, Sector 2. The Kailua Police Substation is located directly east of the project site, across Kawainui Marsh. The Honolulu Fire Department delivers fire protection and first responder emergency medical services. There are 44 fire stations on the island, the Kailua Fire Station (18) is located approximately four miles from the project site by roadway. Aikahi Fire Station (19) is approximately 2.5 miles from the project site by roadway. Emergency medical services (EMS) are provided under contract with the City Emergency Services Department. The closest hospital facility to the project site is Castle Medical Center at Kalaniana'ole Highway and Kailua Road. The lack of residents or a residential area near the project site correlates with the lack of proximate public schools, neighborhood parks, and other community services and infrastructure that would typically serve a more developed area.

2.12.2 Potential Environmental Consequences and Mitigation Measures

2.12.2.1 CONSTRUCTION AND OPERATION

Due to the negligible difference between impacts from the construction and operational phases on utility and public services, the discussion of these phases is combined into the following sections.

2.12.2.2 UTILITIES

Increased water use would be required for some of the construction elements such as concrete mixing and equipment cleaning. Any substantial quantity of construction-related water would be supplied by contractors, likely using water trucks. During construction, potable water lines near the project would be demarcated and protected. No potable water lines are located within the excavation area or areas proposed for paving. Unused irrigation lines within the work area would be located, shut off, and removed. During the operational phase, the BWS would continue to serve the site with potable water. An increase in potable water consumption during the operational phase is not anticipated. Therefore, the project would have less than significant impacts on potable water resources, during either the construction or operational phase.

If electrical power is needed during the construction phase, it would be provided on-site for the existing system. During construction, unused, buried electrical lines to former light poles would be disturbed. Existing buried lines as well as three concrete posts would be de-energized and removed. Existing overhead power lines would remain undisturbed. As part of the operational phase, the design of electrical system upgrades would include the on-site inspection of the existing electrical systems, design of interior and exterior lighting, and design of circuits for the proposed new loading bay. Additionally, the manufacturer's electrical specifications for the new truck scales and knuckle-boom crane would be incorporated. The addition of three overhead light-emitting diode units would illuminate the new concrete pad area. Any required upgrades or alterations to the electrical system would be completed to accommodate the slightly increased demand based on the Proposed Action. Therefore, the impacts on the electrical power system are anticipated to be less than significant at the construction and operational phase.

Impacts to the telecommunication system are anticipated to be less than significant during the construction and operational phase.

2.12.2.3 PUBLIC SERVICES

The Proposed Action mechanizes the GW handling operation facility for greater efficiency. No feature of either the construction or operation of the Proposed Action would result in the need for enhanced or altered police, fire, or EMS resources. The new structure would incorporate a fire alarm system. No population increase is expected because no new residences are expected near the project site and no new employees would be hired. Therefore, no increases in the demands for public services would be expected during the construction and operational phase. Activities at the Proposed Action site would not affect the provision of utilities and public services to adjacent land uses, and therefore impacts would be less than significant.

2.12.2.4 NO ACTION ALTERNATIVE

Under the No Action alternative, utilities and public services would be retained and maintained as is. The demand for public services would remain the same under the No Action alternative.

2.13 SOCIOECONOMIC FACTORS

2.13.1 Affected Environment

2.13.1.1 POPULATION

The area generally served by the Kapa‘a Refuse Transfer Station includes the Ko‘olau Poko and Ko‘olau Loa areas of the island of O‘ahu. These two areas constitute the geographical windward side of the island. As described in the *Ko‘olau Poko Sustainable Communities Plan*, the 2010 population of the area was 115,164, which is 2,835 fewer persons than the 2000 census figure (CCH DPP 2017). The Plan outlines goals for the area under the premise that the area’s population will continue to decline slightly through at least 2035. The Ko‘olau Loa area is located just north of Ko‘olau Poko and extends to the north shore. Its 1999 Sustainable Communities Plan similarly outlines policies and goals predicated on little or no population increase for the area within its 20-year planning horizon (CCH DPP 199).

2.13.1.2 ECONOMY AND INCOME

The U.S. Census Bureau website identifies the Kāne‘ohe census-designated place (CDP) and the Kailua CDP as the areas closest to the project site. In 2017, the median household income in the Kāne‘ohe CDP was \$97,598, while the median in the Kailua CDP was \$114,381. Poverty rates were 6% and 5% in the Kāne‘ohe and Kailua CDPs, respectively. Both median household incomes are substantially higher and poverty rates lower in the two CDPs than on the island of O‘ahu as a whole. A comparison of the income data for Honolulu County, Kāne‘ohe CDP, and Kailua CDP is shown in Table 2.13-1.

Table 2.13-1: Honolulu County, Kāne‘ohe CDP, and Kailua CDP Income

Data Measured	Honolulu County	Kāne‘ohe CDP	Kailua CDP
Median household income (in 2017 dollars), 2013–2017	\$80,078	\$97,598	\$114,381
Per capita income in past 12 months (in 2017 dollars), 2013–2017	\$33,776	\$37,017	\$49,524
Persons in poverty, percent	8.3%	6.0%	5.0%

Source: USCB 2017.

2.13.2 Potential Environmental Consequences and Mitigation Measures

2.13.2.1 CONSTRUCTION

The construction phase would result in some temporary increase in employment at the project site. However, once completed, the Proposed Action would not result in any additional permanent employees at the facility. Therefore, the impacts to socioeconomic factors would be less than significant.

2.13.2.2 OPERATION

The Proposed Action would mechanize the current GW handling operation, and the mechanical operations will be managed by existing ENV employees. No new employees are anticipated as a result of implementation of the Proposed Action. Residential communities would not be displaced or adversely impacted, because all work associated with the Proposed Action would be conducted on a property already developed with an existing Refuse Transfer Station and other industrial uses. In addition, the Proposed Action would not be expected to disproportionately affect any minority or low-income communities. Therefore, the impacts on socioeconomic conditions are anticipated to be less than significant.

2.13.2.3 NO ACTION ALTERNATIVE

No socioeconomic impacts to the site are anticipated under the No Action alternative. The site will continue to collect and transfer refuse and GW at the site using mechanical equipment and facilities currently in use. No temporary increase in the construction workers or increase in potential income for those workers would occur.

3.0 RELATIONSHIP TO PLANS, POLICIES, AND CONTROLS

3.1 STATE OF HAWAII PLANS AND POLICIES

3.1.1 Hawai'i Environmental Policy Act

The Hawai'i Environmental Policy Act (HEPA) outlines the process of environmental review for the state and county. HEPA is codified in HRS Chapter 343 and implemented through HAR 11-200. The review ensures that environmental concerns are appropriately considered in decision-making. Additionally, HEPA defines the actions that trigger environmental review. For the Proposed Action, an environmental review is required due to Trigger No. 1, the use of state or county lands and/or funds. The 2019 filing of the draft EA and publication in the OEQC *Environmental Notice* is the formal initiation of the HEPA process. This EA was prepared in accordance with all applicable provisions from both HRS Chapter 343 and HAR 11-200. Because no federal permits, funds, or approvals are needed for the implementation of this project, the federal NEPA compliance process is not required.

3.1.2 Coastal Zone Management Act

Per the National Coastal Zone Management Act of 1972, Hawai'i's Coastal Zone Management (CZM) Program outlines objectives and policies to guide the use of the State's coastal resources. The entire State of Hawai'i is included in the State's CZM Program Area. As codified in HRS Chapter 205A, each county in the State of Hawai'i provides its own laws and regulations to implement the CZM Program within its respective jurisdiction through the SMA process. The project site is located within the City SMA zone as designated in HRS Chapter 205A (Figure 3.1-1). Under this designation, the Proposed Action would require issuance of an SMA permit by the County under provisions of ROH Chapter 25. This permit process is outlined in Section 3.2.3 below and includes an overview of the permit process to determine the Proposed Action's consistency with the goals, objectives, and policies set forth in the CZM Program and as outlined in HRS Section 205A-2. Because no federal permits, funding, or approvals are associated with this project, no formal CZM Federal Consistency process is required to be processed through the State Office of Planning.



Figure 3.1-1: Special Management Area

3.1.3 State Land Use District

The State Land Use Commission, under the authority granted in HRS Chapter 205, regulates land use through land classification into four districts: Urban, Agriculture, Conservation, and Rural. The intent of the land classification system is to accommodate anticipated growth and development while retaining the natural and agricultural resources of the State. Each district has specific land use objectives and development constraints.

The Proposed Action is located within the state Urban District. As outlined in HRS Chapter 205-2, the Urban District boundaries are determined for those lands that are now in urban use, and sufficient reserve area for foreseeable urban growth shall be included. HRS Chapter 205 further notes that Urban Districts shall include activities or uses as provided by ordinances or regulations of the county within which the Urban District is situated. The Proposed Action site, located within the State Urban District, is further located within the City's land use designated P-2 (General Preservation) zone (Figure 3.1-2). The Proposed Action is consistent with the intent of the State Urban District. Its compliance with the provisions of the County P-2 zone is discussed in Section 3.2.4.

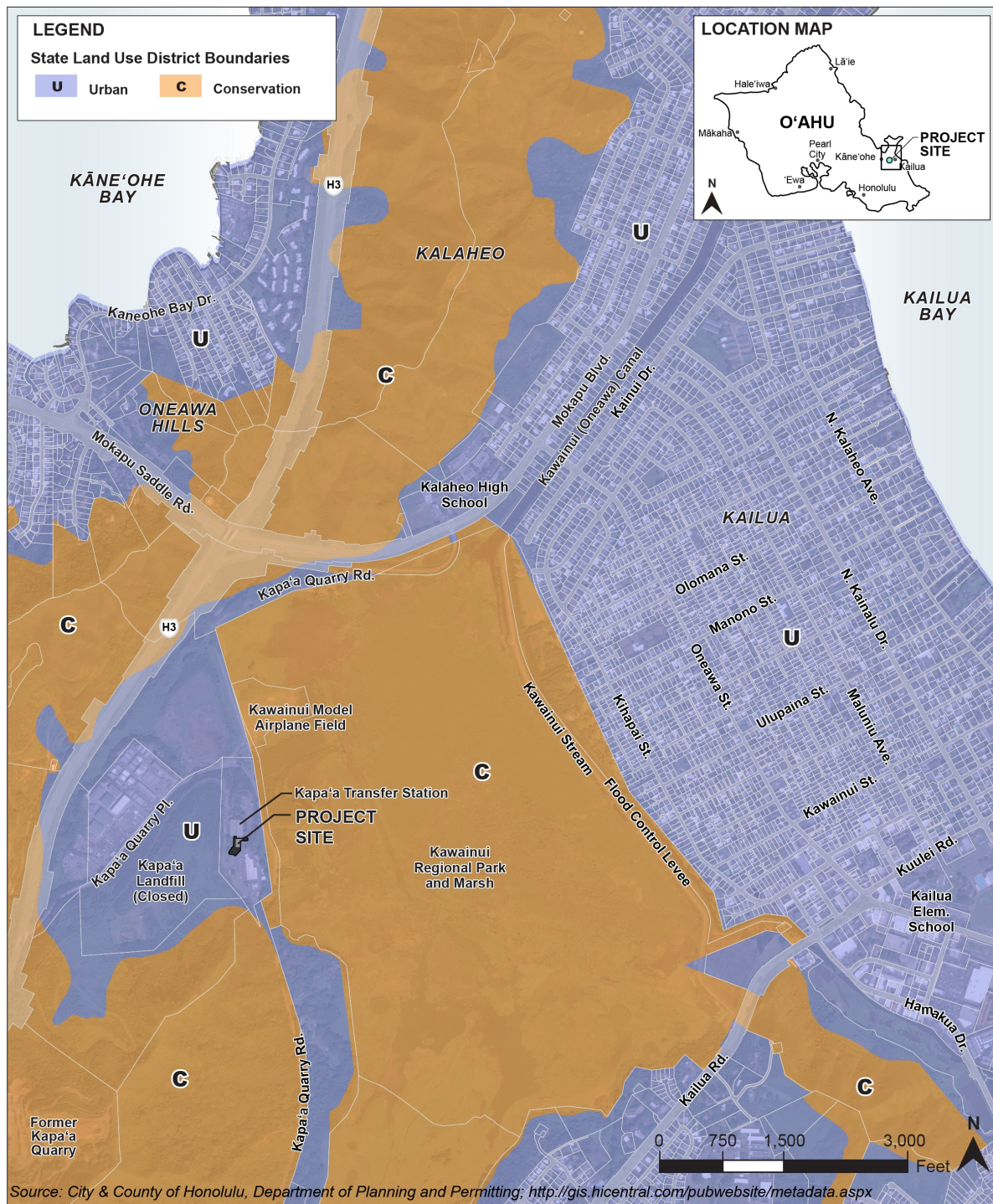


Figure 3.1-2: State Land Use Designations

3.1.4 Hawai'i State Plan

As defined in HRS Chapter 226-1, the Hawai'i State Plan (HSP) guides the future long-range development of the State. The Plan outlines the goals, objectives, policies, and priorities for the State. These goals are to: provide a basis for determining priorities and allocating limited resources, such as public funds, services, human resources, land, energy, water, and other resources; to improve coordination of federal, state, and county plans, policies, programs, projects, and regulatory activities; and establish a system for plan formulation and program coordination for the integration of all major state and county activities. Table 3.1-1 lists applicable themes, goals, objectives, and policies of the HSP, followed by a discussion of their consistency with the Proposed Action. Where an Objective and Policy section of HRS Chapter 226-1 is not listed below, it has been analyzed and determined to be not applicable to the Proposed Action.

Table 3.1-1: Hawai'i State Plan, Chapter 226, HRS

C = Consistent; N/C = Not Consistent; N/A = Not Applicable.

HRS § 226-12: Objectives and policies for the physical environment scenic, natural beauty, and historic resources			
<i>Objective:</i> Planning for the State's physical environment shall be directed towards achievement of the objective of enhancement of Hawai'i's scenic assets, natural beauty, and multi-cultural/historical resources.			
<i>Policies:</i>	C	N/C	N/A
1. Promote the preservation and restoration of significant natural and historic resources.			X
2. Provide incentives to maintain and enhance historic, cultural, and scenic amenities.			X
3. Promote the preservation of views and vistas to enhance the visual and aesthetic enjoyment of mountains, ocean, scenic landscapes, and other natural features.	X		
4. Protect those special areas, structures, and elements that are an integral and functional part of Hawai'i's ethnic and cultural heritage.			X
5. Encourage the design of developments and activities that complement the natural beauty of the islands.			X
<i>Discussion:</i> The structures and equipment associated with the Proposed Action would be placed at an existing, industrially developed site. The current structures are set back from the public roadway and are partially shielded from public view by dense vegetation and mature trees. The proposed structure will be designed to fit within the contours of the sloped hillside, resulting in a low profile that would ensure that the new facilities would not detrimentally impact public scenic views. A vegetated hillside separates the project site from Kapa'a Quarry Place and the industrial businesses further mauka. This hillside prevents the facilities from being seen from this public right-of-way and the industrial businesses. The proposed project is consistent with this objective to preserve scenic assets and natural beauty.			

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

<i>Objective:</i> Planning for the State's physical environment with regard to land, air, and water quality shall be directed towards achievement of the following objectives:	C	N/C	N/A
1. Maintenance and pursuit of improved quality in Hawai'i's land, air, and water resources.			X
2. Greater public awareness and appreciation of Hawai'i's environmental resources.			X
<i>Policies:</i>	C	N/C	N/A
1. Foster educational activities that promote limited environmental resources.			X
2. Promote the proper management of Hawai'i's land and water resources.	X		
3. Promote effective measures to achieve desired quality in Hawai'i's surface, ground, and coastal waters.			X
4. Encourage actions to maintain or improve aural and air quality levels to enhance the health and well-being of Hawai'i's people.			X
5. Reduce the threat to life and property from erosion, flooding, tsunamis, hurricanes, earthquakes, volcanic eruptions, and other natural or man-induced hazards and disasters.			X
6. Encourage design and construction practices that enhance the physical qualities of Hawai'i's communities.			X
7. Encourage urban developments in close proximity to existing services and facilities.			X
8. Foster recognition of the importance and value of the land, air, and water resources to Hawai'i's people, their cultures, and visitors.			X

Discussion: This project will result in the GW handling system being more efficient, cost effective, and environmentally sound. It will result in the reduction of exposed amounts of GW stored at the site, more efficient loading for faster delivery of the GW to the recycling facility, and the better utilization of ENV staff resources.

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

Objective: Planning for the State's facility systems in general shall be directed towards achievement of the objective of water, transportation, waste disposal, and energy and telecommunication systems that support statewide social, economic, and physical objectives.

<i>Policies:</i>	C	N/C	N/A
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.	X		
2. Encourage flexibility in the design and development of facility systems to promote prudent use of resources and accommodate changing public demands and priorities.			X

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

3. Ensure that required facility systems can be supported within resource capacities and at reasonable cost to the user.			X
4. Pursue alternative methods of financing programs and projects and cost-saving techniques in the planning, construction, and maintenance of facility systems.			X

Discussion: The Proposed Action is consistent with this objective to plan for waste disposal systems that support state planning efforts. The Proposed Action results in improved, efficient handling of the GW stream on the windward side of O'ahu.

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

<i>Objective:</i> Planning for the State's facility systems with regard to solid and liquid wastes shall be directed towards the achievement of the following objectives:	C	N/C	N/A
1. Maintenance of basic public health and sanitation standards relating to treatment and disposal of solid and liquid wastes.	X		
2. Provision of adequate sewerage facilities for physical and economic activities that alleviate problems in housing, employment, mobility, and other areas.			X
<i>Policies:</i>	C	N/C	N/A
1. Encourage the adequate development of sewerage facilities that complement planned growth.			X
2. Promote re-use and recycling to reduce solid and liquid wastes and employ a conservation ethic.	X		
3. Promote research to develop more efficient and economical treatment and disposal of solid and liquid wastes.			X

Discussion: The ENV approach to GW management on O'ahu is to process all GW primarily through a GW recycling facility. Commercial, government, homeowners' associations, and nonprofit organizations are required to use recycling facilities for disposal of all their GW. Private vendors turn GW into compost and other products, which are purchased and reused for landscaping, erosion control, soil amendments, and mulching materials. This reduction in the waste stream and beneficial reuse of GW complies with the state objectives for reuse and recycling.

In addition to the various objectives and policies discussed above, HSP Chapter 226, HRS Part III outlines various Priority Guidelines through which a project analysis should be filtered. For this EA, an exercise was completed to analyze the Proposed Action through all of the Priority Guidelines. None of the Guidelines were applicable to the Proposed Action, so they will not be individually listed here.

3.1.5 Functional Plans

The HSP is implemented through the development of functional plans and county general plans. The 13 State Functional Plans are prepared by various state agencies with community input. Each of these plans is written corresponding to a theme, in the short term: agriculture, conservation lands, education, employment, energy,

higher education, health, historic preservation, housing, human services, recreation, tourism, and transportation. A review of all of the Functional Plans found one Plan and related policy applicable to the Proposed Action. A discussion of the Proposed Action's consistency with applicable Health Functional Plan policy follows:

Health Functional Plan

Issue Area 5: Environmental Health and Protection.

Policy: Air, Land and Water Quality Programs.

Implementing Action: Develop and implement a comprehensive Solid and Hazardous Waste Management Program.

Discussion: The ENV has a comprehensive solid waste management regime in compliance with the above policy. Programs include diversion, reuse, and recycling of a range of materials including GW. Materials not conducive to recycling or reuse are disposed of at the H-POWER waste-to-energy plant in Campbell Industrial Park. The H-POWER facility diverts the vast majority of non-recyclable waste from landfills while providing a source of energy for the island. The City has numerous ordinances, mandates, goals, enforcement tools, permits, and monitoring procedures as part of its comprehensive solid waste program. Many elements of the solid waste program area codified in ROH Chapter 9, *Collection and Disposal of Refuse*. The Proposed Action is consistent with applicable provisions of the Health Functional Plan.

3.2 CITY AND COUNTY OF HONOLULU PLANS AND POLICIES

3.2.1 General Plan

As self-described, "the General Plan for the City and County of Honolulu is a comprehensive statement of objectives and policies which sets forth the long-range aspirations of O'ahu's residents and the strategies to achieve them" (CCH DPP 2002). These objectives and policies are deemed pursuable or achievable within an approximate 20-year time horizon. Furthermore, the General Plan guides all levels of government, as well as private enterprises, neighborhood and citizen groups, organizations, and individual citizens. The General Plan is divided into 11 areas of concern:

1. Population
2. Economic Activity
3. The Natural Environment
4. Housing
5. Transportation and Utilities
6. Energy
7. Physical Development and Urban Design
8. Public Safety
9. Health and Education

10. Culture and Recreation

11. Government Operations and Fiscal Management

Of these, the topics applicable to the Proposed Action are:

- The Natural Environment
- Transportation and Utilities
- Government Operations and Fiscal Management

Of the above topics, only some of the policies are applicable to the Proposed Action. Below is a discussion of how the Proposed Action would be consistent with applicable themes, goals, objectives, and policies of the General Plan.

3.2.1.1 NATURAL ENVIRONMENT

Objective A: To protect and preserve the natural environment.

Policy 6: Design surface drainage and flood-control systems in a manner which will help preserve their natural settings.

