FILE COPY

JAN - 8 2021

DAVID Y. IGE
GOVERNOR

CURT T. OTAGURO
COMPTROLLER

AUDREY HIDANO
DEPUTY COMPTROLLER

(P)20.222

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

DEC 24 2020

MEMORANDUM

TO: Mr. Keith Kawaoka, Acting Director
Office of Environmental Quality Control
Department of Health

FROM: Christine L. Kinimaka
for Public Works Administrator Joseph M. Earing

SUBJECT: Draft Environmental Assessment for
Waiawa Correctional Facility, After the Fact Permits for
State Special Use Permit and Plan Review Use Permit
DAGS Job No. 12-27-5715

The Department of Accounting and General Services, State of Hawaii, hereby transmits the draft environmental assessment and anticipated finding of no significant impact (DEA-AFONSI) for Waiawa Correctional Facility, After the Fact Permits for State Special Use Permit and Plan Review Use Permit, situated at TMK: 9-6-005:011 and 012, in the Waiawa Ahupua'a, Ewa Moku, on the Island of Oahu, for publication in the next available edition of the Environmental Notice.

We have included the OEQC Publication form, an electronic copy of the DEA-AFONSI in pdf format, and the action location map.

If there are any questions, please have your staff call Lance Maja of the Planning Branch at 586-0483.

LM:mo
c: Mr. Ivan Lee, SSFM International
Mr. Alden Yago, PSD

21-097

From: webmaster@hawaii.gov
To: HI Office of Environmental Quality Control
Subject: New online submission for The Environmental Notice
Date: Wednesday, December 30, 2020 8:52:31 PM

Action Name

Waiawa Correctional Facility After the Fact Permits for State Special Use Permit and Plan Review Use Permit Draft Environmental Assessment

Type of Document/Determination

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

HRS §343-5(a) Trigger(s)

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

Judicial district

ʻEwa, Oʻahu

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

(1) 9-6-005:011; (1) 9-6-005:012

Action type

Agency

Other required permits and approvals

Numerous

Proposing/determining agency

State of Hawaii, Department of Accounting and General Services

Agency contact name

Lance Maja

Agency contact email (for info about the action)

lance.y.maja@hawaii.gov

Agency contact phone

(808) 586-0483

Agency address

1151 Punchbowl Street, Room 430
Honolulu, Hawaii 96813
United States
Map It

Was this submittal prepared by a consultant?

Yes

Consultant

SSFM International, Inc.

Consultant contact name

Carah Kadota

Consultant contact email

ckadota@ssfm.com

Consultant contact phone

(808) 531-1308

Consultant address

501 Sumner Street, Suite 620
Honolulu, HI 96817
United States
Map It

Action summary

The Department of Public Safety's Waiawa Correctional Facility (WCF) is located in the Waipahu district of O'ahu. The original structures were constructed in the 1940s for use as a Federal military reservation. In 1985, the facility was turned over to the State under a 30-year quitclaim deed and repurposed to minimum-security correctional facility.
The County of Honolulu (City) Department of Planning and Permitting (DPP) notified PSD and DAGS that continued operations at WCF would require Plan Review Use (PRU) and Special Use Permit (SUP) approvals. WCF is located within the State Agricultural District. Correctional facilities are not permissible uses within the Agricultural District, necessitating a SUP. A PRU is required for prison use within any of the City's zoning districts. The requirement to obtain the SUP and PRU include the use of State lands and funds, both of which trigger the preparation of an Environmental Assessment.

Reasons supporting determination

The project is not expected to adversely impact natural or cultural resources, public health, socio-economic welfare, and the surrounding environment. The Waiawa Correctional Facility (WCF) is a long-standing facility that is located on land that has been previously disturbed by its previous use for pineapple and sugarcane cultivation, as well as military use. Any evidence of both pre- and post- contact land use has most likely been destroyed or buried. The site is also outside of the tsunami evacuation zone, flood plains, shoreline areas, and other environmentally sensitive areas and is not vulnerable to natural hazards. The Draft EA is being prepared for the WCF to satisfy HRS Chapter 343 requirements of the State Special Use Permit and the City's Plan Review Use Permit; the facility itself will not undergo any major construction activities, change in use or expansion.

Attached documents (signed agency letter & EA/EIS)

- WCF-DEA-Publication-Form.pdf
- 201222-WCF-Draft-EA-with-Appendix-reduced.pdf
- 201229-DAGS-WCF-Draft-EA-Memo.pdf

Action location map

- EA-Boundary.zip

Authorized individual

Carah Kadota

Authorization

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

submission.

WAIAWA CORRECTIONAL FACILITY AFTER THE FACT PERMITS FOR STATE SPECIAL USE PERMIT AND PLAN REVIEW USE PERMIT

DRAFT ENVIRONMENTAL ASSESSMENT

Prepared for: State of Hawaii
Department of Accounting
and General Services

Prepared by: SSFM International, Inc.

SSFM International

December 2020

This page is intentionally blank

Project Information Summary

Project Name:	Waiawa Correctional Facility After the Fact Permits for State Special Use Permit (SUP) and Plan Review Use Permit (PRU)
Approving Authority:	State of Hawaiʻi Department of Accounting and General Services 1151 Punchbowl Street, Room 430 Kalanimoku Building Honolulu, Hawaiʻi 96813 Contact: Lance Y. Maja, P.E., Coordinator (808) 586-0483
EA Preparer:	SSFM International, Inc. 501 Sumner Street, Suite 620 Honolulu, Hawaiʻi 96817 Contact: Carah Kadota (808) 531-1308
Project Location:	94-670 Kamehameha Highway Waipahu, Hawaiʻi 96797 Waiawa Ahupuaʻa, ʻEwa Moku, Island of Oahu
Tax Map Keys:	(1) 9-6-005: 011 and 012
Parcel Lot Area:	Parcel 011: 157.875 acres Parcel 012: 22.611 acres
Landowner:	State of Hawaiʻi, Department of Public Safety by Governors Executive Order (EO) 3414
Existing Use:	Minimum Security Correctional Facility
State Land Use District:	Agricultural
County Zoning:	F-1 Federal and Military

Chapter 343, HRS Trigger:	Use of State funds and lands (application for a State Special Use Permit and Plan Review Use Permit) per HAR 11-200.1-8 (1)
Special Management Area:	Outside SMA
Central O‘ahu Sustainable Community Plan:	Land Use Designation: Agriculture and Preservation Public Facilities Map Designation: Correctional Facility, outside of Urban Growth Boundary
Proposed Uses:	Same as existing/no change

TABLE OF CONTENTS

1.0 Project Description 1
1.1 Background 1
1.2 Chronological History 4
1.3 Governor's Executive Order No. 3414 4
1.4 Previous Environmental Assessments 5
1.5 Existing Operations 5
1.5.1 Programs 6
1.6 Existing Structures 7
1.7 Five-Year Master Plan 20
1.7.1 Proposed Operations and Activities 21
1.7.2 Proposed Structures and Physical Alterations to the Site 21
1.7.3 Capital Improvement Projects 21
1.7.4 Building Heights 23
1.7.5 Density 23
1.7.6 Landscaping and Buffering from Adjoining Parcels 24
1.7.7 Parking and Loading Requirements 24
1.7.8 Master Signage and Exterior Lighting Plans 26
1.8 Abutting Uses 27
1.9 Approvals and Permits 28

2.0 Affected Environment, Potential Impacts, and Mitigation Measures 31
2.1 Climate 31
2.2 Geology and Topography 31
2.3 Soils 31
2.4 Hydrology 36
2.5 Air Quality, Noise and Lights 36
2.6 Flora and Fauna 37
2.7 Natural Hazards 40
2.8 Historic and Archaeological Resources 40
2.9 Cultural Resources 41
2.10 Viewplanes 42
2.11 Water 42
2.12 Wastewater System 44
2.13 Traffic 47
2.14 Public Services and Community Facilities 51
2.14.1 Refuse Collection 51
2.14.2 Fire Protection 51
2.14.3 Police 51
2.14.4 Schools 51
2.14.5 Parks & Recreation 53
2.14.6 Day Care 53
2.15 Socio-Economic Conditions 53

2.16 Potential Cumulative and Secondary Impacts 53

3.0 Relationship to Plans and Policies 55
3.1 State of Hawaiʻi Policies 55
3.1.1 Hawaiʻi State Plan 55
3.1.2 HRS Chapter 205, Part III 61
3.1.3 Coastal Zone Management, HRS Chapter 205A 61
3.1.4 Land Use Commission Guidelines 66
3.2 City and County of Honolulu Plans and Policies 67
3.2.1 City and County of Honolulu General Plan 67
3.2.2 Central Oʻahu Sustainable Communities Plan 67
3.2.3 Land Use Ordinance 68
3.3 10-Year Corrections Master Plan Update (2003) 69

4.0 Project Alternatives 75
4.1 No Action Alternative 75

5.0 Findings and Anticipated Determination 77
5.1 Anticipated Determination 77
5.2 Significance Criteria Findings 77

6.0 Agencies and Organizations Consulted 81
6.1 Neighborhood Board Meetings 81
6.2 Pre-Assessment Consultation 82

7.0 References 87

List of Figures

Figure 1: Project Location Map 2
Figure 2: State Land Use District Map 3
Figure 3: Building History Map (1 of 2) 9
Figure 4: Building History Map (2 of 2) 10
Figure 5: Site Plan (1 of 2) 11
Figure 6: Site Plan (2 of 2) 12
Figure 7: Parking Locations 24
Figure 8: “Waiawa Correctional Facility” Entry Rock Wall Sign 26
Figure 9: “Waiawa” Rock Wall Sign 27
Figure 10: Abutting Uses 29
Figure 11: Topography – 40ft Contours 32
Figure 12: Soils 34

Figure 13: Land Study Bureau Classification 35
Figure 14: Vegetation Communities of WCF 38
Figure 15: Traffic Count Stations and Bus Stop Location 48
Figure 16: 24-hour Volume Distribution Along Interstate H-2 49
Figure 17: Nearby Fire Stations, Police Stations and Public Schools 52
Figure 18: COSP - Public Facilities Map 71
Figure 19: City & County of Honolulu Zoning 72
Figure 20: Side/Rear Required Yard per P-2 Development Standard 73

LIST OF TABLES

Table 1: WCF Buildings Inventory 13
Table 2: Current CIP Projects at the WCF 21
Table 3: Listing of Past and Ongoing Building Permits 22
Table 4: Number of Parking Stalls by Building 25
Table 5: WCF Potable Water Supply Requirements (Per BWS) 43
Table 6: Design Average Flow 44
Table 7: Design Peak Flow 45
Table 8: Water Hyacinth Pond and R-2 Storage Pond Data 46
Table 9: Roadway Average Daily Traffic 47
Table 10: Comparison of WCF Site/Structures with P-2 Development Standards 68
Table 11: Pre-Assessment Consultation 82

LIST OF APPENDICES

Appendix A: Governor's Executive Order No. 3414
Appendix B: Declaration of Exemption
Appendix C: Architectural Reconnaissance Level Survey
Appendix D: State Historic Preservation Division Response Letter
Appendix E: Floor Plans and Elevations
Appendix F: Photo Appendix
Appendix G: Landscape Plan

Appendix H: Biological Survey Report

Appendix I: Cultural Impact Assessment

Appendix J: Groundwater Hydrology Assessment

Appendix K: 24-hour Traffic Counts

Appendix L: Neighborhood Board Meeting Minutes

Appendix M: Pre-Assessment Consultation

List of Acronyms

ADT Average Daily Traffic
ALISH Agricultural Lands of Importance to the State of Hawaiʻi
AMSL Above mean sea level
BMP Best Management Practice
CDP Census Designated Place
CIP Capital Improvements Project
COSCP Central Oʻahu Sustainable Communities Plan
CZM Coastal Zone Management
DAGS Department of Accounting and General Services, State of Hawaiʻi
DHHL Department of HawaiianHome Lands, State of Hawaiʻi
DLNR Department of Land and Natural Resources, State of Hawaiʻi
DOE Department of Education, State of Hawaiʻi
DOH Department of Health, State of Hawaiʻi
DOT Department of Transportation, State of Hawaiʻi
DPP Department of Planning and Permitting, City and County of Honolulu
EA Environmental Assessment
FEIS Final Environmental Impact Statement
FEMA Federal Emergency Management Agency
FONSI Finding of No Significant Impact
HAR Hawaiʻi Administrative Rules
HFD Honolulu Fire Department
HPD Honolulu Police Department
HRS Hawaiʻi Revised Statutes
IAL Important Agricultural Lands
KASHBOX Knowledge, Attitude, Skills, Habits, Behaviors, Opinion and X – The Unknown Factors
LUO Land Use Ordinance
OEQC Office of Environmental Quality Control, State of Hawaiʻi
PRU Plan Review Use
PSD Department of Public Safety, State of Hawaiʻi
RLS Reconnaissance Level Survey
ROH Revised Ordinances of Honolulu
SHPD State Historic Preservation Division
SIHP State Inventory of Historic Places
SLR-XA Sea Level Rise Exposure Area
SUP Special Use Permit
TMK Tax Map Key
USFWS U.S. Fish and Wildlife Service
WCF Waiawa Correctional Facility
ZOC Zone of Contribution

This page is intentionally blank

1.0 PROJECT DESCRIPTION

1.1 Background

The Department of Public Safety's (PSD) Waiawa Correctional Facility (WCF) is located in the Waipahu district on the island of Oʻahu, Hawaiʻi (see Figure 1). It is comprised of two (2) Tax Map Key (TMK) parcels identified as TMK (1) 9-6-005: 011 and 012. Parcels 011 and 012 are 157.875 acres and 22.611 acres, respectively. The original on-site structures were constructed in the 1940s during World War II for use as a federally-owned military reservation. In 1985, the entire facility was turned over to the State of Hawaiʻi under a 30-year quitclaim deed established by the United States federal government. Since 1985, the site has been known as the WCF and used as a minimum-security correctional facility by the State of Hawaiʻi.

In a letter dated June 5, 2009, the City and County of Honolulu (City) Department of Planning and Permitting (DPP) notified the PSD and State Department of Accounting and General Services (DAGS) that continued operations at WCF would require Plan Review Use (PRU) and Special Use Permit (SUP) approvals after-the-fact. The WCF site is located within the State Land Use Agricultural District (see Figure 2). Prisons and correctional facilities are not classified as permissible uses within the Agricultural District, therefore a SUP is required. The WCF site is within the City's F-1 Military and Federal Preservation zone, which was consistent with its prior use as a military reservation. However, an approved PRU is required for prison use within any of the City's zoning districts. The facility's existence predates both the State Land Use Law (Chapter 205, Hawaiʻi Revised Statutes (HRS), adopted in 1961 by the State Legislature) and the Revised Ordinances of Honolulu 1990 (ROH). Securing these two (2) entitlements would enable the WCF to be in compliance with applicable State and City land use laws.

Subsequent to DPP's notification in 2009, applications for after-the-fact entitlements were deferred until full transfer of the site to the State could occur after the end of the 30-year quitclaim deed, and State funds were made available to establish the next permanent development at WCF. In 2015, DPP granted DAGS and PSD a five (5) year deferral extension to apply for entitlements ending in December 2019. DAGS and PSD applied for a SUP in December 2019. In DPP's letter response to the application dated April 1, 2020, the DPP indicated that the previous Final Environmental Assessment (FEA) and Finding of No Significant Impact (FONSI) prepared in 1998 "erroneously described and concluded that the WCF is an agricultural use and thus avoided permitting requirements of Chapter 205, HRS." Although DAGS disagrees with DPP's statement, DAGS and PSD responded that a new HRS Chapter 343 Environmental Assessment (EA) will be prepared to satisfy requirements for the SUP and PRU applications.

DAGS and PSD's requirement to obtain both the SUP and PRU include the use of state lands and funds, as described under Hawaiʻi Administrative Rules (HAR) 11-200.1-8 (1), both of which trigger the preparation of an Environmental Assessment (EA) as prescribed by Hawaiʻi Revised Statutes, Chapter 343.

Figure 1: Project Location Map

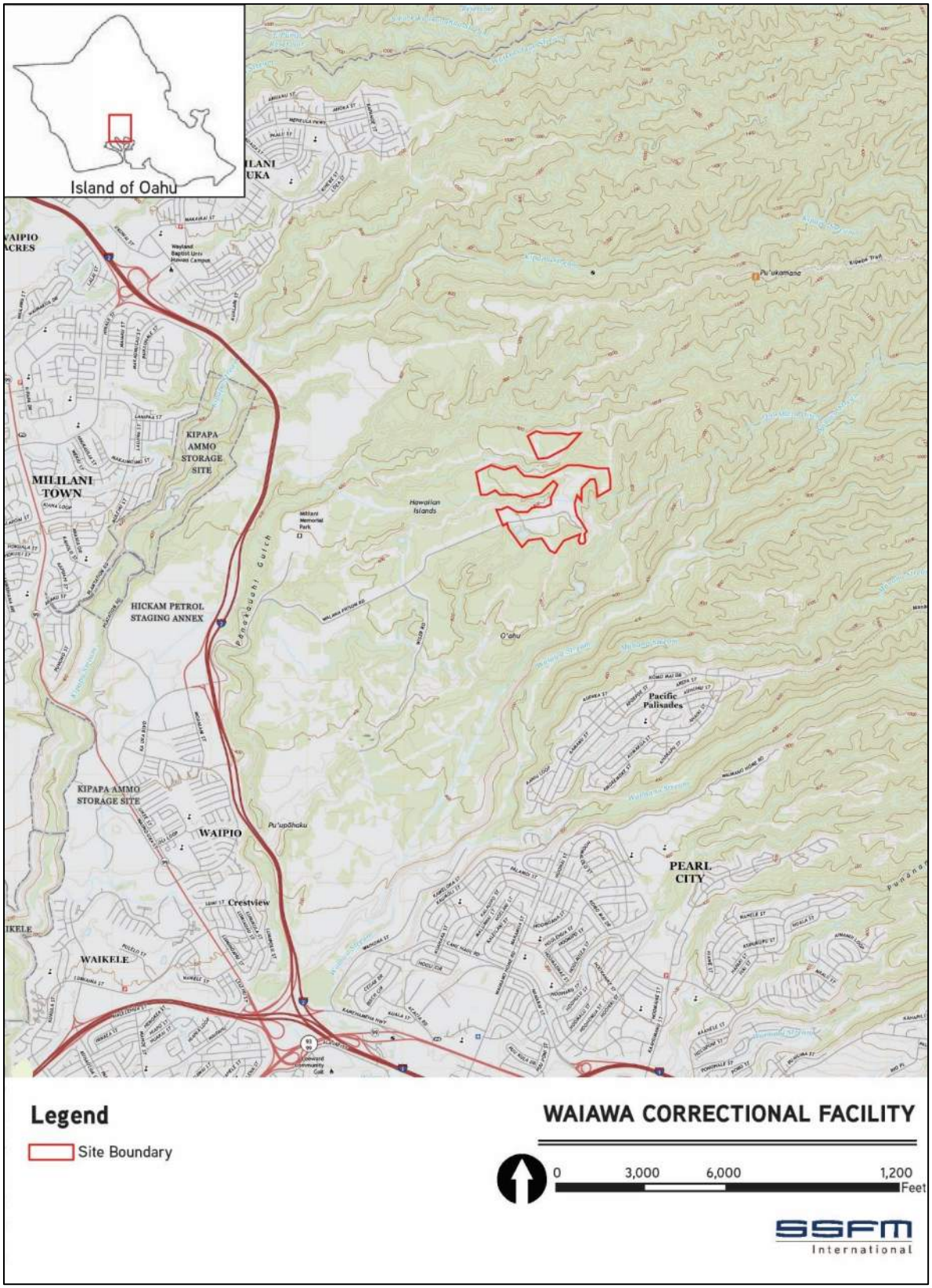
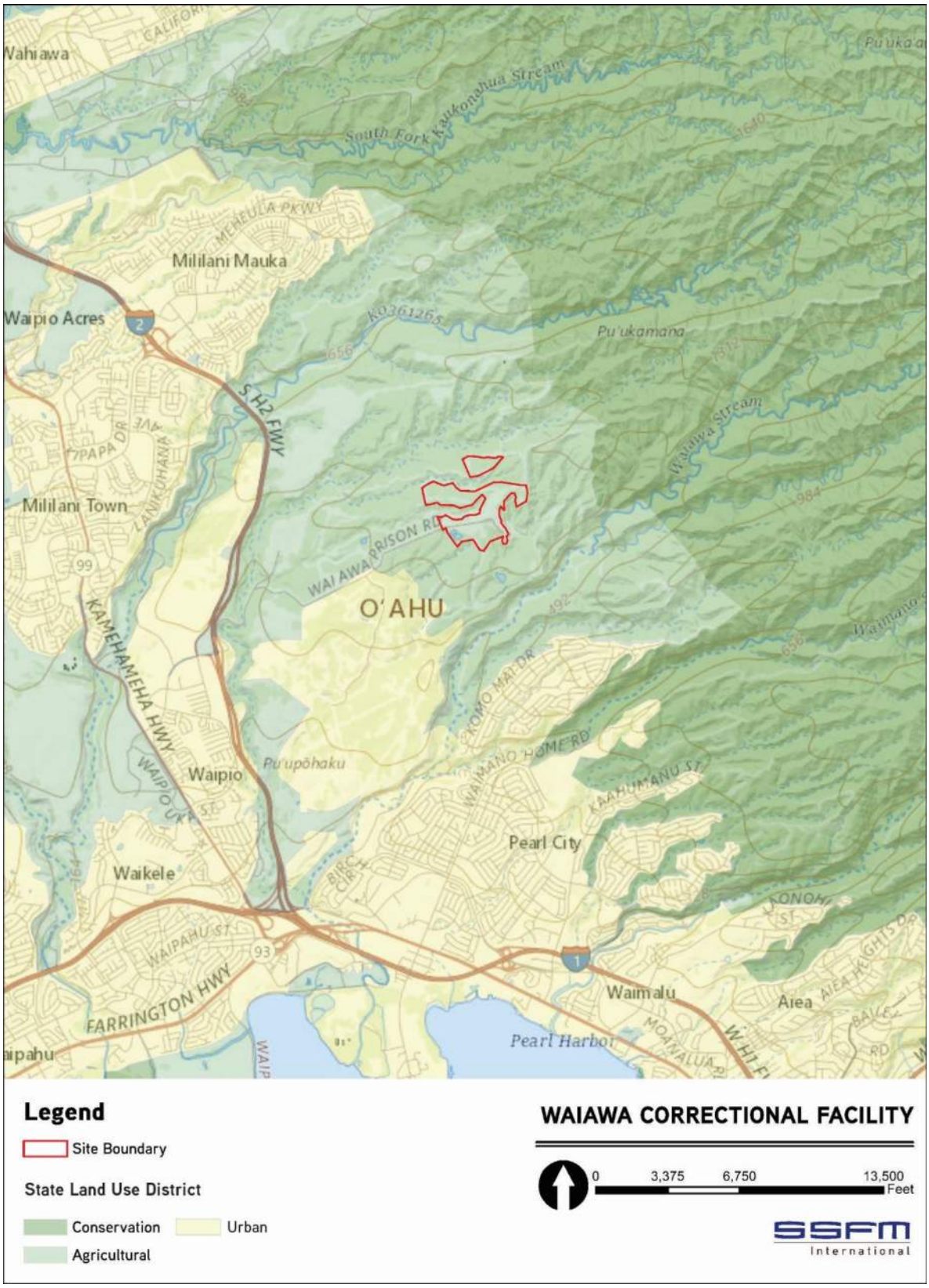


Figure 2: State Land Use District Map



1.2 Chronological History

The WCF encompasses approximately 180 acres of land in the ahupuaʻa of Waiawa, which was claimed by Victoria Kamamalu, sister of Alexander Liholiho (Kamehameha IV) and Lot Kamehameha (Kamehameha V) (Cultural Surveys Hawaiʻi, 1997). It was later inherited by Bernice Pauahi Bishop, and became a part of her estate after her death. In the early 1900s, most of Waiawa was subleased to Oʻahu Sugar Co. for commercial pineapple cultivation. Dole's Hawaiian Pineapple Company opened a cannery and associated camp in Waiawa, including pineapple fields on plateau lands and the WCF site.

In 1916, the Waiāhole Ditch System, which passes through the WCF site, was completed. This system diverted water from Windward Oʻahu to Central Oʻahu, and made water available to irrigate sugarcane, thus the pineapple fields were converted for cane cultivation. In the 1940s after the United States entered World War II, the WCF site was taken over by the military for training and storage purposes and became known as the Waiawa Military Reservation. After World War II, the site was converted by the military to become a communications center as part of the Army Command & Administrative Network, which provided the Army with a global radio communications system spanning from London to Tokyo.

In 1985, the State of Hawaiʻi acquired the site from the federal government under a 30-year quitclaim deed. After acquiring the site, the PSD converted the former military communications center to create a 120-bed, minimum-security correctional facility.

1.3 Governor's Executive Order No. 3414

Governors Executive Order No. 3414, executed by John Waihee on February 24th, 1989, set aside these lands for correction and educational purposes to be under control and managed by the Department of Corrections, State of Hawaiʻi. The Executive Order stated that the land designated as the WCF contained an area of approximately 157.875 acres (Parcel 011) and 22.611 acres (Parcel 012) and included Easements 3-E through 8-E, but was subject to easements A through D, as shown in the map included in Appendix A. Below is a description of Easements 3-E through 8-E that are included in the site; these easements have not, and are not planned to change in any means.

Easements Included in the WCF:

Easement 3-E for Power Line Purposes

Easement 4-E for Access Road Purposes

Easement 5-E for Access Road Purposes

Easement 6-E for Water and Power Line Purposes

Easement 7-E for Power Line Purposes

Easement 8-E for Access Road Purposes

1.4 Previous Environmental Assessments

In 1985, after the site was acquired from the federal government, DAGS prepared an EA to convert the former military structures into a 120-bed minimum-security correctional facility. The former military structures were constructed only on Parcel 011, as Parcel 012 has remained undeveloped.

In 1998, a Final Environmental Assessment and Finding of No Significant Impact (FEA-FONSI) was completed to cover three (3) proposed actions: 1) the construction of various facilities since 1985 (that were being assessed after-the-fact); 2) interim infrastructure improvement activities; and 3) a proposed 200-bed compound for the Knowledge, Attitude, Skills, Habits, Behaviors, Opinion and X – The Unknown Factors (KASHBOX) Drug Rehabilitation Program.

In 2008, a FEA-FONSI was completed for the addition of two (2) temporary prefabricated program structures (WCF-07 and 08) at WCF for additional operational space.

Since the last FEA prepared for the whole facility in 1998, the WCF has not undergone any significant changes. The facility has not changed or added to its existing use (minimum security correctional facility) and has not developed new facilities that have a significant impact to the surrounding environment. All new buildings constructed since 1998 have filed a Declaration of Exemption from the preparation of an environmental assessment by PSD (see Appendix B) since they are considered accessory structures to the existing buildings and structures onsite (see Table 1). The WCF's size and capacity has remained the same.

1.5 Existing Operations

The WCF is an all-male facility that has on average a combined total of approximately 420 inmates and staff on-site. The facility is designed for a maximum capacity of 334 inmates and 118 staff. The WCF experiences a fluctuation in its inmate population as they are constantly being transferred in and out of the facility due to the nature of the minimum-security correctional system. The number of staff also fluctuates due to the various shifts and availability of staff to support the correctional facilities on the island. The WCF is in operation 24 hours a day, 7 days a week, 365 days a year.

At the WCF, the inmates are sectioned into two groups; the KASHBOX population and the General population. The KASHBOX population are those who are participating in the KASHBOX program, which is an intensive substance abuse treatment program for inmates with substance abuse problems. The General population consists of the remainder of inmates.

Visitors are only allowed one (1), one-hour visit per weekend on Saturday or Sunday. The maximum number of visitors in a group are three (3) adults. If the visitors consist of documented parents (through proof of birth certificate) of the inmate then they are considered as one (1) visitor, and two (2) additional adult visitors are allowed. Visitors are required to have visitation approval prior to entry. The hours of visitation for the KASHBOX population are from 7:45AM to 9:45AM (last entrance at 9:15AM), and the hours for the General population are from 11:30AM to 1:30PM (last entrance at 1:00PM).

1.5.1 Programs

The objective of the WCF is to provide an environment conducive to the success of inmates re-entering the community after finishing their sentence. Inmates are required to participate in either education or substance abuse treatment programs and are also able to participate in the work programs offered on-site. The WCF has a Community Service Workline, but participation is subject to the inmates' sentence and demonstrated behavior.

Through the educational programs offered at the WCF, inmates are able to earn their General Education Degree and also work towards an Associate of Arts Degree. Other educational programs offered include adult basic education, life skills, restorative justice, interactive parenting skills, tutor practicum training, communication, keyboarding, test strategies, introduction to information technology, health management, forklift certification, choir, makahiki, and Toastmasters.

The KASHBOX substance abuse treatment program was established at the WCF in 1990. The program utilizes a holistic approach to treat inmates through a change in lifestyle by monitoring and reinforcing changes in attitude, emotions and conduct. The treatment consists of five different programs: the KASHBOX Therapeutic Community is the most intensive program, which spans from 12 – 15 months long; the Intensive Out Patient program lasts for eight months; and the Continuing Care Program and Relapse Intervention Program lasts for four months each.

The work programs offered include food service, building maintenance, farming, landscaping, automotive, educational tutoring, store assistance, and janitorial worklines. Food service worklines are responsible for prepping, cooking, and serving every meal at the facility. They also wash the dishes and clean the dining room and kitchen. The building maintenance workline is responsible for the upkeep of all buildings and structures around the facility. This includes any electrical, carpentry, masonry, welding, and plumbing work that is needed. The farming workline works on the 8-acre on-site farm facility and upkeeps the hydroponics and aquaponics plants. The landscaping workline is responsible for the landscaping maintenance work around the facility. This includes conducting off-site landscaping work on the perimeter of Waiawa Prison Road. The landscaping workline uses weed whackers, lawn mowers, sickles, and cane knives, and are trained in equipment maintenance. The automotive workline is responsible for the repair and maintenance of all mechanical equipment on the facility, including vehicles, forklifts, tractors, and all power tools. The store assistance workline assists with laundry, store orders and clothing issuance. The janitorial workline is responsible for cleaning the restrooms, sweeping, moping, stripping and waxing floors, cleaning windows, and dusting. The farm workline earns $0.50 an hour, while all other worklines earn $0.25 an hour.