Discussion: The Proposed Action is intended to preserve the natural setting with appropriate drainage and flood control. In 2016, the ENV issued an updated Kapa'a Refuse Transfer Station SWPCP. This was completed as a requirement of NPDES MS4 Permit No. HI S000002. This plan is consistent with HAR 11-54, *Water Quality Standards* and HAR 11-55, *General Permit Authorizing Discharges of Storm Water Associated with Industrial Activities*. The facility has operated under a SWPCP since 2006 and has not had discharges of a reportable quantity from the facility. The surface drainage system has been designed to prevent or reduce the pollution of state waters through the application of ongoing BMPs. The Proposed Action will be required to comply with the SWPCP, which may be amended to reflect any additional or modified BMPs and infrastructure. This will ensure that the project complies with the objective to protect and preserve the natural environment.

3.2.1.2 TRANSPORTATION AND UTILITIES

Objective B: To meet the needs of the people of O'ahu for an adequate supply of water and for environmentally sound systems of waste disposal.

Policy 5: Provide safe, efficient, and environmentally sensitive waste collection and waste disposal services.

Policy 6: Support program to recover resources from solid waste and recycle wastewater.

Discussion: The Proposed Action would provide an improved GW handling procedure and improve efficiency of the recycling of GW. Implementation and adherence to the aforementioned SWPCP would ensure compliance with this objective and its applicable policies.

3.2.1.3 GOVERNMENT OPERATIONS AND FISCAL MANAGEMENT

Objective A: To promote increased efficiency, effectiveness, and responsiveness in the provision of government services by the City and County of Honolulu.

Policy 1: Maintain City and County government services at the level necessary to be effective.

Discussion: The Proposed Action will increase the efficiency of the Kapa'a GW handling procedures. The Proposed Action is necessary as part of the continued operation of an effective waste management system that serves the needs of O'ahu. While no increase in GW volume is anticipated with implementation of the Proposed Action, there will be more efficient on- and off-loading and transferring of GW consistent with the objectives and policies for government operations.

3.2.2 Ko'olau Poko Sustainable Communities Plan

The *Ko'olau Poko Sustainable Communities Plan* adopted in August 2017 is one of eight community-oriented plans on the island of O'ahu intended to help guide public policy, investment, and decision-making. The Plan defines the project area as "Institutional" on Map A-2, *Land Use* and as "Solid Waste Transfer Station" on Map A-3, *Public Facilities* (CCH DPP 2017).

Chapter 4.5, *Solid Waste Handling and Disposal* of the Plan outlines policies and guidelines for solid waste handling and disposal in the Ko'olau Poko area. Specifically, the chapter outlines the following applicable policies.

4.5.1 Policies:

- Continue efforts to establish more efficient waste diversion and collection systems.
- Promote waste reduction, re-use, and recycling.

Discussion: See Section 3.1.5, *Functional Plans*.

Chapter 4.6, *Drainage Systems* outlines policies and guidelines for the management of storm water and flood control. In 2000, the City adopted storm drainage standards to address both the quantity and quality of storm runoff for flood control and environmental quality purposes.

4.6.1 Policies:

- Promote drainage system design that emphasizes control and minimization of nonpoint source pollution and the retention of storm water on-site and in wetlands.
- Select natural and man-made vegetated drainageways and retention basins as the preferred solution to drainage problems wherever they can promote water recharge, help control non-source pollutants, and provide passive recreation benefits.

Discussion: See Section 3.1.5, *Functional Plans*.

3.2.3 Special Management Area

Per the Federal Coastal Zone Management Act of 1972, Hawai‘i’s CZM Program outlines objectives and policies to guide the use of the State’s coastal resources. The entire State of Hawai‘i is included in the State’s CZM Program Area.

As codified in HRS Chapter 205A, each county in the State of Hawai‘i provides its own laws and regulations to implement the CZM Program within its respective jurisdiction through the SMA process. The area for the Proposed Action lies within the County-delineated SMA as designated in HRS Chapter 205A. Pursuant to the State’s CZM Program outlined in HRS 205A, the provisions of ROH Section 25 have been established and are applied to all lands within the SMA of the City.

Pursuant to ROH Section 25-6.1, no development or structure shall be constructed within the SMA area without first obtaining an SMA use permit or a minor permit or being exempted pursuant to the provisions of this chapter. Based on the valuation of the work associated with the Proposed Action (\$500,000+), an SMA Use Permit (major) application would need to be pursued and approved by DPP. While an SMA Use Permit File No. 86/SMA-82 was previously approved for the development on the project site, due to the expansion of the facility and its valuation, a new SMA use permit is required to be submitted and approved. As part of the SMA permit application process, the City requires the applicant to identify impacts of the project relative to the CZM objectives and policies (HRS 205A-2) and the SMA review guidelines of ROH 25-3.2. Table 3.2-1 below outlines objectives and policies of HRS 205A-2, followed by a discussion of their applicability and consistency with the Proposed Action.

Table 3.2-1: Coastal Zone Management Act Chapter 205A, HRS

C = Consistent; N/C = Not Consistent; N/A = Not Applicable.

Recreational Resources			
<i>Objective:</i> (A) Provide coastal recreational opportunities accessible to the public.			
<i>Policies:</i>	C	N/C	N/A
(A) Improve coordination and funding of coastal recreational planning and management.			X
(B) Provide adequate, accessible, and diverse recreational opportunities in the coastal zone management area by:			X
(i) Protecting coastal resources uniquely suited for recreational activities that cannot be provided in other areas;			X
(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;			X

Recreational Resources

(iii) Providing and managing adequate public access, consistent with conservation of natural resources, to and along shorelines with recreational value;			X
(iv) Providing an adequate supply of shoreline parks and other recreational facilities suitable for public recreation;			X
(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;			X
(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;			X
(vii) Developing new shoreline recreational opportunities, where appropriate, such as artificial lagoons, artificial beaches, and artificial reefs for surfing and fishing; and			X
(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.			X

Discussion: The Proposed Action would not impact any existing public coastal recreational opportunities since the project site does not include, nor is located near, any public access/trails or other coastal recreation opportunities. The closest recreational area is the Kawaiinui Model Airplane Field a quarter mile from the project site. The use of that facility will not be impacted by the Proposed Action.

Historic Resources

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

<i>Policies:</i>	C	N/C	N/A
(A) Identify and analyze significant archaeological resources;			X
(B) Maximize information retention through preservation of remains and artifacts or salvage operations; and			X
(C) Support state goals for protection, restoration, interpretation, and display of historic resources.			X

Discussion: This project has been through the process of consultation with SHPD and cultural stakeholders as part of the Environmental Assessment and complies with all applicable state and county laws. It was determined that there are likely no significant archaeological or historical resources on the project site or in the immediately surrounding area. However, SHPD has approved the project with conditions to ensure the appropriate handling and management of resources should they be uncovered during the construction phase.

Scenic and Open Space Resources

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

<i>Policies:</i>	C	N/C	N/A
(A) Identify valued scenic resources in the coastal zone management area;	X		
(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;	X		
(C) Preserve, maintain, and, where desirable, improve and restore shoreline open space and scenic resources; and			X
(D) Encourage those developments that are not coastal dependent to locate in inland areas.	X		

Discussion: No valued scenic resources are identified in or around the project area. While the existing Refuse Transfer Station building roofline is visible from some public rights-of-way in Kailua, the new proposed structure would not be visible from any public right-of-way. The project involves the construction of a 20-foot by 50-foot steel structure averaging 18 feet in height. The height of the proposed structure is significantly shorter than the Refuse Transfer Facility building next to where it will be built. The Proposed Action is appropriately located in an inland area and would have no impacts to the shoreline open space and scenic resources.

Coastal Ecosystems

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

<i>Policies:</i>	C	N/C	N/A
(A) Exercise an overall conservation ethic, and practice stewardship in the protection, use, and development of marine and coastal resources;			X
(B) Improve the technical basis for natural resource management;			X
(C) Preserve valuable coastal ecosystems, including reefs, of significant biological or economic importance;			X
(D) Minimize disruption or degradation of coastal water ecosystems by effective regulation of stream diversions, channelization, and similar land and water uses, recognizing competing water needs; and			X
(E) Promote water quantity and quality planning and management practices that reflect the tolerance of fresh water and marine ecosystems and maintain and enhance water quality through the development and implementation of point and nonpoint source water pollution control measures.	X		

Discussion: Due to the minimal scale of the Proposed Action, and lack of any coastal resources or ecosystems associated with it, these policies are inapplicable. However, the SWPCP will outline possible BMPs and mitigation measures to control point and nonpoint source water pollution both on- and off-site, primarily to the Kawainui Marsh.

Economic Uses

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

<i>Policies:</i>	C	N/C	N/A
(A) Concentrate coastal dependent development in appropriate areas;			X
(B) Ensure that coastal dependent development such as harbors and ports, and coastal related development such as visitor industry facilities and energy generating facilities, are located, designed, and constructed to minimize adverse social, visual, and environmental impacts in the coastal zone management area; and			X
(C) Direct the location and expansion of coastal dependent developments to areas presently designated and used for such developments and permit reasonable long-term growth at such areas, and permit coastal dependent development outside of presently designated areas when:			X
(i) Use of presently designated locations is not feasible;			
(ii) Adverse environmental effects are minimized; and			
(iii) The development is important to the State's economy.			

Discussion: The Proposed Action does not involve coastal-dependent development. It would be appropriately sited far from the shoreline in an inland area currently developed with uses similar to the proposed use. The Proposed Action would result in structural and operational improvements to this vital public facility serving the windward side of the island. This is a suitable location for the improvements as this is an existing refuse transfer station site with other industrial uses. The increased efficiencies in operations may result in cost and time savings for the City, waste haulers, and householders.

Coastal Hazards

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

<i>Policies:</i>	C	N/C	N/A
(A) Develop and communicate adequate information about storm wave, tsunami, flood, erosion, subsidence, and point and nonpoint source pollution hazards;	X		
(B) Control development in areas subject to storm wave, tsunami, flood, erosion, hurricane, wind, subsidence, and point and nonpoint source pollution hazards;	X		
(C) Ensure that developments comply with requirements of the Federal Flood Insurance Program; and	X		
(D) Prevent coastal flooding from inland projects.	X		

Coastal Hazards

Discussion: The improvements associated with the Proposed Action will be designed and constructed in compliance with current building codes to mitigate natural disasters including tsunami and earthquakes. The grading and filling on the site will be engineered to ensure stability and allow proper drainage to prevent erosion. The threat from stream flooding is minimal. This area is located in Flood Zone D – *Unstudied areas where flood hazards are undetermined, but flooding is possible*. During the construction phase, an update to the 2016 SWPMP for the site will likely be required. This will provide BMPs and mitigation measures to prevent erosion and storm drain pollution on the site during construction and impacts to water resources off the site during operation.

Managing Development

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

<i>Policies:</i>	C	N/C	N/A
(A) Use, implement, and enforce existing law effectively to the maximum extent possible in managing present and future coastal zone development;	X		
(B) Facilitate timely processing of applications for development permits and resolve overlapping or conflicting permit requirements; and	X		
(C) Communicate the potential short and long-term impacts of proposed significant coastal developments early in their life cycle and in terms understandable to the public to facilitate public participation in the planning and review process.	X		

Discussion: The Proposed Action has gone through the environmental review process in compliance with the State of Hawai'i Environmental Policy Act. A public review/comment period is being conducted as part of the environmental review process that allows for public participation/agency communication to ascertain impacts from the development. The development will proceed in accordance with all applicable City and State regulations/codes. The Proposed Action will comply with all applicable permitting and regulatory requirements including a waste handling permit, building permits, and an SMA permit. The SMA permit process requires discretionary approval subsequent to public hearings and presentations. This will ensure that the public can participate in the review and decision-making for the Proposed Action.

Public Participation

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

<i>Policies:</i>	C	N/C	N/A
(A) Promote public involvement in coastal zone management processes;	X		
(B) Disseminate information on coastal management issues by means of educational materials, published reports, staff contact, and public workshops for persons and organizations concerned with coastal issues, developments, and government activities; and			X
(C) Organize workshops, policy dialogues, and site-specific mediations to respond to coastal issues and conflicts.	X		

Public Participation

Discussion: Both a pre-consultation outreach effort followed by a public review/comment period is being conducted as part of this environmental review process. This allows stakeholders to participate in the review process. All formal comments received during the EA process are followed by response letters by ENV. As part of the SMA permit process, a presentation before Neighborhood Board No. 31 (Kailua) will be offered. The site location and scope does not require public awareness efforts for coastal management.

Beach Protection

Objective: (A) Protect beaches for public use and recreation.

<i>Policies:</i>	C	N/C	N/A
(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;			X
(B) Prohibit construction of private erosion-protection structures seaward of the shoreline, except when they result in improved aesthetic and engineering solutions to erosion at the sites and do not interfere with existing recreational and waterline activities; and			X
(C) Minimize the construction of public erosion-protection structures seaward of the shoreline.			X

Discussion: These policies are not applicable as the Proposed Action is not located on or near the shoreline or shoreline setback areas.

Marine Resources

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

<i>Policies:</i>	C	N/C	N/A
(A) Ensure that the use and development of marine and coastal resources are ecologically and environmentally sound and economically beneficial;			X
(B) Coordinate the management of marine and coastal resources and activities to improve effectiveness and efficiency;			X
(C) Assert and articulate the interests of the State as a partner with federal agencies in the sound management of ocean resources within the U.S. exclusive economic zone;			X
(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			X
(E) Encourage research and development of new, innovative technologies for exploring, using, or protecting marine and coastal resources.			X

Discussion: The project site is not located near the shoreline or beaches. The Proposed Action will neither impact beaches nor warrant beach protection.

Source: HRS 205A.

In addition to compliance with the objectives and policies of the Hawaiʻi CZM Program outlined in HRS Section 205A, the guidelines in ROH Section 25 for review by the City Council when considering a SMA Use Permit include the following:

- Adequate access, by dedication or other means, to publicly owned or used beaches, recreation areas, and natural reserves is provided to the extent consistent with sound conservation principles.
- Adequate and properly located public recreation areas and wildlife preserves are reserved.
- Provisions are made for solid and liquid waste treatment, disposition, and management, which would minimize adverse effects on SMA resources.
- Alterations to existing land forms and vegetation, except crops; and construction of structures shall cause minimum adverse effect to water resources, scenic and recreational amenities, and minimum danger of floods, landslides, erosion, siltation, or failure in the event of an earthquake.

Based on the above discussion and as analyzed in the various chapters of this EA document, the ENV has determined that the Proposed Action is consistent, to the maximum extent practicable, with the objectives and policies of the State CZM Program outlined in HRS 205A-2 and ROH Section 25. These determinations will be reviewed by DPP as well as other agencies as part of the review of the SMA permit application.

3.2.4 City and County of Honolulu Land Use Ordinance – P-2 General Preservation

Land uses within the City jurisdiction are regulated under ROH Chapter 21, Land Use Ordinance (LUO). The purpose of the LUO, as stated in its Section 21.1.20, is to “regulate land use in a manner that will encourage orderly development in accordance with adopted land use policies, including the Oʻahu general plan and development plans, and to promote and protect the public health, safety and welfare.” Section 21.3.10 of the LUO lists the latest land use zoning districts classifications.

The project site is located within the P-2 (General Preservation) zone as defined in the LUO (Figure 3.2-1). The purpose of the P-2 zone is to preserve and manage major open space, recreational lands, and lands of scenic and other natural resource value.

Permitted uses and structures within the P-2 zone are outlined in Table 21-3 of the LUO. According to the LUO table, *Public Uses and Structures* are permitted uses within the P-2 zone. Public uses and structures are defined in the LUO as uses conducted by or structures owned or managed by the federal government, the State of Hawaiʻi or the City to fulfill a governmental function, activity or service for public benefit. The Proposed Action is consistent with this purpose. It would neither change any existing land uses nor introduce significantly new types of uses. The Proposed Action would only improve existing processes that are already legally on the site.

Table 3.2-2 shows a table from ROH Chapter 21-3.1 outlining the development standards applicable to new development in the P-2 General Preservation District and the Proposed Action's compliance with the development standards in the P-2 zone. While the proposed metal structure exceeds the height limit in the P-2 zone, Section 21-2.130 of the LUO allows a waiver from development standards for public and public/private uses and structures.

Table 3.2-2: P-2 District Development Standards

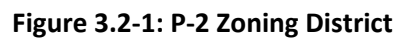
Description	P-2 Zoning Requirement	Proposed Development
Minimum lot area (acres)	5	20
Minimum lot width and depth (feet)	200	1600 wide 375 deep
Front yard setback (feet)	30	190
Side and rear yard setback (feet)	15	90
Maximum building area (percent of zoning lot)	5%	2%
Maximum height (feet)	15–25	30–48 ^a

Note: A waiver of the strict application of the development or design standards of this chapter may be granted by the director for the following:

- (1) Public or public/private uses and structure, including utility installations.

Source: ROH Chapter 21-3.1.

^a LUO Section 21-2.130 Waiver of Requirements.



3.3 PERMITS AND APPROVALS REQUIRED FOR THE PROPOSED ACTION

Table 3.3-1 outlines the required permits to implement the Proposed Action. While most will be processed administratively, the Proposed Action will require the issuance of a Special Management Area Permit (Major). The latter is a discretionary permit that will involve a presentation before the Kailua Neighborhood Board and eventual decision-making by the City Council.

Table 3.3-1: List of Required Permits

Agency	Permit
State of Hawai'i Department of Health	HRS Chapter 343 Compliance
	Solid Waste Management Permit (Update-Amendment)
	Community Noise Permit
City and County of Honolulu Department of Planning and Permitting	Special Management Area Permit (Major)
	Building, Grading, and Trenching Permits

Source: AECOM 2019 (this report).

4.0 DIRECT, INDIRECT, AND CUMULATIVE IMPACTS AND MITIGATION MEASURES

4.1 DIRECT AND INDIRECT IMPACTS

“Primary impact”, “primary effect”, “direct impact”, or “direct effect” means effects caused by the action and occur at the same time and place. For direct impacts to occur, a resource must be present in the particular project site. “Secondary impact”, “secondary effect”, “indirect impact”, or “indirect effect” means effects caused by the action and are later in time or farther removed in distance but are still reasonably foreseeable. Indirect impacts may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density, or growth rate, and related effects on air and water and other natural systems, including ecosystems (HAR §11-200-2).

4.2 CUMULATIVE IMPACTS

As defined in HAR §11-200-2, “cumulative impacts” are the impact on the environment, which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. The cumulative impacts of implementing the Proposed Action, along with past and reasonably foreseeable future projects proposed, were assessed based on available information.

4.2.1 Current Use

A portion of the site in the past included a quarry operation which subsequently closed and was followed by use of the site as the Kapaʻa Landfill. With closure of the landfill, the present use of the site consists of city public services facilities including a refuse management operation, refuse collection yard, and vehicle corporation yard.

4.2.2 Past and Reasonably Foreseeable Future Projects

- This site is now located between industrial uses, the former landfill mauka of the project site, and the Kawaiinui Marsh makai of the project site.
- The former landfill has been designated for construction of a future City park although no definitive plans have been approved for its development.
- The City is currently in the process of completing review of the Kawaiinui-Hāmākua Master Plan project, which proposes certain improvements to the marsh located across Kapaʻa Quarry Road and designated the Kahanaiki- Nā Pōhaku Sub-Area. Within this subarea, the Plan proposes to create

a Hawaiian Cultural and Environmental Complex including a hale, hula mound, imu, and parking lot connected by a perimeter path.

- Just north of the Kahanaiki-Nā Pōhaku Sub-Area is the Kawainui Model Airplane Field. Currently, no changes to this facility are planned.
- Adventist Health Castle Medical Center recently announced plans to convert the Hawai'i Pacific University Hawai'i Loa campus at 45-045 Kamehameha Highway into a medical facility including a new 160-bed hospital (HNN 2019). The campus is approximately 1.5 miles southwest of the project site. The conversion is expected to start in 2020.

HAR §11-200-7 states the following regarding analyzing cumulative effects of a Proposed Action.

A group of actions proposed by an agency or applicant shall be treated as a single action when:

- (1) The component actions are phases or increments of a larger total undertaking;
- (2) An individual project is a necessary precedent for a larger project;
- (3) An individual project represents a commitment to a larger project; and
- (4) The actions in question are essentially identical and a single statement will adequately address the impacts of each individual action and those of the group of actions as a whole.

The Proposed Action will not result in cumulative impacts from past, present, or reasonably foreseeable future projects. In accordance with HAR 11-200, a discussion of cumulative impacts resulting from projects that are proposed, under construction, recently completed, or anticipated to be implemented in the near future is included in this EA. While each section of this EA contains a discussion on impacts for that resource, Table 4.2-1 summarizes the anticipated impacts or lack thereof for the various resources analyzed in this document.