The farm workline cultivates approximately 2,000 to 3,000 pounds of produce per week, and averages over 10,000 pounds per month from the 8-acre agricultural area west of WCF-K KASHBOX facility. Some of the produce grown and harvested include lettuce, eggplant, squash, pineapple, beets, green onions, kale, bok choy, choy sum, taro, tomatoes, mango, lemons, banana, strawberry, beans, mizuna, radish, spinach, sweet potato, bell peppers, corn, and various herbs. They also raise sunfish tilapia for the aquaponics plants, which works in harmony with the hydroponics plants. The produce grown on-site is cooked and served in meals at the facility. Surplus produce is shared with the Women's Correctional Facility, Oʻahu Community

Correctional Center, and the Hālawa Correctional Facility, while fish is shared with Kapiʻolani and Leeward Community Colleges' culinary programs. Deliveries to these other facilities occur approximately twice a month.

Inmates who are allowed to work in the Community Service Workline are able to work off-site to do various landscaping work. This sometimes includes landscaping work for the Department of Education (DOE), Department of Health (DOH), the Attorney General's Office, Department of Hawaiian Home Lands (DHHL), Community Cultural Centers, City and County of Honolulu Refuse and Sewer Divisions, Divisions of Public Safety, and the State Capitol.

1.6 Existing Structures

The WCF has 40 existing buildings and structures. An architectural Reconnaissance Level Survey (RLS) was prepared by Fung Associates Inc. in 2019 to inventory and identify any potential historic properties for listing under the State Register of Historic Places and National Register of Historic Places. The RLS was submitted for the State Historic Preservation Division's (SHPD) Hawaiʻi Revised Statutes (HRS) 6E-08 review. In a letter dated December 11, 2019, the SHPD concurred with DAGS determination of "no historic properties affected". This letter, along with the RLS report is included in Appendix C.

Out of the 40 existing buildings and structures, three (3) buildings and four (4) structures were found to be existing remnants of the Waiawa Military Reservation and have retained their historic integrity. These buildings and structures were filed to be listed under the State Inventory of Historic Places (SIHP) for the WCF (SIHP 50-80-09-08853). The letter from SHPD is included in Appendix D.

- WCF-04, 05 and 06: these buildings have retained their integrity of design, workmanship, material, setting, feeling, location, and association, and appear to meet Criterion C as examples of the modern, international building style in Hawaiʻi in the 1950s.
- V1, V2, V3, and V4: these telecommunication huts have retained their integrity of design, workmanship, material, setting, feeling, location, and association, and appear to meet Criterion A associated at the local level with military history and installation construction in Hawaiʻi.

The remainder of this section includes a brief description of each existing building and structure listed in order by Building ID in Table 1. See corresponding Site Plan in Figures 5 and 6. Floor plans and elevations for each building are included in Appendix E. Images of the existing buildings and structures can be found in Appendix F.

The WCF also contains structures for infrastructure facilities that are abandoned. In the 1940s, the military developed four splinter proof concrete cable huts that were used for telecommunications (labeled V1, V2, V3, and V4 on the site plan). The huts are located north of buildings WCF-B, WCF-C and WCF-F, and are currently not in use by the WCF's operations. In addition to the cable huts, the military also constructed a supporting underground, reinforced concrete tunnel system that once housed five electrical transformers and other electronic equipment. The entrance to the tunnel is hidden by dense vegetation south of WCF-A, and runs

up north past buildings WCF-S1 and WCF-CP. The tunnel is currently closed off and there are no plans for PSD to use the tunnel in the future.

Further north of the site is a 0.5-million-gallon water tank that stores treated water for potable use that is pumped from the Waiāhole Ditch. This water tank is currently in use and is proposed to be replaced by a 0.75-million-gallon water tank under DAGS Job No. 12-27-5657 New Domestic Water System and Related Improvements project.

Near the entry gate is a wastewater treatment plant and disinfection basin that currently services three ponds. Wastewater that is generated at the WCF is delivered to the wastewater treatment plant, where it then flows by gravity into a lined, hyacinth-filled lagoon (identified as Pond A) for nutrient removal. Water from the hyacinth lagoon becomes chlorinated in a disinfection basin, where it then flows into an adjacent smaller lagoon. The water in this lagoon is classified as R-2 quality treated effluent. This water is disposed of by drip irrigation to the upper vegetated area (approximately 16-acres) that's outside of the Zone of Contribution (see Figure 6). This agricultural area is used to grow a variety of trees, including albizia, eucalyptus, mango, mulberry, citrus, guava koa, ironwood, and pine. The pine trees are cultivated for the Department of Land and Natural Resources' (DLNR) Christmas decorations at the Honolulu City Hall during the holiday season.

Figure 3: Building History Map (1 of 2)

LEGEND:

- Original Military Structure (pre 1985)
- 1998 FEA Approved (includes year built)
- 2008 FEA Approved (includes year built)
- 2019 to be filed under Declaration of Exemption by PSD
- R 1988 — Building ID and Year Built
- Tax Map Key Boundary

0 250 500 1000 Feet

SSFM International

WCF-01	Office Space	WCF-AF	Aqua Farm Storage	WCF-G2	Gatehouse Storage Shed	WCF-P6	Pump Station 6
WCF-04	Housing 4	WCF-AS	Agricultural Storage	WCF-G3	Visitor Check-in Office	WCF-P7	Pump Station 7
WCF-05	Housing 5	WCF-B	Operations	WCF-GA	Guard Shack Administration	WCF-R	Recreational Center
WCF-06	Housing 6	WCF-C	Control & Support	WCF-I	Auto/Landscape Shop & Tool Room	WCF-S1	Fuel Storage
WCF-07	Tent 7	WCF-CH	Chapel	WCF-K	KASHBOX Compound	WCF-V1	KASHBOX Compound - Visiting 1
WCF-08	Tent 8	WCF-CP	Carport	WCF-M	Medical Services	WCF-V2	KASHBOX Compound - Visiting 2
WCF-09	Building 9	WCF-E	Education	WCF-P	Program	V1	Concrete Communications Structure
WCF-10	Building 10	WCF-F	Inmate Dining Facility	WCF-PA	Pavilion and Multi-Purpose Area	V2	Concrete Communications Structure
WCF-A	Administration Building	WCF-FS	Food Service Storage	WCF-P1	Pump Station 1	V3	Concrete Communications Structure
WCF-A1	Agricultural Storage	WCF-G	Guard Shack	WCF-P2	Pump Station 2	V4	Concrete Communications Structure
						WWTP	Wastewater Treatment Plant

Figure 4: Building History Map (2 of 2)

LEGEND:

- Original Military Structure (pre 1985)
- 1998 FEA Approved (includes year built)
- 2008 FEA Approved (includes year built)
- 2019 to be filed under Declaration of Exemption by DAGS
- R 1988 Building ID and Year Built
- Tax Map Key Boundary

0 250 500 1000 Feet

SSFM International

WCF-01	Office Space	WCF-AF	Aqua Farm Storage	WCF-G2	Gatehouse Storage Shed	WCF-P2	Pump Station 2
WCF-04	Housing 4	WCF-AS	Agricultural Storage	WCF-GA	Guard Shack Administration	WCF-P6	Pump Station 6
WCF-05	Housing 5	WCF-B	Operations	WCF-I	Auto/Landscape Shop & Tool Room	WCF-P7	Pump Station 7
WCF-06	Housing 6	WCF-C	Control & Support	WCF-K	KASHBOX Compound	WCF-V1	KASHBOX Compound - Visiting 1
WCF-07	Tent 7	WCF-CH	Chapel	WCF-M	Medical Services	WCF-V2	KASHBOX Compound - Visiting 2
WCF-08	Tent 8	WCF-CP	Carport	WCF-P	Program	V1	Concrete Communications Structure
WCF-09	Building 9	WCF-E	Education	WCF-PA	Pavilion and Multi-Purpose Area	V2	Concrete Communications Structure
WCF-10	Building 10	WCF-F	Inmate Dining Facility	WCF-R	Recreational Center	V3	Concrete Communications Structure
WCF-A	Administration Building	WCF-FS	Food Service Storage	WCF-S1	Fuel Storage	V4	Concrete Communications Structure
WCF-A1	Agricultural Storage	WCF-G	Guard Shack	WCF-P1	Pump Station 1	WWTP	Wastewater Treatment Plant

Figure 5: Site Plan (1 of 2)

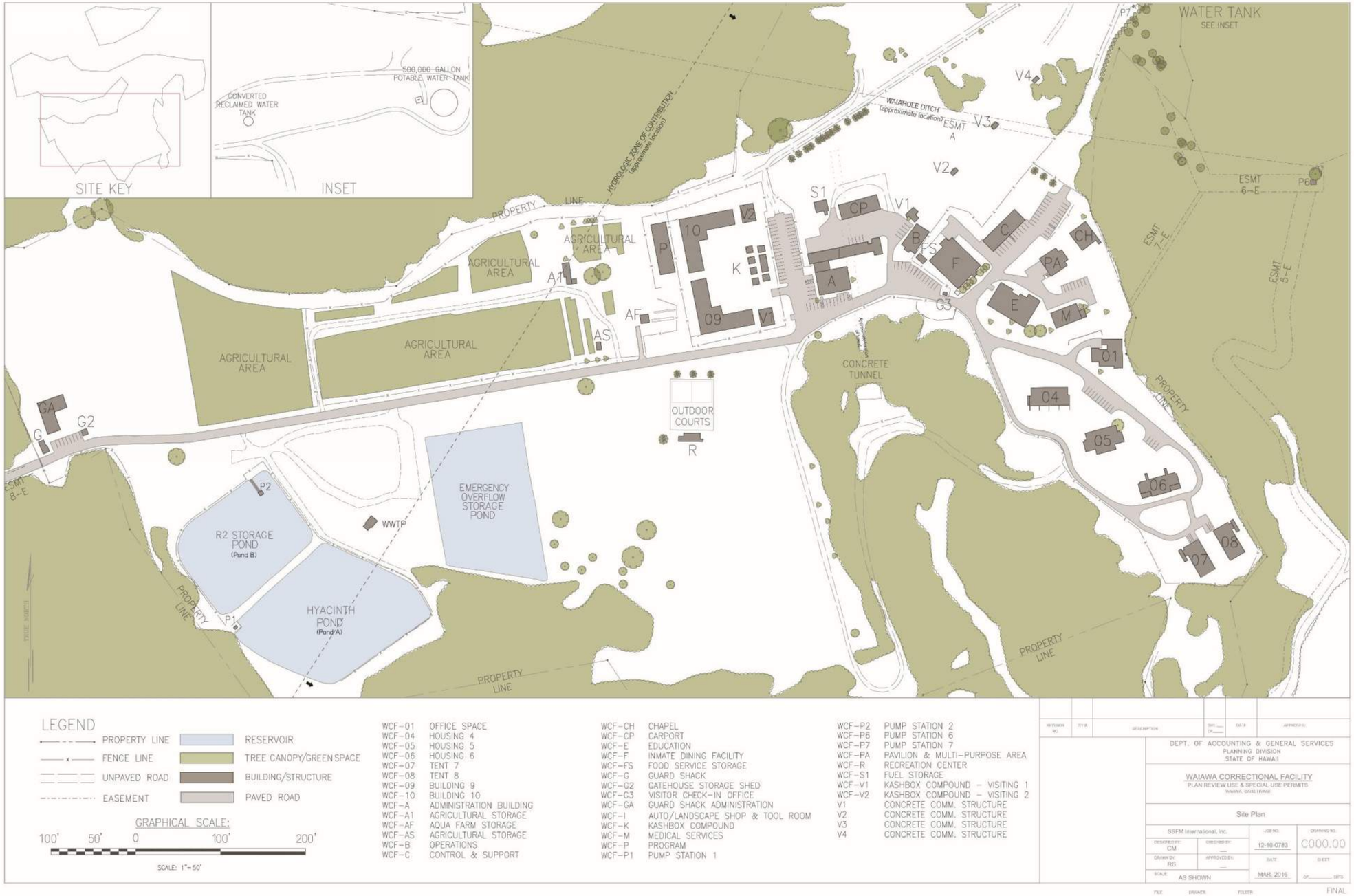


Figure 6: Site Plan (2 of 2)

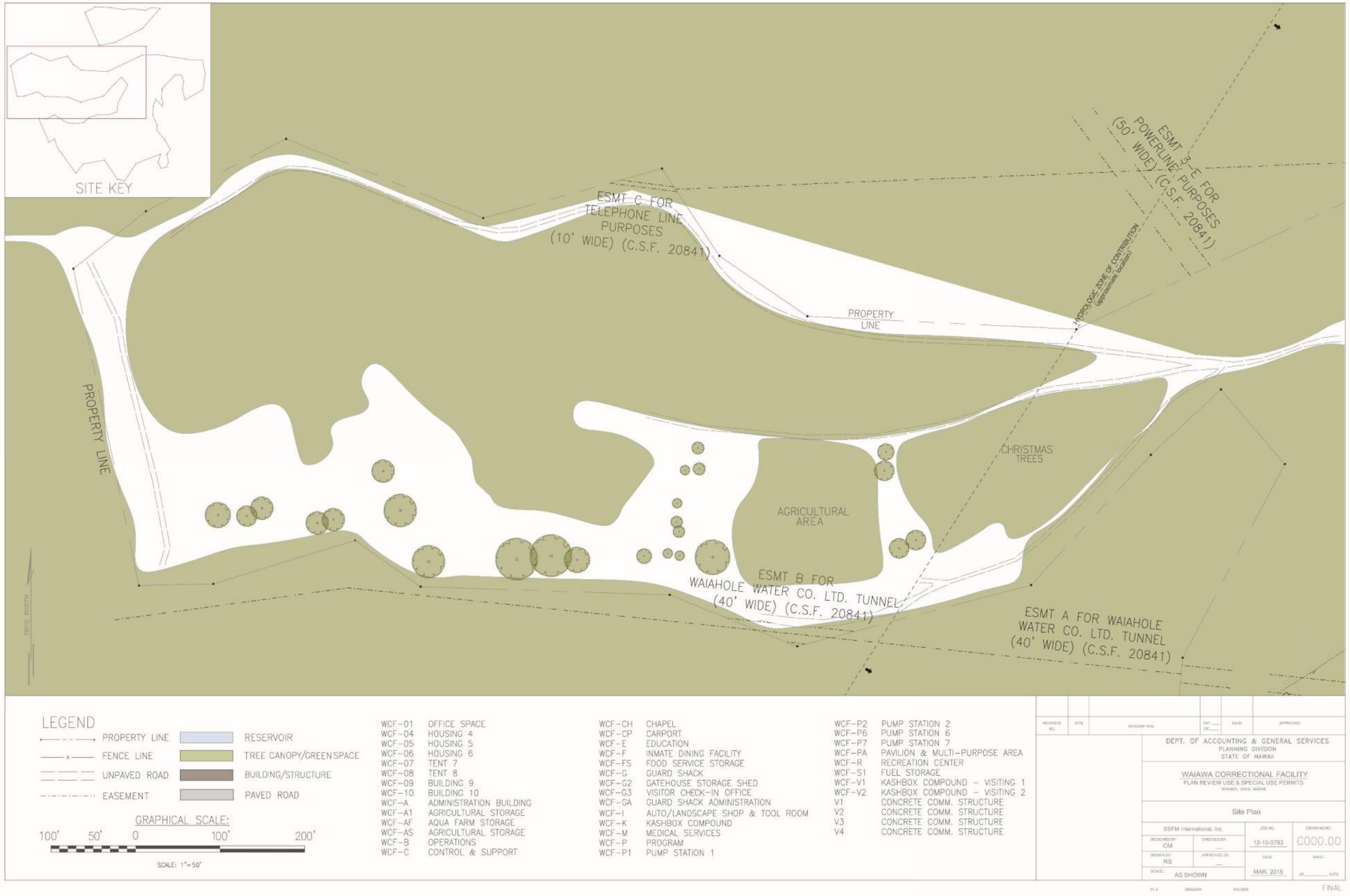


Table 1: WCF Buildings Inventory

WCF Buildings Inventory						
Building ID	**Description**	**Building Area (Square Feet)**	**Building Height (Feet)**	**Number of Stories**	**HRS Chapter 343 Compliance**	**Building Permit**
WCF-01:	Original military structure that served as a Commanding Officer's Quarters. It was converted in 1985 to an Administration Building, and then renovated in 1997 to serve as a 20-bed residential facility. Inmates were transferred out of this facility into other housing units, and the building was converted to an office space. It is currently being used by the Hawaiʻi Correctional Industries Office.	3905	11	1	Original Military Structure (established by the federal government)	No
WCF-04:	Original two-story military building that was used for Dependent Housing. It was converted around 1985 – 1986 into dormitories. The building is currently being used as inmate housing for the General Population, and it has a maximum capacity of 44.	3849	18	2	Original Military Structure (established by the federal government)	No

WCF Buildings Inventory						
Building ID	**Description**	**Building Area (Square Feet)**	**Building Height (Feet)**	**Number of Stories**	**HRS Chapter 343 Compliance**	**Building Permit**
WCF-05:	Original two-story military building that was used for Dependent Housing. It was converted around 1985 – 1986 into dormitories. The building is currently being used as inmate housing for the General Population, and it has a maximum capacity of 43.	4284	18	2	Original Military Structure (established by the federal government)	No
WCF-06:	Original two-story military building that was used for Dependent Housing. It was converted around 1985 – 1986 into dormitories. The building is currently being used as inmate housing for the General Population, and it has a maximum capacity of 43.	3998	18	2	Original Military Structure (established by the federal government)	No
WCF-07 and WCF-08:	Former tent structures with toilets and showers that were erected in 1996 and 1997. In 2009, two prefabricated temporary program structures replaced the tent structures, and	3200	21	1	2008 FEA	Yes

WCF Buildings Inventory						
Building ID	Description	Building Area (Square Feet)	Building Height (Feet)	Number of Stories	HRS Chapter 343 Compliance	Building Permit
	utilized the existing concrete building pads that served the former tents. The structures also contained mobile restrooms and a storage unit.					
WCF-09 and WCF-10:	Two 100-bed buildings for the KASHBOX compound, which were built in 1997. Each building contains sleeping areas, restrooms and showers, and two (2) day rooms and support areas.	8404	24	1	1998 FEA	Yes
WCF-A:	Administration building that was built in 1995	4919	16	1	1998 FEA	No
WCF-A1:	Storage shed used to shelter agricultural tools and supplies, built between 1985 – 1996	695	8	1	1998 FEA	No
WCF-AF:	Storage building used to store aquaponics tools and supplies, built between 1985 – 1996	1232	9	1	1998 FEA	No
WCF-AS:	Storage building used to store aquaponics tools and supplies,	331	10	1	1998 FEA	No

WCF Buildings Inventory						
Building ID	**Description**	**Building Area (Square Feet)**	**Building Height (Feet)**	**Number of Stories**	**HRS Chapter 343 Compliance**	**Building Permit**
	built between 1985 – 1996					
WCF-B:	Operations building that was built in 1989	1529	14	1	1998 FEA	No
WCF-C:	Original three-story military building that was used as an Enlisted Men's Barracks. It was converted in 1987 to become a 28-bed dormitory, Central Control Facility, Commissary, and an Intake Area. The building contains a holding unit, which can hold up to four inmates.	3770	33	3	Original Military Structure (established by the federal government)	No
WCF-CH:	Chapel building that was built in 1988	2376	10	1	Original Military Structure (established by the federal government)	No
WCF-CP:	Carport structure - the year built is unknown	3406	17	1	Covered under Declaration of Exemption by PSD	No

WCF Buildings Inventory						
Building ID	**Description**	**Building Area (Square Feet)**	**Building Height (Feet)**	**Number of Stories**	**HRS Chapter 343 Compliance**	**Building Permit**
WCF-E:	Education building that contains a library, which was built in 1988	6613	15	1	1998 FEA	Yes
WCF-F:	Inmate dining facility that contains a food service kitchen, which was built in 1987	7212	18	1	1998 FEA	Yes
WCF-FS:	Food service storage structure, which was built in 1987	306	12	1	1998 FEA	No
WCF-G:	Guard shack at the front gate, which was built in 1986	443	9	1	1998 FEA	No
WCF-G2:	Gatehouse storage shed, where visitor and staffs' tobacco products are stored and locked	96	9	1	Covered under Declaration of Exemption by PSD	No
WCF-G3:	Visitor Check-in Office				Covered under Declaration of Exemption by PSD	No
WCF-GA:	Administration building that supports the guard shack, and also contains a weight room	3480	15	1	1998 FEA	Yes

WCF Buildings Inventory						
Building ID	**Description**	**Building Area (Square Feet)**	**Building Height (Feet)**	**Number of Stories**	**HRS Chapter 343 Compliance**	**Building Permit**
WCF-I:	Open structure that serves as the auto and landscape shop, and also has an adjoining tool room.	790	11	1	Covered under Declaration of Exemption by PSD	Yes
WCF-K:	KASHBOX Compound that contains seven office buildings used by staff, which were built in 1997	2071	12	1	1998 FEA	Yes
WCF-M:	Medical services building that was built in 1987	2465	13	1	1998 FEA	No
WCF-P:	Program building used to support the KASHBOX Compound – the year built is unknown	4333	17	1	Covered under Declaration of Exemption by PSD	No
WCF-P1:	Pump Station No. 1 constructed in 1998				1998 FEA	No
WCF-P2:	Pump Station No. 2 constructed in 1998				1998 FEA	No
WCF-P6:	Pump Station No. 6 constructed in 1998				1998 FEA	Yes
WCF-P7:	Pump Station No. 7 constructed in 1998				1998 FEA	Yes

WCF Buildings Inventory						
Building ID	**Description**	**Building Area (Square Feet)**	**Building Height (Feet)**	**Number of Stories**	**HRS Chapter 343 Compliance**	**Building Permit**
WCF-PA:	Pavilion and multi-purpose area built in 1988	3498	23	2	1998 FEA	No
WCF-R:	Recreational center structure built in 1988 that is adjacent to a basketball court and a baseball field	993	13	1	1998 FEA	No
WCF-S1:	Fuel storage structure	981	13	1	Covered under Declaration of Exemption by PSD	No
WCF-V1:	KASHBOX – Visiting 1 area for visitors of inmates in the KASHBOX program, built in 1997	1272	14	1	1998 FEA	Yes
WCF-V2:	KASHBOX – Visiting 2 area for visitors of inmates in the KASHBOX program, built in 1997	1272	14	1	1998 FEA	Yes
V1:	Concrete communications structure constructed circa 1944				Original Military Structure (established by the federal government)	No

WCF Buildings Inventory						
Building ID	Description	Building Area (Square Feet)	Building Height (Feet)	Number of Stories	HRS Chapter 343 Compliance	Building Permit
V2:	Concrete communications structure constructed circa 1944				Original Military Structure (established by the federal government)	No
V3:	Concrete communications structure constructed circa 1944				Original Military Structure (established by the federal government)	No
V4:	Concrete communications structure constructed circa 1944				Original Military Structure (established by the federal government)	No

1.7 Five-Year Master Plan

As a requirement for the PRU, a master plan covering a minimum of five (5) years must be included. All future expansions, new uses, and any other physical development must be covered within the master plan. As previously mentioned, DAGS and PSD do not have any plans to expand or upgrade the existing facility. Therefore, the objective of this five-year master plan is to analyze the WCF's existing buildings and structures against the requirements for the PRU. The only projects that will occur at the WCF are Capital Improvement Projects (CIP), which are necessary to maintain the facility and its operations in its current state.

1.7.1 Proposed Operations and Activities

PSD currently has no plans for the addition or modification of current programs, operations and activities at the WCF.

1.7.2 Proposed Structures and Physical Alterations to the Site

PSD currently has no plans for the addition of any structures or buildings to the WCF. No physical alterations are planned for the site.

1.7.3 Capital Improvement Projects

DAGS and PSD have five CIPs that are either planned or currently in process for the WCF. Two projects are in the construction phase, one is pending a building permit, and the remaining two are in the planning or design phases. CIPs are listed in Table 2, and a listing of past and ongoing building permits are listed in Table 3.

PSD acknowledges that there are existing structures that do not have building permits (see Table 1). These structures will be brought into compliance as renovations, repairs or improvements are implemented. PSD also commits to remove discarded inoperable vehicles and equipment from the lot near structures V1 – V4.

Table 2: Current CIP Projects at the WCF

DAGS Job No.	Description	Affected Structures/Buildings/Areas	DPP Building Permit Application No.	Building Permit No.
12-27-5657	New Domestic Water System and Related Improvements	Finished water storage tank, water treatment plant, raw water intake tank, pump station no. 6	A2018-07-0106 A2019-09-0386 A2019-09-0741	Pending
12-27-5682	Security Lighting	Various	A2018-04-1524 A2018-04-1529 A2018-04-1532	845935 845936
12-27-5706	Roofing Improvements	WCF-I	A2018-04-0992	844227
12-27-5724	Mechanical and Electrical	Various	TBD	TBD

	Systems Improvements			
	Farm Wash Station	Area near WCF-AF	TBD	TBD

Table 3: Listing of Past and Ongoing Building Permits

DPP Building Permit Application No./Permit No.	Affected Structures/ Buildings/Areas	Description	DAGS Job No.
A2019-09-0386 A2019-09-0741 A2019-11-0895	Water Tank	CONSTRUCT NEW 0.75 MILLION GALLON FINISHED WATER STORAGE, NEW WATER TREATMENT PLANT, SITEWORK TO INCLUDE PIPING AND NEW WALLS	12-27-5657
A2018-07-0106	WCF-P6 WCF-P7	NEW DOMESTIC WATER SYSTEM AND RELATED IMPROVEMENTS (NEW 0.75M GAL POTABLE WATER STORAGE TANK)	12-27-5657
A2018-04-1524 A2018-04-1529 A2018-04-1532	WCF-GA VARIOUS LOCATIONS	ALTERATION TO EXISTING MULTIPURPOSE BUILDING, SITEWORK & GUARDHOUSE - NEW SECURITY LIGHTING	12-27-5682
A2018-04-0992	WCF-I	ADDITION/ALTERATION OF ADMIN BLDG	12-27-5706
A2016-05-0101/799524	WCF-F	ALTERATION TO FOOD SERVICE FACILITY, ROOFING REPAIRS & RELATED IMPROVEMENTS	12-27-5658
A2014-04-1619/749789	WCF-09 WCF-10	KASHBOX BUILDINGS BOILER SYSTEMS REPLACEMENT	12-27-5650
A2014-05-1025/763468	POND 1 POND 2	WASTEWATER SYSTEM IMPROVEMENTS - REPLACE POND LINER	12-27-5563
A2014-04-0628/786079	GENERATORS BY ADMIN	ELEC SYSTEM IMPROVEMENTS TO INCLUDE 6' MAX HEIGHT CHAINLINK FENCE AND 10' MAX HEIGHT CMU RETAINING WALL	12-27-5564

DPP Building Permit Application No./Permit No.	Affected Structures/ Buildings/Areas	Description	DAGS Job No.
A2014-03-1429/753038	WCF-E	EDUCATION BLDG, REPLACE A/C SYSTEM & UPGRADE ELECTRICAL	12-27-5646
A2013-01-0261/753209	WCF-E	REMOVE EXISTING ROOFING AND PROVIDE NEW ROOFING, FLASHINGS, AND REPLACE DETERIORATED FASCIA AND SOFFIT	12-27-5645
A2010-06-0128/664633	WCF-F	NEW 1500 GAL GREASE INTERCEPTOR, EXT FREEZER UNIT & FLOORING FOR INMATE DINING FACILITY	
A2009-04-0376/648142 A2009-04-0377/648143 A2009-04-0378/648500 A2009-04-0379/648501	WCF-07 WCF-08	TEMP PROGRAM FACILITIES - NEW STRESSED MEMBRANE STRUCTURE, DEMO EXISTING STRUCTURE	12-27-5609
A2000-04-1268		NEW ABOVE GROUND FUEL TANK & CMU WALL MAX HT 4'	
A1997-10-1073/411812	WCF-09 WCF-10 WCF-K WCF-V1 WCF-V2	KASHBOX BUILDINGS	
A1994-06-0010/359249	WCF-P7	WAIAWA SURFACE WATER TREATMENT SYSTEM	12-27-6659
A1994-06-0009/356732	POND		

1.7.4 Building Heights

The existing building heights at the WCF range from 10 feet to 33 feet. WCF-C is the tallest building at three-stories. This building is an original military structure that was constructed prior to 1985 by the federal government.

1.7.5 Density

There are no plans for the addition of any structures at the WCF, therefore the density will not be increased.

1.7.6 Landscaping and Buffering from Adjoining Parcels

Currently, the WCF is buffered from the adjoining parcel by dense vegetation which lines the property boundary and continues into the undeveloped adjoining parcel. As mentioned in section 5.2.3, an inventory of the existing plant species and a landscape plan of the site is included in Appendix G. A series of photos taken along the property boundary is also included in Appendix G. It was not feasible to document every single plant and its exact location due to dense vegetation and inaccessibility of certain areas, however the landscape plan identifies the predominant trees, shrubs and ground covers for each area of the site. There are no plans to modify the existing landscaping at the WCF.

1.7.7 Parking and Loading Requirements

In 2010, various repairs and improvements were made to the WCF site, which included repaving of the road and parking areas. At the completion of this project, the WCF had a total of 145 marked parking stalls, of which three (3) were designated as handicap stalls. Since then there have been no improvements or additions to the road or parking areas. According to the Land Use Ordinance (LUO) Article 6, Table 21-6.1, parking requirements for prison uses are to be determined by the director. All standard sized parking stalls are between 8.25 to 8.5 feet wide by 18 feet long, which is in accordance with Sec. 21-6.50. Handicap stalls are 8 feet wide by 18 feet long, with an adjacent access aisle ranging from 5 to 8 feet wide by 18 feet long.

The existing parking areas and number of stalls are shown in Table 4. The locations of the parking areas are also identified in Figure 7. There are no plans to modify or add to the existing parking layout.