Table 4.2-1: Anticipated Impacts on Resources

Resource	Direct Impacts	Indirect Impacts	Cumulative Impacts
Climate and Air Quality	None	None	None
Topography, Geology, and Soils	Less than Significant	None	None
Water Resources	Less than Significant	None	None
Solid Waste and Hazardous Materials	Less than Significant	None	None
Natural Hazards	None	None	None
Biological Resources	Less than Significant	None	None
Historic and Cultural Resources	None	None	None
Recreation	None	None	None

Resource	Direct Impacts	Indirect Impacts	Cumulative Impacts
Visual Resources	None	None	None
Noise	None	None	None
Site Access, Circulation, and Traffic	None	None	None
Utilities and Public Services	None	None	None
Socioeconomic Factors	None	None	None

Source: AECOM 2019 (this report).

As with impacts, where appropriate, conditions and best management practices are listed in each of their respective resource sections in this EA. These mitigation measures are summarized in Table 4.2-2.

Table 4.2-2: Summary of Conditions and Best Management Practices

Resource	Conditions and Best Management Practices
Climate and Air Quality	None.
Topography, Geology, and Soils	Comply with all provisions of the ROH Chapter 14 Article 15, Grading, Grubbing and Stockpiling permit to be issued for the project.
Water Resources	Comply with and maintain an approved SWPCP mitigation measures as part of NPDES MS4 Permit HI S000002 and DOH Solid Waste Permit TF-0015-15.
Solid Waste and Hazardous Materials	Comply with and maintain an approved SWPCP mitigation measures as part of NPDES MS4 Permit HI S000002 and DOH Solid Waste Permit TF-0015-15.
Natural Hazards	None.
Biological Resources	<p>The City will enlist the services of a qualified arborist approved by the DPR, Division of Forestry, Urban Forestry Administration.</p> <p>The qualified arborist to prepare a Tree Assessment Report and Tree Protection Zone Fencing Plan to provide mitigation measures for the protection of trees to be retained.</p> <p>The removal of trees will be mitigated through replacement tree planting. Due to existing operations at the site, which include the movement of large trucks and equipment, opportunities for replacement tree planting on-site are limited. Therefore, some replacement planting may be proposed off-site at locations that provide a greater benefit to the community. The number, species, and location of tree planting will be determined by the qualified arborist in coordination with DPR, The Outdoor Circle, Neighborhood Board No. 31 (Kailua), District Councilmember, and other interested parties.</p>

Resource	Conditions and Best Management Practices
Biological Resources (cont'd.)	<p>To avoid mortality to Hawaiian hoary bat pups that may be present in trees and cannot yet fly, trees and woody plants greater than 15 feet tall will not be disturbed, removed, or trimmed during the bat birthing and pup rearing from June 1 through September 15.</p> <p>Construction site BMPs including standards for handling and disposal of waste, erosion and sediment control measures (e.g., drain inlet protection, compost filter socks, stabilized ingress/egress, spill kits), BMP inspections, and required pollution prevention plan shall be implemented.</p> <p>All construction activities would take place during daylight hours. No night construction or construction lighting is proposed. However, in the unlikely event that nighttime construction lighting is required, any lights used would be downward facing and fully shielded to minimize impacts to seabirds. In addition to lighting for construction, all permanent lighting to be installed on the site will also be downward facing and fully shielded.</p> <p>If CRB are discovered at the facility, personnel have been directed to notify appropriate personnel with the College of Tropical Agriculture and Human Resources at the University of Hawai'i at Mānoa.</p>
Historic and Cultural Resources	<p>If human remains or subsurface archaeological resources are encountered during construction, work would immediately stop, and the SHPD would be contacted in accordance with State law and rules.</p>
Recreation	None.
Visual Resources	None.
Noise	None.
Site Access, Circulation, and Traffic	None.
Utilities and Public Services	None.
Socioeconomic Factors	None.

Source: AECOM 2019 (this report).

5.0 DETERMINATION AND FINDINGS

5.1 HAR 11-200 SIGNIFICANCE CRITERIA

The Significance Criteria outlined in HAR §11-200.12 were reviewed and analyzed to determine whether the Proposed Action would have significant adverse impacts on the environment. The following discussion identifies each criterion followed by an analysis of its consistency with the project.

1. Involves an irrevocable commitment to loss or destruction of any natural, cultural or historical resource.

As initially described in the 1988 EIS for the Kapaʻa Refuse Transfer Station and as verified during research and consultation with SHPD during the spring of 2019, the project site has been extensively altered by previous quarry activity, and nothing of cultural or historical significance is known to exist in the immediate area of the project site (CCH DPW 1988). As noted in the EIS, a survey of the flora did not locate any endangered species of flora, and the site is mostly devoid of flora aside from some monkeypod, Formosa koa, and weeping fig, with koa haole and Guinea grass along the sides of the draining ditch. As part of the project, 11 trees will be removed, none of which are endangered or threatened. Per the requirements of the DPR, a Certified Arborist Permit issued through the Urban Forestry Division is required including a replanting plan to ensure impacts to flora on the site are less than significant. Based on this analysis and findings, the Proposed Action is not anticipated to involve an irrevocable commitment to loss or destruction of any natural, cultural, or historical resource.

2. Curtails the range of beneficial uses of the environment.

The operation at the Kapaʻa Refuse Transfer Station is currently subject to the operational requirements of a 2016 Solid Waste Management Permit (TF-0015-15) issued by the DOH, Environmental Management Division, Solid and Hazardous Waste Branch. This permit has identified operation requirements and conditions to protect public health and safety and avoid threats to the environment. A program of BMPs will be implemented during both construction and operations. These BMPs are outlined in the Department of Environmental Service Kapaʻa Refuse Transfer Station SWPCP of 2016, (prepared as part of the NPDES permit MS4 Permit No. HI S00002) and are designed to mitigate potential environmental impacts associated with the project (CCH DFM 2016). Both documents may be required to be revised to accommodate the Proposed Action and its potential impacts. With revisions to these documents, the Proposed Action is not anticipated to curtail the range of beneficial uses of the environment.

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

Short-term construction environmental impacts would include negligible soil loss and erosion during construction activities. Stabilizing the site during the excavation, grading, and construction of the retaining walls would be required.

Control of erosion, siltation of channel ways, and protection of trees to remain in the project area would all need to be addressed. The 2016 SWPCP would likely need to be reviewed and updated. All grading operations will proceed in compliance with dust, erosion control, all City Grading Ordinance provisions, and the fugitive dust control measures outlined in HAR 1-60, 1-33. All of the above would ensure that the construction and operation of the project would not conflict with the policies or goals and guidelines expressed in HRS Chapter 344, or with environmental policies or long-term environmental goals established by law.

4. Substantially affects the economic or social welfare, of the community or State.

On a short-term basis, the Proposed Action would support construction and construction-related employment. It would also have a beneficial impact on the local economy during the period of construction through the purchase of materials and services associated with construction. No cultural resources or practices are known to be performed at the project site.

Post-construction, the operation would provide a community benefit as it would make the storage, handling and movement of GW more efficient and less time-consuming for the public. The top-loading of trucks with the use of a knuckle boom crane and a two-level loading system would reduce the GW loading and labor process time. No adverse effects on the economic welfare, social welfare, or cultural practices of the community or State are anticipated.

5. Substantially affects public health.

The Proposed Action is required to comply with the requirements of the DOH Solid Waste Management Permit, the approved SWPCP, and any of its amendments, provisions of HRS 342H and associated requirements in HRS related to public health and safe operation of the facility. Typical short-term construction-related impacts (e.g., noise and air quality) are anticipated; however, they would be temporary in nature and would comply with State and County regulations. No significant adverse impacts to public health are anticipated to result from the Proposed Action.

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

The Proposed Action would ensure the convenient and reliable solid waste management and GW services continue to be provided to the windward side of O'ahu. It would neither result in any increased facility capacity, nor induce increased waste delivering and hauling to or from the site. The Proposed Action is not anticipated to result in secondary impacts such as population changes or increased demands on regional public facilities.

7. Involve a substantial degradation of environmental quality.

During project construction and operations, appropriate measures such as BMPs would be utilized to mitigate potential environmental impacts associated with the Proposed Action. Typical short-term construction-related impacts (e.g., noise and air quality) are anticipated, but would be temporary in nature and would comply with State and County regulations. No substantial degradation of

the environment is anticipated as a result of project implementation. Criteria responses for 2, 3, and 5 include additional analysis.

8. Is individually limited but cumulatively has considerable impacts on the environment or involves a commitment for larger actions.

The Proposed Action would add an additional facility and enhanced operational capabilities for the processing of GW and does not represent a commitment to larger actions. The Proposed Action would result in efficiencies, cost savings, and staff time savings. The current waste handling operation capacity would remain the same and no additional quantity of GW handling is anticipated. The Proposed Action is not anticipated to have cumulatively substantial adverse impacts on the environment or involve a commitment for larger actions.

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

Based on information in the 1988 EIS and recent reconnaissance visits, no rare, threatened, or endangered species of fauna, flora, or their habitat have been identified within the project site. However, the federal and state endangered Hawaiian hoary bat and the state endangered Hawaiian short eared owl could use habitat at the site. Proposed mitigation measures include avoiding tree removal during the hoary bat birthing and pup rearing seasons, and avoidance of barbed wire on the site. Hawaiian seabirds may traverse the project site at night during the breeding season and may be attracted to outdoor lighting on the site. The limited security lighting to be installed as part of this project would be shielded and directed downward to limit its attractiveness to seabirds. No listed or protected plant species are known to be present in the project area. These and other mitigation measures have been established for this project to ensure impacts to biological resources are not significant. These conditions would ensure that adverse effects on a rare, threatened, or endangered species or its habitat do not occur.

10. Detrimentially affects air or water quality or ambient noise levels.

See discussion for criteria 2, 3, 5, and 7. The proposed project is not expected to present significant adverse impacts on air, water quality, or ambient noise levels either at the construction phase or operational phase.

11. Effects or is likely to suffer damage by being located in an environmentally sensitive area such as a flood plain, tsunami zone, sea level rise exposure area, beach, erosion-prone area, geologically hazardous land, estuary, fresh water, or coastal waters.

The subject property is neither considered to be erosion prone nor geologically hazardous, nor is it located within a Special Flood Hazard Area or the tsunami evacuation area as defined by the City. According to the FIRM, the project site is designated Zone D, an unstudied area where flood hazards are undetermined, but flooding is possible. No base flood elevations or depths are shown within this zone. A small portion of the parcel located in Zone X area is also outside of the 1% annual chance floodplain and areas protected from the 1% annual chance flood by levees. While the project site is across the street from the sensitive habitat of the Kawainui Marsh, no estuaries or coastal waters are located on the project site that would be adversely impacted by current daily waste handling

operations or by those being proposed. The Proposed Action is not anticipated to adversely impact environmentally sensitive areas or hazard zones.

12. Have a substantial adverse effect on scenic vistas and viewplanes, during the day or night, identified in county or state plans or studies.

The project site is not identified as a scenic vista or view plane. As described in the 1988 EIS, the existing solid waste transfer building was designed to take advantage of the sloped terrain and step down the hillside within various levels. The Proposed Action would incorporate this same concept. The proposed 48-foot-tall steel structure would have a 20-foot by 50-foot footprint and includes a 26-foot-high open steel canopy extension. The truck loading bay below the structure would be placed below grade on one side and imbedded into the hillside. The entire building would be shorter than the Refuse Transfer Facility building, next to which it would be built. While approximately 11 trees would need to be removed to accommodate the Proposed Action, numerous trees and foliage of various species and heights are still between the proposed building site and any public right-of-way. Additionally, a Certified Arborist assigned to the site would likely require replacement of removed trees on a 1:1 basis or more, further mitigating visual impacts.

The materials and colors of the proposed building would match those for the existing buildings at the site and consist of natural colors to blend in with the surrounding vegetation. The Proposed Action would not substantially affect scenic vistas and view planes identified in County or State plans and studies.

13. Require substantial energy consumption or emit substantial greenhouse gases.

The Proposed Action would involve the commitment of fuel for equipment, vehicles, and machinery during the construction and operational phases. During the operational phase, electricity from the Hawaiian Electric Company grid would be used to operate the hydraulic knuckle boom crane and to power lights, any other electrical components of the loading bay, and the new building to be constructed over the loading bay. The energy demand is not considered substantial or excessive within the context of the overall operation of the Kapaʻa Refuse Transfer Station facilities, or the surrounding neighborhood's overall energy consumption. The minimal amount of increased energy use will not emit substantial greenhouse gases. The Proposed Action will not result in substantial energy consumption no emit substantial greenhouse gases.

5.2 ANTICIPATED DETERMINATION PURSUANT TO CHAPTER HRS CHAPTER 343

Based on the above stated criteria, ENV as the approving agency anticipates that the Proposed Action would not have any significant adverse environmental impacts, and that an EIS would not be required for the project.

This EA is subject to public review as prescribed by HRS Chapter 343 and HAR 11-200. ENV had determined that a Finding of No Significant Impact is anticipated for the Kapaʻa Refuse Transfer Station Renovation action, based on the information provided in this EA.

6.0 AGENCY REVIEW AND PUBLIC OUTREACH

6.1 PRE-ASSESSMENT CONSULTATION

The agencies and organizations consulted during the Draft EA Pre-Assessment Consultation process that took place in early 2019 are listed in Table 6.1-1. All comment letters received, as well as formal response letters to the same, are included as Appendix A.

Table 6.1-1: Agencies and Organizations Consulted

Agency/Organization	Comments Received?	
	Yes	No
Federal		
Department of the Interior, Fish and Wildlife Service	X	
U.S. Environmental Protection Agency		X
State of Hawai'i		
Department of Business, Economic Development and Tourism		X
Department of Business, Economic Development and Tourism, Office of Planning	X	
Department of Hawaiian Home Lands	X	
Department of Health		X
Department of Land and Natural Resources	X	
Department of Land and Natural Resources, State Historic Preservation Division		X
Department of Transportation	X	
Office of Hawaiian Affairs		X
City and County of Honolulu		
Board of Water Supply		X
Department of Design and Construction	X	
Department of Environmental Services		X
Department of Facility Maintenance		X
Honolulu Fire Department	X	
Department of Planning and Permitting	X	
Department of Parks and Recreation	X	
Neighborhood Board No. 31 (Kailua)		X
Private		
Hawaiian Electric Company		X

Source: AECOM 2019 (this report).

7.0 REFERENCES

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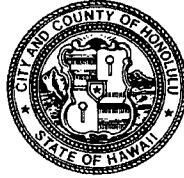
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Appendix A: Pre-Assessment Consultation

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 11TH FLOOR
HONOLULU, HAWAII 96813
Phone: (808) 768-8480 • Fax: (808) 768-4567
Web site: www.honolulu.gov

KIRK CALDWELL
MAYOR



ROBERT J. KRONING, P.E.
DIRECTOR

MARK YONAMINE, P.E.
DEPUTY DIRECTOR

January 3, 2019

SENT VIA EMAIL

Mr. Jeff Merz
Jeff.merz@aecom.com

Dear Mr. Merz,

Subject: Pre- Consultation Process for the Department of Environmental
Services Green Waste handling at the existing Kapaa Refuse Transfer
Station

Thank you for the opportunity to review and comment. The Department of Design and Construction, Facilities Division did have a comment regarding the original transfer station. There were some concerns about buried structures from the original quarry which was at the site. We recommend the consultant thoroughly research the records to determine if the area of the new work may encounter tunnels and other structures which may have been buried when the quarry was shut down.

Should you have any further questions, please call Clifford Lau at 768-8483.

Sincerely,

A handwritten signature in black ink, appearing to read "R. J. Kroning", is written over a horizontal line.

Robert J. Kroning, P.E.
Director

RJK:ms(754502)

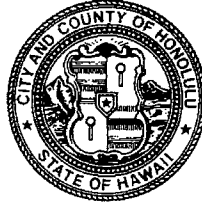
cc: Josh Nagashima, ENV/Refuse Division

DEPARTMENT OF ENVIRONMENTAL SERVICES
CITY AND COUNTY OF HONOLULU

REFUSE DIVISION

1000 ULUOHIA STREET, SUITE 201, KAPOLEI, HAWAII 96707
TELEPHONE: (808) 768-3401 • FAX: (808) 768-3434 • WEBSITE: www.opala.org

KIRK CALDWELL
MAYOR



LORI M.K. KAHIKINA, P.E.
DIRECTOR

MANUEL S. LANUEVO, P.E., LEED AP
CHIEF

IN REPLY REFER TO:
RE 19-003

December 28, 2018

Robert J. Kroning, P.E.
City and County of Honolulu
Department of Design and Construction
650 South King Street, 11th Floor
Honolulu, Hawaii 96813

Dear Director Kroning,

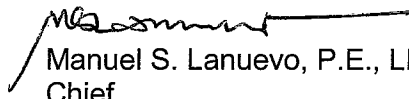
Subject: Response to Comments
Draft Environmental Assessment for Kapaa Quarry Transfer Station
Renovation Project, Tax Map Key 4-2-015:005

Thank you for your organization's letter dated January 3, 2019, regarding the project above. We acknowledge your pre-consultation comments and our responses are provided below.

We acknowledge your concern over possible tunnels or other buried structures associated with the former quarry and possibly located in the project site. Our initial research indicated that there were no known, buried structures or tunnels on the project site. However, further research indicates a tunnel structure on the parcel in the past associated with the rock quarry operation. However, the tunnel is not located on the actual project site or area of disturbance. Additional research is being conducted and we will discuss this further in the draft Environmental Assessment (EA). We are also preparing a map to indicate where the tunnel structure is/was on the site and to ensure this area is avoided during the grading, construction and operational phases of the project. This information will be included in the Draft EA document.

We value your participation in the environmental review process. Your organization's letter and our response will be included in the draft EA, scheduled for publication Spring 2019.

Sincerely,

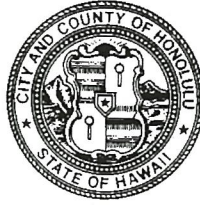

Manuel S. Lanuevo, P.E., LEED AP
Chief

cc: Jeff Merz
Josh Nagashima

DEPARTMENT OF PARKS & RECREATION
CITY AND COUNTY OF HONOLULU
1000 Uluohia Street, Suite 309, Kapolei, Hawaii 96707
Phone: (808) 768-3003 • Fax: (808) 768-3053
Website: www.honolulu.gov

19 JAN 22 P3:32

KIRK CALDWELL
MAYOR



MICHELE K. NEKOTA
DIRECTOR

JEANNE C. ISHIKAWA
DEPUTY DIRECTOR

January 15, 2019

MEMORANDUM

TO: Lori Kahikina, Director
Department of Environmental Services

FROM: Michele K. Nekota, Director *MK Nekota*

SUBJECT: Draft Environmental Assessment-Pre Consultation
Kapaa Refuse Transfer Station Renovations
Kailua, Oahu, Hawaii

Thank you for the opportunity to review the plans and summary information sheet for the above-noted project and their impacts to the City-owned trees. We offer the following comments:

1. AECOM Hawaii prepared the project plans.
2. The project consists of improving the Refuse Division's green waste (GW) procedures, grading the site to include a new building structure with retaining walls, new loading bay, new concrete pad, new asphalt pavement, upgrading storm water control systems, relocation of existing utilities, and the demolition and removal of seven existing trees.
3. In December of 2017, Mayor Kirk Caldwell signed the U.S. Conference of Mayors Climate Protection Agreement to fight climate change and combat global warming. The Mayor committed the City and County of Honolulu to planting 100,000 trees by 2025 and achieving 35% urban tree canopy coverage by 2035. To accomplish the Mayor's initiative, it is imperative that the City take every

opportunity to increase tree plantings. Kathy K. Sokugawa, Acting Director of the Department of Planning and Permitting, Michele K. Nekota, Director of the Department of Parks and Recreation (DPR), and their respective staff are also in agreement. As such, DPR requests the support of the Department of Environmental Services to incorporate new tree plantings and replacement tree plantings in their projects for trees removed.

4. This project will require a Qualified Arborist (QA). A QA shall be hired, at no cost to the City, to prepare a Tree Assessment Report (TAR), Tree Protection Zone (TPZ) Fencing Plan, and provide tree mitigation measures to protect the trees, irrigation system; and if applicable, grounds from damage. The QA shall observe and supervise the tree root pruning for grading/trenching, form work, branch trimming clearance for vehicle and equipment ingress/egress routes, staging, scaffolding, and work set-up. A QA is necessary to protect the City from liability and poor workmanship and must assure that the work performed does not destabilize the trees and cause failure or demise of the trees and risk personal injury and property damage.
5. Attached is the Qualified Arborist Application. The applicant is requested to submit the completed application to the Urban Forestry Administrator of the DUF, Department of Parks and Recreation, at 3902 Paki Avenue, Honolulu, Hawaii, 96815, or via email to duf@honolulu.gov or fax to 971-7160.
6. The QA shall submit the TAR to the Urban Forestry Administrator of the DUF, Department of Parks and Recreation at 3902 Paki Avenue, Honolulu, Hawaii, 96815, or via email to duf@honolulu.gov or fax to 971-7160.
7. Please be advised that DUF may request that additional trees be included in the TAR, and subsequently removed during the course of construction if they are determined to pose potential hazards to the areas of work and to the General Contractor's crews.
8. On the plans, include the Root and Branch Pruning Detail, Tree Protection Zone (TPZ) Fence Detail, and TPZ Warning Sign Detail as these details are required for this project to protect tree trunks, roots, branches, grounds and grassed areas, and to prevent soil compaction and erosion.
9. On the plans, show the tree protection zone fencing; anticipated vehicle and equipment ingress and egress routes beginning at the Kapaa Quarry Road, refuse service road, and to the project area; proposed staging/stockpiling areas; and construction site office. Avoid driving and locating these items under the

tree canopies. Show other refuse station trees outside the project limits line and private property trees (if applicable) that are in the vicinity of these areas for DUF's review and comment.

10. Tree canopies shall be drawn to scale and delineate any above-grade surface roots that radiate from the tree trunks.
11. Contact the Arboriculture Section of DUF, DPR, at 971-7151, to schedule a pre-mobilization meeting at the refuse station to be attended by the QA, Landscape Contractor, Department of Environmental Services (DES) Officer-In-Charge, General Contractor (GC), Refuse Division staff, and AECOM Hawaii. Discussion shall include, but not be limited to, the proposed construction, tree removals, replacement tree plantings, tree protection mitigation measures, tree protection zone fencing alignment, tree branch pruning for vehicle and equipment clearance, root pruning for grading/trenching work, tree and grass watering, identifying parking areas for workers (parking is not permitted under trees, in grassed areas, or in grassed roadway shoulders), staging and stockpiling areas, determining vehicular, material, and equipment ingress/egress access routes to the construction site to prevent damage to tree surface roots and to protect the grounds from compaction and erosion.
12. It is recommended that the tree protection zone fencing layout be staked out and above-grade tree surface roots be located and marked with orange surveyors paint by the GC for DUF's review, modification and approval at the pre-mobilization meeting at the refuse station.
13. Tree mitigation measures include, but are not limited to, wrapping the tree trunk with a thick carpet or protective rubber padding of "Tree Trunk Shield" a polypropylene fabric with bamboo and PVC pipe inserts to protect the trunk, root flare and surface roots; tree protection zone fencing; tree protection zone warning signs, thick plywood boards (full size); steel plates or heavy duty ground protection mats over an eight-inch organic mulch layer under the tree's drip line.
14. No materials, equipment, dumping of construction waste products and hazardous debris, or vehicles shall be stockpiled, stored, parked, or permitted to operate within the drip line of trees and grassed areas. Driving vehicles and equipment over the tree surface roots, which may cause soil compaction, erosion and damage to the irrigation system(if applicable), tree trunks, roots, grassed areas, is not permitted.

15. The GC is responsible to ensure the trees and grass inside the project limits line are watered using the refuse station's irrigation system, if applicable, or hand-watered using hoses. If the irrigation system that waters the trees and grass inside and outside the project limits line is turned off during construction, the GC is also responsible for ensuring that the trees and grass outside the project limits line are watered.
16. On the plans, note the 60-day Grass Maintenance Period and grass species to re-grass the disturbed areas.
17. All depressions and low spots caused by the contractor's operations shall be filled to proper grade and such areas shall be re-grassed, as required.
18. Prior to the start of construction, the GC is required to submit current photos (Do not submit Google Street View photos) and/or video to document the existing site conditions, including trees to: Urban Forestry Administrator, Division of Urban Forestry (DUF), Department of Parks and Recreation, 3902 Paki Avenue, Honolulu Hawaii 96815. DUF will share with the DES Officer-In-Charge and Refuse Division staff.
19. If required, the GC shall take appropriate measures to ensure that the temporary ingress/egress construction gravel pad does not spill onto grassed areas, walkways and roadways which will alleviate the concern of damage to vehicles, pedestrians, and mowing equipment. Additionally, airborne gravel is a public safety concern, and if embedded in the soil, grass restoration may be compromised, thus, delaying project completion and extending the length of the landscape maintenance period.
20. The GC and subcontractors are required to continue to follow and apply tree protection protocols, maintain the tree protection zone fencing, and to protect the grounds from damage due to the construction work.
21. Please be advised that the preparation and execution of public notification (to The Outdoor Circle, Neighborhood Board, District Councilmember, etc.) for tree removals and any action necessary to defend and justify the work is the responsibility of the DES Officer-In-Charge and Refuse Division staff.
22. Tree removals will require replacement trees. Depending on the tree species, size, cultural, or historical significance, and their contribution to the neighboring community with regard to tree canopy coverage, the Division of Urban Forestry

(DUF) may require more than one replacement tree to compensate for each tree removed, and where appropriate, a different species may be requested. Contact the Nursery and Landscape Section of DUF at 971-7151, for selection of tree species, sizes, and quantity, and the DES Officer-In-Charge, and Refuse Division staff for potential tree locations.

23. Replacement trees and new trees shall be pre-approved at the nursery by the Landscape Design Consultant and concurred by DUF two weeks prior to their delivery to the project site. The Landscape Contractor shall contact the Nursery and Landscape Section of DUF, at 971-7151, to schedule an inspection. Trees that do not have a well-established root system or that are damaged will be rejected.
24. Replacement trees and new trees require a 120-day Formal Landscape Maintenance Period (FLMP) for tree establishment. Final acceptance of replacement tree installation will be based on the successful completion of the FLMP for the new tree plantings. Partial approval for multiple tree installations will not be given.
25. Contact Clifford Lau, Chief of Facilities Division, Department of Design and Construction at 768-8478, for copies of the Tree Planting Detail and Tree Relocation Planting Detail, if applicable, to be included on the plans.

Should you have any questions, please contact David Kumasaka, Landscape Architect III, at 971-7151.

MKN:jr
(754348)

Attachments

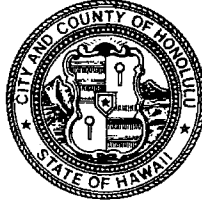
cc: Shane Kane, DUF
Brandon Au, DUF
David Kumasaka, DUF

DEPARTMENT OF ENVIRONMENTAL SERVICES
CITY AND COUNTY OF HONOLULU

REFUSE DIVISION

1000 ULUOHIA STREET, SUITE 201, KAPOLEI, HAWAII 96707
TELEPHONE: (808) 768-3401 • FAX: (808) 768-3434 • WEBSITE: www.opala.org

KIRK CALDWELL
MAYOR



LORI M.K. KAHIKINA, P.E.
DIRECTOR

MANUEL S. LANUEVO, P.E., LEED AP
CHIEF

IN REPLY REFER TO:
RE 19-007

January 30, 2018

Michele K. Nekota
Director
City and County of Honolulu
Department of Environmental Services
1000 Uluohia Street, Suite 309
Honolulu, Hawaii 96707

Dear Ms. Nekota,


Subject: Response to Comments
Draft Environmental Assessment for Kapaa Quarry Transfer Station
Renovation Project, Tax Map Key 4-2-015:005

Thank you for your organization's letters dated January 15, 2019, regarding the project above. We acknowledge your pre-consultation comments and our responses are provided below.

- We are familiar with, and support, the Mayor's commitment to the U.S. Conference of Mayors Climate Protection Agreement and its goals. To that end, we will be engaging a Qualified Arborist to prepare a Tree Assessment Report and Tree Protection Zone Fencing Plan along with proposed mitigation measures and other required information as outlined in your comment letter.
- A Qualified Arborist Application will then be submitted to the Division of Urban Forestry, Department of Parks and Recreation.
- All requirements for tree removal shall be met including public noticing. The tree removal application will also include a tree replacement plan, all approved by the Urban Forestry Administrator, Division of Urban Forestry.

We value your participation in the environmental review process. Your organization's letter and our response will be included in the draft Environmental Assessment, scheduled for publication Spring 2019.

Sincerely,


Manuel S. Lanuevo, P.E., LEED AP
Chief

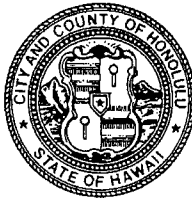
cc: Jeff Merz
Josh Nagashima

file

DEPARTMENT OF PLANNING AND PERMITTING
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 7TH FLOOR • HONOLULU, HAWAII 96813
PHONE: (808) 768-8000 • FAX: (808) 768-6041
DEPT. WEB SITE: www.honoluluapp.org • CITY WEB SITE: www.honolulu.gov

KIRK CALDWELL
MAYOR



KATHY K. SOKUGAWA
ACTING DIRECTOR

TIMOTHY F. T. HIU
DEPUTY DIRECTOR

EUGENE H. TAKAHASHI
DEPUTY DIRECTOR

January 15, 2019
REVISED

2018/ELOG-2466(SA)

Mr. Jeff Merz
AECOM
1001 Bishop Street, Suite 1600
Honolulu, Hawaii 96813

Dear Mr. Merz:

SUBJECT: Pre-Consultation for Draft Environmental Assessment (EA)
Kapaa Refuse Transfer Station Renovations
100 Kapaa Quarry Road - Kailua
Tax Map Key 4-2-015: 005

This responds to your request for comments, received December 19, 2018, on the Pre-Consultation for a Draft EA for the subject Project, which involves renovations to the Refuse Transfer Station. The renovations include the construction of a new metal frame structure, a new loading bay (including a new concrete pad), new retaining walls, and asphalt paving. We have reviewed the Project summary and have the following comments:

1. We consider the proposed Project to be an expansion of the facility, therefore, a Special Management Permit will be required.
2. The Draft EA should list all permits required from the City.
3. The Draft EA should include a discussion of the Project's consistency with the Oahu General Plan and the Koolau Poko Sustainable Communities Plan (KPSCP).
4. The Project site was rezoned from R-5 Residential District to P-2 General Preservation under Ordinance 98-13. However, there are no Unilateral Agreement conditions attached to the Ordinance. For your information, the site

Mr. Jeff Merz
January 15, 2019
Page 2

is designated for institutional use on the KPSCP Land Use Map and as a Solid Waste Transfer Station on the KPSCP Public Facilities Map.

We look forward to reviewing the Draft EA. Should you have any questions, please contact Sarah Afong, at 768-8026.

Very truly yours,

A handwritten signature in black ink, appearing to read 'Kathy K. Sokugawa', with a stylized flourish at the end.

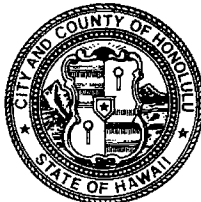
Kathy K. Sokugawa
Acting Director

DEPARTMENT OF ENVIRONMENTAL SERVICES
CITY AND COUNTY OF HONOLULU

REFUSE DIVISION

1000 ULUOHIA STREET, SUITE 201, KAPOLEI, HAWAII 96707
TELEPHONE: (808) 768-3401 • FAX: (808) 768-3434 • WEBSITE: www.opala.org

KIRK CALDWELL
MAYOR



LORI M.K. KAHIKINA, P.E.
DIRECTOR

MANUEL S. LANUEVO, P.E., LEED AP
CHIEF

IN REPLY REFER TO:
RE 19-006

January 30, 2018

Kathy K. Sokugawa
Acting Director
City and County of Honolulu
Department of Planning and Permitting
650 South King Street, 7th Floor
Honolulu, Hawaii 96813

Dear Ms. Sokugawa,


Subject: Response to Comments
Draft Environmental Assessment for Kapaa Quarry Transfer Station
Renovation Project, Tax Map Key 4-2-015:005

Thank you for your organization's letters dated January 15, 2019, regarding the project above. We acknowledge your pre-consultation comments and our responses are provided below.

- We acknowledge that this project will require the issuance of a Special Management Area Permit
- All permits required for the implementation of this project will be listed in the draft Environmental Assessment (EA).
- The draft EA will include a discussion of the project's consistency with the Oahu General Plan and the Koolau Poko Sustainable Communities Plan
- We acknowledge the current zoning, land use designation and the site's symbol identified on the Public Infrastructure Map.

We value your participation in the environmental review process. Your organization's letter and our response will be included in the draft EA, scheduled for publication Spring 2019.

Sincerely,


Manuel S. Lanuevo, P.E., LEED AP
Chief

cc: Jeff Merz
Josh Nagashima

DAVID Y. IGE
GOVERNOR
STATE OF HAWAII

JOSH GREEN
L.T. GOVERNOR
STATE OF HAWAII



JOBIE M. K. MASAGATANI
CHAIRMAN
HAWAIIAN HOMES COMMISSION

WILLIAM J. AILA, JR.
DEPUTY TO THE CHAIRMAN

STATE OF HAWAII
DEPARTMENT OF HAWAIIAN HOME LANDS

P. O. BOX 1879
HONOLULU, HAWAII 96805

January 4, 2019

AECOM

Mr. Jeff Merz, Project Planner
1001 Bishop Street
Honolulu, Hawaii 96813

Dear Mr. Merz:

Subject: Green Waste Handling Process at existing Kapaa
Refuse Transfer Station

The Department of Hawaiian Home Lands acknowledges receiving the request for comments on the above-cited project. After reviewing the materials submitted, due to its lack of proximity to Hawaiian Home Lands, we do not anticipate any impacts to our lands or beneficiaries from the project.

However, we highly encourage all agencies to consult with Hawaiian Homestead community associations and other (N)ative Hawaiian organizations when preparing environmental assessments, to better assess potential impacts to cultural and natural resources, access, and other rights of Native Hawaiians.

Mahalo for the opportunity to provide comments. If you have any questions, please call Rae Ann Hyatt at 620-9480 or contact via email at raeann.p.hyatt@hawaii.gov.

Sincerely,

M. Kaleo Manuel
Acting Planning Program Manager

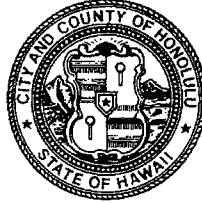
cc: J. Nagashima, ENV/Refuse Div.

DEPARTMENT OF ENVIRONMENTAL SERVICES
CITY AND COUNTY OF HONOLULU

REFUSE DIVISION

1000 ULUOHIA STREET, SUITE 201, KAPOLEI, HAWAII 96707
TELEPHONE: (808) 768-3401 • FAX: (808) 768-3434 • WEBSITE: www.opala.org

KIRK CALDWELL
MAYOR



LORI M.K. KAHIKINA, P.E.
DIRECTOR

MANUEL S. LANUEVO, P.E., LEED AP
CHIEF

IN REPLY REFER TO:
RE 19-005

January 30, 2018

Kaleo Manuel
Acting Planning Program Manager
Department of Hawaiian Home Lands
P.O. Box 1879
Honolulu, Hawaii 96805

Dear Mr. Manuel,

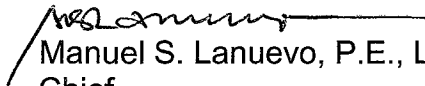
Subject: Response to Comments
Draft Environmental Assessment for Kapaa Quarry Transfer Station
Renovation Project, Tax Map Key 4-2-015:005

Thank you for your organization's letters dated January 4, 2019, regarding the project above. We acknowledge your pre-consultation comments and our responses are provided below.

We acknowledge your comment that due to the lack of proximity to Hawaiian Home Lands, you do not anticipate impacts to your lands or beneficiaries. As part of the Environmental Assessment (EA) process under HRS Chapter 343, we will be consulting with Hawaiian community organizations in conjunction with the DLNR - State Historic Preservation Division to better assess potential impacts to the cultural and natural resources, access and other rights of Native Hawaiians.

We value your participation in the environmental review process. Your organization's letter and our response will be included in the draft EA, scheduled for publication Spring 2019.

Sincerely,


Manuel S. Lanuevo, P.E., LEED AP
Chief

cc: Jeff Merz
Josh Nagashima



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
869 PUNCHBOWL STREET
HONOLULU, HAWAII 96813-5097

JADE T. BUTAY
DIRECTOR

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

IN REPLY REFER TO:
DIR 1422
HWY-CM 2.9179

January 4, 2019

Mr. Jeff Merz
AECOM
1001 Bishop Street, Suite 1600
Honolulu, Hawaii 96813

Dear Mr. Merz:

Subject: Kapaa Refuse Transfer Station Renovations
Pre-Consultation for Environmental Assessment

Based on the information provided, the subject project does not appear to impact a State highway facility. If there is any work in the State Highways Right-of-Way, please advise and provide construction plans for review when available.

Should you have any questions, please call Mr. John Williams, Construction and Maintenance Branch, at (808) 587-2183 or email at John.Williams@hawaii.gov.

Sincerely,

A handwritten signature in black ink, reading "Jade T. Butay", is written over a light blue circular stamp that partially overlaps the signature.

JADE T. BUTAY
Director of Transportation

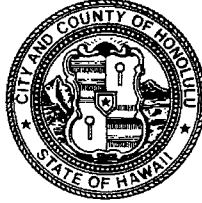
c: Josh Nagashima, Planner, ENV/ Refuse Division

DEPARTMENT OF ENVIRONMENTAL SERVICES
CITY AND COUNTY OF HONOLULU

REFUSE DIVISION

1000 ULUOHIA STREET, SUITE 201, KAPOLEI, HAWAII 96707
TELEPHONE: (808) 768-3401 • FAX: (808) 768-3434 • WEBSITE: www.opala.org

KIRK CALDWELL
MAYOR



LORI M.K. KAHIKINA, P.E.
DIRECTOR

MANUEL S. LANUEVO, P.E., LEED AP
CHIEF

IN REPLY REFER TO:
RE 19-004

January 30, 2018

Jade T. Butay
Director
State of Hawaii
Department of Transportation
869 Punchbowl Street
Honolulu, Hawaii 96813-5097

Dear Director Butay,


Subject: Response to Comments
Draft Environmental Assessment for Kapaa Quarry Transfer Station
Renovation Project, Tax Map Key 4-2-015:005

Thank you for your organization's letters dated January 4, 2019, regarding the project above. We acknowledge your pre-consultation comments and our responses are provided below.

- We acknowledge your comment that the proposed project described above does not appear to impact a State Highway.
- If there is any work in the State Right-of-Way, construction plans will be provided to the Department of Transportation for review.

We value your participation in the environmental review process. Your organization's letter and our response will be included in the draft Environmental Assessment, scheduled for publication Spring 2019.

Sincerely,


Manuel S. Lanuevo, P.E., LEED AP
Chief

cc: \ Jeff Merz
Josh Nagashima

HONOLULU FIRE DEPARTMENT
CITY AND COUNTY OF HONOLULU

636 South Street
Honolulu, Hawaii 96813-5007
Phone: 808-723-7139 Fax: 808-723-7111 Internet: www.honolulu.gov/hfd

KIRK CALDWELL
MAYOR



MANUEL P. NEVES
FIRE CHIEF

LIONEL CAMARA JR.
DEPUTY FIRE CHIEF

January 8, 2019

Mr. Jeff Merz
Project Planner
AECOM
1001 Bishop Street, Suite 1600
Honolulu, Hawaii 96813

Dear Mr. Merz:

Subject: Environmental Assessment Pre-Consultation Request for the Kapaa Refuse
Transfer Station
913 Kalanianaʻole Highway
Kailua, Hawaii 96734
Tax Map Key: 4-2-015: 005

In response to a letter from Mr. Manual Lanuevo from the City and County of Honolulu Department of Environmental Services dated December 14, 2018, regarding the abovementioned subject, the Honolulu Fire Department (HFD) requires that the following be complied with:

1. Fire department access roads shall be provided such that any portion of the facility or any portion of an exterior wall of the first story of the building is located not more than 150 feet (46 meters) from fire department access roads as measured by an approved route around the exterior of the building or facility. (National Fire Protection Association [NFPA] 1; 2012 Edition, Section 18.2.3.2.2.)

A fire department access road shall extend to within 50 feet (15 meters) of at least one exterior door that can be opened from the outside and that provides access to the interior of the building.
(NFPA1; 2012 Edition, Section 18.2.3.2.1.)

Mr. Jeff Merz
Page 2
January 8, 2019

2. A water supply approved by the county, capable of supplying the required fire flow for fire protection, shall be provided to all premises upon which facilities or buildings, or portions thereof, are hereafter constructed, or moved into or within the county. When any portion of the facility or building is in excess of 150 feet (45,720 millimeters) from a water supply on a fire apparatus access road, as measured by an approved route around the exterior of the facility or building, on-site fire hydrants and mains capable of supplying the required fire flow shall be provided when required by the AHJ [Authority Having Jurisdiction]. (NFPA 1; 2012 Edition, Section 18.3.1, as amended.)
3. Submit civil drawings to the HFD for review and approval.

Should you have questions, please contact Battalion Chief Wayne Masuda of our Fire Prevention Bureau at 723-7151 or wmasuda@honolulu.gov.

Sincerely,



SOCRATES D. BRATAKOS
Assistant Chief

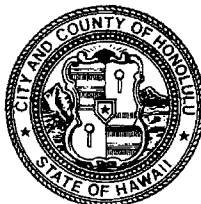
SDB/DM:gl

DEPARTMENT OF ENVIRONMENTAL SERVICES
CITY AND COUNTY OF HONOLULU

REFUSE DIVISION

1000 ULUOHIA STREET, SUITE 201, KAPOLEI, HAWAII 96707
TELEPHONE: (808) 768-3401 • FAX: (808) 768-3434 • WEBSITE: www.opala.org

KIRK CALDWELL
MAYOR



LORI M.K. KAHIKINA, P.E.
DIRECTOR

MANUEL S. LANUEVO, P.E., LEED AP
CHIEF

IN REPLY REFER TO:
RE 19-008

January 30, 2018

Socrates D. Bratakos
Assistant Chief
Honolulu Fire Department
636 South Street
Honolulu, Hawaii 96813-5007

Dear Mr. Bratakos,

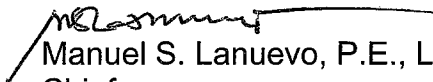
Subject: Response to Comments
Draft Environmental Assessment for Kapaa Quarry Transfer Station
Renovation Project, Tax Map Key 4-2-015:005

Thank you for your organization's letters dated January 8, 2019, regarding the project above. We acknowledge your pre-consultation comments and our responses are provided below.