Figure 7: Parking Locations

Table 4: Number of Parking Stalls by Building

Building Adjacent to Parking	Number of Stalls
WCF-01	7
WCF-04/05	11
WCF-05/06	5
WCF-07/08	2 handicap stalls
WCF-A	16 (including one handicap stall)
WCF-B	5
WCF-C	30
WCF-F	13
WCF-G	8
WCF-I	4
WCF-K	35
WCF-M	8
Total	**144**

Per the LUO Article 6, Sec. 21-6.100, the WCF's loading requirements are assumed to fall under the use or use category of hotels, hospitals, or similar institutions, and places of public assembly, which requires a minimum of three (3) loading spaces for 50,001 to 100,000 sf of floor area. One loading space is located between WCF-C and WCF-F. The loading space and driveway is approximately 20 feet wide by 100 feet long and is used to receive food and product deliveries. The second loading space is by WCF-AF and is approximately 20 feet wide by 35 feet long to accommodate produce delivery trucks and vans. The third loading space is located between WCF-CP and WCF-I and is about 65 feet wide by 60 feet long. All loading spaces at the WCF are paved, but they are unmarked and do not have signage.

1.7.8 Master Signage and Exterior Lighting Plans

The WCF has two natural stone rock walls that contain signage identifying the facility/area. The first rock wall is behind the entry gate to the facility and across from WCF-G (see Figure 8). The second rock wall is located on the southwest corner of WCF-E, where the road forks to go north towards WCF-C or south towards WCF-01, 04, 05, 06, 07, and 08 (see Figure 9).

PSD and DAGS currently have a project underway to upgrade the security lighting at the site (DAGS Project No. 12-27-5682 Security Lighting). The upgrades include adding new floodlights, streetlights and poles, along with replacing existing lights in various areas on the site. The replacement luminaires and streetlights will be completely downward facing and will not cause any light pollution in the area. New floodlights will be oriented to provide security in and around the buildings on-site, with precaution as to not cause light spill to abutting properties. The floodlights will only be used in emergency situations and is not anticipated to be used on a regular basis.

Figure 8: "Waiawa Correctional Facility" Entry Rock Wall Sign

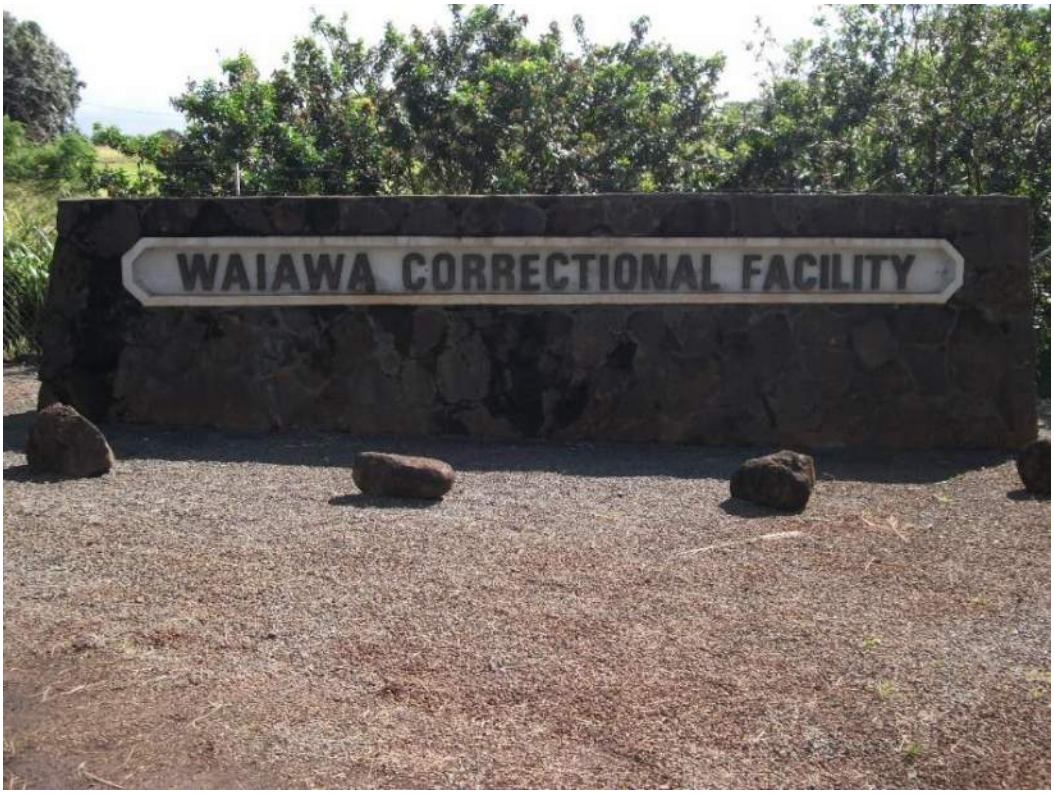


Figure 9: "Waiawa" Rock Wall Sign

1.8 Abutting Uses

The WCF is generally located on an isolated ridge that is surrounded by undeveloped land. Both Parcel 011 and 012 are encompassed within TMK (1) 9-6-004: 003, which is owned by Bishop Trust Estate. The Bishop Trust Estate's 1,831.45-acre parcel is comprised of undeveloped former agricultural land that creates a 0.3 to 0.8-mile natural buffer surrounding the WCF.

The nearest developed parcel adjacent to the Bishop Trust Estate parcel is Mililani Memorial Park & Mortuary, which is an approximate 2.1-mile drive from the WCF. Access to the Mililani Memorial Park & Mortuary is via Mililani Memorial Park Road, which adjoins with the Waiawa Prison Rd about 0.3 miles from the entrance to the memorial park. Adjacent to the Bishop Trust Estate parcel is a 343.64-acre parcel identified as TMK (1) 9-5-003:017, which is owned by Waipio Land Holdings LLC. This parcel is proposed to be used as a solar energy facility in the future. Figure 10 shows the location of the WCF in relation to the parcels.

The nearest existing residential community (in terms of driving distance) to the WCF is Waipio, which is an approximate 3-mile drive from the facility. Also nearby is the Pacific Palisades residential development, which is a 9.7-mile drive from the facility, but 1.2 miles south of the facility, geographically. A Final Environmental Impact Statement (FEIS) was accepted in 2009 for Castle & Cooke's Koa Ride Makai and Waiawa Development, and it identifies approximately 191 acres of residential development to be located southwest of the WCF and directly south of the Mililani Memorial Park & Mortuary. Approximately 1,500 residential units will be built in the Waiawa development along with a community center and park complex, neighborhood parks and a new elementary school.

1.9 Approvals and Permits

The following approvals and permits are anticipated to be required to bring the WCF into compliance with State and City land use laws:

State Land Use Commission

- State Special Use Permit

State Historic Preservation Division

- HRS Chapter 6E-8, Historic Preservation Review (completed, see Appendix D)

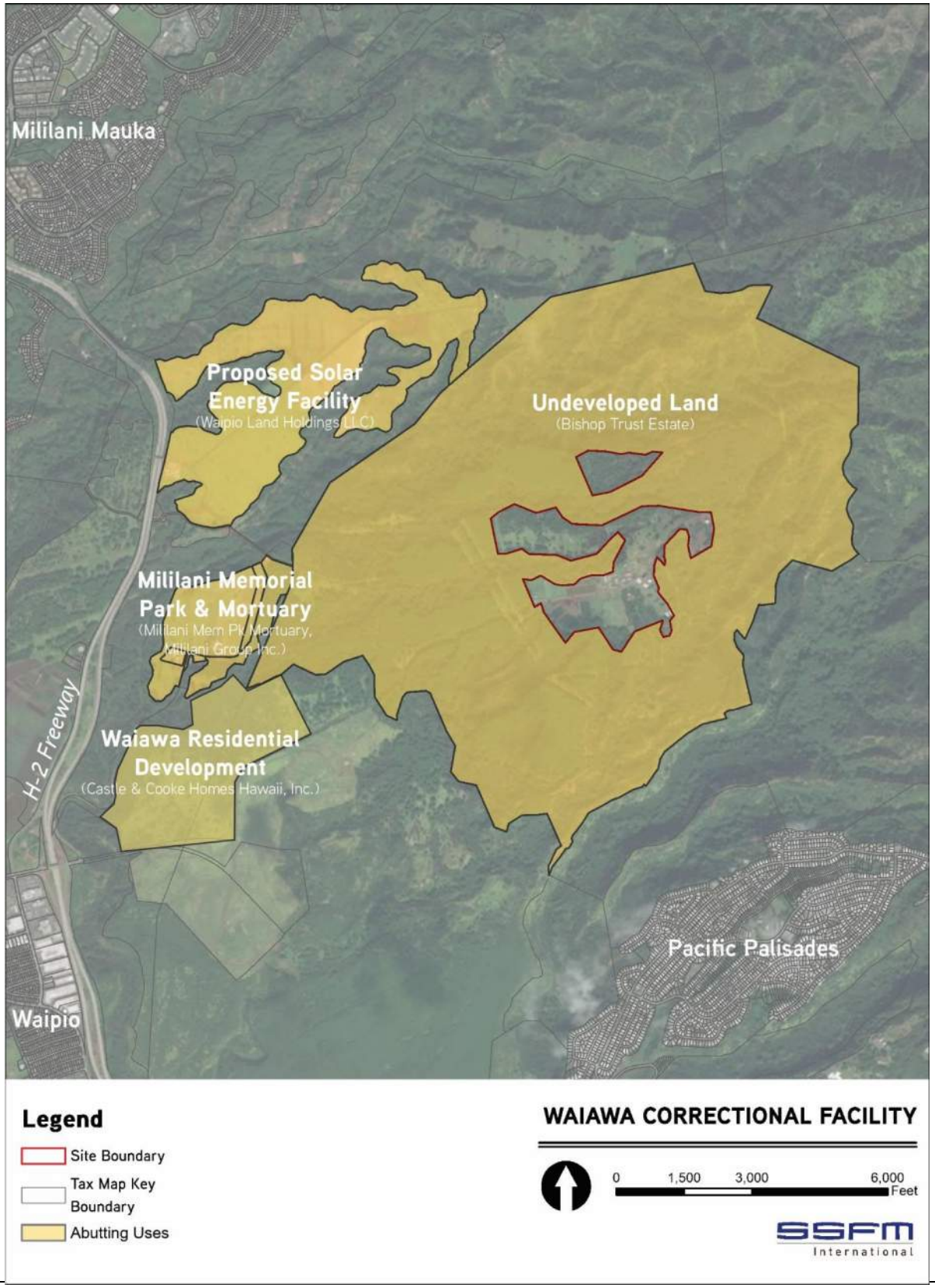
Office of Environmental Quality Control

- HRS Chapter 343 Compliance

City and County of Honolulu, Department of Planning and Permitting

- Plan Review Use Approval
- Building Permits (see Table 1)

Figure 10: Abutting Uses



This page is intentionally blank

2.0 AFFECTED ENVIRONMENT, POTENTIAL IMPACTS, AND MITIGATION MEASURES

2.1 Climate

Waiawa is located on a broad ridge that receives moderate rainfall throughout the year. The mean annual temperature is 74 degrees Fahrenheit, and mean annual rainfall is 57.85 in, with most of the rainfall occurring between November and March (Giambelluca et. al., 2013).

Potential Impacts and Mitigation Measures

The existing operations and any planned CIPs at the WCF have not, and are not anticipated to, have any effect on the region's climate.

2.2 Geology and Topography

The WCF is situated on a broad ridge at a mean elevation of 800 feet above mean sea level (AMSL) (see Figure 11). The topography in this area is generally sloping from north to south. The greatest change in elevation (approximately 100 feet) occurs south of building WCF-A, where the land begins to steeply slope down to the entrance to the underground concrete tunnel and further down to dense vegetation.

Since the early 1900s, the WCF site was cultivated for pineapple and sugarcane fields. Over time the development of the site has generally remained within the parcel boundaries and has not significantly impacted its surrounding environment. Parcel 012 has remained undeveloped, along with the land surrounding the site.

Potential Impacts and Mitigation Measures

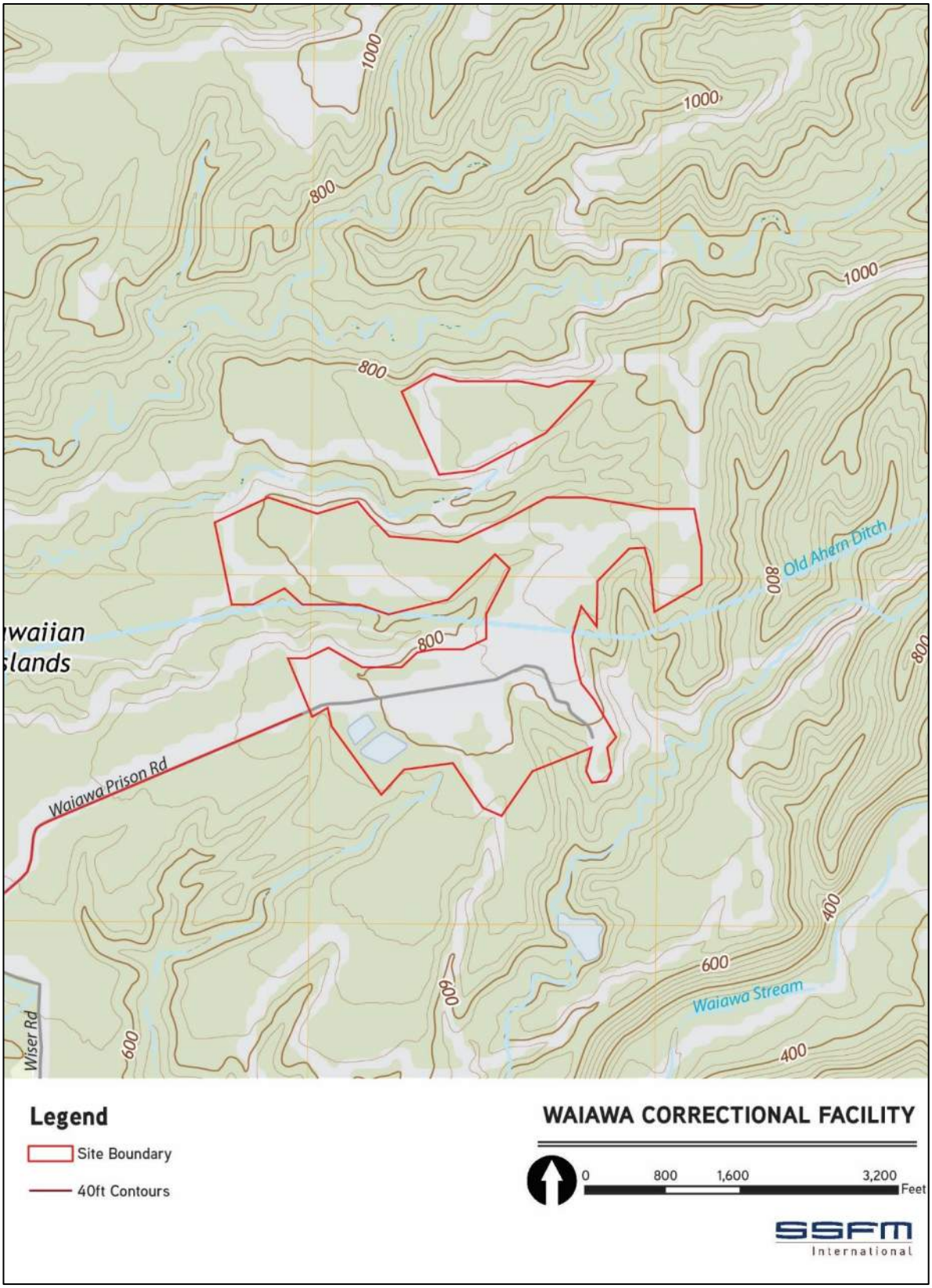
The existing operations and any planned CIPs at the WCF have not, and are not anticipated to, have any impact on the topography of the site. In most cases, any excavation for the installation or replacement of infrastructure for any CIPs will take place in areas that have been previously excavated and backfilled and paved over. Since the WCF will not be expanding, no impacts to the surrounding environment and natural landforms are expected.

2.3 Soils

According to the U.S. Department of Agriculture, Natural Resources Conservation Service Web Soil Survey, the WCF's site contains soils in the Leilehua, Manana, Helemano, and Wahiawā Series (see Figure 12).

- **Leilehua silty clay, 2 to 6 percent slopes (LeB) and 6 to 12 percent slopes (LeC).** The Leilehua Series soils cover a majority of the WCF site. They are well drained soils most commonly found in the uplands of Oʻahu, at elevations of up to 1,200 feet, and in areas with an average rainfall of 60 to 80 inches a year. LeB soils fall under land capability Class 2, which has moderate limitations that reduces the choice of plants suitable for these

Figure 11: Topography – 40ft Contours



soils, or would require moderate conservation practices. LeC soils are Class 3 soils that have severe limitations that reduce the choice of plants and/or would require special conservation practices. Both LeB and LeC soils have a subclass rating "e", which indicates the main hazard for these soils is the risk of erosion.

- **Manana silty clay, 2 to 6 percent slopes (MoB) and 6 to 12 percent slopes (MoC).** The Manana Series soils also cover a majority of the WCF site, along with the Leilehua Series soils. They are found at high elevations ranging from 500 to 1,200 feet, but in areas with a lower average rainfall of 40 to 60 inches per year. MoB soils fall under land capability Class 3. MoC soils are Class 4 soils that have very severe limitations that reduce the choice of plants suitable for these soils and/or would require very careful management. Both MoB and MoC soils have a subclass rating "e".
- **Wahiawā silty clay, 0 to 3 percent slopes (WaA) and 3 to 8 percent slopes (WaB).** The Wahiawā Series soils are found in high elevations of up to 1,200 feet, and in areas that receive an average of 40 to 60 inches of rainfall per year. Both WaA and WaB fall under the land capability Class 2. WaA soils have a subclass rating "c", which indicates that its main limitation is climate that is very cold or very dry, while WaB soils have an "e" rating.
- **Helemano silty clay, 30 to 90 percent slopes (HLMG).** Helemano Series soils consists of well drained soils found in upper elevations ranging from 500 to 1,200 feet, in areas with an average rainfall of 30 to 60 inches per year. They are steeper sloping and are classified as Class 7 soils, which has severe limitations that restrict their use to grazing, forestland or wildlife habitat, as they are unsuitable for cultivation. HLMG soils have a subclass rating "e".

The University of Hawaiʻi's Land Study Bureau established a five-class soil productivity rating system from "A" to "E", with "A" representing the class of highest productivity and "E" as the lowest. The rating system is based on soil properties such as drainage, texture, stoniness, structure, slope, rainfall, material, and depth/penetration of roots. The WCF is located on land classified as "B", "C" and "E" (see Figure 13). The areas of the WCF site with the lower class rating of "E" are lands with the steepest slopes.

The Hawaiʻi Department of Agriculture, with the assistance of the Soil Conservation Service, U.S. Department of Agriculture, and the University of Hawaiʻi College of Tropical Agriculture and Human Resources, established a classification system to identify Agricultural Lands of Importance to the State of Hawaiʻi (ALISH) that is primarily, but not exclusively, based on soil characteristics. The classification system identifies three classes of ALISH: "prime", "unique" and "other". The WCF site does not contain any land identified as ALISH prime, unique or other.

Potential Impacts and Mitigation Measures

The existing operations and any planned CIPs at the WCF have not, and are not anticipated to, significantly impact the soils at the site. Grading and excavation that took place for the construction of existing structures have not resulted in any observable erosion problems.

Figure 12: Soils

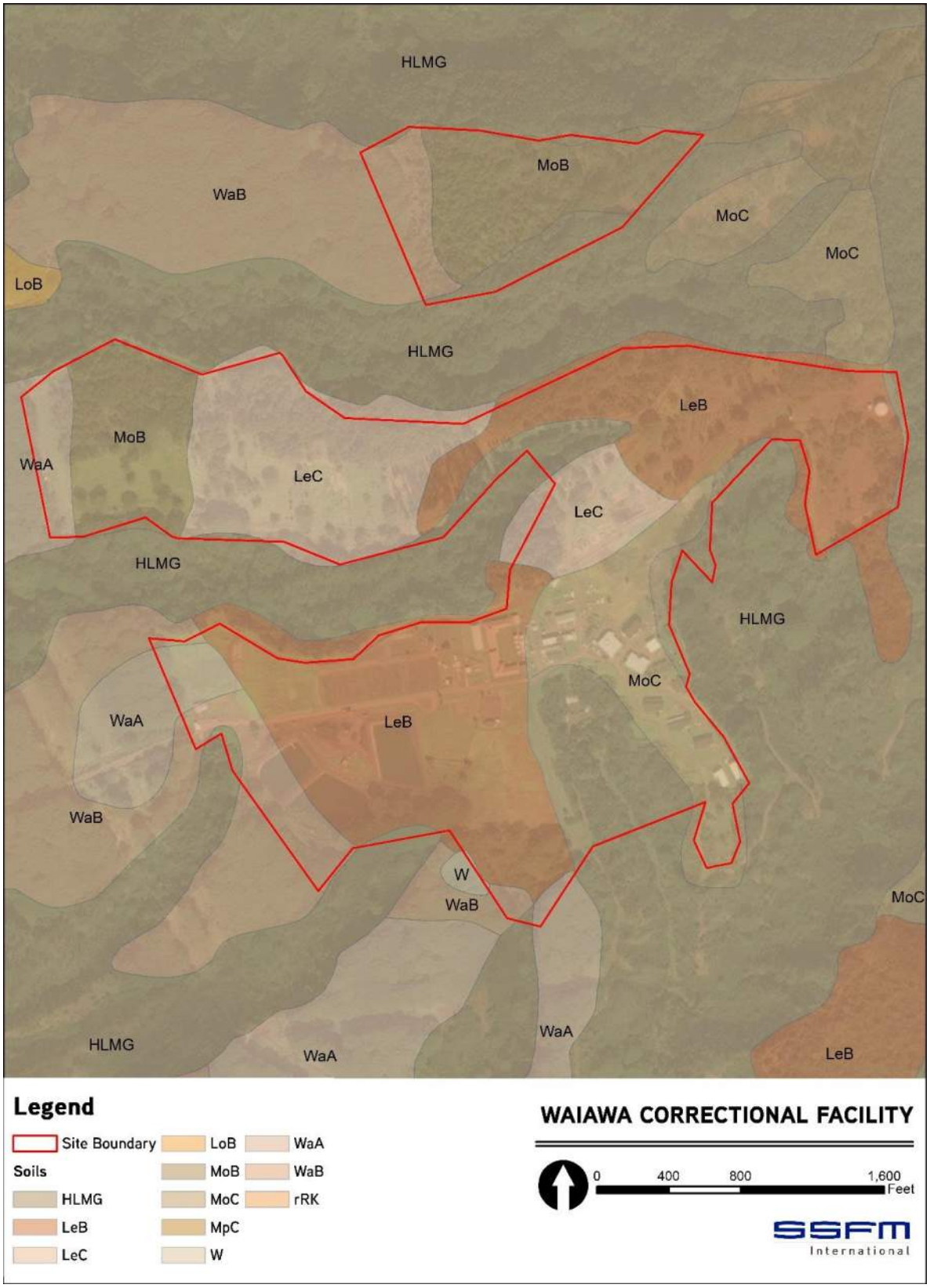
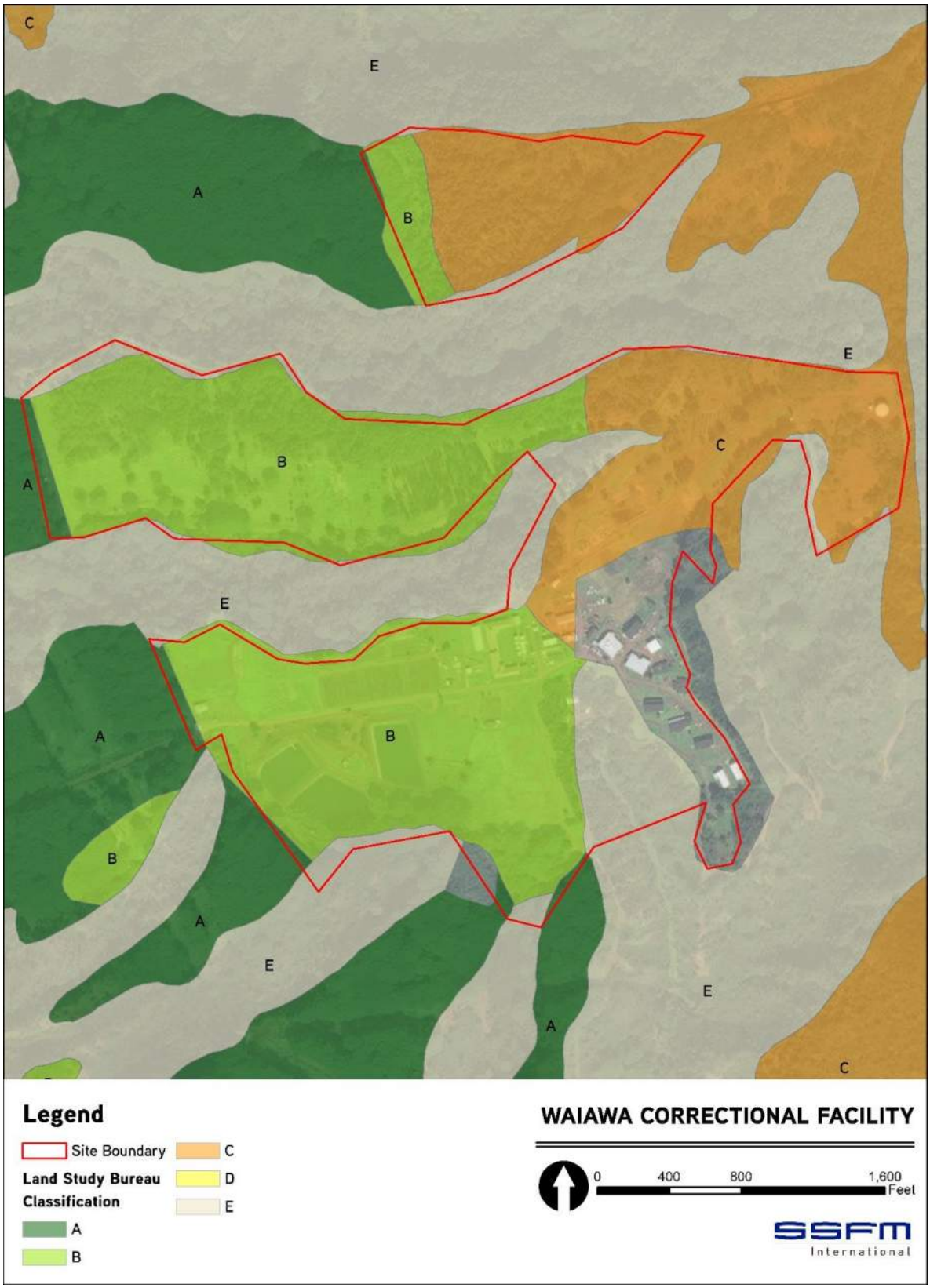


Figure 13: Land Study Bureau Classification



2.4 Hydrology

There are no perennial streams, natural surface waters or wetland features within the WCF site, as identified by the National Wetlands Inventory (USFWS 2020a). The facility falls within the Pearl Harbor Aquifer Sector of Oʻahu, which starts from Joint Base Pearl Harbor Hickam on the east, and runs all the way to Koʻolina on the west, up to Mililani Mauka on the north. The WCF falls within the Waipahu-Waiawa aquifer system of the Pearl Harbor Aquifer Sector.

Potential Impacts and Mitigation Measures

There are no perennial streams, natural surface waters or wetland features within or immediately adjacent to the WCF. No significant impacts to groundwater aquifers or surface waters are expected to result from the on-going or proposed CIP projects at the WCF.

2.5 Air Quality, Noise and Lights

Noise within vicinity of the WCF is mostly attributable to vehicular traffic traveling to and from the project site along Interstate H-2 and Ka Uka Boulevard. On-site agricultural and other operations are the main contributors to noise at the facility, although none of these operations produce any significant noise or emissions that would impact the surrounding environment.

DAGS Security Lighting project (Project No. 12-57-5682) proposes to add and replace area and flood lights at the facility. New luminaires will also be installed on existing streetlights. Existing streetlights and new area lights are, and will be, downward facing and will not directly emit any light at a vertical angle more than 90 degrees from straight down. Flood lights will be outward facing, but are not intended to be used on a regular basis. These lights will be installed for security purposes to illuminate the perimeters of the facility, and will be used during emergencies or as needed.

Potential Impacts and Mitigation Measures

There are no substantial changes to existing operations or any planned construction activities at the WCF which would result in any change in noise and air quality impacts. The existing operations at the facility do not generate any significant noise or air quality impacts. Any increase in noise during regular operations would be slight and virtually inaudible by the public, as the nearest development is Pacific Palisades, which is located 1.2-miles south of the WCF, but across two mountain ridges.

The installation and replacement of new floodlights, area lights and streetlights are not anticipated to significantly impact any wildlife within the area. The streetlights and area lights will be downward facing, and will not directly emit light at a vertical angle more than 90 degrees from straight down. While the flood lights will be outward facing, they are not intended to be used on a regular basis and will only be used during emergencies to illuminate the perimeter of the WCF. It should also be noted that there are no lights located near the ponds/reservoirs, which are areas where the Hawaiian coot and Hawaiian stilt have been spotted, as mentioned in Section 2.6.

2.6 Flora and Fauna

In August 2020, a reconnaissance-level biological survey was conducted by H.T. Harvey & Associates (HTH) to identify and document wildlife species (birds and mammals) and vegetation communities and plant species at the WCF. Their findings, along with potential impacts and recommended mitigation measures, are documented in their Biological Survey Report, which is included in Appendix H.

The methods of HTH's biological survey included visual and auditory detection and identification of birds and mammals during six 10-minute point counts that were conducted between 10AM and 3PM. Incidental observation of non-native mammal species were also recorded, and were based on visual detections of scat, tracks and other animal signs. Plant species and vegetation types were surveyed in areas that were accessible by foot, while the inaccessible areas (due to dense vegetation) were observed from strategic vantage points with binoculars.

Flora

No rare native Hawaiian plant species, or plant species that are listed as threatened, endangered, or candidates for listing on both state and federal lists, were observed in the accessible parts of the WCF. HTH observed 57 plant species at the facility, and a vast majority (53 species) are either non-native or cultivated species. Three species are Polynesian introductions, and only one species (*Acacia koa)* is native to Hawaiʻi.

HTH categorized the site by several different vegetation communities, which includes Acacia Dominated Forests, Cook Pine Plantation, Ironwood Stand, Mixed Alien Forest, Albizia Dominated Forest, Guinea Grass Grassland, Maintained Vegetation, and Agricultural Farm (see Figure 14).

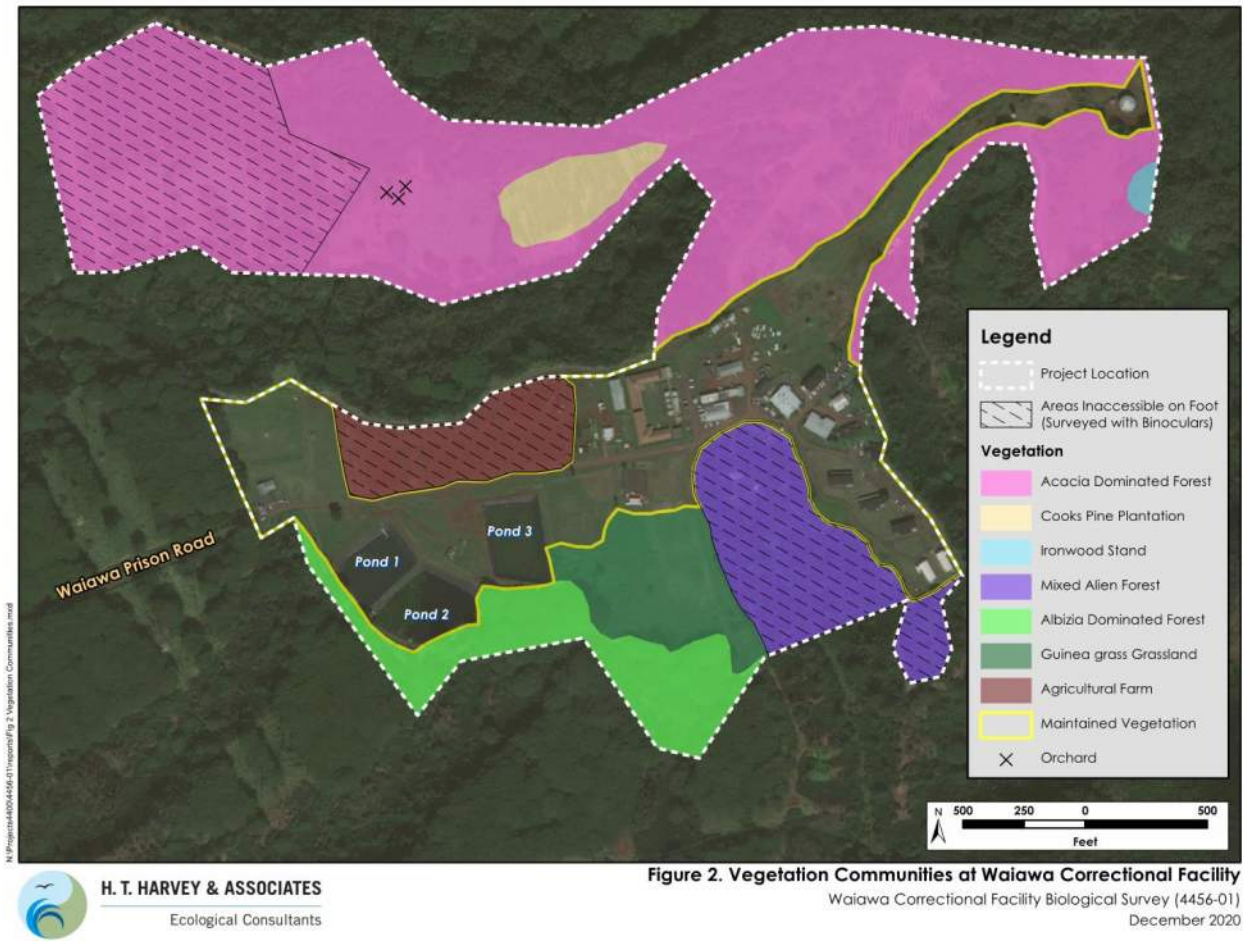
Approximately 73 acres of the northern portion of the site comprises of Acacia Dominated Forest. While a few native koa trees (*Acacia koa)* were documented along the unpaved dirt road, other common species found in the forest included juniperberry (*Citharexylum caudatum)*, ironwood (*Casuarina equisetifolia*), albizia (*Falcataria moluccana*), octopus tree (*Schefflera actinophylla*), and Christmas berry (*Schinus terebinthifolius*). HTH also documented the Cook pine (*Araucaria columnaris*) trees that are planted for the DLNR's use as Christmas trees, and the small orchard of fruit trees adjacent to the pine trees.

The Mixed Alien Forest that is identified near the underground tunnel comprises of a variety of alien tree species such as octopus tree, juniperberry, Christmas berry, ironwood, silk oak (*Grevillea robusta*), Australian blackwood (*Acacia melanoxylon*), Mangium wattle (*Acacia mangium),* strawberry guava (*Psidium cattleiyanum*), bingabing (*Macaranga mappa*), and opiuma (*Pithecellobium dulce).* The ground vegetation in this area and immediately to the west is dominated by tall guinea grass (*Megathyrsus maximus*).

Bordering the southern perimeter of the site is the Albizia Dominated Forest, which comprised of tall albizia trees with predominantly guinea grass in the understory. Other species such as octopus tree, bingabing and Magnium wattle were also spotted, along with several strawberry

guava thickets. The Maintained Vegetation areas of the WCF (approximately 45 acres) are comprised of manicured lawns, landscaped plants, mowed areas, scrub vegetation, and roadside weeds.

Figure 14: Vegetation Communities of WCF



Fauna

The point-count surveys conducted by HTH identified 107 birds comprising of 18 different species. Of the identified species, two are endemic and endangered Hawaiian waterbirds – the Hawaiian coot (*Fulica alai)* and Hawaiian stilt (*Himantopus mexicanus knudseni)*; and one – the Pacific golden plover (*Pluvialis fulva)*, is a migratory shorebird that is recognized as an indigenous species. The remaining species are alien to Hawai‘i. No Hawaiian waterbird nests or nesting behavior was observed.

The most abundant species observed was the red-vented bulbul (*Pycnonotus cafer)*; other common species included the common myna (*Acridotheres tristis)*, common waxbill (*Estrilda astrild)*, zebra dove (*Geopelia striata)*, red-crested cardinal (*Paroaria coronate)*, rose-ringed parakeet (*Psittacula krameri)*, and the warbling white-eye (*Zosterops japonicas*). The Hawaiian coot and Hawaiian stilt were considered as rare sightings; in total, two Hawaiian coots and

three Hawaiian stilts were observed. The coots and stilts were observed in the R-2 Storage Pond (identified as Pond 1 in Figure 14).

No non-native mammal species were observed, however feral pig wallows, scat and rooting signs were observed in the Acacia Dominated Forest in the northwestern part of the WCF.

Potential Impacts and Mitigation Measures

Any maintenance and construction activities at the WCF are not anticipated to have a substantial adverse impact on any plant species that is state or federally listed as threatened or endangered, candidate species for listing as endangered, species of concern, or rare native Hawaiian plant species. The site is highly disturbed and contains primarily alien forestry tree and plant species.

The Hawaiian stilt and Hawaiian coot are state and federally listed as endangered species and are protected under the state and federal Endangered Species Act. No nests or nesting behavior of these birds were observed. The ponds/reservoirs at the WCF do not provide the preferred nesting habitat for the Hawaiian coot, which would be a mosaic of open, shallow water and floating aquatic vegetation for nesting. The ponds are either too open (R-2 Storage Pond) or covered with hyacinths that limits open water (Hyacinth Pond) and does not appear to provide suitable nesting habitat for these species. HTH recommends that should the WCF undergo major construction activities, specifically near the ponds/reservoirs, then the DLNR and the U.S. Fish and Wildlife Service (USFWS) should be consulted to evaluate potential impacts on listed waterbirds from construction activities. In addition, HTH recommends the following to be incorporated to minimize impacts to the Hawaiian waterbirds:

- *In areas where waterbirds are known to be present, post and implement reduced speed limits, and inform project personnel and contractors about the presence of endangered species on-site or nearby.*
- *If water resources are located within or adjacent to the project site, incorporate the applicable best management practices (BMPs) regarding work in aquatic environments into the project design.*
- *Have a biological monitor that is familiar with the species' biology conduct Hawaiian waterbird nest surveys where appropriate habitat occurs within the vicinity of the proposed project site prior to project initiation. Repeat surveys again within 3 days of project initiation and after any subsequent delay of work of 3 or more days (during which the birds may attempt to nest).*
- *If a nest or active brood is found:*
    - *Contact the Service within 24 hours for further guidance.*
    - *Establish and maintain a 100-foot buffer around all active nests and/or broods until the chicks/ducklings have fledged. Do not conduct potentially disruptive activities or habitat alteration within this buffer.*

- *Have a biological monitor familiar with the species' biology present on the project site during all construction or earth moving activities until the chicks/ducklings fledge to ensure that Hawaiian waterbirds and nests are not adversely impacted.*

2.7 Natural Hazards

Flood Hazard Risk

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM), the WCF is within Zone D, which is defined as areas where flood hazards are undetermined. While no analysis of flood hazards has been conducted for Zone D areas, it is unlikely that the WCF site will be subject to major flooding due to its location on a broad sloped ridge.

Tsunami Risk

The WCF is not within the tsunami evacuation zone identified for the island of Oʻahu. The site is located approximately 3.8-miles from the nearest coastline.

Wildfire Hazard Risk

The WCF is within the "N/A" zone for risk to wildfire hazards, as identified by the DLNR's Division of Forestry and Wildlife (DLNR-DOFAW).

Sea Level Rise

The facility is located outside of the 3.2-foot Sea Level Rise Exposure Area (SLR-XA), as identified in the Hawaiʻi Sea Level Rise Vulnerability and Adaptation Report.

Potential Impacts and Mitigation Measures

The WCF is in an isolated area that is not susceptible to natural hazards. Since it is located approximately 3.8-miles from the nearest coastline, it is outside of the tsunami evacuation zone and the 3.2-foot SLR-XA.

2.8 Historic and Archaeological Resources

An Archaeological Assessment was conducted in 1997 by Cultural Surveys Hawaiʻi (CSH) as part of the EA for the 200-bed KASHBOX facility. In this Archaeological Assessment, CSH prepared a brief archaeological literature review and a field inspection of the site for the KASHBOX facility, which is summarized below.

The field inspection conducted by CSH included the area of the KASHBOX facility and the facilities that were being built at that time. No historic sites were observed. Informal interviews with the WCF guards were also conducted at that time, and they had indicated that occasionally small spent cartridges and rocket launcher parts were found during subsurface excavations.

Based off the extensive land modification related to pineapple and sugarcane cultivation, followed by military utilization, no further archaeological research was recommended by CSH. They concluded that the proposed KASHBOX facility and the in-progress improvements at that

time would have no adverse effects on historic sites. In a letter dated November 15, 1997, the SHPD concurred that the impacts from previous improvements and the 200-bed KASHBOX facility would have no effect on significant historic resources.

Since the archaeological assessment, the WCF has experienced minor upgrades and additions of small structures to the site. All new structures constructed since 1998 have been built on previously disturbed land. The FEA-FONSI completed in 2008 for the Temporary Housing and Program Structures also resulted in a finding of no impact on historic properties. As the land had been previously disturbed for pineapple cultivation and military utilization, the likelihood of the presence of archaeological and historical resources on the WCF site is very low.

As previously mentioned in Section 1.6, an RLS was prepared by Fung Associates Inc. in 2019 to inventory and identify any potential historic properties for listing under the State Register of Historic Places and National Register of Historic Places. The RLS was submitted for the SHPD's HRS 6E-08 review. In a letter dated December 11, 2019, the SHPD concurred with DAGS determination of "no historic properties affected".

Based on the RLS, three (3) buildings and four (4) structures were found to be existing remnants of the Waiawa Military Reservation and have retained their historic integrity. These buildings and structures were filed to be listed under the State Inventory of Historic Places (SIHP) for the WCF (SIHP 50-80-09-08853).

Potential Impacts and Mitigation Measures

Based off the extensive land modification related to the intensive previous uses of the site including pineapple and sugarcane cultivation and military utilization, the likelihood of the presence of archaeological and historical resources on the WCF site is very low. While three buildings and four structures were found to be eligible for listing under the SIHP, PSD does not have any plans to modify or demolish these structures and buildings.

2.9 Cultural Resources

In October 2020, Pacific Consulting Services, Inc. (PCSI) prepared a Cultural Impact Assessment for the WCF to evaluate any potential effect on historic properties, traditional cultural places, or traditional cultural practices in the project area. The report was prepared using archival background research, maps, historical and archival documents, and previous archaeological studies in the vicinity of the site. Relevant historical maps were georeferenced to determine where traditional Hawaiian or historic features may be located within the project site. A draft of the report is included in Appendix I.

The toponym Waiawa has been translated two ways: as "Milkfish (awa, chanos chanos) Water" or "Bitter Water". In the story of the dividing of 'Ewa by the god Kāne and Kanaloa, Waiawa is mentioned as a place where 'awa (or kava) was grown. Since traditional Hawaiian settlements would have been concentrated along the coast, the lower forest areas of the mountain slopes offered other resources during famine or low rainfall. Thus Waiawa is mentioned only in a few historical accounts as a place where 'ulu maika playing fields were located, along with a heiau

called Puokiki. Puokiki was situated on the border of Manana and Waiawa, and its remains are still extant. It is located roughly two kilometers south of the project area.

No kuleana awards were granted in the project area. In Waiawa, kuleana were granted along Waiawa Stream, which include a house lot, lo‘i, and dry agricultural land. The entire ahupua‘a of Waiawa, excluding the kuleana land parcels, was Crown Land awarded to Victoria Kamamalu, sister to King Kamehameha IV and V. Following her death, the land was passed down to relatives and finally to Bernice Pauahi Bishop in 1883. This land now belongs to Kamehameha Schools, who still owns a large portion of the ahupua‘a.

Potential Impacts and Mitigation Measures

Based on PCSI’s findings, no traditional cultural places or practices, or archaeological sites, have been identified in the project area. Due to the pineapple and sugarcane cultivation, followed by grading, leveling, and filling associated with military use, any evidence of both pre- and post-contact land use has most likely been destroyed or buried.

2.10 Viewplanes

Due to the isolated location on top of a ridge, the WCF is not visible from areas that are generally accessible to the public nor does it restrict any public views or viewplanes. The tallest structure on-site is three-stories, while most are single-story buildings. These structures are obscured by the hilly terrain and trees surrounding the WCF. There are no plans to add any new structures to the WCF.

Potential Impacts and Mitigation Measures

The WCF’s existing buildings and structures are not visible from areas that are generally accessible to the public, thus it does not have any impact to public views or viewplanes in the area.

2.11 Water

Potable water for the WCF’s domestic use is provided by an on-site water treatment plant system that operates 24-hours a day for five (5) days a week and meets daily domestic and peak potable water demands. At peak water demand, WCF plant operators would operate the water treatment plant over the weekend to satisfy higher water volumes as required. Table 5 shows the Honolulu Board of Water Supply capacity requirements for the facility.

Table 5: WCF Potable Water Supply Requirements (Per BWS)

Water System	Daily Use (Gallons)	Finished Supply (Gallons)	Finished Water Production Days	Existing Tank Capacity
Domestic Potable Water	40,000	60,000	5 days/week	0.5M Gallons
Peak Potable Domestic Water (Hot Humid Day)	60,000	60 - 72,000	5 – 6 days/week	
Fire Water	300,000	N/A	N/A	

Raw water is drawn from the Waiahole Ditch, the sole water source for the WCF, by two booster pumps at Pump Station 6 (WCF-P6) and into a 2,400-gallon raw water storage tank. The existing PS6 pumps, P-301 and P-302 are each rated at 160 gallons-per-minute (gpm). There is an existing 1-1/2 inch draw off line between the PS6 and raw water storage tank used to fill an existing underground irrigation storage tank. Raw water is then transferred from the raw water storage tank to the treatment facility. At the treatment facility, raw water is run through two high pressure continuous microfiltration units with one unit in stand-by mode. Upon completion of the water treatment process, the water is transferred from a temporary 450-gallon capacity holding tank on to the existing 0.5-M gallon finished water storage reservoir through a 3-inch intake waterline. From the finished water storage reservoir, water is distributed to the WCF by a 12-inch waterline.

A portion of the site is located within the Zone of Contribution (ZOC) of the U.S. Navy's Waiawa Shaft. According to a Groundwater Hydrology Assessment prepared by Tom Nance Water Resource Engineering, the activities with the potential to impact the ZOC underlying groundwater are associated with percolation from the unlined silty basin on the drinking water system and potential leakage of treated wastewater from the systems two lined lagoons, however activities are considered to be insignificant. This assessment report is provided in Appendix J.

Potential Impacts and Mitigation Measures

The WCF is not connected to any municipal water supply system and has an on-site water treatment plant system to provide for the whole facility's water demand. The PSD does not propose to expand the use or capacity at the facility, thus it will not require an expansion of its water system. As previously mentioned in Section 1.6, a new 0.75-million-gallon water tank is proposed to replace the existing 0.50-million-gallon water tank under DAGS Job No. 12-27-5657 New Domestic Water System and Related Improvements project. The current 0.50-million-gallon water tank will be replaced due to leakage and other damages occurred over its lifetime.

The existing operations and any planned CIPs at the WCF have not, and are not anticipated to, have a significant impact on any municipal or nearby water supply systems.

2.12 Wastewater System

The wastewater flows at the WCF originate from the dormitories, kitchen/dining facilities, administration building and other miscellaneous facilities accommodating security, educational and recreational activities. Due to the remote location of this facility, connecting the WCF wastewater system to the City's system was not feasible. The last major improvement that enhanced the collection and treatment capabilities included a complete-mix activated sludge treatment facility; lift stations; and two sewage ponds. The last improvement conducted at this facility included the replacement of the lining at the two active ponds – Water Hyacinth Pond and R-2 Storage Pond.

The current average influent daily flow rate is approximately 42,000 gpd, while the maximum average daily flow is approximately 103,000 gpd (2.5 times the average). The average effluent daily flow rate is 74,000 gpd. The influent and effluent gallons per day per inmate averaged 124 gallons per capita per day (gpcd) and 219 gpcd, respectively. The possible cause for higher effluent measurements as compared with the influent is likely caused by flow meter malfunction or heavy rainfall. The Design Standards for the City and County of Honolulu required to determine the design wastewater flow rate is listed below in Table 6:

Table 6: Design Average Flow

Description	Capita	GPCD	Flow (gpd)
Inmate Population	334	150	50,100
WCF Staff (full-time)	118	20	2,160
Civil Service	33	20	660
Health Care Staff	6	20	120
Subtotal	**481**		**53,040**
Dry Weather Infiltration & Inflow (I/I)		5	2,405
Total			**55,445**
Design Average Flow			**56,000**

The Design Peak Flow is listed in Table 7 below. Note the Babbit's peak flow factor was used to determine the Design Peak Flow:

Table 7: Design Peak Flow

Description		Factor	Flow (gpd)
Babbit Max Flow Factor		1.45	
Maximum Flow			77,116
Design Maximum Flow			**80,000**
	Acre	***gpd/acre***	
Wet Weather Infiltration & Inflow (I)	50	1250	62,500
Total			142,500
Design Peak Flow			**143,000**

The gallons per capita per day estimate for the inmate population and staff was obtained from the M&E textbook (M&E Pacific, Inc., 2005). The design flow of 56,000 gpd also matches the design flow of 56,100 gpd calculated in the 1997 Preliminary Engineering Report (M&E Pacific, Inc., 1997).

The WCF utilizes a grease trap which is not regulated by the Revised Ordinances of Honolulu or the Hawaiʻi State Department of Health since it discharges to a privately owned waste water treatment plant. This existing kitchen grease trap serves the kitchen for the entire population within the WCF. All biosolids are processed through the "activated sludge" under aeration. The microorganisms ("activated sludge") are grown in the presence of raw wastewater and dissolved oxygen, which in turn treat the incoming wastewater. The solids then stay in the system under constant aeration treating the wastewater as it comes in, converting it to a "settleable solid" which returns to aeration.

There are two influent wastewater pump stations. Pump station No. 2 (WCF-P2) serves the southern portion of the WCF inmate facilities and discharges into Pump Station No.1 (WCF-P1). Pump Station No. 2 consists of two pumps (one stand-by) each with a design capacity of 105 gpm. The pumps are automatically activated by float switches installed in the wet well. A 4-inch force main transports the wastewater from the pump station into the collection system which discharges wastewater into Pump Station No. 1 via an 8-inch gravity sewer line.

Pump Station No. 1 consists of two pumps with a design capacity of 125 gpm. A 4-inch force main discharges wastewater into the existing package plant.

The existing 30,000 gpd packaged wastewater plant was built in 1987. The packaged plant was built in the first of three phases for the wastewater facility. The second phase included the conversion of the evaporation pond to sewage pond B and construction of sewage pond A and other-miscellaneous improvements. The third phase of construction in 1997 converted the sewage pond A to the water hyacinth pond and the R-2 effluent storage pond, and added the chlorine contact tank, R-2 effluent pump station, and the R-2 irrigation distribution system. A pressure sand filter was added after the startup of the 1997 construction when it was determined that the solids from the plant effluent were plugging the drip irrigation system.

The physical data for the water hyacinth pond and the R-2 storage ponds are listed below in Table 8.

Table 8: Water Hyacinth Pond and R-2 Storage Pond Data

Description	Value
Design Population: Inmates Workers	334 147
Design wastewater flows, gpd	56,000
Water hyacinth pond surface area, square feet	87,150 (2 acres)
Design hydraulic loading, gpd per acre of pond surface	28,050
Typical hydraulic loading, gpd per acre of pond surface	<64,600
Design influent 5-day Biochemical Oxygen Demand (BOD), mg/L	200
Design influent 5-day BOD loading, lbs per day	67
Design influent BOD lading, pbs per day per acre of pond	34
Typical influent BOD loading, lbs/day/acre	<89
Design effluent BOD, mg/L	30
Design effluent total suspended soils (TSS), mg/L	30
Water hyacinth pond volume, gallons	261,500
Water hyacinth pond depth, feet	3
R-2 Storage Pond volume, gallons	2,850,000
R-2 Storage Pond Depth, feet	5

Potential Impacts and Mitigation Measures

The WCF is not connected to a municipal wastewater system due to its isolated location. The PSD does not propose to expand the use or capacity at the facility, thus it will not require an expansion of its wastewater system. The existing operations and any planned CIPs at the WCF have not, and are not anticipated to, have any effect on any municipal or adjacent wastewater systems.

2.13 Traffic

Existing Conditions

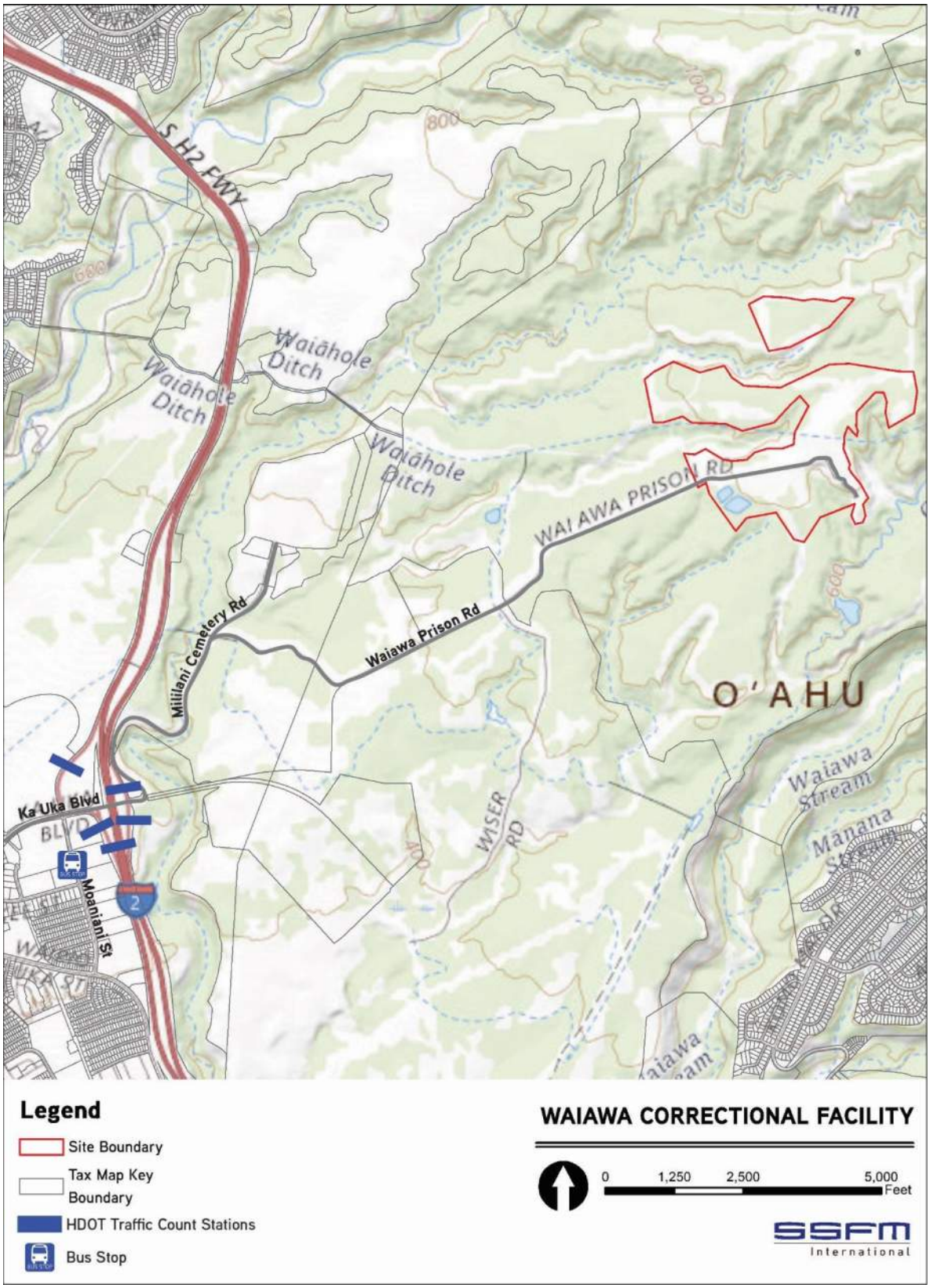
The WCF is located approximately 2.5 miles east of Interstate H-2's Ka Uka Boulevard off-ramp, as shown in Figure 15. Vehicular access for the WCF comes through Waiawa Prison Road and Mililani Cemetery Road. Waiawa Prison Road is a paved, two-way, 20-foot-wide, 1.8-mile-long road, oriented in the east-west direction with a 15-mph posted speed limit. It starts at a three-legged intersection with Mililani Cemetery Road and ends at the entrance to the WCF. The intersection of Mililani Cemetery Road and Waiawa Prison Road is stop sign controlled with a stop sign for the vehicles traveling along Waiawa Prison Road. Mililani Cemetery Road is a curvy, two lane, two-way road, oriented in the north-south direction. It starts at the signalized intersection of northbound Interstate H-2 ramps and Ka Uka Boulevard and terminates at the Mililani Cemetery. No curb/gutter or sidewalks exist along Waiawa Prison Road or Mililani Cemetery Road.

The most recent historical average daily traffic (ADT) along roadways in the project area are shown in Table 9. The data comes from the annual traffic counts completed by the State of Hawai'i Department of Transportation (HDOT) and is provided in the 2016 Traffic Station Mapbook for the Island of Oahu.

Table 9: Roadway Average Daily Traffic

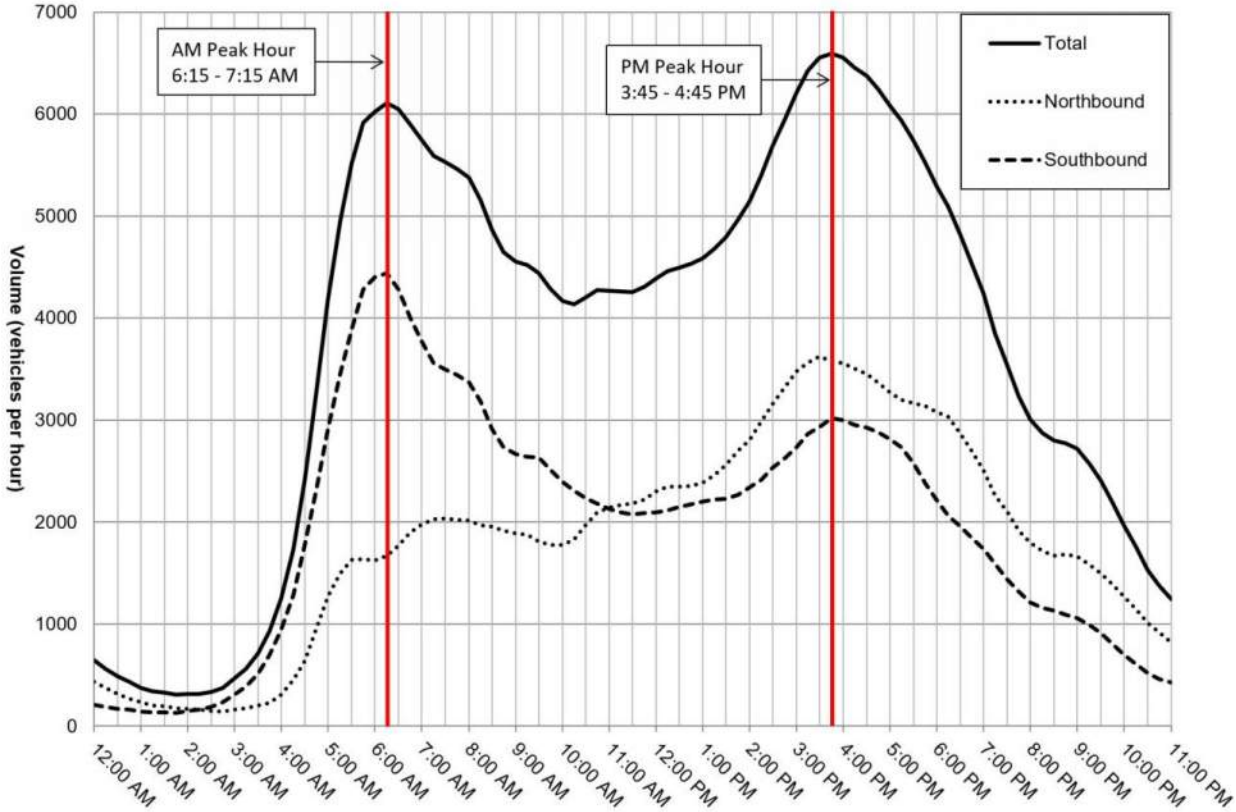
Location	Year	ADT
Interstate H-2, between northbound and southbound on ramps from Ka Uka Boulevard	2016	83,500
Interstate H-2 northbound off ramp from H-2 to Ka Uka Boulevard	2015	11,800
Interstate H-2 northbound on ramp from Ka Uka Boulevard to H-2	2016	5,800
Interstate H-2 southbound on ramp from Ka Uka Boulevard to H-2	2016	9,200
Interstate H-2 southbound off ramp from H-2 to Ka Uka Boulevard	2016	5,900

Figure 15: Traffic Count Stations and Bus Stop Location



The 24-hour traffic volume distribution along Interstate H-2 (see Figure 16) at the traffic count station shows a variation in travel patterns throughout the day with prominent morning and afternoon commuter peak periods. Detailed 24-hour counts are included in Appendix K.