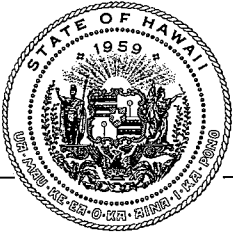
- Fire department access roads shall be provided and maintained in compliance with all applicable provisions of the Honolulu Fire Department codes and design criteria.
- A water supply shall be provided to all newly constructed facilities and in compliance with all applicable provisions of the Honolulu Fire Department codes and design criteria.

We value your participation in the environmental review process. Your organization's letter and our response will be included in the draft Environmental Assessment, scheduled for publication Spring 2019.

Sincerely,


Manuel S. Lanuevo, P.E., LEED AP
Chief

cc: \ Jeff Merz
Josh Nagashima



OFFICE OF PLANNING STATE OF HAWAII

DAVID Y. IGE
GOVERNOR

LEO R. ASUNCION
PLANNING PROGRAM ADMINISTRATOR II
OFFICE OF PLANNING

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

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

DTS201901240839NA

January 24, 2019

Mr. Josh Nagashima
Planner
City and County of Honolulu
Department of Environmental Services
Refuse Division
1000 Uluohia Street, Suite 201
Kapolei, Hawaii 96707

Dear Mr. Nagashima:

Subject: Pre-Assessment Consultation for a Draft Environmental Assessment –
Kapaa Refuse Transfer Station Renovations, Kailua, Oahu, Hawaii

Thank you for the opportunity to provide comments on the pre-consultation request for the preparation of a Draft Environmental Assessment (Draft EA) on the proposed renovations to the Kapaa Refuse Transfer Station located in Kailua, Oahu.

It is our understanding that the City and County of Honolulu, Department of Environmental Services (ENV) proposes upgrades to the green waste (GW) processing site at the Kapaa Refuse Transfer Station. Improvements to the facility seek to streamline the GW handling by automating some of the procedures; building a structure to house a new knuckle boom crane; and, grading improvements to build a natural slope at the transfer station to allow for greater efficiency of GW collection and processing.

Renovations include a new loading bay for the trucks, an integral truck scale, a metal frame building and crane, a new concrete pad for public off-loading of GW, upgraded stormwater control systems, and the relocation of existing utilities. Additionally, upgrades to the facility include new asphalt pavement and new structural retaining walls.

The Office of Planning (OP) has reviewed the transmitted material and based on the limited information provided, has the following comments to offer:

1. Tax Map Key (TMK) Location

The pre-consultation review material does not include the TMK location. Providing the specific location in TMK format will allow agencies, such as OP, to provide site specific comments on the proposed action and possible impact on surrounding areas.

2. Hawaii State Planning Act

Hawaii Administrative Rules (HAR) § 11-200-10(4) requires an Environmental Assessment to provide a general description of the action's technical, economic, social, and environmental characteristics. The Draft EA should provide a discussion on the project and its ability to meet State goals and priorities as detailed in Hawaii Revised Statutes (HRS) Chapter 226.

The analysis on the Hawaii State Planning Act should examine the project's consistency with all three parts of HRS Chapter 226 or clarify where the project conflicts with them. If any of these statutes are not applicable to the project, the analysis should affirmatively state such determination, along with discussion paragraphs.

3. Hawaii Coastal Zone Management Program

The Coastal Zone Management (CZM) area is defined as "all lands of the State and the area extending seaward from the shoreline to the limit of the State's police power and management authority, including the U.S. territorial sea" (HRS § 205A-1).

The proposed action should conform with all the objectives and supporting policies of the Hawaii CZM program, as listed in HRS § 205A-2. Pursuant to HRS § 205A-4, in implementing the objectives of the CZM program, agencies shall give full consideration to ecological, cultural, historic, esthetic, recreational, scenic, open space values, coastal hazards, and economic development. As this project may require the approval of government agencies, the Draft EA should contain analysis on the project's consistency with HRS § 205A-2.

4. Special Management Area

The Draft EA should indicate the project site's proximity to the Special Management Area (SMA) of Oahu, delineated by the City and County of Honolulu. If the project site is within the SMA, the ENV should consult with the Department of Planning and Permitting (DPP) on SMA use requirements and permitting.

5. Drainage / Stormwater Runoff Mitigation / Erosion Control

Pursuant to HAR § 11-200-10(6) – identification and summary of impacts and alternatives considered; in order to ensure that the surface water and wetland resources of Windward Oahu remain protected, the effects of stormwater inundation, resulting from the proposed development activities should be evaluated in the Draft EA.

The refuse transfer facility is located near vulnerable habitats, marsh areas, and perennial streams. Stormwater runoff emanating from the Kapaa Refuse Transfer Station may impact these resources by depositing sediment, land-based toxins, and other harmful

Mr. Josh Nagashima
January 24, 2019
Page 3

pollutants into these wetlands and streams. It is noted that, according to the review material, the project calls for upgraded stormwater control systems.

Drainage plans, erosion controls, and mitigation measures should therefore be evaluated in the Draft EA. Issues that may be examined include, but are not limited to, project site characteristics in relation to flood and erosion prone areas, open spaces, the potential vulnerability of surface water resources, drainage infrastructure currently in place, soil absorption characteristics of the area, and examining the amount of permeable versus impervious surfaces in the project area. These items should be considered when developing mitigation measures for the protection for surface water resources and the coastal ecosystem, pursuant to HAR § 11-200-10(7).

Additionally, based on the information provided and those available to our office, due to the land classification, project area, and the planned increase of impervious surfaces (use of asphalt and concrete materials), this proposed action may be subject to the DPP rules on drainage and onsite stormwater management. Please contact DPP on rule requirements for this project.

If you have any questions regarding this comment letter, please contact Joshua Hekeia of our office at (808) 587-2845.

Sincerely,

A handwritten signature in black ink, appearing to read 'Leo R. Asuncion', with a stylized flourish at the end.

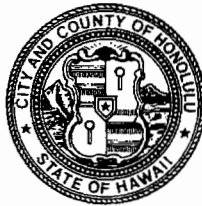
Leo R. Asuncion
Planning Program Administrator II

DEPARTMENT OF ENVIRONMENTAL SERVICES
CITY AND COUNTY OF HONOLULU

REFUSE DIVISION

1000 ULUOHIA STREET, SUITE 201, KAPOLEI, HAWAII 96707
TELEPHONE: (808) 768-3401 • FAX: (808) 768-3434 • WEBSITE: www.opala.org

KIRK CALDWELL
MAYOR



LORI M.K. KAHIKINA, P.E.
DIRECTOR

MANUEL S. LANUEVO, P.E., LEED AP
CHIEF

IN REPLY REFER TO:
RE 19-009

January 31, 2019

Leo R. Asuncion
Planning Program Administrator II
Office of Planning
State of Hawaii
P.O. Box 2359
Honolulu, Hawaii 96804

Dear Mr. Asuncion,

Subject: Response to Comments
Draft Environmental Assessment for Kapaa Quarry Transfer Station
Renovation Project, Tax Map Key 4-2-015:005

Thank you for your organization's letter dated January 24, 2019, regarding the project above. We acknowledge your pre-consultation comments and our responses are provided below.

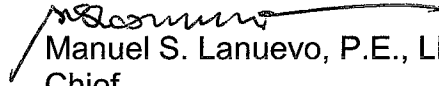
- The TMK is identified in this response letter, will be listed in numerous official documents submitted as part of the public review of the draft EA, and will also be listed and shown in various locations throughout the draft EA.
- The draft EA will include a full discussion of the project's ability to meet, or conflicts with, all State goals and priorities as detailed in the three parts of HRS Chapter 226.
- The draft EA will also include a full discussion and demonstrate consistency with all the objectives and supporting policies of the Hawaii Coastal Zone Management Program as listed in HRS Chapter 205A-2.
- The draft EA will graphically demonstrate the boundaries of the Special Management Area and will provide a full discussion of the applicability of the SMA to the project. This will include a discussion of the SMA permit process and requirements. Consultation has occurred with the Department of Planning and Permitting and will continue through the EA process.

Leo R. Asuncion
January 31, 2019
Page 2

- The draft EA will include a full discussion of the anticipated impacts to drainage, stormwater runoff, and erosion and, specifically to vulnerable habitats, marsh areas and perennial streams. Drainage plans, erosion controls and mitigation measures will be evaluated and discussed in the draft EA.
- We will consult with DPP as to any applicable rules for drainage and stormwater management and appropriate mitigation measure to address them.

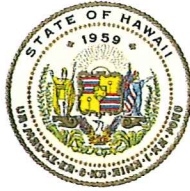
We value your participation in the environmental review process. Your organization's letter and our response will be included in the draft EA, scheduled for publication Spring 2019.

Sincerely,


Manuel S. Lanuevo, P.E., LEED AP
Chief

cc: Jeff Merz
Josh Nagashima

DAVID Y. IGE
GOVERNOR OF HAWAII



SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE
MANAGEMENT

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

January 25, 2019

Jeff Merz, Project Planner, AECOM
c/o Refuse Division
Department of Environmental Services
City & County of Honolulu
1000 Uluohia Street, Suite 201
Kapolei, Hawaii 96707

Dear Jeff:

SUBJECT: Draft Environmental Assessment Pre-Consultation for **Kapaa Refuse Transfer Station**, Kapaa Valley, Island of Oahu, TMK: (1) 4-2-015:005

Thank you for the opportunity to review and comment on the above subject matter. The Land Division of the Department of Land and Natural Resources distributed a copy of your request to Land Division's Oahu District for their review and comments.

Enclosed are comments from DLNR's a) Engineering Division, b) Division of Forestry & Wildlife, and c) Land Division – Oahu District on the subject matter. Should you have any questions, please feel free to call Barbara Lee at (808) 587-0453. Thank you.

Sincerely,

A handwritten signature in black ink, appearing to be "Russell Y. Tsuji", written over a horizontal line.

Russell Y. Tsuji
Land Administrator

Enclosure
cc: Central Files

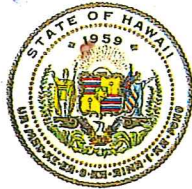
DAVID Y. IGE
GOVERNOR OF HAWAII



RECEIVED
LAND DIVISION

2019 JAN 16 AM 10:42

DEPT. OF LAND &
NATURAL RESOURCES
STATE OF HAWAII



SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE
MANAGEMENT

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

December 27, 2018

MEMORANDUM

TO:

FROM

DLNR Agencies:

- ☐ Div. of Aquatic Resources
- ☐ Div. of Boating & Ocean Recreation
- ☒ Engineering Division
- ☒ Div. of Forestry & Wildlife
- ☐ Div. of State Parks
- ☒ Commission on Water Resource Management
- ☒ Office of Conservation & Coastal Lands
- ☒ Land Division – Oahu District
- ☒ Historic Preservation

FROM:

SUBJECT:

LOCATION:

APPLICANT:

Russell Y. Tsuji, Land Administrator
Pre-consultation for the **Kapaa Refuse Transfer Station**
Kapaa Valley, Island of Oahu; TMK: (1) 4-2-015:005
City and County of Honolulu, Department of Environmental Services

Transmitted for your review and comment is information on the above-referenced project. We would appreciate your comments by **January 18, 2019**.

If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Barbara Lee at 587-0453. Thank you.

() We have no objections.

() We have no comments.

(✓) Comments are attached.

Signed:

Cary S. Chang, Chief Engineer

Print Name:

Date:

1/15/19

Attachments

cc: Central Files

18 DEC 28 PM 01:11 ENGINEERING

**DEPARTMENT OF LAND AND NATURAL RESOURCES
ENGINEERING DIVISION**

LD/Russell Y. Tsuji

**Ref: Pre-consultation for the Kapaa Refuse Transfer Station, Kapaa Valley,
Island of Oahu; TMK: (1) 4-2-015:005**

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). State projects are required to comply with 44CFR regulations as stipulated in Section 60.12. Be advised that 44CFR 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 to research the Flood Hazard Zone designation for the project. Flood Hazard Zones are designated on FEMA's Flood Insurance Rate Maps (FIRM), which can be viewed on our Flood Hazard Assessment Tool (FHAT) (<http://gis.hawaiiinfip.org/FHAT>).

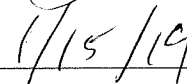
If there are questions regarding the local flood ordinances, please contact the applicable County NFIP coordinating agency below:

- o Oahu: City and County of Honolulu, Department of Planning and Permitting (808) 768-8098.
- o Hawaii Island: County of Hawaii, Department of Public Works (808) 961-8327.
- o Maui/Molokai/Lanai County of Maui, Department of Planning (808) 270-7253.
- o Kauai: County of Kauai, Department of Public Works (808) 241-4846.

Signed: _____


CARTY S. CHANG, CHIEF ENGINEER

Date: _____


1/15/19

19400

DAVID Y. IGE
GOVERNOR OF HAWAII



SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE
MANAGEMENT

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

December 27, 2018

MEMORANDUM

TO: *From:*

DLNR Agencies:

- ☐ Div. of Aquatic Resources
- ☐ Div. of Boating & Ocean Recreation
- ☒ Engineering Division
- ☒ Div. of Forestry & Wildlife
- ☐ Div. of State Parks
- ☒ Commission on Water Resource Management
- ☒ Office of Conservation & Coastal Lands
- ☒ Land Division – Oahu District
- ☒ Historic Preservation

FROM:

Russell Y. Tsuji, Land Administrator

SUBJECT:

Pre-consultation for the **Kapaa Refuse Transfer Station**

LOCATION:

Kapaa Valley, Island of Oahu; TMK: (1) 4-2-015:005

APPLICANT:

City and County of Honolulu, Department of Environmental Services

Transmitted for your review and comment is information on the above-referenced project. We would appreciate your comments by **January 18, 2019**.

If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Barbara Lee at 587-0453. Thank you.

- ☐ We have no objections.
- ☐ We have no comments.
- ☒ Comments are attached.

Signed: _____

DAVID G. SMITH, Administrator

Print Name: _____

Date: _____

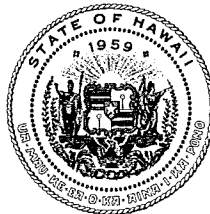
1/18/19

Attachments

cc: Central Files

RECEIVED
LAND DIVISION
2019 JAN 23 AM 11:00
DEPT. OF LAND &
NATURAL RESOURCES
STATE OF HAWAII

DAVID Y. IGE
GOVERNOR OF HAWAII



19406
SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

ROBERT K. MASUDA
FIRST DEPUTY

JEFFREY T. PEARSON, P.E.
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 HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF FORESTRY AND WILDLIFE
1151 PUNCHBOWL STREET, ROOM 325
HONOLULU, HAWAII 96813

MEMORANDUM

JAN 22 2019

TO: RUSSELL Y. TSUJI, Administrator
Land Division

FROM: DAVID G. SMITH, Administrator
Division of Forestry and Wildlife

SUBJECT: Division of Forestry and Wildlife Comments on the Environmental Assessment Pre-Consultation for the Kapaa Refuse Transfer Station

The Department of Land and Natural Resources Division of Forestry and Wildlife (DOFAW) has received your inquiry regarding the Environmental Assessment pre-consultation for the proposed improvements to the Kapaa Refuse Transfer Station located in Kailua on O'ahu, Hawai'i. The proposed project includes grading and filling at the site for the construction of a two-level structure to house a knuckle boom crane, a truck scale, and loading bay. Proposed work will also include a new concrete pad and surrounding asphalt pavement for public green waste offloading, a structural retaining wall, upgraded storm water control systems, some relocation of existing utilities, and the removal of seven trees.

The State listed Hawaiian Hoary Bat (*Lasiurus cinereus semotus*) has the potential to occur in the vicinity of the project area and may roost in trees. To avoid the potential for impacts to this tree-roosting species, site clearing should be timed to avoid disturbance during the bat birthing and pup rearing season (June 1 through September 15). If this cannot be avoided, woody plants greater than 15 feet (4.6 meters) tall should not be disturbed, removed, or trimmed without consulting DOFAW. Barbed wire should be avoided for any construction because bat mortalities have been documented as a result of becoming ensnared by barbed wire during flight.

We note that artificial lighting can adversely impact seabirds that may pass through the area at night causing disorientation that could result in collision with manmade artifacts or grounding of birds. For nighttime lighting that might be required, DOFAW recommends that any lights be fully shielded to minimize impacts. Nighttime work that requires outdoor lighting should be avoided during the seabird fledging season from September 15 through December 15. This is the period when young seabirds take their maiden voyage to the open sea.

The State endangered Hawaiian Short-eared Owl or Pueo (*Asio flammeus sandwichensis*) has the potential to occur in the project vicinity site. Pueo are a crepuscular species, most active during dawn and dusk twilights. DOFAW recommends twilight pre-construction surveys by a qualified biologist prior to clearing vegetation. If Pueo nests are present, a buffer zone should be established in which no clearing occurs until nesting ceases, and DOFAW staff should be notified.

You should avoid moving soil or other plant material within the island due to the potential presence of pathogens. We recommend consulting the Hawai'i Interagency Biosecurity Plan at <http://dlnr.hawaii.gov/hisc/plans/hibp/> in planning, design, and construction of the project.

Finally, DOFAW is concerned about the planned removal of seven trees from the project site. The percentage of tree canopy in Honolulu County has decreased at the rate of 1% each year for the past five years. Trees provide numerous environmental benefits such as decreased storm water run-off, a decrease in the urban heat island effect, improved aesthetics, and improved water quality. As Kawainui Marsh Wildlife Sanctuary is immediately downstream of the project area, all efforts should be made to replace any trees removed, and to maximize the amount of green infrastructure at the project in the form of native plants, trees, and vegetation swales to collect and absorb rainwater. Minimizing the water and associated nutrients, toxins, and sediment running off of the property should be a high priority in project design.

We appreciate your efforts to work with our office for the conservation of our native species. 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 Jim Cogswell, Wildlife Program Manager at (808) 587-4187 or James.M.Cogswell@hawaii.gov.

DAVID Y. IGE
GOVERNOR OF HAWAII



SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE
MANAGEMENT

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

December 27, 2018

MEMORANDUM

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

FROM: Russell Y. Tsuji, Land Administrator

SUBJECT: Pre-consultation for the **Kapaa Refuse Transfer Station**

LOCATION: Kapaa Valley, Island of Oahu; TMK: (1) 4-2-015:005

APPLICANT: City and County of Honolulu, Department of Environmental Services

Transmitted for your review and comment is information on the above-referenced project. We would appreciate your comments by **January 18, 2019**.

If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Barbara Lee at 587-0453. Thank you.

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

Signed:

Darlene Bryant-Takamatsu

Print Name:

Darlene Bryant-Takamatsu

Date:

12/30/18 *for*

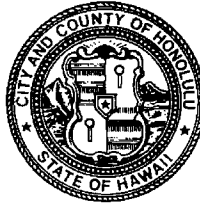
Attachments
cc: Central Files

DEPARTMENT OF ENVIRONMENTAL SERVICES
CITY AND COUNTY OF HONOLULU

REFUSE DIVISION

1000 ULUOHIA STREET, SUITE 201, KAPOLEI, HAWAII 96707
TELEPHONE: (808) 768-3401 • FAX: (808) 768-3434 • WEBSITE: www.opala.org

KIRK CALDWELL
MAYOR



LORI M.K. KAHIKINA, P.E.
DIRECTOR

MANUEL S. LANUEVO, P.E., LEED AP
CHIEF

IN REPLY REFER TO:
RE 19-011

February 4, 2019

Russell Y. Tsuji
Land Administrator
Department of Land and Natural Resources
Land Division
P.O. Box 621
Honolulu, Hawaii 96809

Dear Mr. Tsuji,

Subject: Response to Comments
Draft Environmental Assessment for Kapaa Quarry Transfer Station
Renovation Project, Tax Map Key 4-2-015:005

Thank you for your organization's letter dated January 25, 2019, regarding the project above. We acknowledge your pre-consultation comments and our responses are provided below per division.

Engineering Division

The draft EA will discuss rules and regulations of the National Flood Insurance Program and City and County of Honolulu flood control ordinance compliance. A graphic will also be prepared for the draft EA showing FEMA's Flood Insurance Rate Maps overlain on the project site and property, followed by a discussion of flooding potential and possible design and mitigative measures to address flooding risk at the project site, as applicable.

Division of Forestry and Wildlife

Please see the detailed response letter sent under separate cover and attached to this mailing. This response letter dated February 2, 2019, Safety Inspections – Roles and Responsibilities and mailed directly to David Smith, Administrator, responds to the comments from the January 25, 2019 DLNR Division letter and other, earlier consultation with DOFAW.


Russell Y. Tsuji
February 4, 2019
Page 2

Land Division – Oahu District

We acknowledge that the Land Division has no comments currently.

We value your participation in the environmental review process. Your organization's letter and our response will be included in the draft EA, scheduled for publication Spring 2019.

Sincerely,


Manuel S. Lanuevo, P.E., LEED AP
Chief

Enclosure

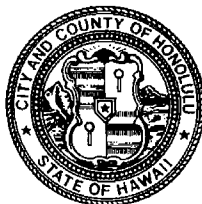
cc: Jeff Merz, AECOM
Josh Nagashima

DEPARTMENT OF ENVIRONMENTAL SERVICES
CITY AND COUNTY OF HONOLULU

REFUSE DIVISION

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KIRK CALDWELL
MAYOR



LORI M.K. KAHIKINA, P.E.
DIRECTOR

MANUEL S. LANUEVO, P.E., LEED AP
CHIEF

IN REPLY REFER TO:
RE 19-010

February 2, 2019

David Smith, Administrator
Department of Land and Natural Resources
Division of Forestry and Wildlife
Kalanimoku Building
1151 Punchbowl Street, Room 325
Honolulu, Hawaii 96813

Dear Mr. Smith,

Subject: Kapaa Refuse Transfer Station Renovation
Kailua, Oahu, Hawaii, TMK (1) 4-2-015-005

The City and County of Honolulu (City), Department of Environmental Services is proposing improvements to the green waste handling process and facilities at the existing Kapaa Refuse Transfer Station in Kailua, Oahu, Hawaii (Figure 1). The purpose of this project is to streamline the green waste handling at the site by automating some of the procedures.

The narrative below, prepared by the City's contractor, AECOM, provides a description of the proposed project, existing condition at the site, and measures that will be implemented to avoid and minimize effects to species protected under Hawaii Revised Statutes (HRS) Chapter 195D. We are requesting your review and comment on the subject project, recommendations on measures to avoid or minimize impacts to biological resources, and, if warranted, your concurrence that impacts to special status species will be avoided with implementation of the proposed measures.

Under provisions of HRS 343 and Hawaii Administrative Rules (HAR) Chapter 200-11, a Draft Environmental Assessment (EA) is being prepared to analyze the potential impacts of the proposed action. Information and recommendations received from the Department of Land and Natural Resources (DLNR) Division of Forestry and Wildlife (DOFAW) will be incorporated into the EA.

Project Description

Proposed improvements include construction of a new loading bay adjacent to the existing Refuse Transfer Station Building (Figure 2). The new loading bay would operate on two levels and would house a new knuckle boom crane. Transfer trucks would enter from below and the knuckle boom crane would be used to top load and compact the green waste into the trucks. The new bay would include an integral truck scale and concrete pad for off-loading of green waste. Construction of the new loading bay would require grading into an existing slope, construction of a new structural retaining wall, removal of eleven existing trees, new asphalt pavement, upgrades to the stormwater control system, and relocation of existing utilities as needed. The eleven trees to be removed consist of eight Formosa koa (*Acacia confuse*), two monkeypod (*Samanea saman*), and one weeping fig (*Ficus benjamina*) (Figure 3 and Photo 1). These improvements would not result in any increase in waste handling capacity or increase the quantity of waste being handled at the site.

Existing Conditions

Kapaa Transfer Station is located on Kapaa Quarry Road in Kailua. Adjacent properties to the site include the closed Kapaa Sanitary Landfill to the west, Kapaa Corporation Automotive Equipment Service Yard and the Kapaa Refuse Collection Yard to the south, Kawainui Marsh to the east on the opposite site of Kapaa Quarry Road, and commercial/industrial properties to the north past Kapaa Quarry Place (Figure 2).

The existing Kapaa Refuse Transfer Station first became operational in 1989 as an addition to the larger 76 acre Maintenance Yard Facility owned by the City. Major buildings on Maintenance Yard property include the Automotive Equipment Service Building, Refuse Collection Building, and Refuse Transfer Station Building. The site also contains some accessory buildings such as the former caretaker's cottage and a truck weighing kiosk (Figure 2).

The City began collection of residential green waste at the Kapaa Transfer Station in September 2009. This includes green waste from the City's curbside collection, Laie and Waimanalo Convenience Centers, and self-hauling households. Green waste from commercial green waste generators, government agencies, homeowner associations, and non-profit organizations are not accepted at the Kapaa Transfer Station. These generators are required to use green waste recycling facilities for disposal of their green waste. Green waste operations at the Kapaa Transfer Station are limited to receiving, storing, loading, and hauling of green waste to the contracted green waste recycling facility. The transfer station receives approximately 3,000 tons of green waste per month. Currently green waste delivered to the transfer station is stockpiled in the yard near the exiting Kapaa Transfer Station Building (Photo 1).

The site includes asphalt pavement areas, compacted bare dirt areas, and vegetated slopes. Trees in the project area include Formosa koa, monkeypod, and weeping fig (Photo 1). Vegetation along the slopes includes slender amaranth (*Amaranthus viridis*), wedelia (*Sphagneticola trilobata*), Guinea grass (*Megathyrsus maximus*), koa haole (*Leucaena leucocephala*) and other ruderal herb and grass species. Outside the proposed improvement area running along the west side of Kapaa Quarry Road is an open drainage ditch that receives stormwater runoff from the project site (Photo 2). Water from this ditch discharges to Kawainui Marsh. Vegetation growing along the sides of the ditch includes koa haole and Guinea grass (Photo 2).

Biological Evaluation and Proposed Measures to Avoid Effects

Hawaiian hoary bat

The federal and state endangered Hawaiian hoary bat or 'ōpe'ape'a (*Lasiurus cinereus semotus*) could use habitat at the site. Hawaiian hoary bats roost in both exotic and native trees. Both the United States Fish and Wildlife Service (USFWS) and DOFAW generally recommend that woody plants greater than 15 feet tall should not be disturbed, removed, or trimmed during the bat birthing and pup rearing season (June 1 through September 15). Bat mortality has also been documented as a result of ensnarement in barbed wire. As described above the project will involve removal of eleven trees over 15 feet in height (eight Formosa koa, two monkeypod, and one weeping fig). To avoid impacts to hoary bat pups that cannot yet fly, all tree removal will be scheduled outside the hoary bat birthing and pup rearing season. No barbed wire is currently in place at the Kapaa Transfer Station and no new barbed wire is proposed. Therefore, the project would have no effect to the Hawaiian hoary bat.

Hawaiian short-eared owl

The state endangered Hawaiian short-eared owl or Pueo (*Asia flammeus sandwichensis*) has the potential to occur in the project vicinity. This species may feed on small mammals (e.g., rats and mongoose) at both the Kapaa Refuse Transfer Station and nearby Kawainui Marsh. Nests for this species are comprised of simple scrapes in the ground lined with grasses and feather down. Pueo are a crepuscular species, most active at dusk and twilight. DOFAW generally recommends pre-construction surveys prior to clearing vegetation during the dusk or twilight hours. However, pre-construction surveys are not warranted for this project. The entire project area to be disturbed is highly active on a daily basis with heavy equipment and truck traffic related to ongoing transfer station operations. Even the narrow vegetated slopes in the project area are regularly mowed. Therefore, there is no suitable nesting habitat for this species within the project area. It is assumed that adult birds would avoid construction activities as they likely avoid ongoing transfer station operations. Therefore, the project would have no effect to Hawaiian short-eared owls.

Endangered Hawaiian waterbirds

Federal and state endangered Hawaiian waterbirds include the Hawaiian duck (*Anas wyvilliana*), Hawaiian stilt (*Himantopus mexicanus knudseni*), Hawaiian coot (*Fulica alai*), and Hawaiian moorhen (*Gallinula chloropus sandvicensis*). Due to hybridization with invasive mallards, it is unlikely that there are any true Hawaiian ducks on the island of Oahu. Hawaiian stilts, coots, and moorhen are known to use the nearby Kawainui Marsh for feeding, nesting, and rearing young. However, there is no suitable habitat for these species within the project area.

There is an open drainage ditch on the property outside the proposed project area. This ditch is covered by a dense tangled canopy of tall grasses, vines, shrubs, and trees (Photo 2). It is unlikely that any Hawaiian waterbirds would access or use this ditch. Therefore, no Hawaiian waterbirds would be present in the project area and no take would occur.

The open drainage ditch receives stormwater runoff from the project site and discharges to Kawainui Marsh. While no in-water work is proposed, it is possible that construction activities could mobilize sediments and cause turbidity; and discharges and spills of other pollutants could occur, which if uncontained could reach the open ditch and impact water quality in Kawainui Marsh. Construction site Best Management Practices (BMPs) including standards for handling and disposal of waste, erosion and sediment control measures (drain inlet protection, compost filter socks, stabilized ingress/egress, spill kits, etc.), BMP inspections, and required pollution prevention plans, would make it extremely unlikely that the discharge of pollutants to Kawainui Marsh would occur. Therefore, the project would have no effect to endangered Hawaiian waterbirds.

Hawaiian seabirds

Protected Hawaiian seabirds include the threatened Newell's shearwater (*Puffinus auricularis newelli*), endangered Hawaiian petrel (*Pterodroma sandwichensis*), endangered band-rumped storm-petrel (*Oceanodroma castro*), and native wedge-tailed shearwater (*Ardenna pacifica*).

Hawaiian seabirds may traverse the project area at night during the breeding season (March 1 to December 15). Outdoor lighting can result in seabird disorientation, fallout, and injury or mortality. Seabirds are attracted to lights and after circling the lights they may become exhausted and collide with nearby wires, buildings, or other structures or they may land on the ground. Downed seabirds are subject to increased mortality due to collision with automobiles, starvation, and predation by dogs, cats, and other predators. Young birds (fledglings) traversing the project area between September 15 and December 15, in their first flights from their mountain nests to the sea, are particularly vulnerable.

All construction activities would take place during daylight hours. No night construction or lighting is proposed. In the unlikely event that nighttime lighting is required any lights used would be downward facing and fully shielded to minimize impacts.

The project will include installation of additional outdoor security lighting at the facility. This new lighting will be downward facing and fully shielded to minimize impacts to seabirds and comply with Revised Ordinances of Honolulu Section 21-4.100 concerning outdoor lighting. Therefore, the project would have no effect to Hawaiian seabirds.

Listed plant species

No listed plant species are present within or adjacent to the project site. As discussed above plant species at the project site include Formosa koa, monkeypod, weeping fig, slender amaranth, wedelia, Guinea grass, koa haole and other ruderal herb and grass species. Further the site is heavily disturbed on a daily basis with heavy equipment and truck traffic related to ongoing transfer station operations. Therefore, the project will have no effect to listed plant species.

Invasive species

As a facility that receives, stores, and transfers waste it is likely that invasive mammals such as rats, cats, and mongoose may feed and reproduce at the transfer station. The City currently traps and poisons rats on this property.

Green waste received and stored at the transfer station may contain seeds and propagules of invasive plant species, as well as insect pests. Coconut rhinoceros beetles (CRB) (*Oryctes rhinoceros*) chew into the emerging fronds of palm trees to feed on sap; killing the tree if it eats into the meristem. Once the palm dies, eggs are laid. These beetles may also attack and feed on Pandanus species, banana, pineapple, and sugar cane. Breeding populations and larvae of this species are often found in mulch and green waste piles. It is possible that the transfer station may receive green waste containing adult CRB, eggs, and/or larvae. To avoid the spread of this species personnel working at the facility have received CRB awareness and identification briefings. The State Department of Agriculture has installed and periodically inspects and maintains CRB traps around the site. If CRB are discovered at the facility, personnel are to notify Dr. Po-Yung Lai with the College of Tropical Agriculture and Human Resources, at the University of Hawaii Manoa. Green waste piles containing the pest would be isolated from the other green waste at the site and hauled to H-POWER for incineration.

Tree removal

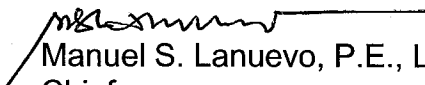
As described above the removal of eleven trees is proposed. This includes eight Formosa koa, two monkeypod, and one weeping fig. The City will enlist the services of a qualified arborist approved by the City and County of Honolulu, Department of Parks and Recreation (DPR), Division of Forestry, Urban Forestry Administration. The arborist will be responsible for preparation of a Tree Assessment Report and Tree Protection Zone Fencing Plan. The arborist may recommend removal of additional trees if they are determined to pose potential hazards to the areas of work and/or personnel working at the facility. The removal of trees from the site will be mitigated through replacement planting. Replacement tree planting maybe on-site, off-site, or a combination based on recommendations from the arborist and in coordination with the DPR.

Conclusions

Based on the information presented above the project would have no effect on native plant or wildlife species. We appreciate your review and comment on this project, recommendations to protect biological resources, and written concurrence with our determination of no effect to plants and wildlife protected under HRS 195D.

We would appreciate a written response within 30 days from receipt of this letter. Should you have questions or need further information, please contact Mr. Josh Nagashima at josh.nagashima@honolulu.gov or at 768-3430.

Sincerely,


Manuel S. Lanuevo, P.E., LEED AP
Chief

Enclosure

cc: Jeff Merz, AECOM
Josh Nagashima



Figure 1: LOCATION MAP

Kapa'a Refuse Transfer Station Renovations
Kailua, O'ahu, Hawai'i

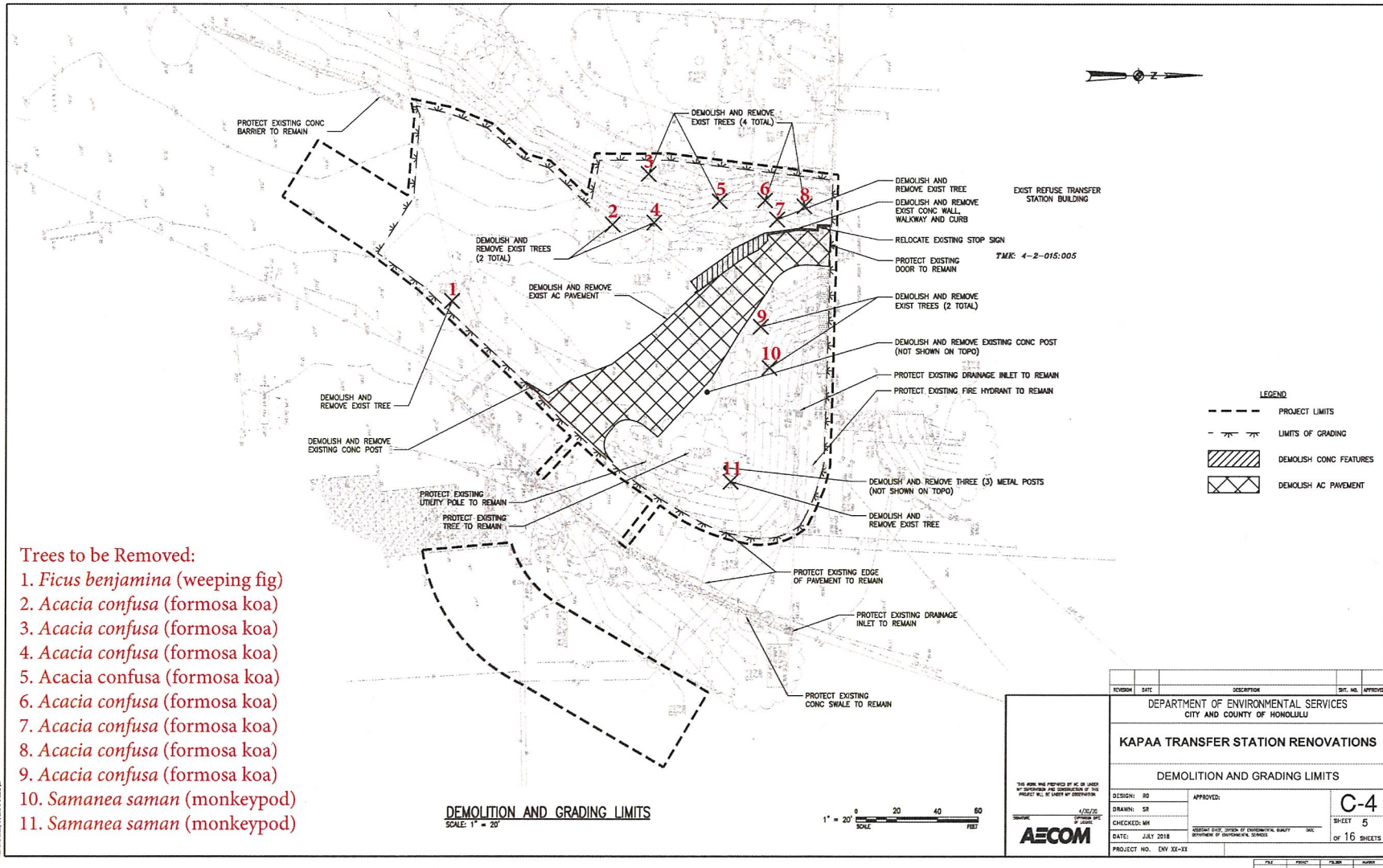
February 2019



Figure 2: SITE PLAN
Kapa'a Refuse Transfer Station Renovations
Kailua, O'ahu, Hawai'i

February 2019

Figure 3. Tree Removal and Demolition Plans



Site Photographs



Photo 1. Location of proposed green waste loading bay, new concrete pad, and asphalt pavement; existing Refuse Transfer Building; existing green waste stockpiling area; existing Forsoma koa and monkeypod trees to be removed.



Photo 2. Existing open drainage ditch outside the project area that receives stormwater runoff from the project site.



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Pacific Islands Fish and Wildlife Office
300 Ala Moana Boulevard, Room 3-122
Honolulu, Hawai'i 96850

In Reply Refer To:
01EPIF00-2019-TA-115

February 4, 2019

Mr. Manuel Lanuevo
Department of Environmental Services
City and County of Honolulu
Refuse Division
1000 Uluohia Street, Suite 201
Kapolei, Hawaii 96707

Subject: Response to your Request for Technical Assistance Regarding Kapaa Transfer Station Renovations, Kailua, Oahu

Dear Mr. Lanuevo:

Thank you for your recent correspondence requesting technical assistance on species biology, habitat, or life requisite requirements. The Pacific Islands Fish and Wildlife Office (PIFWO) of the U.S. Fish and Wildlife Service (Service) appreciates your efforts to avoid or minimize effects to protected species associated with your proposed actions. We provide the following information for your consideration under the authorities of the Endangered Species Act (ESA) of 1973 (16 U.S.C. 1531 *et seq.*), as amended.

Due to significant workload constraints, PIFWO is currently unable to specifically address your information request. The table below lists the protected species most likely to be encountered by projects implemented within the Hawaiian Islands. Based on your project location and description, we have noted the species most likely to occur within the vicinity of the project area, in the '**Occurs In or Near Project Area**' column. Please note this list is not comprehensive and should only be used for general guidance. We have added to the PIFWO website, located at <https://www.fws.gov/pacificislands/promo.cfm?id=177175840> recommended conservation measures intended to avoid or minimize adverse effects to these federally protected species and best management practices to minimize and avoid sedimentation and erosion impacts to water quality.

If you are representing a federal action agency, please use the official species list on our web-site for your section 7 consultation. You can find out if your project occurs in or near designated critical habitat here: <https://ecos.fws.gov/ipac/>.

Under section 7 of the ESA, it is the Federal agency's (or their non-Federal designee) responsibility to make the determination of whether or not the proposed project "may affect" federally listed species or designated critical habitat. A "may affect, not likely to adversely

affect” determination is appropriate when effects to federally listed species are expected to be discountable (*i.e.*, unlikely to occur), insignificant (minimal in size), or completely beneficial. This conclusion requires written concurrence from the Service. If a “may affect, likely to adversely affect” determination is made, then the Federal agency must initiate formal consultation with the Service. Projects that are determined to have “no effect” on federally listed species and/or critical habitat do not require additional coordination or consultation.

Implementing the avoidance, minimization, or conservation measures for the species that may occur in your project area will normally enable you to make a “may affect, not likely to adversely affect” determination for your project. If it is determined that the proposed project may affect federally listed species, we recommend you contact our office early in the planning process so that we may assist you with the ESA compliance. If the proposed project is funded, authorized, or permitted by a Federal agency, then that agency should consult with us pursuant to section 7(a)(2) of the ESA. If no Federal agency is involved with the proposed project, the applicant should apply for an incidental take permit under section 10(a)(1)(B) of the ESA. A section 10 permit application must include a habitat conservation plan that identifies the effects of the action on listed species and their habitats, and defines measures to minimize and mitigate those adverse effects.

We appreciate your efforts to conserve endangered species. We regret that we cannot provide you with more specific protected species information for your project site. If you have questions that are not answered by the information on our website, you can contact PIFWO at (808) 792-9400 and ask to speak to the lead biologist for the island where your project is located.

Sincerely,

Island Team Manager
Pacific Islands Fish and Wildlife Office

cc: Mr. Jeff Merz, Mr. Josh Nagashima

The table below lists the protected species most likely to be encountered by projects implemented within the Hawaiian Islands. For your guidance, we've marked species that may occur in the vicinity of your project, this list is not comprehensive and should only be used for general guidance.