Figure 16: 24-hour Volume Distribution Along Interstate H-2



Along Interstate H-2, during the morning peak hour of 6:15 to 7:15AM, there were approximately 1,700 vehicles travelling northbound and 4,400 vehicles travelling southbound for a total of 6,100 vehicles. During the afternoon peak hour of 3:45 to 4:45PM, there were approximately 3,600 vehicles travelling northbound and 3,000 travelling northbound for a total of 6,600 vehicles.

No other significant developments or future construction projects are expected in the immediate surrounding area that would significantly affect the roadway geometrics or traffic volumes at the study intersections. This is based on research completed on September 25th, 2019 in the State of Hawai‘i, Office of Environmental Quality Control (OEQC) library and review of the Statewide Transportation Improvements Program.

Bus Transit

The City and County of Honolulu transit system (TheBus) operates Route 433 that stops on Moaniani Street, opposite from Costco, which is approximately 2.5 miles from the WCF (see Figure 15). This route connects travelers to the Wahiawa Transit Center.

Bicycle and Pedestrians

As noted earlier, no sidewalks exist nor are there any bikeway facilities in the vicinity of WCF.

Potential Impacts and Mitigation Measures

The traffic in and out of WCF primarily comes from the Interstate H-2 northbound and southbound ramps. Vehicle trips generated by the WCF include employees, truck deliveries, visitors on the weekends and holidays, and small-scale agricultural production.

Employee shifts are from 6:00AM – 2:00PM, 2:00PM – 10:00PM, and 10:00PM – 6:00AM. The highest number of vehicles generated by the WCF are during the 30 minutes before and after shift changes. This equates to 5:30 – 6:30AM, 1:30 - 2:30PM, and 9:30 – 10:30PM. All shift changes occur during adjacent roadway off-peak hours, except for the 5:30 – 6:30AM period. During this shift change, there are approximately 25 incoming and 15 outgoing employees which, as compared to the traffic volumes on the Interstate H-2 ramps and Ka Uka Boulevard, is minor. Hence, the traffic generated by the WCF has a negligible impact on the operations and delay of adjacent intersections and roadways.

The WCF transports inmates approximately five times a week, to and from their facility. The number of inmates being transferred fluctuates since it is dependent on the inmates' sentencing, behavior, and the overall nature of the corrections system. The facility sees approximately 50 visitors a week on Saturdays and Sundays during their visiting hours, which are from 7:45AM – 9:45AM and 11:30AM – 1:30PM.

The signalized intersection of Mililani Cemetery Road, Interstate H-2 ramps and Ka Uka Boulevard was observed during a weekday between the hours of 5:45 – 6:45AM. This overlapped with peak periods along Interstate H-2 in addition to a shift change at the WCF. Approximately 15 vehicles were observed traveling to/from the WCF during this period. Minimal delay was observed as the traffic signal operated in a semi-actuated manner that was responsive to vehicle demand. Therefore, only minor queuing was observed coming from the Interstate H-2 northbound exit.

The 8-acre farm operated by the WCF inmates requires vehicle trips associated with supplies and food distribution. Supplies for the agricultural farm are delivered approximately twice a month. The farm cultivates approximately 2,000 to 3,000 pounds of produce per week, and averages over 10,000 pounds per month. The produce grown on-site is cooked and used in the meals served at the WCF. If the dining facility has excess produce, deliveries will be made approximately twice a month by truck to the Women's Correctional Facility, Oahu Community Correctional Center, and the Halawa Correctional Facility.

The *Multimodal Transportation Impact Assessment for Site Development* (ITE), recommends that a transportation impact study be conducted whenever a proposed development will generate 50 or more additional trips during the adjacent roadway's peak hour or the development's peak hour. The WCF's current and proposed operations do not contribute 50 trips to the adjacent roadway's peak hour, therefore a full transportation impact study was not conducted. The vehicular impact of the trips generated by the WCF is considered to result in a negligible impact on the operations and delay along Waiawa Prison Road, Mililani Cemetery Road, and the primary intersection of northbound Interstate H-2 ramps and Ka Uka Boulevard.

2.14 Public Services and Community Facilities

2.14.1 Refuse Collection

Solid waste generated at the WCF is collected on a regular schedule (twice a week) by West Oʻahu Aggregate. The waste generation at WCF is estimated at approximately two to four pounds of waste generated per inmate, per day. Using the average of these numbers, if three pounds of waste was generated per inmate/staff, per day, this would approximate a total of 18.9 tons of waste generated per month. The WCF is not increasing staff or inmate populations or expanding the capacity of infrastructure facilities, therefore waste generation is not expected to increase or result in significant impacts through the foreseeable future.

2.14.2 Fire Protection

The nearest fire stations to the WCF are the Honolulu Fire Department's (HFD) Fire Station 36 Mililani, Fire Station 41 Mililani Mauka, and Fire Station 42 Waikele, all of which are located approximately seven miles of the site (see Figure 17). HFD's Fire Station 16 Wahiawa, Fire Station 20 Pearl City, and Fire Station 38 Waiau are also within range and are approximately 8 - 9 miles from the WCF. The WCF will not be adding additional buildings to their site, and no increase in inmate and staff population is expected. No impacts to HFD's operations are expected.

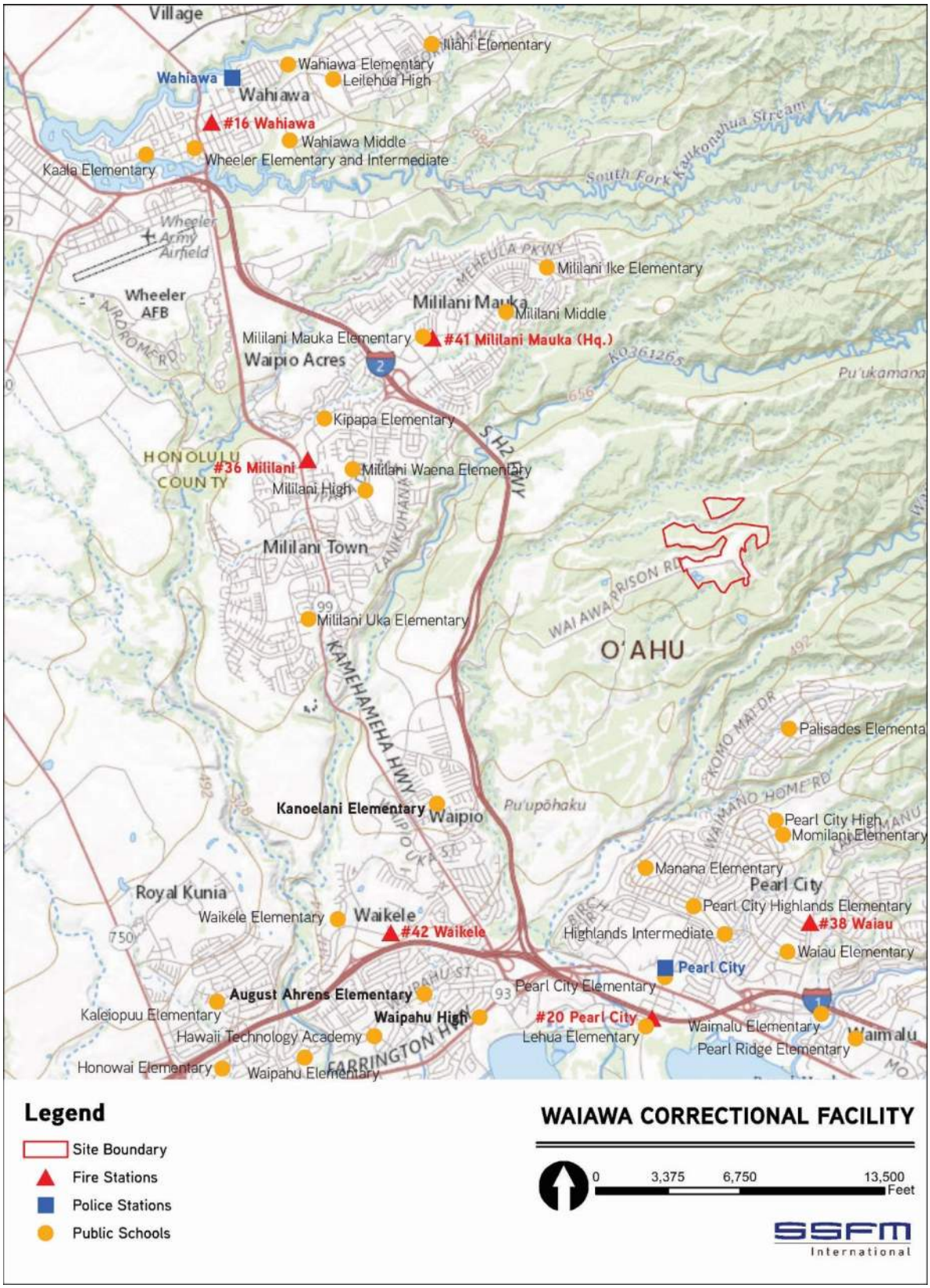
2.14.3 Police

The WCF lies within the Honolulu Police Department's (HPD) Patrol District 2 – Wahiawā/North Shore, Sector 1, which covers Waipio, Mililani and Mililani Mauka. The nearest police stations are the Pearl City District Station and the Wahiawā District Station (see Figure 17). The inmates at the WCF pose a low risk to the public since they are in the final stage of their term and are being prepared for release. In addition, PSD staff would be trained and equipped to handle most emergency situations that may arise during operations at the facility. The WCF is not undergoing any expansion, thus the inmate and staff population is not expected to increase. Significant impacts to HPD's services are not anticipated.

2.14.4 Schools

The WCF is located in the DOE's Leeward Oʻahu District, between the Pearl City and Waipahu school complexes. The schools closest to the site (in driving distance) include Kanoelani Elementary, August Ahrens Elementary and Waipahu High School, which range in distance from 4 - 7 miles south-west of the WCF (see Figure 17). The WCF and its operations will not generate an increase in residents and school children, thus no anticipated impacts to the Pearl City and Waipahu school complexes are anticipated.

Figure 17: Nearby Fire Stations, Police Stations and Public Schools



2.14.5 Parks & Recreation

The WCF has its own recreational facilities on-site for the inmates and staff, including a basketball court and baseball field. The guard administration building also has gym equipment for the guards and staff. Since the WCF has its own on-site facilities and will not impact the housing and population of the surrounding area, the continued operation of WCF is likely to result in no impacts to parks and recreational facilities in the surrounding communities.

2.14.6 Day Care

There are no day care facilities on or within proximity of the WCF site. The facility is not anticipated to undergo any changes or upgrades that will affect day care facilities within the area.

Potential Impacts and Mitigation Measures

The existing operations and any planned CIPs at the WCF have not, and are not anticipated to, have a significant impact on any public services and community facilities.

2.15 Socio-Economic Conditions

The City and County of Honolulu's resident population was estimated to be 987,638 according to the 2018 American Community Survey taken by the U.S. Census Bureau. The WCF does not fall within a Census Designated Place (CDP). The closest CDP is the Waipio CDP, which had a population estimate of 11,508 in the 2018 American Community Survey.

The WCF itself does not have an impact on the housing population of surrounding neighborhoods, due to the nature of its use. The facility will not be expanding its use or capacity; thus the number of staff is expected to remain the same.

Potential Impacts and Mitigation Measures

The WCF will not be expanding, and thus will not require an increase in staff. No significant impacts on population or employment in the region is anticipated.

2.16 Potential Cumulative and Secondary Impacts

Cumulative impacts are impacts which result from the incremental effects of an activity when added to other past, present, and reasonably foreseeable future actions, regardless of what agency or person undertake such actions. The existing operations and planned CIPs at the WCF have not, and are not anticipated to, generate substantial cumulative impacts. The WCF is a long-standing facility that has continued to sustain its operations despite its isolated location; its location and self-sustaining systems (water, wastewater) allow it to have minimal impact on any surrounding uses and environments. The PSD will implement the recommended mitigation measures during any current and future CIPs to ensure there will be no adverse impacts to the fauna within the area.

This page is intentionally blank

3.0 RELATIONSHIP TO PLANS AND POLICIES

3.1 State of Hawai‘i Policies

3.1.1 Hawai‘i State Plan

The Hawai‘i State Plan was set forth by the Hawai‘i State Planning Act, which was signed into law in 1978 and codified under HRS Chapter 226. The plan is a long-range comprehensive plan that identifies goals, objectives, policies, and priorities for the state. The plan is divided into three parts, in which the first part identifies the overall theme, goals, objectives, and policies of the state. The listing below identifies the objectives and policies that are met by the WCF.

HRS Chapter 226 Hawai‘i State Planning Act Part I. Overall Theme, Goals, Objectives and Policies	**Applicability to Project**
§226-5 Objective and policies for population	Not applicable
§226-6 Objectives and policies for the economy--in general	Not applicable
§226-7 Objectives and policies for the economy-- agriculture	**Applicable**
§226-8 Objective and policies for the economy--visitor industry	Not applicable
§226-9 Objective and policies for the economy--federal expenditures	Not applicable
§226-10 Objective and policies for the economy--potential growth and innovative activities	Not applicable
§226-10.5 Objectives and policies for the economy--information industry	Not applicable
§226-11 Objectives and policies for the physical environment--land-based, shoreline, and marine resources	Not applicable
§226-12 Objective and policies for the physical environment--scenic, natural beauty, and historic resources	Not applicable
§226-13 Objectives and policies for the physical environment--land, air, and water quality	Not applicable
§226-14 Objective and policies for facility systems--in general	Not applicable
§226-15 Objectives and policies for facility systems--solid and liquid wastes	Not applicable
§226-16 Objective and policies for facility systems--water	Not applicable
§226-17 Objectives and policies for facility systems--transportation	Not applicable
§226-18 Objectives and policies for facility systems--energy	Not applicable
§226-18.5 Objectives and policies for facility systems--telecommunications	Not applicable
§226-19 Objectives and policies for socio-cultural advancement--housing	Not applicable
§226-20 Objectives and policies for socio-cultural advancement--health	**Applicable**
§226-21 Objective and policies for socio-cultural advancement--education	**Applicable**
§226-22 Objective and policies for socio-cultural advancement--social services	**Applicable**
§226-23 Objective and policies for socio-cultural advancement--leisure	Not applicable
§226-24 Objective and policies for socio-cultural advancement--individual rights and personal well-being	**Applicable**
§226-25 Objective and policies for socio-cultural advancement--culture	Not applicable
§226-26 Objective and policies for socio-cultural advancement--public safety	**Applicable**
§226-27 Objective and policies for socio-cultural advancement--government	Not applicable

Described below are the sections of HRS Chapter 226 and the project's relation to the objectives and policies.

§226-7 Objectives and policies for the economy--agriculture*.*

(a) Planning for the State's economy with regard to agriculture shall be directed towards achievement of the following objectives:

(1) Viability of Hawai'i's sugar and pineapple industries.

(2) Growth and development of diversified agriculture throughout the State.

(3) An agriculture industry that continues to constitute a dynamic and essential component of Hawai'i's strategic, economic, and social well-being.

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

(1) Establish a clear direction for Hawai'i's agriculture through stakeholder commitment and advocacy.

(2) Encourage agriculture by making the best use of natural resources.

(3) Provide the governor and the legislature with information and options needed for prudent decision-making for the development of agriculture.

(4) Establish strong relationships between the agricultural and visitor industries for mutual marketing benefits.

(5) Foster increased public awareness and understanding of the contributions and benefits of agriculture as a major sector of Hawai'i's economy.

(6) Seek the enactment and retention of federal and state legislation that benefits Hawai'i's agricultural industries.

(7) Strengthen diversified agriculture by developing an effective promotion, marketing, and distribution system between Hawai'i's food producers and consumers in the State, nation, and world.

(8) Support research and development activities that strengthen economic productivity in agriculture, stimulate greater efficiency, and enhance the development of new products and agricultural by-products.

(9) Enhance agricultural growth by providing public incentives and encouraging private initiatives.

(10) Assure the availability of agriculturally suitable lands with adequate water to accommodate present and future needs.

(11) Increase the attractiveness and opportunities for an agricultural education and livelihood.

(12) In addition to the State's priority on food, expand Hawai'i's agricultural base by promoting growth and development of flowers, tropical fruits and plants, livestock, feed grains, forestry, food crops, aquaculture, and other potential enterprises.

(13) Promote economically competitive activities that increase Hawaiʻi's agricultural self-sufficiency, including the increased purchase and use of Hawaiʻi-grown food and food products by residents, businesses, and governmental bodies as defined under section 103D-104.

(14) Promote and assist in the establishment of sound financial programs for diversified agriculture.

(15) Institute and support programs and activities to assist the entry of displaced agricultural workers into alternative agricultural or other employment.

(16) Facilitate the transition of agricultural lands in economically nonfeasible agricultural production to economically viable agricultural uses.

(17) Perpetuate, promote, and increase use of traditional Hawaiian farming systems, such as the use of loko iʻa, māla, and irrigated loʻi, and growth of traditional Hawaiian crops, such as kalo, ʻuala, and ʻulu.

(18) Increase and develop small-scale farms. [L 1978, c 100, pt of §2; am L 1986, c 276, §6; am L 1993, c 25, §2; am L 2009, c 167, §3; am L 2013, c 55, §2; am L 2015, c 31, §2]

Response: The WCF is consistent with the Hawaiʻi State Plan's objectives and policies for the economy with regard to agriculture. Currently, the WCF maintains eight (8) acres on-site for agricultural use. The inmates are taught the skills to plant and harvest a diversified range of produce and maintain aquaponics and hydroponics systems. The inmates grow a diversity of fruits, vegetables, and herbs, including traditional Hawaiian crops such as kalo. All produce is used in the preparation of meals for the inmates, and any surplus produce gets transferred to other correctional facilities on the island. In addition, the wastewater generated at the WCF is treated and reused for irrigation of the northern agricultural area of the site to support pine, citrus, guava, koa, eucalyptus and other tree species.

§226-20 Objectives and policies for socio-cultural advancement--health.

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

(1) Fulfillment of basic individual health needs of the general public.

(2) Maintenance of sanitary and environmentally healthful conditions in Hawaiʻi's communities.

(3) Elimination of health disparities by identifying and addressing social determinants of health.

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

(1) Provide adequate and accessible services and facilities for prevention and treatment of physical and mental health problems, including substance abuse.

(2) Encourage improved cooperation among public and private sectors in the provision of health care to accommodate the total health needs of individuals throughout the State.

(3) Encourage public and private efforts to develop and promote statewide and local strategies to reduce health care and related insurance costs.

(4) Foster an awareness of the need for personal health maintenance and preventive health care through education and other measures.

(5) Provide programs, services, and activities that ensure environmentally healthful and sanitary conditions.

(6) Improve the State's capabilities in preventing contamination by pesticides and other potentially hazardous substances through increased coordination, education, monitoring, and enforcement.

(7) Prioritize programs, services, interventions, and activities that address identified social determinants of health to improve native Hawaiian health and well-being consistent with the United States Congress' declaration of policy as codified in title 42 United States Code section 11702, and to reduce health disparities of disproportionately affected demographics, including native Hawaiʻians, other Pacific Islanders, and Filipinos. The prioritization of affected demographic groups other than native Hawaiʻians may be reviewed every ten years and revised based on the best available epidemiological and public health data. [L 1978, c 100, pt of §2; am L 1986, c 276, §19; am L 2014, c 155, §2]

Response: The WCF is consistent with the Hawaiʻi State Plan's objectives and policies for socio-cultural advancement with regard to health. Per PSD, the WCF "provides an environment that helps inmates successfully re-enter the community from prison. All inmates participate in education or substance abuse treatment programs." One of the main programs offered at the WCF is the KASHBOX Drug Rehabilitation Program. This substance abuse treatment program consists of five different programs, as described in Section 1.5.1. The facility also supports the Keiki of Incarcerated Parents pilot program, which is designed to help inmates with substance abuse issues become better fathers through participation in parenting groups and structured playgroups with their children. In addition, the WCF offers educational programs that cover life skills, interactive parenting skills, self-improvement, health management, and cognitive skills.

§226-21 Objective and policies for socio-cultural advancement--education.

(a) Planning for the State's socio-cultural advancement with regard to education shall be directed towards achievement of the objective of the provision of a variety of educational opportunities to enable individuals to fulfill their needs, responsibilities, and aspirations.

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

(1) Support educational programs and activities that enhance personal development, physical fitness, recreation, and cultural pursuits of all groups.

(2) Ensure the provision of adequate and accessible educational services and facilities that are designed to meet individual and community needs.

(3) Provide appropriate educational opportunities for groups with special needs.

(4) Promote educational programs which enhance understanding of Hawai‘i's cultural heritage.

(5) Provide higher educational opportunities that enable Hawai‘i's people to adapt to changing employment demands.

(6) Assist individuals, especially those experiencing critical employment problems or barriers, or undergoing employment transitions, by providing appropriate employment training programs and other related educational opportunities.

(7) Promote programs and activities that facilitate the acquisition of basic skills, such as reading, writing, computing, listening, speaking, and reasoning.

(8) Emphasize quality educational programs in Hawai‘i's institutions to promote academic excellence.

(9) Support research programs and activities that enhance the education programs of the State. [L 1978, c 100, pt of §2; am L 1986, c 276, §20]

Response: The WCF is consistent with the Hawai‘i State Plan’s objectives and policies for socio-cultural advancement with regard to education. As discussed in the previous response, the main objective of the WCF is to help inmates successfully re-enter the community from prison. To support this objective, it is required that all inmates at the WCF participate in education or substance abuse treatment programs. General education programs are provided, which offer inmates the opportunity to work towards a General Education Degree or an Associate of Arts degree. Other educational programs offered at the WCF, along with the KASHBOX substance abuse treatment program, are described in Section 1.5.1. In addition, the WCF offers worklines that teach inmates vocational and employment skills.

§226-22 Objective and policies for socio-cultural advancement--social services.

(a) Planning for the State's socio-cultural advancement with regard to social services shall be directed towards the achievement of the objective of improved public and private social services and activities that enable individuals, families, and groups to become more self-reliant and confident to improve their well-being.

(b) To achieve the social service objective, it shall be the policy of the State to:

(1) Assist individuals, especially those in need of attaining a minimally adequate standard of living and those confronted by social and economic hardship conditions, through social services and activities within the State's fiscal capacities.

(2) Promote coordination and integrative approaches among public and private agencies and programs to jointly address social problems that will enable individuals, families, and groups to deal effectively with social problems and to enhance their participation in society.

(3) Facilitate the adjustment of new residents, especially recently arrived immigrants, into Hawai‘i's communities.

(4) Promote alternatives to institutional care in the provision of long-term care for elder and disabled populations.

(5) Support public and private efforts to prevent domestic abuse and child molestation, and assist victims of abuse and neglect.

(6) Promote programs which assist people in need of family planning services to enable them to meet their needs. [L 1978, c 100, pt of §2; am L 1986, c 276, §21; am L 1990, c 67, §8]

Response: The WCF is consistent with the Hawai‘i State Plan’s objectives and policies for socio-cultural advancement with regard to social services. As discussed in the previous responses, the WCF offers educational and substance abuse treatment programs to provide an environment conducive to the inmates’ successful re-entry into the community from prison. Along with the worklines offered, these programs educate the inmates with the basic skills needed to deal with social problems, as well as support their participation back into society.

§226-26 Objectives and policies for socio-cultural advancement--public safety.

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

(1) Assurance of public safety and adequate protection of life and property for all people.

(2) Optimum organizational readiness and capability in all phases of emergency management to maintain the strength, resources, and social and economic well-being of the community in the event of civil disruptions, wars, natural disasters, and other major disturbances.

(3) Promotion of a sense of community responsibility for the welfare and safety of Hawai‘i's people.

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

(1) Ensure that public safety programs are effective and responsive to community needs.

(2) Encourage increased community awareness and participation in public safety programs.

(c) To further achieve public safety objectives related to criminal justice, it shall be the policy of this State to:

(1) Support criminal justice programs aimed at preventing and curtailing criminal activities.

(2) Develop a coordinated, systematic approach to criminal justice administration among all criminal justice agencies.

(3) Provide a range of correctional resources which may include facilities and alternatives to traditional incarceration in order to address the varied security needs of the community and successfully reintegrate offenders into the community.

(d) To further achieve public safety objectives related to emergency management, it shall be the policy of this State to:

(1) Ensure that responsible organizations are in a proper state of readiness to respond to major war-related, natural, or technological disasters and civil disturbances at all times.

(2) Enhance the coordination between emergency management programs throughout the State. [L 1978, c 100, pt of §2; am L 1986, c 276, §25]

Response: The WCF is consistent with the Hawaiʻi State Plan's objectives and policies for socio-cultural advancement with regard to public safety. Unlike traditional correctional facilities, the WCF provides educational, vocational and rehabilitation programs that will allow inmates to develop the skills necessary for their successful reintegration into the community. While the WCF is a minimum-security facility, it is also isolated from the rest of the community, which provides additional space and security to the public.

3.1.2 HRS Chapter 205, Part III

Important Agricultural Lands (IAL), as formalized in HRS Chapter 205, Part III, establishes objectives and policies for the conservation, protection, maintenance and sustainability of Hawaiʻi's agriculture industry through identifying lands that meet the following criteria:

- *Are capable of producing sustained high agricultural yields when treated and managed according to accepted farming methods and technology;*
- *Contribute to the State's economic base and produce agricultural commodities for export or local consumption; or*
- *Are needed to promote the expansion of agricultural activities and income for the future, even if currently not in production*

In 2018, the DPP prepared a report titled "Oʻahu Important Agricultural Land Mapping Project" that included recommendations on land to be designated as IAL, in accordance with the county designation process set forth in Chapter 205-47, HRS and HAR 15-15-17. The recommendations were reviewed by the Honolulu City Council and adopted by resolution on June 5, 2019 (Resolution No. 18-233, CD1, FD1). In the maps included in DPP's report and Resolution No. 18-233, CD1, FD1, the WCF is identified as "Public lands pending State screening for IAL designation". The Resolution was sent to the LUC and is pending final IAL designation.

The WCF has two agricultural areas; one approximately 8-acre site that is used to grow edible produce (west of WCF-K KASHBOX facility), and another site that is used to grow trees (northwestern portion of parcel 011). The agricultural area used to grow edible produce was discussed in Section 1.5.1, while the northern agricultural area was discussed at the end of Section 1.6. The 8-acre agricultural area has, and continues to be, a sustainable source of produce that generates high agricultural yields for the WCF's inmates' consumption, as well as PSD's other correctional facilities.

3.1.3 Coastal Zone Management, HRS Chapter 205A

The State Coastal Zone Management (CZM) Program, as formalized in HRS Chapter 205A, establishes objectives and policies to "provide for the effective management, beneficial use,

protection, and development of the coastal zone." The following are the objectives and policies of the CZM, and the relationship of the WCF to the applicable considerations:

1) *Recreational Resources Objective: Provide coastal recreational opportunities accessible to the public*
   a) *Improve coordination and funding of coastal recreational planning and management; and*
   b) *Provide adequate, accessible, and diverse recreational opportunities in the coastal zone management area by:*
      i) *Protecting coastal resources uniquely suited for recreational activities that cannot be provided in other areas;*
      ii) *Requiring replacement of coastal resources having significant recreational value including, but not limited to, surfing sites, fishponds, and sand beaches, when such resources will be unavoidably damaged by development; or requiring reasonable monetary compensation to the State for recreation when replacement is not feasible or desirable;*
      iii) *Providing and managing adequate public access, consistent with conservation of natural resources, to and along shorelines with recreational value;*
      iv) *Providing an adequate supply of shoreline parks and other recreational facilities suitable for public recreation;*
      v) *Ensuring public recreational uses of county, state, and federally owned or controlled shoreline lands and waters having recreational value consistent with public safety standards and conservation of natural resources;*
      vi) *Adopting water quality standards and regulating point and nonpoint sources of pollution to protect, and where feasible, restore the recreational value of coastal waters;*
      vii) *Developing new shoreline recreational opportunities, where appropriate, such as artificial lagoons, artificial beaches, and artificial reefs for surfing and fishing; and*
      viii) *Encouraging reasonable dedication of shoreline areas with recreational value for public use as part of discretionary approvals or permits by the land use commission, board of land and natural resources, and county authorities; and crediting such dedication against the requirements of section 46-6.*

   Response: Access to shoreline areas would remain unaffected by the current and/or future operations at the WCF, as the site is not located near the shoreline.