<u>Scientific Name</u>	<u>Common Name / Hawaiian Name</u>	<u>Federal Status</u>	<u>May Occur In Project Area</u>
Mammals			
<i>Lasiurus cinereus semotus</i>	Hawaiian hoary bat/ ‘ōpe‘ape‘a	E	<input checked="" type="checkbox"/>
Reptiles			
<i>Chelonia mydas</i>	Green sea turtle/honu - Central North Pacific DPS	T	<input type="checkbox"/>
<i>Erectmochelys imbricata</i>	Hawksbill sea turtle/ Honu ‘ea	E	<input type="checkbox"/>
Birds			
<i>Anas wyvilliana</i>	Hawaiian duck/ koloa	E	<input checked="" type="checkbox"/>
<i>Branta sandvicensis</i>	Hawaiian goose/ nēnē	E	<input type="checkbox"/>
<i>Fulica alai</i>	Hawaiian coot/ ‘alae kea	E	<input checked="" type="checkbox"/>
<i>Gallinula galeata sandvicensis</i>	Hawaiian gallinule/ ‘alae ‘ula	E	<input checked="" type="checkbox"/>
<i>Himantopus mexicanus knudseni</i>	Hawaiian stilt/ Ae‘o	E	<input checked="" type="checkbox"/>
<i>Oceanodroma castro</i>	Band-rumped storm-petrel/ ‘akē‘akē	E	<input checked="" type="checkbox"/>
<i>Pterodroma sandwichensis</i>	Hawaiian petrel/ ‘ua‘u	E	<input checked="" type="checkbox"/>
<i>Puffinus auricularis newelli</i>	Newell’s shearwater/ ‘a‘o	T	<input checked="" type="checkbox"/>
<i>Ardenna pacificus</i>	Wedge-tailed Shearwater/ ‘ua‘u kani	MBTA	<input type="checkbox"/>
<i>Gygis alba</i>	White Tern/ manu-o-kū	MBTA	<input type="checkbox"/>
<i>Buteo solitarius</i>	Hawaiian hawk/ ‘io	E	<input type="checkbox"/>
Insects			
<i>Manduca blackburni</i>	Blackburn’s sphinx moth	E	<input type="checkbox"/>
<i>Megalagrion pacificum</i>	Pacific Hawaiian Damselfly	E	<input type="checkbox"/>
<i>M. xanthomelas</i>	Orangeblack Hawaiian Damselfly	E	<input type="checkbox"/>
<i>M. nigrohamatum nigrolineatum</i>	Blackline Hawaiian Damselfly	E	<input type="checkbox"/>

Plants				
<u>Scientific Name</u>	<u>Common Name or Hawaiian Name</u>	<u>Federal Status</u>	<u>Locations</u>	<u>May Occur In Project Area</u>
<i>Abutilon menziesii</i>	Ko‘oloa‘ula	E	O, L, M, H	<input type="checkbox"/>
<i>Achyranthes splendens</i> var. <i>rotundata</i>	‘Ewa hinahina	E	O	<input type="checkbox"/>
<i>Bonamia menziesii</i>	No common name	E	K, O, L, M, H	<input type="checkbox"/>
<i>Canavalia pubescens</i>	‘Āwikiwiki	E	Ni, K, L, M	<input type="checkbox"/>
<i>Colubrina oppositifolia</i>	Kauila	E	O, M, H	<input type="checkbox"/>
<i>Cyperus trachysanthos</i>	Pu‘uka‘a	E	K, O	<input type="checkbox"/>
<i>Gouania hillebrandii</i>	No common name	E	Mo, M	<input type="checkbox"/>
<i>Hibiscus brackenridgei</i>	Ma‘o hau hele	E	O, Mo, L, M, H	<input type="checkbox"/>
<i>Ischaemum byrone</i>	Hilo ischaemum	E	K, O, Mo, M, H	<input type="checkbox"/>
<i>Isodendron pyrifolium</i>	Wahine noho kula	E	O, H	<input type="checkbox"/>
<i>Marsilea villosa</i>	‘Ihi‘ihi	E	Ni, O, Mo	<input type="checkbox"/>
<i>Mezoneuron kavaianse</i>	Uhiuhi	E	O, H	<input type="checkbox"/>
<i>Nothoctrum breviflorum</i>	‘Aiea	E	H	<input type="checkbox"/>
<i>Panicum fauriei</i> var. <i>carteri</i>	Carter’s panicgrass	E	Molokini Islet (O), Mo	<input type="checkbox"/>
<i>Panicum niuhauense</i>	Lau‘ehu	E	K	<input type="checkbox"/>
<i>Peucedanum sandwicense</i>	Makou	E	K, O, Mo, M	<input type="checkbox"/>
<i>Pleomele (Chrysodracon)</i> <i>hawaiiensis</i>	Halapepe	E	H	<input type="checkbox"/>
<i>Portulaca sclerocarpa</i>	‘Ihi	E	L, H	<input type="checkbox"/>
<i>Portulaca villosa</i>	‘Ihi	E	Le, Ka, Ni, O, Mo, M, L, H, Nihoa	<input type="checkbox"/>
<i>Pritchardia affinis</i> (<i>maideniana</i>)	Loulu	E	H	<input type="checkbox"/>
<i>Pseudognaphalium</i> <i>sandwicense</i> var. <i>molokaiense</i>	‘Ena‘ena	E	Mo, M	<input type="checkbox"/>
<i>Scaevola coriacea</i>	Dwarf naupaka	E	Mo, M	<input type="checkbox"/>
<i>Schenkia (Centaurium)</i> <i>sebaeoides</i>	‘Āwiwi	E	K, O, Mo, L, M	<input type="checkbox"/>
<i>Sesbania tomentosa</i>	‘Ōhai	E	Ni, Ka, K, O, Mo, M, L, H, Necker, Nihoa	<input type="checkbox"/>
<i>Tetramolopium rockii</i>	No common name	T	Mo	<input type="checkbox"/>
<i>Vigna o-wahuensis</i>	No common name	E	Mo, M, L, H, Ka	<input type="checkbox"/>

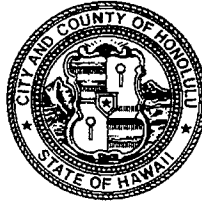
Location key: O=O‘ahu, K=Kaua‘i, M=Maui, H=Hawai‘i Island, L=Lāna‘i, Mo=Moloka‘i,
Ka=Kaho‘olawe, Ni=Ni‘ihau, Le=Lehua

DEPARTMENT OF ENVIRONMENTAL SERVICES
CITY AND COUNTY OF HONOLULU

REFUSE DIVISION

1000 ULUOHIA STREET, SUITE 201, KAPOLEI, HAWAII 96707
TELEPHONE: (808) 768-3401 • FAX: (808) 768-3434 • WEBSITE: www.opala.org

KIRK CALDWELL
MAYOR



LORI M.K. KAHIKINA, P.E.
DIRECTOR

MANUEL S. LANUEVO, P.E., LEED AP
CHIEF

IN REPLY REFER TO:
RE 19-012

February 11, 2019

Aaron Nadig
Island Team Manager
Pacific Islands Fish and Wildlife Office
300 Ala Moana Boulevard, Room 3-122
Honolulu, Hawaii 96850

Dear Mr. Nadig:

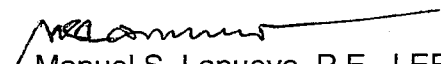
Subject: Response to Comments
Draft Environmental Assessment for Kapaa Quarry Transfer Station
Renovation Project, Tax Map Key 4-2-015:005

Thank you for your organization's letter dated February 4, 2019, regarding the project above. We acknowledge your pre-consultation comments and our responses are provided below:

- We will review the links you provided in your letter as well as information on the PIFWO website to determine recommended conservation measures and best management practices tailored to the project site and species situation.
- This project does not trigger any federal actions or funding and no federal permit is required at this time. However, we will work with the State Division of Fish and Wildlife to discuss possible project effects on habitat or species, coordinate for determinations on any impacts, and take appropriate mitigation and conservation measures.

We value your participation in the environmental review process. Your organization's letter and our response will be included in the draft EA, scheduled for publication Spring 2019.

Sincerely,


Manuel S. Lanuevo, P.E., LEED AP
Chief

cc: Jeff Merz, AECOM
Josh Nagashima

Appendix B: Conceptual Design

KAPAA TRANSFER STATION RENOVATIONS

KAILUA, OAHU, HAWAII

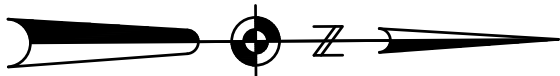
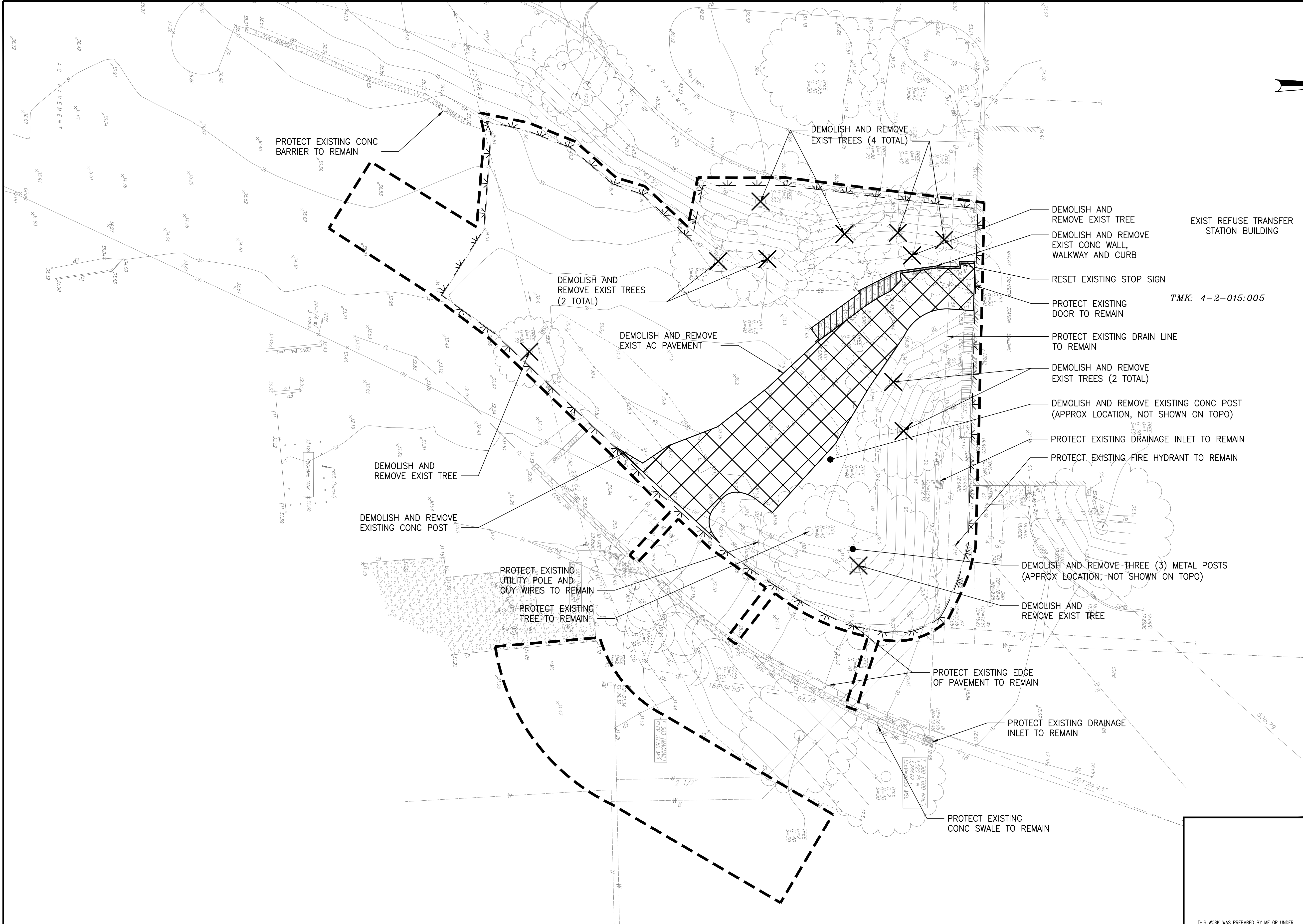
DEPARTMENT OF ENVIRONMENTAL SERVICES
CITY AND COUNTY OF HONOLULU

Prepared By:



VICINITY MAP		LOCATION MAP		INDEX OF DRAWINGS			INDEX OF DRAWINGS (CONT.)		
				SHT. No.	DWG. No.	DESCRIPTION	SHT. No.	DWG. No.	DESCRIPTION
				1	T-1	TITLE SHEET	26	S-12	STRUCTURAL SECTIONS
				2	C-1	CONSTRUCTION NOTES - 1	27	S-13	CRANE SUPPORT BEAM SECTIONS
				3	C-2	CONSTRUCTION NOTES - 2	28	S-14	STRUCTURAL DETAILS A
				4	C-3	CONSTRUCTION NOTES - 3	29	S-15	STRUCTURAL DETAILS B
				5	C-4	DEMOLITION AND GRADING LIMITS	30	S-16	RESERVED
				6	C-5	CIVIL SITE PLAN	31	E-1	ELECTRICAL SYMBOLS, GENERAL NOTES, FIRE ALARM NOTES
				7	C-6	GRADING PLAN	32	E-2	ELECTRICAL SITE PLAN
				8	C-7	DETAILS	33	E-3	LEVEL 17 ELECTRICAL PLAN, PANEL SCHEDULES
				9	C-8	CROSS SECTIONS	34	E-4	LEVEL 49 ELECTRICAL PLAN
				10	C-9	EROSION & SEDIMENT CONTROL PLAN	35	E-5	BASEMENT ELECTRICAL PLANS
				11	C-10	EROSION & SEDIMENT CONTROL DETAILS AND NOTES - 1	36	E-6	FIRST FLOOR ELECTRICAL PLANS
				12	C-11	EROSION & SEDIMENT CONTROL DETAILS AND NOTES - 2	37	E-7	EXISTING ONE-LINE DIAGRAM WITH MODIFICATIONS
				13	C-12	TRAFFIC CONTROL PLAN - 1	APPROVED		
				14	C-13	TRAFFIC CONTROL PLAN - 2			
				15	S-1	STRUCTURAL NOTES - 1	<div>DIRECTOR DEPARTMENT OF ENVIRONMENTAL SERVICES CITY AND COUNTY OF HONOLULU</div> <div>DATE</div>		
				16	S-2	STRUCTURAL NOTES - 2			
				17	S-3	TYPICAL STRUCTURAL DETAILS - 1			
				18	S-4	TYPICAL STRUCTURAL DETAILS - 2			
				19	S-5	TYPICAL RETAINING WALL SECTIONS AND DETAILS			
				20	S-6	FOUNDATION LAYOUT PLAN AND WALL-3 ELEVATION			
				21	S-7	RETAINING STRUCTURE CROSS SECTIONS - 1			
				22	S-8	RETAINING STRUCTURE CROSS SECTIONS - 2			
				23	S-9	FOUNDATION DETAILS			
				24	S-10	TYPICAL RETAINING WALL SECTIONS AND DETAILS			
				25	S-11	ROOF FRAMING PLAN			

PROJECT: KAPAA TRANSFER STATION RENOVATIONS
DRAWN BY: J. L. LEE
CHECKED BY: M. H. HARRIS
DATE: JANUARY 2019
SCALE: 1" = 20'

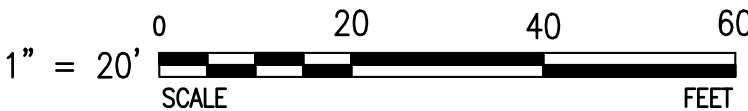


EXIST REFUSE TRANSFER
STATION BUILDING

TMK: 4-2-015:005

- LEGEND**
- PROJECT LIMITS
 - - - LIMITS OF GRADING
 - DEMOLISH CONC FEATURES
 - DEMOLISH AC PAVEMENT

DEMOLITION AND GRADING LIMITS
SCALE: 1" = 20'



THIS WORK WAS PREPARED BY ME OR UNDER
MY SUPERVISION AND CONSTRUCTION OF THIS
PROJECT WILL BE UNDER MY OBSERVATION.

SIGNATURE
4/30/20
EXPIRATION DATE
OF LICENSE

AECOM

REVISION	DATE	DESCRIPTION	SHT. NO.	APPROVED
DEPARTMENT OF ENVIRONMENTAL SERVICES CITY AND COUNTY OF HONOLULU				
KAPAA TRANSFER STATION RENOVATIONS				
DEMOLITION AND GRADING LIMITS				
DESIGN: RO	APPROVED: ASSISTANT CHIEF, DIVISION OF ENVIRONMENTAL QUALITY DEPARTMENT OF ENVIRONMENTAL SERVICES		C-4 SHEET 5 OF 37 SHEETS	
DRAWN: SR				
CHECKED: MH				
DATE: JANUARY 2019	DATE			
PROJECT NO. ENV XX-XX				



LEGEND

NEW CONC. PAVEMENT

CURVE DATA:

①		②	
Δ	29°25'60"	Δ	76°51'05"
Δ/2	14°42'60"	Δ/2	38°25'33"
R	60.00	R	25.00
T	15.76	T	19.83
C	30.48	C	31.08
LC	30.82	LC	33.53

SCALE: 1" = 20'

1" = 20'

0 20 40 60

SCALE FEET

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4/30/20
EXPIRATION DATE

OF LICENSE

AECOM

M

DEPARTMENT OF ENVIRONMENTAL SERVICES
CITY AND COUNTY OF HONOLULU

KAPAA TRANSFER STATION RENOVATIONS

CIVIL SITE PLAN

DESIGN: R0

SR

CHECKED: MH

PROJECT NO. ENV XX-XX

APPROVED:

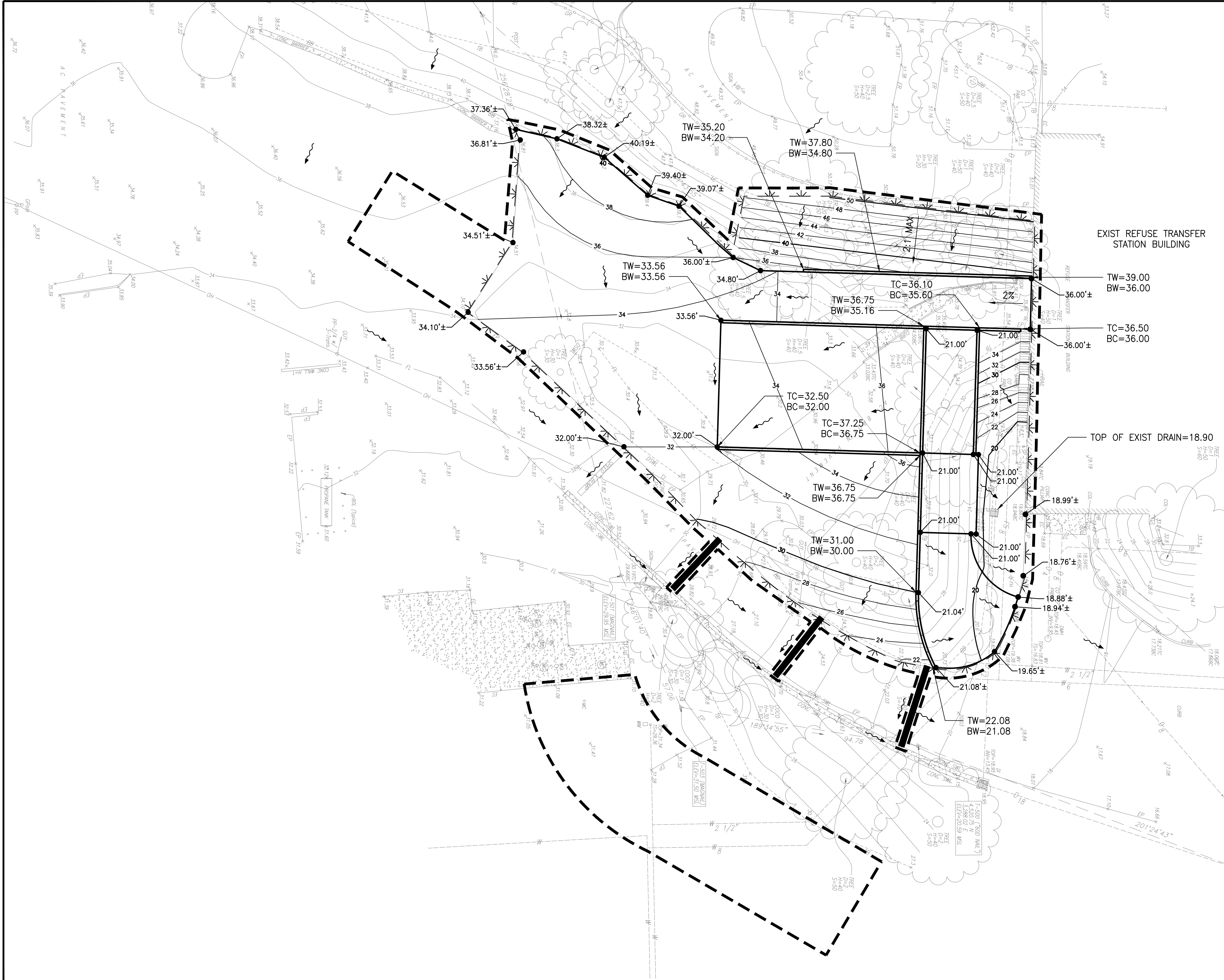
ASSISTANT CHIEF, DIVISION OF ENVIRONMENTAL QUALITY
DEPARTMENT OF ENVIRONMENTAL SERVICES