2) *Historic Resources Objective: Protect, preserve, and, where desirable, restore those natural and manmade historic and prehistoric resources in the coastal zone management area that are significant in Hawaiianand American history and culture.*
   a) *Identify and analyze significant archaeological resources*
   b) *Maximize information retention through preservation of remains and artifacts or salvage operations; and*
   c) *Support state goals for protection, restoration, interpretation, and display of historic resources*

   Response: The WCF is not anticipated to impact any natural and manmade historic and prehistoric resources in the coastal zone management area. The Archaeological Assessment

prepared by CSH in 1997 found no historic sites on WCF's property. Additionally, in a letter dated November 15, 1997, SHPD concurred that no historic sites would be impacted by the improvements and addition of the 200-bed KASHBOX facility that was being constructed at that time. Since then, minor improvements have been made to the WCF. The FEA that was completed for the Temporary Housing and Program Structures in 2008 also found no impacts on historic properties for the project. As the land was previously disturbed for pineapple cultivation and military utilization, the likelihood of the presence of archaeological, historic and cultural resources is very low.

3) *Scenic and Open Space Resources Objective: Protect, preserve, and, where desirable, restore or improve the quality of coastal scenic and open space resources.*
   a) *Identify valued scenic resources in the coastal zone management area;*
   b) *Ensure that new developments are compatible with their visual environment by designing and locating such developments to minimize the alteration of natural landforms and existing public views to and along the shoreline;*
   c) *Preserve, maintain, and, where desirable, improve and restore shoreline open space and scenic resources; and*
   d) *Encourage those developments that are not coastal dependent to locate in inland areas.*

   Response: The WCF is located at a high elevation on an isolated ridge and does not substantially affect public views or open space views or resources. The existing structures on site do not affect any existing public views of natural landforms to and along the shoreline. The WCF is not located near a coastal area, and thus does not impact any coastal and scenic open space resources.

4) *Coastal Ecosystems Objective: Protect valuable coastal ecosystems, including reefs, from disruption and minimize adverse impacts on all coastal ecosystems.*
   a) *Exercise an overall conservation ethic, and practice stewardship in the protection, use, and development of marine and coastal resources;*
   b) *Improve the technical basis for natural resource management;*
   c) *Preserve valuable coastal ecosystems, including reefs, of significant biological or economic importance;*
   d) *Minimize disruption or degradation of coastal water ecosystems by effective regulation of stream diversions, channelization, and similar land and water uses, recognizing competing water needs; and*
   e) *Promote water quantity and quality planning and management practices that reflect the tolerance of fresh water and marine ecosystems and maintain and enhance water quality through the development and implementation of point and nonpoint source water pollution control measures.*

   Response: The current operations at the WCF does not impact any coastal ecosystems due to its location inland on a mountain ridge and away from the coastline.

5) *Economic Uses Objective: Provide public or private facilities and improvements important to the State's economy in suitable locations.*
   a) *Concentrate coastal dependent development in appropriate areas;*

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

Response: The WCF does not abut the shoreline and would not affect coastal development necessary to the state's economy.

6) *Coastal Hazards Objective: Reduce hazard to life and property from tsunami, storm waves, stream flooding, erosion, subsidence, and pollution.*
   a) *Develop and communicate adequate information about storm wave, tsunami, flood, erosion, subsidence, and point and nonpoint source pollution hazards;*
   b) *Control development in areas subject to storm wave, tsunami, flood, erosion, hurricane, wind, subsidence, and point and nonpoint source pollution hazards;*
   c) *Ensure that developments comply with requirements of the Federal Flood Insurance Program; and*
   d) *Prevent coastal flooding from inland projects.*

Response: The WCF does not have any floodplains on site and is not in a tsunami inundation zone. The site is located outside of the 100-year floodplain and therefore no direct or indirect impacts to flood prone areas are anticipated.

7) *Managing Development Objective: Improve the development review process, communication, and public participation in the management of coastal resources and hazards.*
   a) *Use, implement, and enforce existing law effectively to the maximum extent possible in managing present and future coastal zone development;*
   b) *Facilitate timely processing of applications for development permits and resolve overlapping or conflicting permit requirements; and*
   c) *Communicate the potential short and long-term impacts of proposed significant coastal developments early in their life cycle and in terms understandable to the public to facilitate public participation in the planning and review process.*

Response: Two EAs have been published for the WCF site in which public information and outreach activities were carried out during the EA process, including public meetings. The most recent community outreach being in 2008, where the community was provided a 30-day period to comment on the Draft EA. As part of the recent application for PRU, presentations were made in 2019 to the Pearl City Neighborhood Board (No. 21) and the Mililani/Waipio/Melemanu Neighborhood Board (No. 25). Based on the public comments received during both EA processes, the proposed actions did not create a high degree of controversy.

8) *Public Participation Objective: Stimulate public awareness, education, and participation in coastal management.*
   a) *Promote public involvement in coastal zone management processes;*
   b) *Disseminate information on coastal management issues by means of educational materials, published reports, staff contact, and public workshops for persons and organizations concerned with coastal issues, developments, and government activities; and*
   c) *Organize workshops, policy dialogues, and site-specific mediations to respond to coastal issues and conflicts.*

   Response: Extensive public information and outreach activities were carried out during the 2008 EA process through contact with legislators and news articles. During the 1998 DEA process, neighborhood boards were notified and sent a copy of the Draft EA, with a request for their comments. Discussion on coastal zone management did not take place during both EA processes, as the WCF site is not located near the coastal zone.

9) *Beach Protection Objective: Protect beaches for public use and recreation.*
   a) *Locate new structures inland from the shoreline setback to conserve open space, minimize interference with natural shoreline processes, and minimize loss of improvements due to erosion;*
   b) *Prohibit construction of private erosion-protection structures seaward of the shoreline, except when they result in improved aesthetic and engineering solutions to erosion at the sites and do not interfere with existing recreational and waterline activities; and*
   c) *Minimize the construction of public erosion-protection structures seaward of the shoreline*.

   Response: The WCF is not located adjacent to the coast, therefor it does not have any impact on shoreline activities and no adverse impacts to beaches will occur.

10) *Marine Resources Objective: Promote the protection, use, and development of marine and coastal resources to assure their sustainability.*
   a) *Ensure that the use and development of marine and coastal resources are ecologically and environmentally sound and economically beneficial;*
   b) *Coordinate the management of marine and coastal resources and activities to improve effectiveness and efficiency;*
   c) *Assert and articulate the interests of the State as a partner with federal agencies in the sound management of ocean resources within the United States exclusive economic zone;*
   d) *Promote research, study, and understanding of ocean processes, marine life, and other ocean resources in order to acquire and inventory information necessary to understand how ocean development activities relate to and impact upon ocean and coastal resources; and*
   e) *Encourage research and development of new, innovative technologies for exploring, using, or protecting marine and coastal resources. [L 1977, c 188, pt of §3; am L 1993, c 258, §1; am L 1994, c 3, §1; am L 1995, c 104, §5; am L 2001, c 169, §3]*

Response: The WCF would not adversely impact ocean resources and would not affect marine and coastal resources as it is not located adjacent to or in the vicinity of these resources.

3.1.4 Land Use Commission Guidelines

As stated in HAR §15-15-95, certain "unusual and reasonable" uses within agricultural and rural districts other than those for which the district is classified may be approved through the issuance of a SUP. The WCF meets the LUC's guidelines by demonstrating the following:

1) *The use shall not be contrary to the objectives sought to be accomplished by chapters 205 and 205A, HRS, and the rules of the commission;*

   Response: The SUP that will be prepared and submitted to the DPP will meet the requirements of the LUC's guidelines, which upon acceptance will bring the WCF in compliance with HRS Chapters 205 and 205A.

2) *The proposed use would not adversely affect surrounding property;*

   Response: The WCF is a long-standing facility that was once used as a military reservation, which was converted in 1985 to become a prison. It is located on an isolated ridge that is surrounded by undeveloped land. PSD currently has no plans to expand or perform any major upgrades at the WCF, and thus the surrounding property will not be adversely affected.

3) *The proposed use would not unreasonably burden public agencies to provide roads and streets, sewers, water drainage and school improvements, and police and fire protection;*

   Response: The WCF is a long-standing facility that already has the appropriate infrastructure in place to be in full operation. It does not require any additional infrastructure improvements or services from other public agencies as described in Section 2.0 of this report.

4) *Unusual conditions, trends, and needs have arisen since the district boundaries and rules were established; and*

   Response: Prior to its current use, the WCF was once a military reservation constructed in the 1940s during World War II by the federal government. The existence of the facility predates the State Land Use Law and the designation of the district boundaries. The WCF falls within the State Land Use Agricultural District, and the Agriculture and Preservation Areas as identified on the Central Oʻahu Sustainable Communities Plan (COSCP) Public Facilities Map. Its location within lands planned for agricultural use is consistent with the COSCP's general policy for the location of correctional facilities.

5) *The land upon which the proposed use is sought is unsuited for the uses permitted within the district.*

   Response: The site's use solely for agriculture as a permitted use is unsuitable due to its longstanding use as a correctional facility and former military reservation.

3.2 City and County of Honolulu Plans and Policies

3.2.1 City and County of Honolulu General Plan

The General Plan for the City and County of Honolulu was originally adopted in 1977 and was most recently amended in 2002. A revised version is currently in review by the City Council. The General Plan is a statement of the long-range physical, social, cultural, economic, environmental, and design objectives for the welfare and prosperity of the people of O‘ahu. It is intended to guide land use and development decisions, and to influence actions in eleven areas of concern, including population; economy; natural environment and resource stewardship; housing and communities; transportation and utilities; energy; physical development and urban design; public safety and community resilience; health and education; culture and recreation; and government operations and fiscal management. The WCF is in accordance with The General Plan’s “Public Safety and Community Resilience” area of concern and the following policies (which have remained unchanged in the Proposed Revised version):

- ***Public Safety and Community Resilience***
  - *Objective A: To prevent and control crime and maintain public order.*
    - *Policy 1: Provide a safe environment for residents and visitors on O‘ahu*
    - *Policy 2: Provide adequate, safe and secure criminal justice facilities*
    - *Policy 5: Support policies and programs that expand access to treatment, rehabilitation, and re-entry programs for adult and juvenile offenders*
    - *Policy 11: Encourage the improvement of rehabilitation programs and facilities for criminals and juvenile offenders*

3.2.2 Central O‘ahu Sustainable Communities Plan

The Central O‘ahu Sustainable Communities Plan (COSCP) was adopted in December 2002, and a revised version is currently in review by the City Council. The COSCP is one of eight community-oriented plans that is intended to guide public policy, investment, and decision-making in response to the specific conditions and community values of each region. The WCF falls under the COSCP’s region and is specifically identified on the COSCP’s Urban Land Use and Public Facilities Map (see Figure 18). The WCF is consistent with the COSCP’s general policy established for correctional facilities in both the current plan (2002) and the proposed revised plan (2016):

- ***Correctional Facilities –*** *Locate correctional facilities on lands planned for industrial and agricultural use. If such a facility is proposed for lands not planned for industrial or agricultural use, a City review and approval process which provides public review, complete project analysis, and City Council approval should be used.*

On the COSCP’s Urban Land Use and Public Facilities Map, the WCF is identified as a “Correctional Facility” within the “Agriculture and Preservation Area,” which is consistent with the plan’s policy to locate correctional facilities on agricultural lands. The WCF does not fall within one of the Special Area Plans for Central O‘ahu, and it is also outside of the COSCP’s Urban Growth Boundary.

3.2.3 Land Use Ordinance

The City and County of Honolulu Land Use Ordinance (LUO) regulates land use in accordance with adopted land use policies, which includes the General Plan and Sustainable Communities Plans. The provisions are also referred to as the "zoning ordinance." The WCF is zoned as F-1 Military and Federal Preservation District (see Figure 19), which was consistent with its prior use as a military reservation under federal jurisdiction. According to the LUO Article 3, Sec. 21-3.40 (c), it states that the purpose of the F-1 district is to "identify areas in military or federal government use and to permit the full range of military or federal government activities." Prior to its current use, the WCF was once a military reservation under federal jurisdiction, which was consistent with its F-1 designation. The F-1 district does not have any development standards as it permits the full range of military or federal government use. Therefore, the WCF site and existing structures are compliant with its current zoning.

Item (d) under this section states that "should lands be removed from either the state-designated conservation district or from federal jurisdiction, all uses, structures and development standards shall be as specified for the P-2 general preservation district." Regardless of whether the WCF remains zoned as F-1 or if it is eventually rezoned to P-2, a PRU approval is required for prison facilities in all zones.

The WCF was assessed for its compliance with P-2 development standards in the table below.

Table 10: Comparison of WCF Site/Structures with P-2 Development Standards

Development Standard		P-2 General Preservation District Standards	WCF Existing Site/Structures
Minimum lot area (acres)		5	Parcel 011: 157.875 Parcel 012: 22.611
Minimum lot width and depth (feet)		200	Approximately 3,000 (width) by 4,600 (depth)
Yards (feet):	Front	30	Compliant
	Side and rear	15	Two buildings not in compliance (see below)
Maximum building area (percent of zoning lot)		5	Approximately 1%
Maximum height (feet)		15 – 25	10 – 33 (see below)
Height setbacks		per Sec. 21-3.40-1(e)	(see below)

According to the P-2 development standard, the side and rear yard requires a distance of at least 15 feet from the property line. Currently, buildings WCF-01 and WCF-CH do not meet this requirement as illustrated in Figure 20.

Twelve (12) of the buildings have heights within the range of 15 to 25 feet, and all are compliant with the height setback requirement. Only one building (WCF-C) exceeds the maximum height allowance with height setbacks, as it is approximately 33 feet high. This building is original to the site and built in the 1940's when the facility was first established as a military reservation.

3.3 10-Year Corrections Master Plan Update (2003)

In 2003, the PSD updated their 10-Year Corrections Master Plan (CMP) that was previously completed in 1991. The CMP provides an assessment of the status of findings and recommendations that were made in 1991 compared to what was found in the inspection of the facilities in 2003. It also provides a recommended plan for meeting the projected jail and prison capacity needs of the State for the next ten years.

While this plan is considered out of date, as it outlines the needs of the correctional facilities from 2003 to 2013, the needs and recommendations made for the WCF will be assessed against the facility's current facilities and operations to confirm if the facility has addressed what was established in the 2003 CMP.

CMP Development Plan Summary (only included items where WCF is identified):

2. **Expand Existing Facilities in Phase 1 2004 – 2008 for Short-term or Temporary Use**

The WCF had constructed two temporary prefabricated structures (WCF-07 and 08) in 2009 for expanded program space.

3. **Build New Facilities in Phases 1 and 2 Over 10 years – 2004 – 2013**

The WCF has not expanded its operational bed capacity and has no plans to in the foreseeable future.

Chapter 3 Capital Improvements Plan – Waiawa Correctional Facility

In Chapter 3 Capital Improvements Plan, the recommended role and mission of the WCF states "Waiawa's current mission as the Department's primary substance abuse treatment facility is an important one especially with the growth in the variety and prevalence of substance abuse in the State. Based on the age of the buildings and infrastructure and land conversion trends nearby it would be logical to continue its status as a minimum-security facility rather than considering a costly upgrading of the security level. However, at some future date it is likely that the market value for this land could make it advantageous for the State to sell the 192-acre site for private sector development and use the proceeds for funding the construction of a replacement facility. If such an opportunity emerged the Department should consider making Waiawa's replacement a medium security facility with an attached minimum unit so that more inmates could be given a treatment placement, rather than just those who are near the end of their sentence and/or qualified for minimum security." The WCF's existing operations is still in

conformance with the recommended role identified in the CMP. The PSD has no plans to expand the capacity at the facility and does not anticipate any modifications to its current operations and functioning security level.

Figure 18: COSP - Public Facilities Map

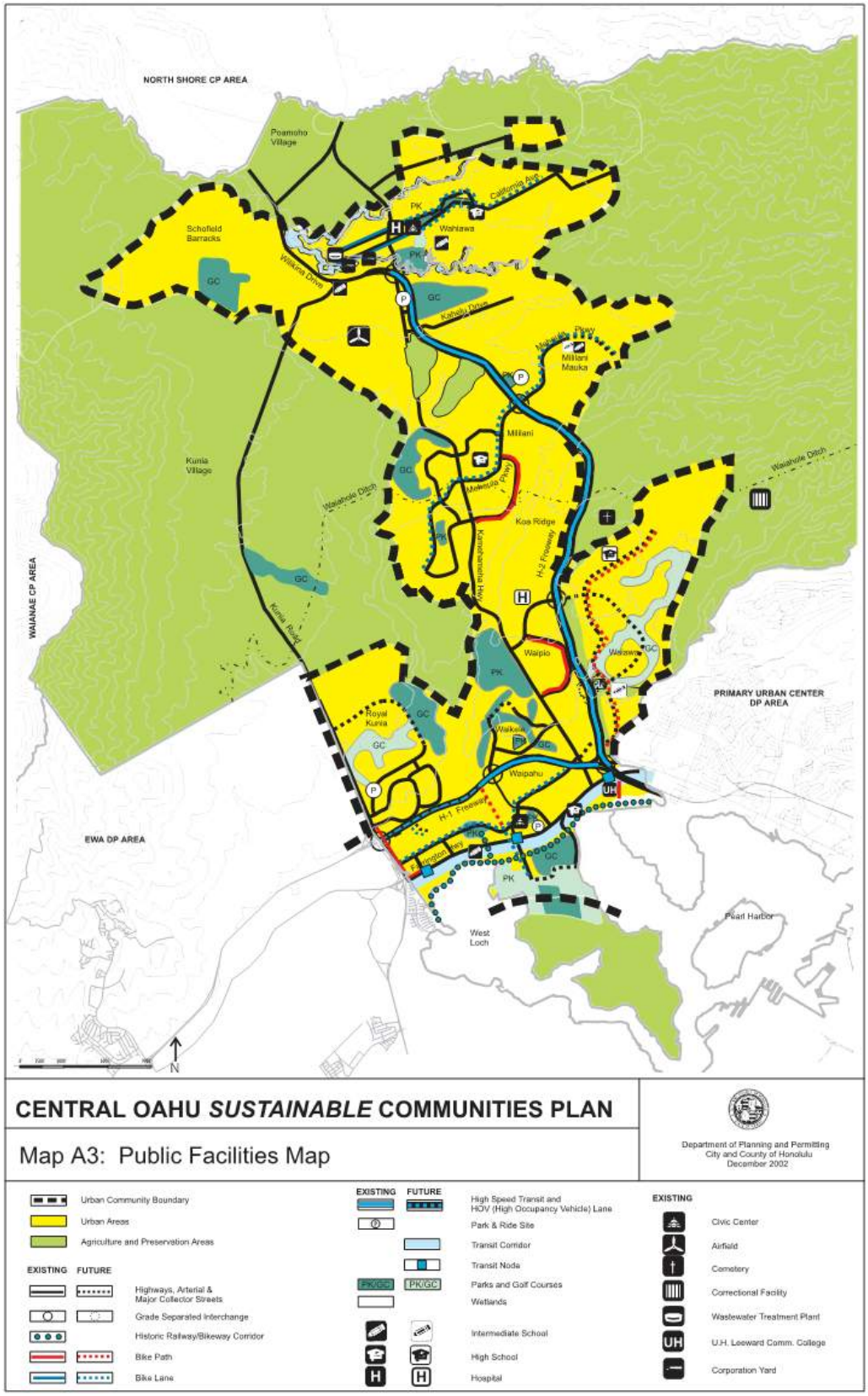


Figure 19: City & County of Honolulu Zoning

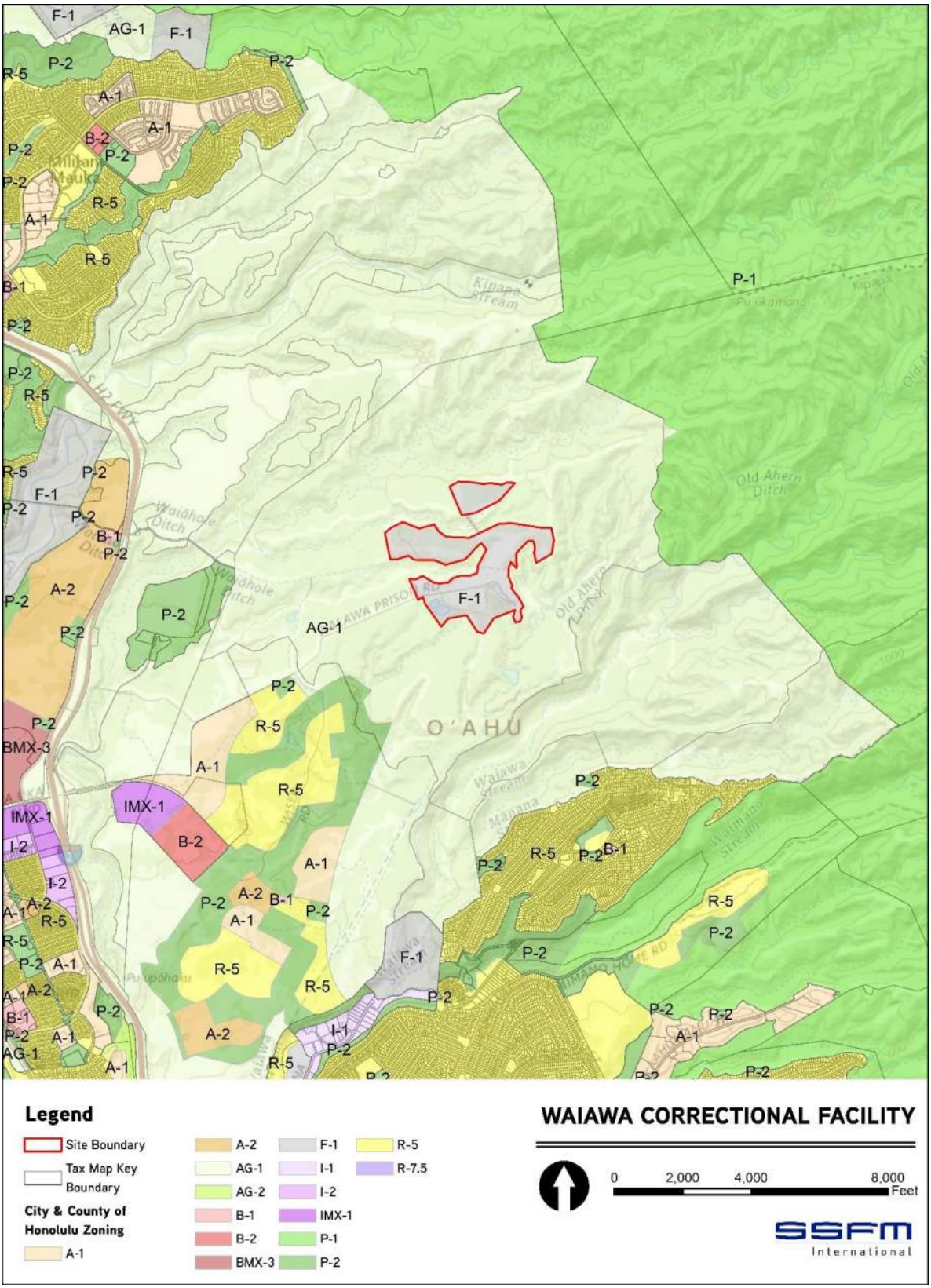
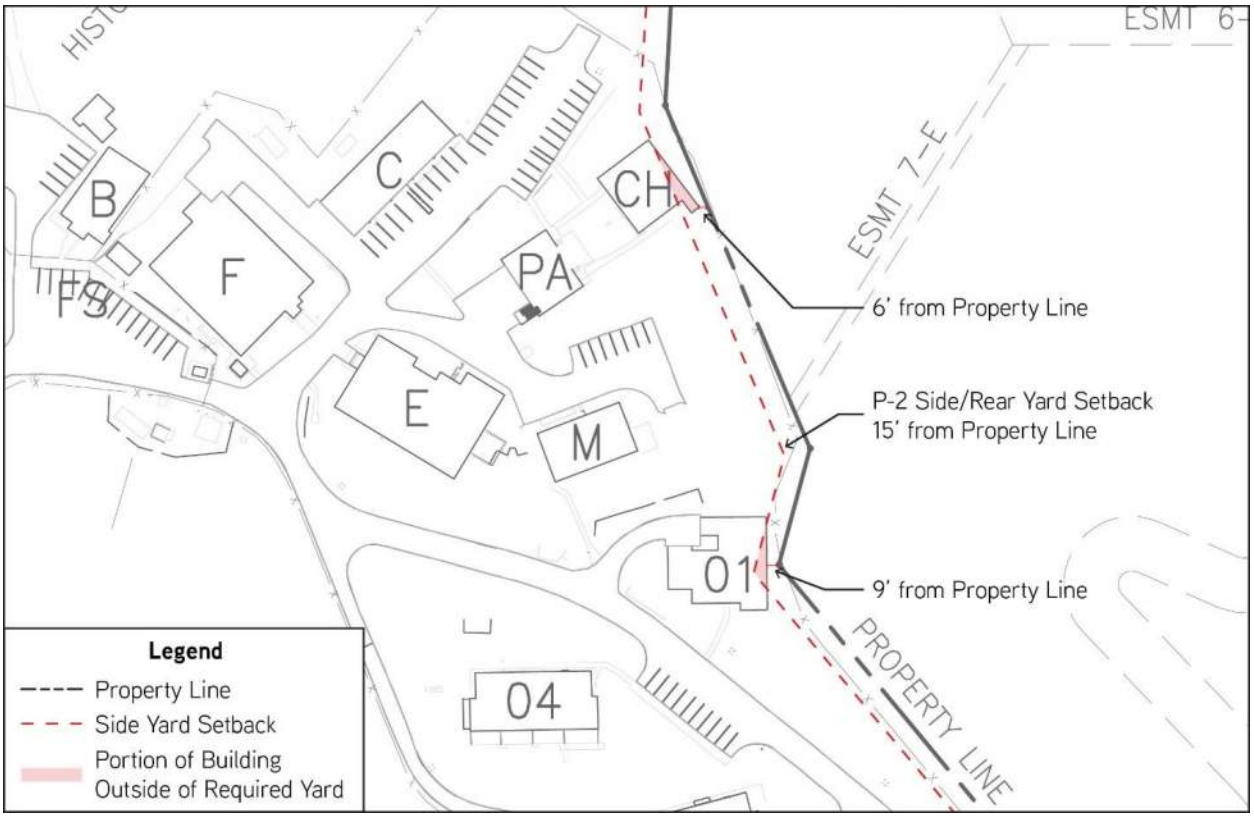


Figure 20: Side/Rear Required Yard per P-2 Development Standard



This page is intentionally blank

4.0 PROJECT ALTERNATIVES

4.1 No Action Alternative

The No Action alternative would preclude the WCF from maintaining and upgrading its facilities and systems to keep operations running efficiently and smoothly. The WCF has its own self-sustaining water and wastewater systems in place to allow the facility to function efficiently despite its isolated location. These systems not only contribute to the facility's necessary functions, but also to the farming program that allows inmates to gain new skills and knowledge, while also providing produce for the facility and PSD's other correctional facilities. If the WCF's operations were to decline and/or halt, the WCF's inmates would be transferred to other facilities, which could lead to prison overcrowding. The island of O'ahu already experiences prison overcrowding in the other correctional facilities, which results in inmates being sent to prisons on the mainland.

This page is intentionally blank

5.0 FINDINGS AND ANTICIPATED DETERMINATION

5.1 Anticipated Determination

The Waiawa Correctional Facility After the Fact Permits for State Special Use Permit (SUP) and Plan Review Use Permit (PRU) project is not anticipated to have a significant impact based on the criteria set forth in HAR, Chapter 200.1, Title 11, Section 12. The objective of this Draft EA is to identify and consider the "significance" of potential environmental effects, which includes the sum of effects on the quality of the environment along with cumulative long-term effects.

As set forth in HAR, Chapter 200.1, Title 1, a prescribed set of 13 Significance Criteria is used to determine the project's impact on the environment. The project's relationship to each criterion is discussed in this chapter.

5.2 Significance Criteria Findings

To determine whether a proposed action may have a significant effect on the environment under HAR Title 11, Chapter 200.1 (2019), the Proposing Agency needs to consider every phase of the action, the expected primary and secondary consequences, cumulative effect, and the short- and long-term effects. The Proposing Agency's review and evaluation of the proposed action's effect on the environment would result in a determination whether: 1) the action would have a significant effect on the environment, and an Environmental Impact Statement Preparation Notice should be issued, or 2) the action would not have a significant effect warranting a Finding of No Significant Impact (FONSI).

1. Irrevocably commits a natural, cultural, or historic resource.

The project is not expected to adversely impact natural or cultural resources in and around the WCF. Technical studies have been conducted to assess the potential impact of the facility on flora and fauna, as well as cultural and archaeological resources in the WCF and its surrounding environment.

Due to the pineapple and sugarcane cultivation that previously occurred at the site, followed by grading, leveling, and filling associated with military use, any evidence of both pre- and post-contact land use has most likely been destroyed or buried. As previously mentioned in Section 1.6, an RLS was prepared by Fung Associates Inc. in 2019. Based on the RLS, three (3) buildings and four (4) structures were found to be existing remnants of the Waiawa Military Reservation and have retained their historic integrity. These buildings and structures were filed to be listed under the State Inventory of Historic Places (SIHP) for the WCF (SIHP 50-80-09-08853).

The WCF site contains primarily alien forestry tree and plant species, and no state or federally listed as threatened or endangered, candidate species for listing as endangered, species of concern, or rare native Hawaiian plant species. The Hawaiian stilt and Hawaiian coot are state and federally listed as endangered species and are protected under the state and federal Endangered Species Act. Should the WCF undergo major construction activities, then the DLNR

and the USFWS will be consulted to evaluate potential impacts on these listed waterbirds from construction activities.

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

The proposed project will not curtail the range of beneficial use of the environment. As previously mentioned, the site has been highly disturbed from previous uses associated with pineapple and sugarcane cultivation and military use. Although the site has been highly disturbed, the WCF has cultivated approximately 8-acres of land to grow produce for the facility's consumption and use. They have also planted pine trees for the DLNR's use in the holiday decorations at the Honolulu City Hall. The facility has managed the resources provided by its environment to maximize the benefits of both the inmates and its operations.

3. Conflicts with the State's environmental policies or long-term environmental goals and guidelines established by law.

The project does not conflict with the State's long-term environmental policies or goals and guidelines. Any potential adverse impacts are associated with short-term construction and maintenance activities associated with the CIPs previously listed and will be mitigated through compliance with regulatory guidelines and use of best management practices.

4. Has a substantial adverse effect on the economic welfare, social welfare, or cultural practices of the community and State.

The project will continue to be beneficial to the economic and social welfare of the community and State by providing a minimum-security corrections facility that provides an environment conducive to the success of inmates re-entering the community after finishing their sentence. This facility contributes to the inmate capacity of the PSD's correctional facilities in the State in the efforts to reduce prison overcrowding, which otherwise could lead to inmates being sent to mainland prisons or even early release.

5. Has a substantial adverse effect on public health.

Short-term construction-related impacts on noise and air quality may occur in association with the CIPs at the WCF, but they will be mitigated by compliance with Department of Health regulations. The facility's existing operations are anticipated to remain the same, and it has not, and will not substantially affect public health.

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

The WCF will not undergo any expansion or major construction activities, thus no adverse secondary impacts are anticipated to result from any construction or operational activities. The

WCF will maintain its use as a minimum-security correctional facility, which has no impact on the population and surrounding community. Its isolated location and its onsite utility systems allow the facility to be self-sustaining with minimal connections to municipal utility systems, thus it will continue to have a minimal impact on public utilities.

7. Involves a substantial degradation of environmental quality.

Construction activities related to the CIPs will cause some impacts to air quality and noise, but they will be temporary in nature and will be mitigated by best management practices in accordance with State and County permit regulations.

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

The WCF and its planned CIPs are not expected to have a significant negative cumulative effect upon the environment. The facility is in an isolated location and does not affect any other projects or uses within its vicinity.

9. Has a substantial adverse effect on a rare, threatened or endangered species, or its habitat.

As previously mentioned, the Hawaiian stilt and Hawaiian coot were observed at the facility during the biological survey conducted in August 2020. These birds are state and federally listed as endangered species and are protected under the state and federal Endangered Species Act. The biological report prepared by HTH stated that no nests or nesting behavior of these birds were observed. The ponds/reservoirs at the WCF do not provide the preferred nesting habitat for the Hawaiian coot, which would be a mosaic of open, shallow water and floating aquatic vegetation for nesting.

Should the WCF undergo major construction activities, then the DLNR and the USFWS will be consulted to evaluate potential impacts on these listed waterbirds from construction activities. Other mitigation measures, as listed in Section 2.6, will be observed by the facility.

10. Has a substantial adverse effect on air or water quality or ambient noise levels.

The construction activities related to the CIPs will cause some impacts to air quality and noise, but they will be temporary in nature, and appropriate regulations and best management practices in accordance with the State Department of Health will be followed.

The WCF will not have any effect on any surface waters or wetlands in the vicinity of the site. No perennial streams, wetlands or other types of surface waters were detected to be in, or within proximity to, the WCF. In addition, the facility itself does not contain many paved and impervious surfaces; most roads and paths are unpaved dirt paths. It is not anticipated that stormwater runoff from the facility would impact the surrounding environment.

11. Has a substantial adverse effect on or be 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.

As previously discussed in Section 2.7, the project site is designated as an area where flood hazards are undetermined, Flood Zone D, according to FEMA's FIRM. It is also located outside of the tsunami evacuation zone and 3.2-foot SLR-XA. Due to its location approximately 3.8-miles inland from the nearest coastline, the WCF is not in an environmentally sensitive area.

The site is located within the "N/A" zone for risk to wildfire hazards, as identified by DLNR-DOFAW. Although the facility is located around dense vegetation, the WCF irrigates most of the site and has agricultural uses, both of which prevent dry patches of land that could be prone to wildfires.

12. Has a substantial adverse effect on scenic vistas and view-planes, during day or night, identified in county or state plans or studies.

The WCF is not located in an area that has been identified as a scenic view plane or area of natural beauty by the State or County and it contains no significant geographical points. The PSD does not plan to expand its facilities, therefore the WCF will remain to have minimum to no impact to scenic vistas and view planes in the area.

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

The buildings at the WCF do not substantially consume energy or emit greenhouse gases. All the housing units and program buildings are naturally ventilated with ceiling fans. In addition, the PSD is in the beginning stages of producing a Sustainability Master Plan for all their facilities statewide. This effort is currently delayed due to the COVID-19 pandemic and travel and facility access restrictions.

6.0 AGENCIES AND ORGANIZATIONS CONSULTED

6.1 Neighborhood Board Meetings

Plans to apply for the PRU and SUP was presented to the Pearl City Neighborhood Board No. 21 at their meeting held on August 27, 2019. Official minutes from the Pearl City Neighborhood Board Meeting is included in Appendix L. Nearby property owners were sent written notification of the presentation to the Pearl City Neighborhood Board.

A brief presentation to the board covered the WCF's history and current programs, along with the permits' processes. A project informational handout that was provided at the meeting and is also included in Appendix L. The following is a summary of the questions and comments made following the presentation:

Elayne Funakoshi (board member)

- General public doesn't realize the process on how the inmates' sentence determines which facility they will be sent to
- The WCF is where inmates go to serve the last phase of their sentence, and it is like a community – it's heart-warming to see them ready to go out into society

Lorna Pacheco (board member)

- Because it's a minimum-security facility, what is the likelihood of the security level changing if there is a lack of space at the other facilities?
    - Response: There are currently no plans to change operations in any way within the next five (5) years.

Myrtle Nyuha (community member)

- Visited the facility with the board many years ago
- Thinks it's a marvelous place and was able to learn a lot about the programs for the inmates
  Thinks this is the place to go for those who need rehabilitation

Albert Fukushima (community member, former board Chairman)

- What is the timeline for the permits?
- Would the applicant do another presentation to the board?
- Requested that a summary of the report (including the history, proposed changes and details on the facility) be provided to the board
    - Response: The SUP application will be submitted before the end of this year. SSFM can inquire with DAGS and PSD if another presentation can be made. The permit applications will be available to the public, and SSFM can notify the board when it is posted online.

Larry Veray (chairman)

- Requested that a tour of the WCF be set up for the board members

Guy Inouye (board member)

- Requested an electronic copy of the handout be provided for the board's new website

Following the meeting, SSFM emailed an electronic copy of the handout to Larry Veray and Kekuni Agard for the board's website. An introduction via email was made to Larry Veray and Mistuko Hayakawa to Tessie Fernandez of PSD for the coordination and scheduling of a tour of the WCF.

In addition, SSFM also made a presentation to the Mililani/Waipio/Melemanu Neighborhood Board No. 25 at their meeting held on October 23, 2019. The Mililani/Waipio/Melemanu Neighborhood Board is not the board of the district that the WCF is in, but DAGS and PSD normally notifies the board of any new activities that occur at the facility because of the district's proximity to the site. Following the presentation, only one question was raised by a board member concerning what actions the permits will be covering and if any new developments would be happening at the WCF. SSFM reiterated that the permits are considered after-the-fact and necessary to bring the facility into compliance with State and County land use laws, and that no new developments would be occurring at the site. Copies of the Mililani/Waipio/Melemanu Neighborhood Board No. 25 meeting are also included in Appendix L.

A presentation to the Pearl City Neighborhood Board No. 21 is planned for January 2021 to provide an update on the PRU and SUP process, and to inform the board of the Draft EA process. The Mililani/Waipio/Melemanu Neighborhood Board will be consulted via email, as in-person meetings have been cancelled for the foreseeable future due to the COVID-19 pandemic.

6.2 Pre-Assessment Consultation

The following agencies and organizations were consulted during the preparation of the Draft EA. All written comments received during the early consultation period of the Draft EA are included in Appendix M.

Table 11: Pre-Assessment Consultation

Distribution	Pre-Assessment Consultation Recipient	Comments Received
FEDERAL AGENCIES		
U.S. Fish and Wildlife Service, Pacific Islands Fish and Wildlife Office	X	
U.S. Department of Agriculture, Natural Resources Conservation Service	X	

Distribution	Pre-Assessment Consultation Recipient	Comments Received
U.S. Environmental Protection Agency, Region 9, Pacific Islands Office	X	
U.S. Army Corps of Engineers, Regulatory Branch	X	
U.S. Geological Survey, Pacific Island Ecosystems Research Center	X	
STATE OF HAWAIʻI AGENCIES		
State of Hawaiʻi, Office of Planning	X	X
State of Hawaiʻi, Land Use Commission, DBEDT	X	
State of Hawaiʻi, DBEDT, Hawaiʻi Housing Finance & Development Corporation	X	
State of Hawaiʻi, Department of Land and Natural Resources, State Historic Preservation Division	X	
State of Hawaiʻi, Department of Land and Natural Resources, Engineering Division	X	
State of Hawaiʻi, Department of Land and Natural Resources, Land Division	X	
State of Hawaiʻi, Department of Health, Office of Environmental Quality Control	X	
State of Hawaiʻi, Department of Health, Clean Air Branch	X	
State of Hawaiʻi, Department of Health, Clean Water Branch	X	
State of Hawaiʻi, Department of Health, Wastewater Branch	X	
State of Hawaiʻi, Department of Transportation, Highways	X	X

Distribution	Pre-Assessment Consultation Recipient	Comments Received
State of Hawai‘i, Department of Education, Office of Facilities and Operations	X	
Office of HawaiianAffairs	X	
CITY AND COUNTY OF HONOLULU		
Board of Water Supply	X	
City and County of Honolulu, Department of Planning and Permitting, Land Use Permits Division	X	
City and County of Honolulu, Department of Planning and Permitting, Planning Division	X	X
City and County of Honolulu, Department of Parks and Recreation	X	
City and County of Honolulu, Department of Design and Construction	X	
City and County of Honolulu, Department of Environmental Services	X	
City and County of Honolulu, Department of Community Services	X	
City and County of Honolulu, Fire Department	X	X
City and County of Honolulu, Police Department	X	
Pearl City Neighborhood Board No. 21	X	
Mililani/Waipio/Melemanu Neighborhood Board No. 25	X	
ELECTED OFFICIALS		
Office of the Governor, Honorable Governor David Ige	X	
Office of the Mayor, Honorable Mayor Kirk Caldwell	X	

Distribution	Pre-Assessment Consultation Recipient	Comments Received
United States House of Representatives, Hawai'i, District 1	X	
United States Senate, Senator Mazie Hirono	X	
United States Senate, Senator Brian Schatz	X	
State House of Representatives, House District 35	X	
State House of Representatives, House District 37	X	
Senate District 18, Senator Michelle Moriwaki	X	
Honolulu City Council, Council District 8	X	
Honolulu City Council, Council District 2	X	
Honolulu City Council, Public Safety and Welfare Committee	X	
Honolulu City Council, Zoning, Planning and Housing Committee	X	
OTHER AGENCIES		
Kamehameha Schools	X	
AES Distributed Energy	X	
Clearway Energy Group LLC	X	
Castle & Cooke	X	
Koa Ridge Ranch	X	
Mililani Cemetery	X	

This page is intentionally blank

7.0 REFERENCES

Agricultural Lands of Importance to the State of Hawaiʻi (ALISH). Agricultural Lands of Importance to the State of Hawaiʻi for Islands of Kauaʻi, Oʻahu, Maui, Molokaʻi, Lānaʻi, & Hawaiʻi. 1977.

City and County of Honolulu, Department of Planning and Permitting. Building Permit Search. Accessed August 2019.

City and County of Honolulu, Department of Planning and Permitting. *Central Oʻahu Sustainable Communities Plan, Proposed Revised Plan.* October 2016.

City and County of Honolulu, Department of Planning and Permitting. *Oʻahu General Plan, Proposed Revised Plan*. 2017.

City and County of Honolulu. *The Revised Ordinances of the City and County of Honolulu 1990, Chapter 21: Land Use Ordinance*. 1990.

Cultural Surveys Hawaiʻi. *Archaeological Assessment of a Portion of the Waiawa Correctional Facility, ʻEwa, Oʻahu, Hawaiʻi (TMK 9-6-05:11),* 24 September 1997.

HHF Planners. *Waiawa Correctional Facility Due Diligence Report*, May 2017.

Giambelluca ,T.W., Q. Chen, A.G. Frazier, J.P. Price, Y-L Chen, P-S Chu, J. Eischeid, and D. Delparte. *The Rainfall Atlas of Hawaiʻi.* http://rainfall.geography.Hawaiʻi.edu. Accessed March 2019.

M&E Pacific, Inc. *Preliminary Engineering Report for the Waiawa Correctional Facility Interim Infrastructure Improvements,* May 1997.

M&E Pacific, Inc. *Preliminary Engineering Report for Waiawa Correctional Facility Wastewater System Improvements,* 26 August 2005, pg. 30-31.

Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Accessed September 2019.

The Louis Berger Group, Inc. *Final Environmental Assessment, Proposed Temporary Program Structures.* June 2008.

Wilson Okamoto & Associates, Inc. *Final Environmental Assessment and Finding of No Significant Impact (FONSI), Waiawa Correctional Facility Improvements.* December 1997.

U.S. Department of Agriculture, Natural Resource Conservation Service. *Soil Survey of the Islands of Kauaʻi, Oʻahu, Maui, Molokaʻi, and Lānaʻi, State of Hawaiʻi.* In Cooperation with University of Hawaiʻi Agricultural Experiment Station. 1972.

U.S. Fish and Wildlife Service (USFWS). 2020a. National Wetlands Inventory Mapper. Washington, D.C. https://www.fws.gov/wetlands/data/mapper.html. Accessed March 15, 2020.

APPENDIX A - Governor's Executive Order No. 3414

Executive Order No. 3414

Setting Aside Land for Public Purposes

By this Executive Order, I, the undersigned, Governor of the State of Hawaii, by virtue of the authority in me vested by Section 171-11, Hawaii Revised Statutes, and every other authority me hereunto enabling, do hereby order that the public land hereinafter described be, and the same is, hereby set aside for the following public purposes:

FOR CORRECTIONAL AND EDUCATIONAL FACILITY PURPOSES to be under the control and management by the Department of Corrections, State of Hawaii, being those certain parcels of land designated as "Waiawa Correctional Facility Site Parcels 1 and 2," containing an area of approximately 157.875 acres and 22.611 acres, respectively, SUBJECT TO Easements A through D inclusive, and TOGETHER WITH Easements 3-E through 8-E inclusive, Easements as shown on Land Court Application 1000, and Sanitary Sewer Outfall Easement, all more particularly described in Exhibit "A", attached hereto and made a part hereof; said exhibit being a survey description prepared by the Survey Division, Department of Accounting and General Services, State of Hawaii, being designated C.S.F. No. 20,841 and dated September 29, 1988, and also delineated on map designated, H.S.S. Plat 2192.

SUBJECT to disapproval by the Legislature by two-thirds vote of either the Senate or the House of Representatives or by majority vote of both, in any regular or special session next following the date of this Executive Order.

In Witness Whereof, I have hereunto set my hand and caused the Great Seal of the State of Hawaii to be affixed.

Done at the Capitol at Honolulu this 24th day of February Nineteen Hundred and 89

John Waihee
Governor of the State of Hawaii

Approved as to form:

William McCue
Deputy Attorney General

Dated: 1/9/89

State of Hawaii

Office of the Lieutenant Governor

This is to Certify That the within is a true copy of Executive Order No. 3414 setting aside land for public purposes, the original of which is on file in this office.

In Testimony Whereof, the Lieutenant Governor of the State of Hawaii, has hereunto subscribed his name and caused the Great Seal of the State to be affixed.

DONE in Honolulu, this ..... day of ....., A.D. 19.....

Executive Order No. 3414

Setting Aside Land for Public Purposes

Land .....

Purpose .....

Date .....

STATE OF HAWAII
SURVEY DIVISION
DEPT. OF ACCOUNTING AND GENERAL SERVICES
HONOLULU

C.S.F. No. 20,841

September 29, 1988

WAIAWA CORRECTIONAL FACILITY SITE
PARCELS 1 AND 2
Waiawa, Ewa, Oahu, Hawaii

Being portions of Royal Patent 4475, Land Commission Award 7713, Apana 46 to V. Kamamalu conveyed to the State of Hawaii by the United States of America by Deed dated April 25, 1985 and recorded in Liber 18721, Page 536 (Land Office Deed S-27506).

PARCEL 1

Beginning at the southwest corner of this parcel of land, the coordinates of said point of beginning referred to Government Survey Triangulation Station "WAIPIO UKA" being 1602.20 feet South and 14,354.82 feet East, thence running by azimuths measured clockwise from True South:-

1. 156° 55' 40" — 620.15 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;

2. 275° 05' 40" — 184.75 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;

3. 243° 19' 20" — 204.98 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;

4. 300° 49' 10" — 349.19 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;

5. 278° 58' 20" — 143.53 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;

6. 265° 40' 40" — 253.47 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;

7. 226° 57' 50" — 178.90 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;

8. 253° 03' — 227.80 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;

EXHIBIT "A"

9. 269° 43' 40" — 253.52 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;

10. 249° 55' 50" — 202.92 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;

11. 185° 07' — 201.56 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;

12. 207° 48' 40" — 500.22 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;

13. 139° 22' — 224.30 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;

14. 47° 04' 50" — 218.85 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;

15. 42° 35' — 403.96 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;

16. 75° 19' 20" — 552.79 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;

17. 111° 57' 10" — 313.94 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;

18. 91° 53' 40" — 569.76 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;

19. 125° 18' 50" — 183.02 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;

20. 72° 56' 40" — 339.33 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;

21. 88° 46' — 169.77 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;

22. 168° 17' 50" — 739.04 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;

23. 231° 37' — 211.25 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;

24. 242° 42' 20" 360.57 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;

25. 291° 53' 30" 485.27 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;

26. 254° 32' 10" 424.21 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;

27. 326° 40' 238.64 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;

28. 304° 25' 243.93 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;

29. 272° 45' 615.26 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;

30. 244° 43' 30" 910.77 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;

31. 267° 35' 20" 341.30 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;

32. 279° 17' 50" 204.57 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;

33. 278° 50' 10" 632.00 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;

34. 271° 10' 50" 255.38 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;

35. 349° 19' 50" 335.71 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;

36. 8° 24' 370.13 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;

37. 60° 07' 10" 490.27 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;

38. 167° 36' 265.09 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;

39. 187° 50' 20" 174.54 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;

40. 162° 28' 30" 164.53 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;

41. 92° 18' 20" 145.37 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;

42. 43° 27' 30" 451.26 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;

43. 2° 38' 240.88 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;

44. 340° 10' 10" 84.74 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;

45. 11° 03' 90.94 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;

46. 136° 34' 40" 226.18 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;

47. 18° 28' 10" 173.05 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;

48. 3° 19' 10" 218.62 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;

49. 337° 02' 273.86 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;

50. 15° 06' 88.70 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;

51. 320° 18' 40" 314.59 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;

52. 330° 53' 50" 269.50 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;

53. 39° 11' 20" 136.52 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;

54.	348° 35' 40"	198.59 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;
55.	22° 05' 20"	119.28 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;
56.	78° 33' 40"	131.63 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;
57.	154° 53' 50"	156.43 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;
58.	196° 59' 10"	206.94 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;
59.	68° 39'	626.76 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;
60.	33° 20' 30"	494.89 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;
61.	104° 03' 50"	177.54 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;
62.	146° 26' 30"	542.37 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;
63.	79° 36'	509.03 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;
64.	39° 07' 40"	284.20 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;
65.	144° 17' 50"	763.70 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;
66.	163° 15' 30"	198.81 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;
67.	58° 51' 20"	155.15 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu to the point of beginning and containing an AREA OF 157.875 ACRES.

Subject, however, to the following easements as described in Deed from the United States of America to the State of Hawaii dated August 25, 1985 and recorded in Liber 18721, Page 536 (Land Office Deed S-27506) over, under and across the above described Waiawa Correctional Facility Site, Parcel 1, said easements more particularly described as follows:

EASEMENT A FOR WAIAHOLE WATER CO., LTD'S TUNNEL PURPOSES

Being a strip of land forty (40.00) feet wide and extending twenty (20.00) feet on each side of the following described centerline:

Beginning at the easterly end of this centerline, the true azimuth and distance from the end of Course 47 of the above-described Waiawa Correctional Facility, Parcel 1 being 3° 19' 10" 59.47 feet, thence running by azimuths measured clockwise from True South:-

1.	95° 54' 05"	842.26 feet to the westerly end of this centerline, the true azimuth and distance to the end of Course 11 of the above-described Waiawa Correctional Facility Site, Parcel 1 being: 185° 07' 37.30 feet and containing an AREA OF 0.773 ACRE.

EASEMENT B FOR WAIAHOLE WATER CO., LTD'S TUNNEL PURPOSES

Being a strip of land forty (40.00) feet wide and extending twenty (20.00) feet on each side of the following described centerline:

Beginning at the easterly end of this centerline, the true azimuth and distance from the end of Course 16 of the above-described Waiawa Correctional Facility Site, Parcel 1 being 255° 19' 20" 77.92 feet, thence running by azimuths measured clockwise from True South:-

1.	95° 54' 05"	168.14 feet to the westerly end of this centerline, the true azimuth and distance to the end of Course 16 of the above-described Waiawa Correctional Facility Site, Parcel 1 being: 291° 57' 10" 99.06 feet and containing an AREA OF 0.154 ACRE.

EASEMENT C FOR TELEPHONE LINE PURPOSES

Being a strip of land ten (10.00) feet wide and extending five (5.00) feet on each side of the following described centerline:

Beginning at the easterly end of this centerline, the true azimuth and distance from the end of Course 26 of the above-described Waiawa Correctional Facility Site, Parcel 1 being 326° 40' 56.40 feet, thence running by azimuths measured clockwise from True South:-

1.	97° 17' 10"	138.80 feet to the westerly end of this centerline, the true azimuth and distance to the end of Course 26 of the above-described Waiawa Correctional Facility Site, Parcel 1 being: 254° 32' 10" 110.70 feet and containing an AREA OF 1388 SQUARE FEET.

EASEMENT D FOR TELEPHONE LINE PURPOSES

Being a strip of land ten (10.00) feet wide and extending five (5.00) feet on each side of the following described centerline:

Beginning at the easterly end of this centerline, the true azimuth and distance from the end of Course 34 of the above described Waiawa Correctional Facility Site, Parcel 1 being 349° 19' 50' 30.00 feet, thence running by azimuths measured clockwise from True South:-

1.	98° 38'	226.38 feet to the westerly end of this centerline, the true azimuth and distance to the end of Course 33 of the above-described Waiawa Correctional Facility Site, Parcel 1 being: 91° 10' 50" 37.06 feet and containing an AREA OF 2264 SQUARE FEET.

Reserving, however, to the State of Hawaii its successors and assigns Road Easements E, F, G and H over and across the above described Waiawa Correctional Facility Site, Parcel 1 as shown on plan attached hereto and made a part hereof.

PARCEL 2

Beginning at the east corner of this parcel of land, the coordinates of said point of beginning referred to Government Survey Triangulation Station "WAIPIO UKA" being 1562.69 feet North and 16,983.43 feet East, thence running by azimuths measured clockwise from True South:-

1.	41° 26' 50"	635.52 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;
2.	63° 14'	736.12 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;
3.	79° 19' 10"	368.21 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;
4.	156° 36' 35"	854.46 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;
5.	242° 16' 30"	284.97 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;
6.	272° 54' 50"	369.50 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;
7.	279° 45' 40"	308.14 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;
8.	259° 55' 10"	167.42 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;
9.	277° 13'	349.79 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;
10.	244° 19' 40"	154.04 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu;
11.	276° 06' 20"	204.52 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46 to V. Kamamalu to the point of beginning and containing an AREA OF 22.611 ACRES.

Together with the following easements in favor of the above described Waiawa Correctional Facility Site, Parcels 1 and 2 as described in Deed from the United States of America to the State of Hawaii dated April 25, 1985 and recorded in Liber 18721, Page 536 (Land Office Deed S-27506) over, under and across Royal Patent 4475, Land Commission Award 7713, Apana 46 to V. Kamamalu and Land Court Application 1000 and more particularly described as follows:

A. EASEMENT 3-E FOR POWER LINE PURPOSES:

Being a strip of land fifty (50.00) feet wide and extending twenty-five (25.00) feet on each side of the following described centerline:

Beginning at the southerly end of this centerline, the true azimuth and distance from the end of Course 29 of the above-described Waiawa Correctional Facility Site, Parcel 1 being 244° 43' 30" 313.11 feet, thence running by azimuths measured clockwise from True South:-

1. 143° 21' 10" 624.22 feet to the northerly end of this centerline, the true azimuth and distance to the end of Course 3 of the above-described Waiawa Correctional Facility Site, Parcel 2 being : 79° 19' 10" 109.88 feet and containing an AREA OF 0.717 ACRE.

B. EASEMENT 4-E FOR ACCESS ROAD PURPOSES:

Being a strip of land forty (40.00) feet wide and extending twenty (20.00) feet on each side of the following described centerline:

Beginning at the south end of this centerline, the true azimuth and distance to the end of Course 34 of the above-described Waiawa Correctional Facility Site, Parcel 1 being 271° 10' 50" 20.15 feet, thence running by azimuths measured clockwise from True South:-

1. 174° 15' 40" 761.98 feet;

2. Thence on a curve to the left with a radius of 800.00 feet, the arc length being 223.09 feet and the chord azimuth and distance being: 166° 16' 20" 222.37 feet;

3. 158° 17' 394.87 feet;

4. Thence on a curve to the left with a radius of 125.00 feet, the arc length being 178.63 feet and the chord azimuth and distance being: 117° 20' 40" 163.81 feet;

5. 76° 24' 20" 167.33 feet;

6. 71° 31' 40" 472.80 feet to the west end of this centerline, the true azimuth and distance to the initial point of the above-described Waiawa Correctional Facility Site, Parcel 2 being: 276° 06' 20" 48.09 feet and containing an AREA OF 2.019 ACRES.

C. EASEMENT OF 5-E FOR ACCESS ROAD PURPOSES

Being a strip of land forty (40.00) feet wide and extending twenty (20.00) feet on each side of the following described centerline:

Beginning at the south end of this centerline, the true azimuth and distance to the end of Course 57 of the above-described Waiawa Correctional Facility Site, Parcel 1 being 154° 53' 50" 29.84 feet, thence running by azimuths measured clockwise from True South:-

1. 16° 59' 10" 29.84 feet;

2. 334° 53' 50" 91.56 feet;

3. 355° 09' 50" 83.39 feet;

4. 253° 44' 50" 208.46 feet;

5. Thence on a curve to the left with a radius of 30.00 feet, the arc length being 40.02 feet and the chord azimuth and distance being: 215° 32' 37.12 feet;

6. 177° 19' 10" 34.37 feet;

7. Thence on a curve to the right with a radius of 50.00 feet, the arc length being 49.44 feet and the chord azimuth and distance being: 205° 38' 45" 47.45 feet;

8. 233° 58' 20" 17.44 feet;

9. Thence on a curve to the left with a radius of 100.00 feet, the arc length being 94.97 feet and the chord azimuth and distance being: 206° 46' 91.43 feet;

10. 179° 33' 40" 21.55 feet;

11. Thence on a curve to the right with a radius of 150.00 feet, the arc length being 95.94 feet and the chord azimuth and distance being: 197° 53' 05" 94.32 feet;

12. 216° 12' 30" 169.54 feet;

13. Thence on a curve to the left with a radius of 30.00 feet, the arc length being 42.24 feet and the chord azimuth and distance being: 175° 52' 30" 38.83 feet;

14. 135° 32' 30" 105.82 feet;

15. Thence on a curve to the right with a radius of 150.00 feet, the arc length being 88.57 feet and the chord azimuth and distance being: 152° 27' 25" 87.30 feet;

16. 169° 22' 20" 70.54 feet;

17. Thence on a curve to the left with a radius of 150.00 feet, the arc length being 86.66 feet and the chord azimuth and distance being: 152° 49' 15" 85.47 feet;

18. 136° 16' 10" 161.69 feet;

19. Thence on a curve to the right with a radius of 30.00 feet, the arc length being 82.37 feet and the chord azimuth and distance being: 214° 55' 20" 58.83 feet;

20. 293° 34' 30" 64.37 feet;

21. Thence on a curve to the left with a radius of 30.00 feet, the arc length being 62.15 feet and the chord azimuth and distance being: 234° 13' 35" 51.62 feet;

22. 174° 52' 40" 71.96 feet;

23. Thence on a curve to the right with a radius of 150.00 feet, the arc length being 45.76 feet and the chord azimuth and distance being: 183° 37' 05" 45.59 feet;

24. 192° 21' 30" 253.66 feet to the north end of this centerline and containing an AREA OF 1.903 ACRES.

D. EASEMENT 6-E FOR WATER AND POWER LINE PURPOSES

Beginning at the northeast corner of this easement, at the end of Course 45 of the above-described Waiawa Correctional Facility Site, Parcel 1, the coordinates of said point of beginning referred to Government Survey Triangulation Station "WAIPIO UKA" being 742.66 feet South and 17032.36 feet East, thence running by azimuths measured clockwise from True South:-

1. 336° 02' 50" 145.91 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46, to V. Kamamalu;

2. 270° 00' 240.69 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46, to V. Kamamalu;

3. 180° 00' 17.54 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46, to V. Kamamalu;

4. 269° 04' 26.20 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46, to V. Kamamalu;

5. 360° 00' 57.97 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46, to V. Kamamalu;

6. 90° 00' 292.90 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46, to V. Kamamalu;

7. 156° 02' 50" 285.07 feet along the remainder of R.P. 4475, L.C.Aw. 7713, Ap. 46, to V. Kamamalu;

8. 316° 34' 40" 120.02 feet along the Waiawa Correctional Facility Site, Parcel 1 to the point of beginning and containing an AREA OF 0.466 ACRE.