C-5

SHEET 6

- 37 SHEETS

FILE	POCKET	FOLDER	NUMBER



TMK: 4-2-015:005

LEGEND

- EXIST CONTOUR
- PROPOSED CONTOUR
- PROJECT LIMITS
- LIMITS OF GRADING
- EXISTING SPOT ELEVATION
- NEW SPOT ELEVATION
- RUNOFF SURFACE FLOW

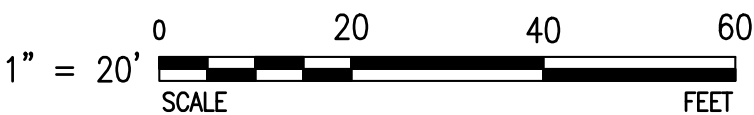
EARTHWORK QUANTITIES

(FOR PERMIT PURPOSES ONLY)

EXCAVATION..... 1210 C.Y.
EMBANKMENT..... 890 C.Y.
DISTURBED AREA 0.90 ACRES

GRADING PLAN

SCALE: 1" = 20'



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4/30/20
EXPIRATION DATE OF LICENSE

AECOM

DEPARTMENT OF ENVIRONMENTAL SERVICES
CITY AND COUNTY OF HONOLULU

KAPAA TRANSFER STATION RENOVATIONS

GRADING PLAN

DESIGN: RO

APPROVED:

DRAWN: SR

CHECKED: MH

DATE: JANUARY 2019

ASSISTANT CHIEF, DIVISION OF ENVIRONMENTAL QUALITY
DEPARTMENT OF ENVIRONMENTAL SERVICES

C-6

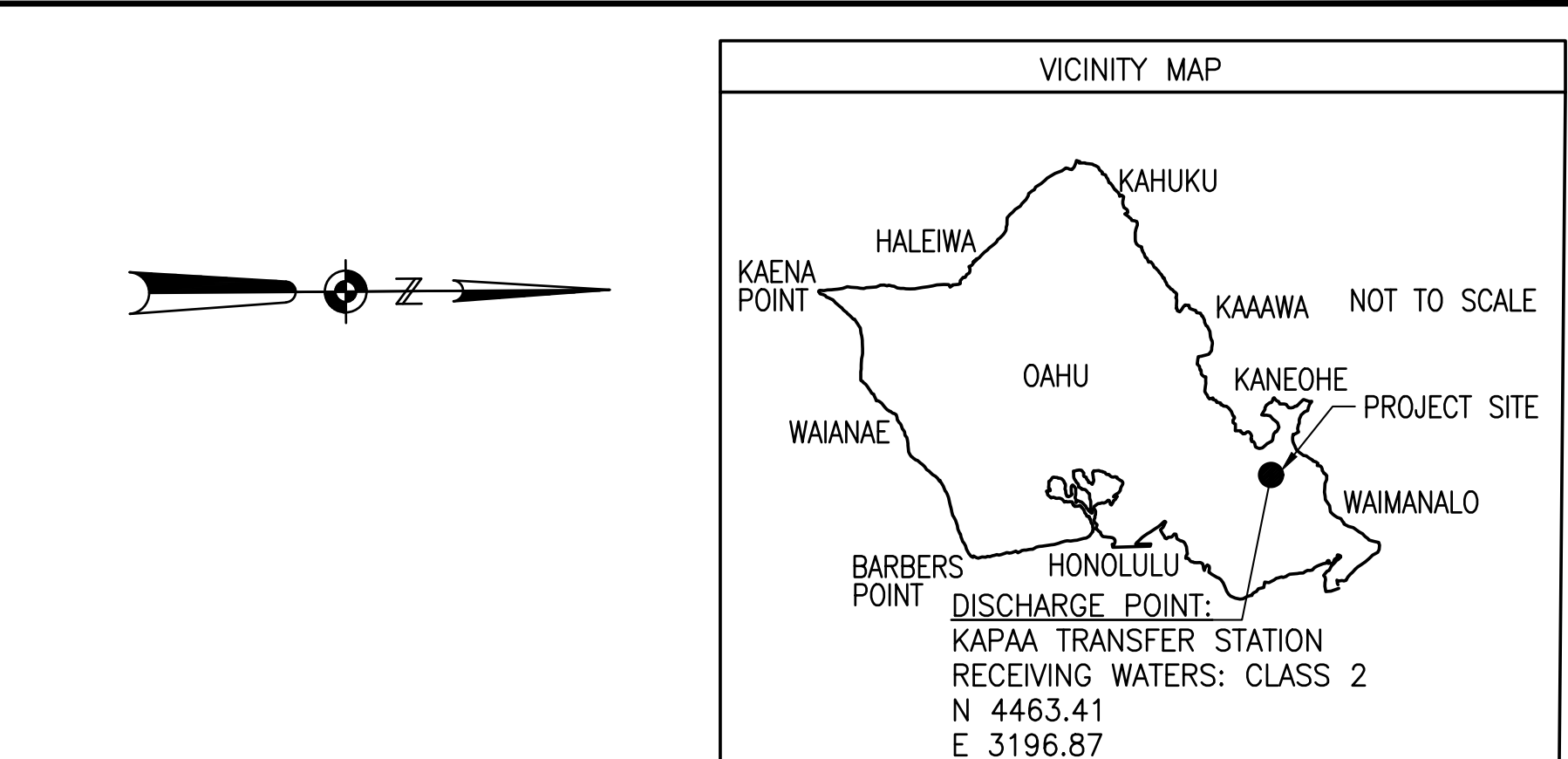
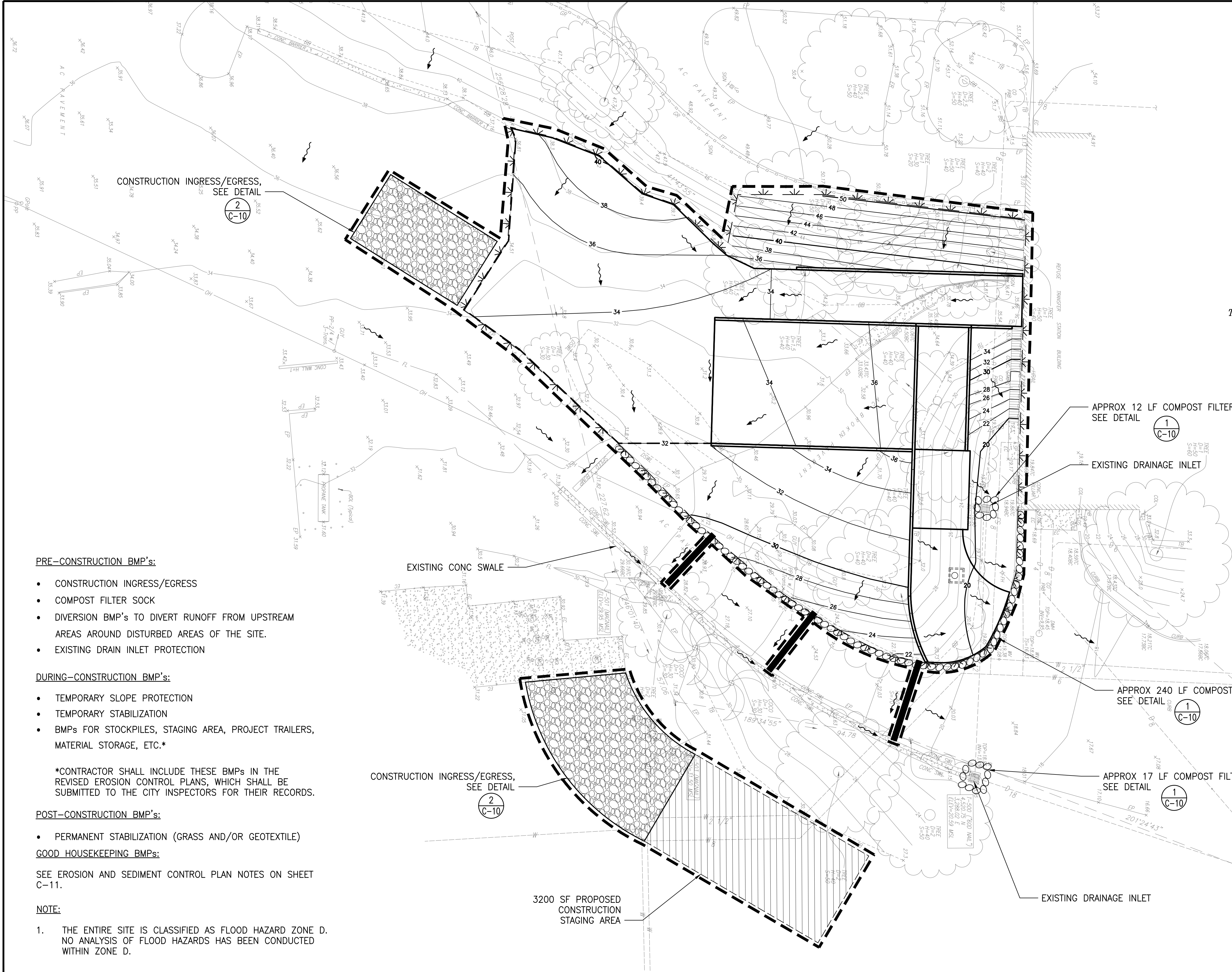
SHEET 7

OF 37 SHEETS

PROJECT NO. ENV XX-XX

FILE POCKET FOLDER NUMBER

PROJECT: KAPAA TRANSFER STATION RENOVATIONS
DRAWN BY: J. L. LEE
CHECKED BY: M. H. HARRIS
DATE: JANUARY 2019
SCALE: 1" = 20'
SHEET: C-9 OF 37



EXIST REFUSE TRANSFER STATION BUILDING

TMK: 4-2-015:005

LEGEND

- PROJECT LIMITS
- PROPOSED CONTOUR
- EXIST CONTOUR
- LIMITS OF GRADING
- COMPOST FILTER SOCK
- PROPOSED CONSTRUCTION STAGING AREA
- CONSTRUCTION ACCESS AREA
- RUNOFF SURFACE FLOW

APPROVED:

CHIEF, CIVIL ENGINEERING BRANCH, D.P.P.
CITY AND COUNTY OF HONOLULU

DATE

PRE-CONSTRUCTION BMP's:

- CONSTRUCTION INGRESS/EGRESS
- COMPOST FILTER SOCK
- DIVERSION BMP's TO DIVERT RUNOFF FROM UPSTREAM AREAS AROUND DISTURBED AREAS OF THE SITE.
- EXISTING DRAIN INLET PROTECTION

DURING-CONSTRUCTION BMP's:

- TEMPORARY SLOPE PROTECTION
- TEMPORARY STABILIZATION
- BMPs FOR STOCKPILES, STAGING AREA, PROJECT TRAILERS, MATERIAL STORAGE, ETC.*

*CONTRACTOR SHALL INCLUDE THESE BMPs IN THE REVISED EROSION CONTROL PLANS, WHICH SHALL BE SUBMITTED TO THE CITY INSPECTORS FOR THEIR RECORDS.

POST-CONSTRUCTION BMP's:

- PERMANENT STABILIZATION (GRASS AND/OR GEOTEXTILE)

GOOD HOUSEKEEPING BMPs:

SEE EROSION AND SEDIMENT CONTROL PLAN NOTES ON SHEET C-11.

NOTE:

- THE ENTIRE SITE IS CLASSIFIED AS FLOOD HAZARD ZONE D. NO ANALYSIS OF FLOOD HAZARDS HAS BEEN CONDUCTED WITHIN ZONE D.

EROSION & SEDIMENT CONTROL PLAN
SCALE: 1" = 20'

REVISION	DATE	DESCRIPTION	SHT. NO.	APPROVED
DEPARTMENT OF ENVIRONMENTAL SERVICES CITY AND COUNTY OF HONOLULU				
KAPAA TRANSFER STATION RENOVATIONS				
EROSION & SEDIMENT CONTROL PLAN				
DESIGN: RO	APPROVED:		C-9	
DRAWN: SR			SHEET 10	
CHECKED: MH			OF 37 SHEETS	
DATE: JANUARY 2019	ASSISTANT CHIEF, DIVISION OF ENVIRONMENTAL QUALITY DEPARTMENT OF ENVIRONMENTAL SERVICES			
PROJECT NO. ENV XX-XX				

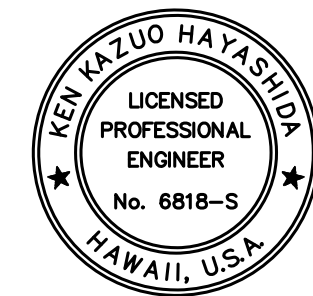
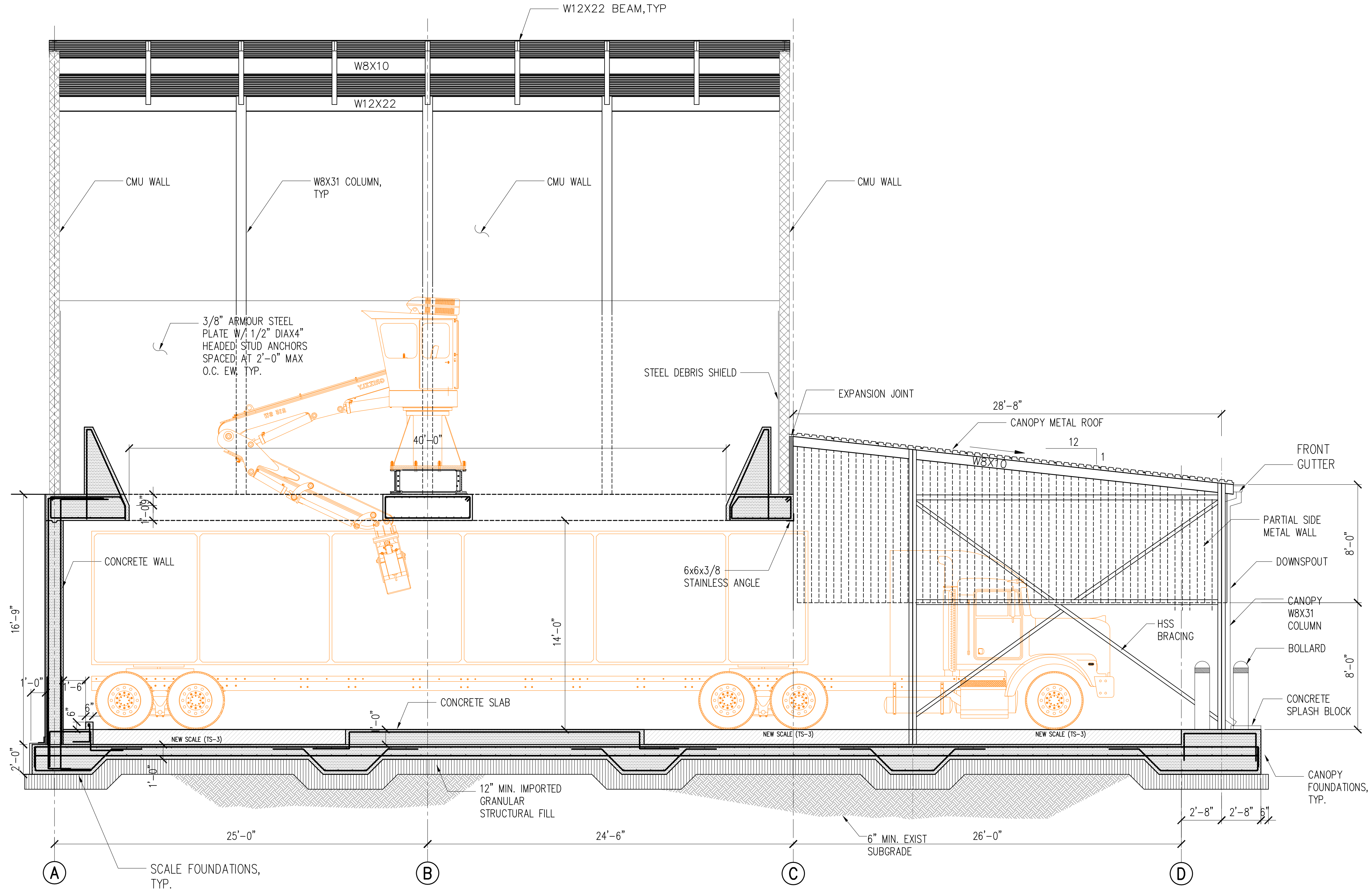
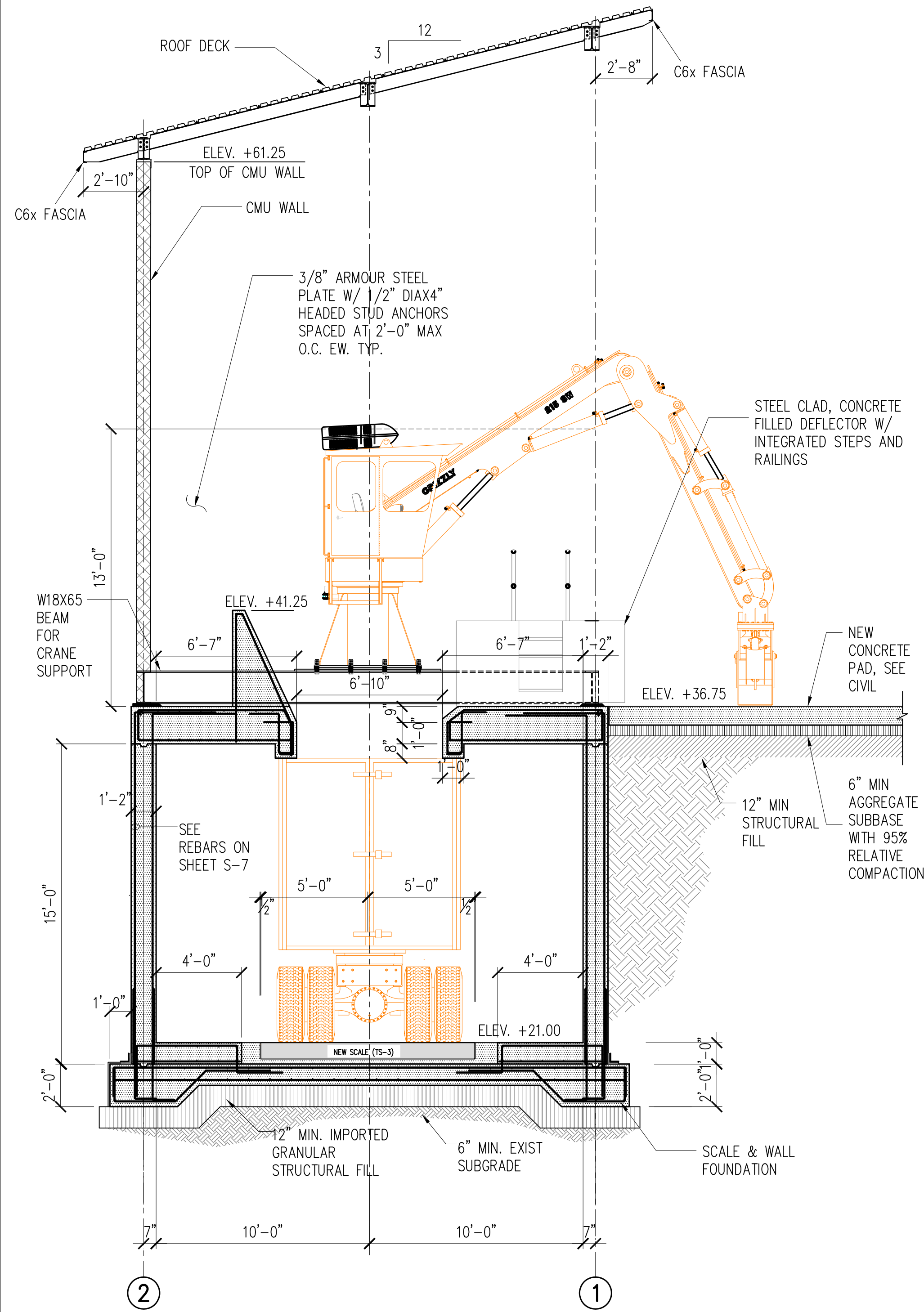
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4/30/20
EXPIRATION DATE OF LICENSE

SIGNATURE

AECOM

PATH/FILNAME: C:\Users\Gens\Documents\6880 Structural\2019-01-19\6880_S12.dwg
PLOT DATE: January 22, 2019 09:44:54 pm



EXPIRATION DATE OF THE LICENSE 4/30/2020
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REVISION	DATE	DESCRIPTION		SHT. NO. APPROVED
DEPARTMENT OF ENVIRONMENTAL SERVICES CITY AND COUNTY OF HONOLULU				
KAPAA TRANSFER STATION RENOVATIONS				
STRUCTURAL SECTIONS				
DESIGN: GX	APPROVED:		S-12	
DRAWN: CADD				
CHECKED: JC				
DATE: JAN. 2019	ASSISTANT CHIEF, DIVISION OF ENVIRONMENTAL QUALITY DEPARTMENT OF ENVIRONMENTAL SERVICES		DATE	
PROJECT NO. ENV XX-XX				

FILE	POCKET	FOLDER	NUMBER