E. EASEMENT 7-E FOR POWER LINE PURPOSES

Being a strip of land ten (10.00) feet wide and extending five (5.00) feet on each side of the following described centerline:

Beginning at the south end of this centerline, the true azimuth and distance to the end of Course 49 of the above described Waiawa Correctional Facility Site, Parcel 1 being 337° 02' 33.82 feet, thence running by azimuths measured clockwise from True South:-

1. 212° 21' 50" 314.65 feet to the north end of this centerline and containing an AREA OF 0.072 ACRE.

F. EASEMENT 8-E FOR ACCESS ROAD PURPOSES

Being a strip of land twenty (20.00) feet wide and extending ten (10.00) feet on each side of the following described centerline:

Beginning at the westerly end of this centerline, and on the boundary between the Lands of Waipio and Waiawa, the coordinates of said point of beginning referred to Government Survey Triangulation Station "WAIPIO UKA" being 4600.27 feet South and 7880.16 feet East, thence running by azimuths measured clockwise from True South:-

1. On a curve to the right with a radius of 400.00 feet, the arc length being 129.12 feet and the chord azimuth and distance being: 312° 42' 10" 128.56 feet;
2. 321° 57' 83.97 feet;
3. Thence on a curve to the left with a radius of 650.00 feet, the arc length being 104.24 feet and the chord azimuth and distance being: 317° 21' 20" 104.13 feet;
4. 312° 45' 40" 124.20 feet;
5. Thence on a curve to the left with a radius of 125.00 feet, the arc length being 150.07 feet and the chord azimuth and distance being: 278° 22' 05" 141.22 feet;
6. 243° 58' 30" 2879.28 feet;

7. Thence on a curve to the left with a radius of 575.00 feet, the arc length being 132.11 feet and the chord azimuth and distance being: 237° 23' 35" 131.81 feet;
8. 230° 48' 40" 731.14 feet;
9. Thence on a curve to the left with a radius of 225.00 feet, the arc length being 175.02 feet and the chord azimuth and distance being: 208° 31' 35" 170.64 feet;
10. 186° 14' 30" 233.26 feet;
11. Thence on a curve to the right with a radius of 150.00 feet, the arc length being 159.01 feet and the chord azimuth and distance being: 216° 36' 40" 151.67 feet;
12. 246° 58' 50" 2764.29 feet to the easterly end of this centerline, the true azimuth and distance from the initial point of the above described Waiawa Correctional Facility Site, Parcel 1 being: 156° 55' 40" 52.18 feet and containing an AREA OF 3.53 ACRES.

G. Easements as shown on Land Court Application 1000

Easement No.	Map No.
19	30
901	348
902	348
903	348
904	348
905	348
906	348
2848	513

H. Sanitary Sewer Outfall Easement

Being a strip of land five (5.00) feet wide and extending two and one-half (2.50) feet on each side of this centerline, covered by Lease No. 14,835 from Edwin P. Murray, et al, Trustees under the Will and of the Estate of Bernice P. Bishop, Deceased, to the United States of America dated October 21, 1965 and recorded in Liber 5191, Pages 253-258 and more particularly described as follows:

C.S.F. No. 20,841

September 29, 1988

Beginning at the east end of this centerline, the true azimuth and distance from the end of course 56 of the above described Waiawa Correctional Facility Site, Parcel 1 being 154° 53' 50" 32.00 feet, thence running by azimuths measured clockwise from True South:-

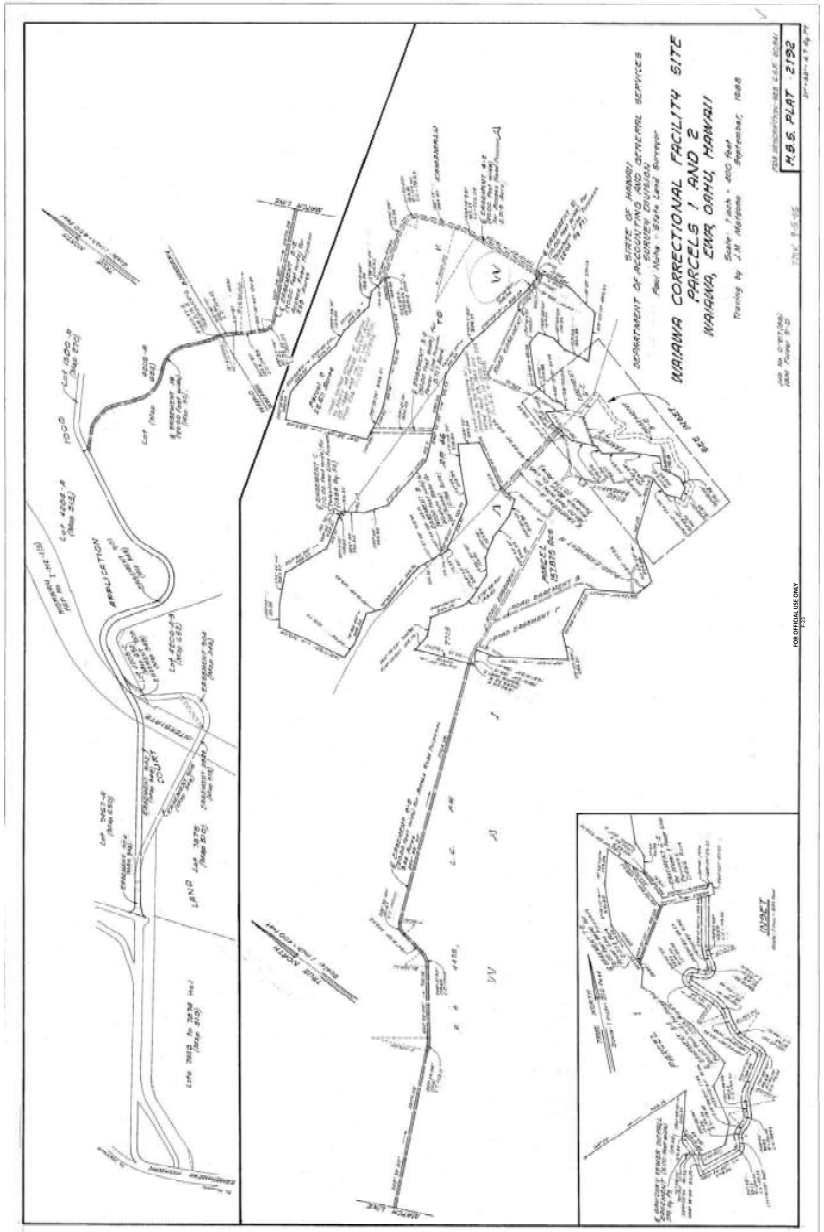
1. 74° 00' 71.00 feet to the west end of this centerline and containing an AREA OF 355 SQUARE FEET.

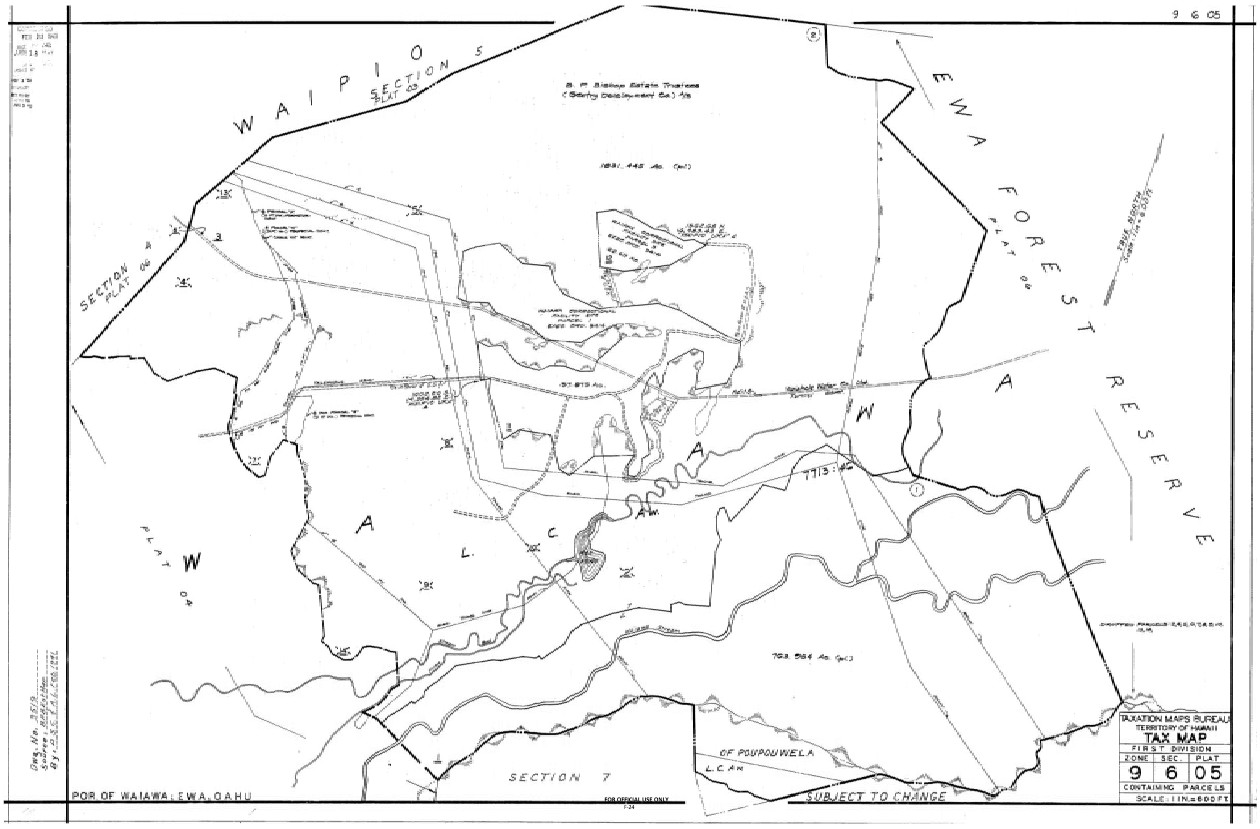
SURVEY DIVISION
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
STATE OF HAWAII

By: Joseph M. Matsuno
Joseph M. Matsuno
Land Surveyor

gm

Compiled from data furn. by
U.S.A., Ld.Ct.App. 1000, Maps 30,
348, 513 and Govt. Survey Records.




9 6 05
WAIPIO
SECTION 5
PLAT 03
SECTION 4
PLAT 06
EWA FOREST RESERVE
PLAT 06
WAIAWA
WAIALE
PLAT 04
SECTION 7
OF POUPOUWELA
L.C.AW.
SUBJECT TO CHANGE
POR OF WAIAWA, EWA, OAHU
FOR OFFICIAL USE ONLY
TAXATION MAPS BUREAU
TERRITORY OF HAWAII
TAX MAP
FIRST DIVISION
ZONE SEC. PLAT
9 6 05
CONTAINING PARCELS
SCALE: 1 IN.=600 FT.

APPENDIX B - Declaration of Exemption

DAVID Y. IGE
GOVERNOR

STATE OF HAWAII
DEPARTMENT OF PUBLIC SAFETY
919 Ala Moana Boulevard, 4th Floor
Honolulu, Hawaii 96814

NOLAN P. ESPINDA
DIRECTOR

Maria C. Cook
Deputy Director
Administration

Jodie F. Maesaka-Hirata
Deputy Director
Corrections

Renee R. Sonobe Hong
Deputy Director
Law Enforcement

No. _____

November 19, 2019

DECLARATION OF EXEMPTION

from the preparation of an environmental assessment under the authority of Chapter 343, HRS and Chapter 11-200.1, HAR

Location: Waiawa Correctional Facility
94-560 Kamehameha Highway
Waipahu, Oahu, 96797
TMK: 9-6-005:011

Description: Declaration of exemption for existing accessory and appurtenant structures at Waiawa Correctional Facility. These structures include:

WCF-P Program Building
WCF-I Industries Building
WCF-CP Carport
WCF-S1 Fuel Storage Shed
WCF-G2 Gatehouse Storage Shed
WCF-G3 Visitor Check-in Office

Consulted Parties: Department of Public Safety, Department of Accounting and General Services,

Exemption Class No.: 3 [HAR § 11-200.1-15(c)(3)].

Construction and location of single, new, small facilities or structures and the alteration and modification of the facilities or structures and installation of new, small equipment or facilities and the alteration and modification of the equipment or facilities, including, but not limited to:

a. Single-family residences less than 3,500 square feet, as measured by the controlling law under which the proposed action is being considered, if not in conjunction with the building of two or more such units;

b. Multi-unit structures designed for not more than four dwelling units if not in conjunction with the building of two or more such structures;

c. Stores, offices, and restaurants designed for total occupant load of twenty individuals or fewer per structure, if not in conjunction with the building of two or more such structures; and

d. Water, sewage, electrical, gas, telephone, and other essential public utility services extensions to serve such structures or facilities; accessory or appurtenant structures including garages, carports, patios, swimming pools, and fences; and, acquisition of utility easements.

Other notes: Accessory and appurtenant structures essential to the operations of Waiawa Correctional Facility. These structures do not increase the capacity or bed count of the facility.

I have considered the potential effect of the above listed structures as provided by Chapter 343, HRS and Chapter 11-200.1 HAR. I declare that these structures will have minimal or no significant effect on the environment and is therefore exempt from the preparation of an environmental assessment.

for DIR (Acting Chief Planner)
Nolan P. Espinda, Director
Department of Public Safety

Date: 11/19/19

attachment
cc: Lance Maja – DAGS PB
Ivan Lee - SSFM

APPENDIX C - Reconnaissance Level Survey

DAVID Y. IGE
GOVERNOR OF
HAWAII

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

STATE HISTORIC PRESERVATION DIVISION
KAKUHIHEWA BUILDING
601 KAMOKILA BLVD, STE 555
KAPOLEI, HAWAII 96707

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

ROBERT K. MASUDA
FIRST DEPUTY

M. KALEO MANUEL
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

February 4, 2020

IN REPLY REFER TO:
LOG NO: 2019.01682
2019.01749
DOC NO: 2001TGM10
Architecture

Christine Kinimaka, Public Works Administrator
Planning Branch, Division of Public Works
Department of Accounting & General Services
650 S. King Street
Honolulu, HI 96813
Chris.kinimaka@hawaii.gov

Dear Ms. Kinimaka:

SUBJECT: HRS Chapter 6E-8 Historic Preservation Review
Waiawa Correctional Facility – Plan Review Use and Special Use Permit
DAGS Job No: 12-27-5715
94-560 Kamehameha Highway, Waipahu, HI 96797
Waiawa Ahupuaʻa, ʻEwa Moku, Island of Oʻahu
TMK: (1) 9-6-005:011

On December 11, 2019, SHPD accepted the Reconnaissance Level Survey (RLS) for the Waiawa Correctional Facility (WCF) located 94-560 Kamehameha Highway, Waipahu, HI (LOG NO: 2019.01682; DOC NO: 1912TGM05).

The State Historic Preservation Division (SHPD) received the filing fees per §13-284-4, HAR, on December 20, 2019.

The State Inventory of Historic Places (SIHP) number for the Waiawa Correctional Facility is: 50-80-09-08853.

Please contact Tanya Gumapac-McGuire, Architectural Historian, at (808) 692-8022 or at Tanya.Gumapac-Mcguire@hawaii.gov regarding architectural resources or this letter.

Aloha,
Alan Downer

Alan Downer, PhD.
Deputy State Historic Preservation Officer
Administrator, State Historic Preservation Division

cc: Joseph Earing, joseph.m.earing@hawaii.gov
Lance Maja, lance.y.maja@hawaii.gov
Alison Chiu, alison@funghawaii.com

Waiawa Correctional Facility

Reconnaissance Level Survey

Located Within the Project Area

Final Report

July 9, 2019

FUNG ASSOCIATES INC.

TABLE OF CONTENTS

Statement of Project Objectives 1

Coverage and Methodology 2

Boundary Justification & Setting 3

Historic Overview 5

Data Summary Recommendations 8

Site Map and Data Summary 9

Bibliography 10

Data Sheets 11

LIST OF FIGURES

Figure 1: *Waiawa Correctional Facility Sign* 1

Figure 2: *TMK Outline of Site* 3

Figure 3: *Waiahole Ditch Irrigation System* 4

Figure 4: *Historic Aerial of Waiawa Military Reservation* 5

Figure 5: *Historic Map of Waiawa Radio Transmitting Station, October 24, 1957* 6

Figure 6: *Historic Image of Telecommunication Huts and Antenna Fields, April 12, 1956* 7

Figure 7: *Site Map and Data Summary* 9

Figure 8: *Building 4 North Facade* 20

Figure 9: *Building 4 South Facade* 21

Figure 10: *Building 4 West Facade* 21

Figure 11: *Building 4 East Facade* 22

Figure 12: *Building 4 Location Map* 23

Figure 13: *Building 5 North Facade* 24

Figure 14: *Building 5 South Facade* 24

Figure 15: *Building 5 West Facade* 25

Figure 16: *Building 5 East Facade* 25

Figure 17: *Building 5 Location Map* 26

LIST OF FIGURES

Figure 18: *Building 6 North Facade* 27

Figure 19: *Building 6 South Facade* 27

Figure 20: *Building 6 West Facade* 28

Figure 21: *Building 6 East Facade* 28

Figure 22: *Building 6 Location Map* 29

Figure 23: *Telecommunication Huts Location* 30

Figure 24: *Telecommunication Huts* 30

Figure 25: *Telecommunication Huts Location Map* 31

STATEMENT OF PROJECT OBJECTIVES

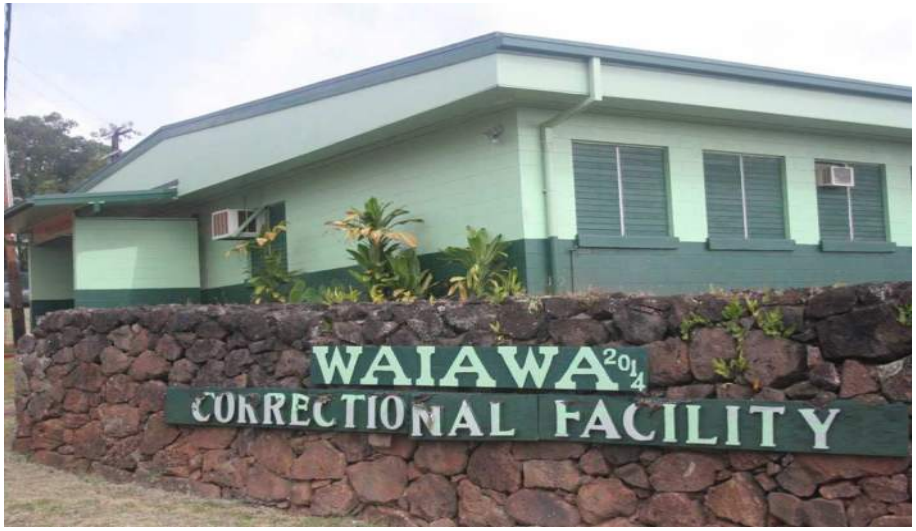


Figure 1: *Waiawa Correctional Facility Sign*
Source: facebook.com

This reconnaissance level survey (RLS) was undertaken in order to identify, and document eligible historic properties located at the Waiawa Correctional Facility (WCF). The Waiawa Correctional Facility is located at 94-560 Kamehameha Highway, Waipahu, HI 96797, TMK: (1) 9-6-005:011. The survey area is a 157.875-acre parcel consisting of twenty-nine buildings and ten structures ranging in age from the 1940s to the 1990s.

The Department of Accounting and General Services (DAGS) has undertaken this survey to identify historic properties, in compliance with Hawaii Revised Statutes (HRS) 6E. This survey provides baseline information for evaluating and assessing the historic significance of all buildings and structures located on the property. A historic overview is included within this survey.

COVERAGE & METHODOLOGY

The survey followed a methodology which included performing background research, undertaking a site visit, photographing and gathering basic information on the buildings, and writing up the results of the survey. The survey area, within the fenced portion of the property, contains twenty-nine buildings and ten structures; however, based on their age, five buildings and four structures were examined as potentially eligible historic properties. The remaining twenty-four buildings are not eligible as they do not meet the criteria for consideration as a historic property due to their construction date and therefore excluded from 1970 to the present time of survey. Six of the structures include two permanent tents, one carport and three water tanks which do not meet the criteria for consideration as a historic property. Data for all buildings is listed in the Site Map and Data Summary Table. (See Figure 6)

Prior to the start of any fieldwork, background research was undertaken which involved an examination of materials provided by the client. Dr. Don Hibbard who meets the Secretary of the Interior's Professional Qualifications Standards as an architectural historian, as well as Ms. Bethany Zedalis and Ms. Cathy Zuniga, conducted a field survey on April 23, 2019. Field notes and photographs were taken on the physical character of the properties within the survey area. One hundred percent of the buildings and structures within the survey area were investigated, which covers approximately 158 acres.

Following the site survey, additional research was undertaken at the County Tax Office, Department of Planning and Permitting and the Hawaii State Library, the Department of Land and Natural Resources' Land Division, the Army Museum, the Tropic Lightning Museum, the Fort Shafter Library, the Army Corps of Engineers, the Army Cultural Resource Management Office, and the private collection of John Bennett. The Army Real Estate Office, due to heavy workload, was not available as a source of historic information. The research included a review of land records and newspaper articles. Very little information was uncovered pertaining to the historic military use of the property. RLS forms were completed for four buildings and four structures which appear to be constructed in the 1940s and 1950s. Subsequently this report was prepared, reviewed and finalized.

While we greatly respect and honor the Hawaiian language as *ka olelo makuahine* o Hawaii (the mother tongue of Hawaii) and recognize it is one of two official languages in the State of Hawaii, we acknowledge that the global use and readability of diacritical markers (the *kahako* and *okina* macron and glottal stop, respectively) in electronic formatting may cause words to display incorrectly when presented in different documentation and databases. Accordingly, diacritical markers have been omitted from Hawaiian words and place names in this report, and we apologize for its non-inclusion in this draft. Mahalo for your understanding in this regard.

BOUNDARY JUSTIFICATION & SETTING

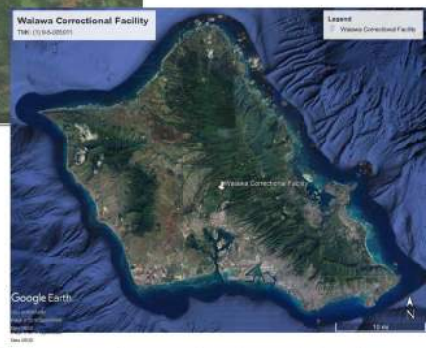


Figure 2: *TMK Outline of Site and Site Location on Oahu*

The project area is in Waipahu, a residential neighborhood in central Oahu. Waipahu is located along the northern portion of Middle and West Loch of Pearl Harbor. The Waiawa Correctional Facility is located in the north east portion of Waipahu approximately three miles east of the H2-Freeway.

The project area is bounded to the north, east and south by a dense forest at the base of the Koolau Mountain Range, and to the west by the H2 freeway. It is located at the end of a dead-end road in a secluded, wooded area. The site is accessed by entering a secure gate off Waiawa Prison Road. The road winds east looping around the multiple buildings and structures on site. Sited on the crest of a broad ridge, the complex features open space, most of which is dedicated to agricultural activities and an aquaponics farm, which allows for myriad unobstructed views of the broad sweep of the property. The 157.875-acre property encompasses all twenty-nine buildings and structures which are situated on a hilly terrain.

A portion of Waiahole Ditch is present on the site, which supplies water to WCF through pump house #6. Waiahole Ditch was constructed between 1913-1916 to transport water for irrigation of the sugar-cane plantation. "The Waihole Ditch system is an extensive plantation irrigation system that extends approximately

22 miles, bringing water from the windward side of the Koolau Range through the Koolau Range by a system of tunnels, across central Oahu and on to the Ewa Plain."[1]

The Waiahole Ditch, SIHP # 50-80-09-2268, was recommended eligible for listing on the National Register of Historic Places under Criterion A, associated with events that have made a significant contribution to the broad patterns of history, under Criterion C, that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction, and Criterion D, that have yielded or may be likely to yield, information important in history or prehistory.

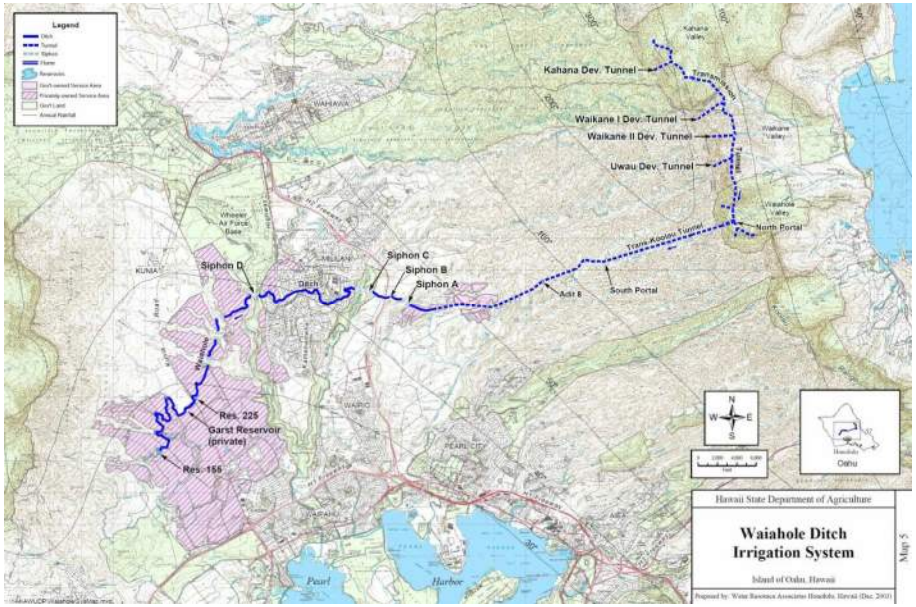


Figure 3: *Waiahole Ditch Irrigation System*
Source: http://totakeresponsibility.blogspot.com/2013/02/waiahole-ditch.html

1 "Section 5 Historic Property Descriptions: 5.1 SIHP # 50-80-09-2268 Hawaiian trail/post-Contact irrigation ditch (part of Waihole Ditch), *Supplemental AISR for the Makakilo Drive Extension Project, Honouliuli, Ewa, Oahu*, Cultural Surveys Hawaii, p.67.

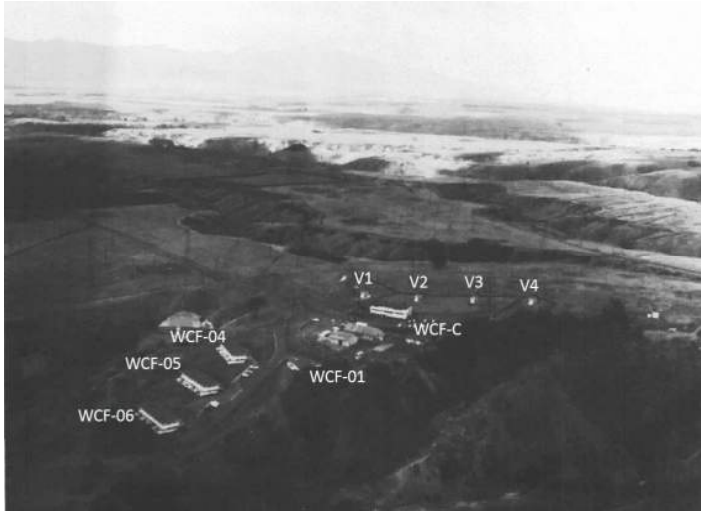


Figure 4*: Historic Aerial of Waiawa Military Reservation with Seven Original Buildings and Structures- February 15, 1960*

The Waiawa Military Reservation was developed during World War II. There is no mention of the installation in the list of military reservations in Addelman's 1939 enumeration of Army reservations in Hawaii. In addition, while the reservation functioned as a radio transmitting station, it was not part of the Army Signal Corps' "Command and Fire Control Project" of the pre-World War II "Hawaiian Defense Project." Instead this telecommunications center was developed during World War II in conjunction with telecommunications operations at Kahuku Air Field and Helemano Military Reservation in Wahiawa. The Waiawa Military Reservation was part of the Army Command & Administrative Network (ACAN) and provided the Army with a global radio communications system which ran from London to ultimately Tokyo.

There are seven concrete masonry unit (CMU) buildings that appear to be vestiges of the Army's use of the property dating from the mid-1950s. These include three two-story buildings, each of which contained four, three-bedroom family housing units (WCF-04, WCF-05 and WCF-06),[1] the station commander's house (WCF-01),[2] a three-story barracks building (WCF-C),[3] and two unidentified single-story buildings that are no longer extant. (See Figure 4)

1 "$12 Million for Military Works Here," The Honolulu Advertiser, July 2, 1955, https://www.newspapers.com/image/259885863/.
2 "Full $4.2 Million For Isle Barracks Approved." The Honolulu Advertiser, July 13, 1955, https://www.newspapers.com/image/259927520/.
3 "Waiawa Barracks Contract Rewarded," The Honolulu Advertiser, November 27, 1954, https://www.newspapers.com/image/259037288/.

The *Honolulu Advertiser* on November 27, 1954, reported the Army awarded a contract for the construction of a barracks to house eighty soldiers at the Waiawa Transmitting Station, which is building WCF-C.[4] In addition, in 1955 the House Appropriations committee approved $4,239,000 to improve living conditions at Schofield Barracks, Helemano, and Waiawa.[5] For the Waiawa Radio Transmitting Station, $332,000 was part of the appropriation to construct six of the seven original buildings.[6] The projects authorized were: $35,000 for a post exchange and craft shop, $41,000 for a fire station, $256,000 for twelve non-commissioned officers' family quarters (WCF-04, WCF-05 and WCF-06),[7] and $31,000 for housing for the station commander (WCF-01).[8] At the time of the appropriation there was no family housing at Waiawa, and military families stationed there found housing in Wahiawa or on Schofield Barracks.[9]

Additionally, there are four concrete structures on the property (V1, V2, V3 and V4) which date from the development of the military reservation, the 1940s. The structures are splinter proof concrete cable huts used in telecommunications. Splinter proof construction is defined as the capability to withstand a blast from a shell or bomb. In addition to these huts, a supporting underground, reinforced concrete tunnel system

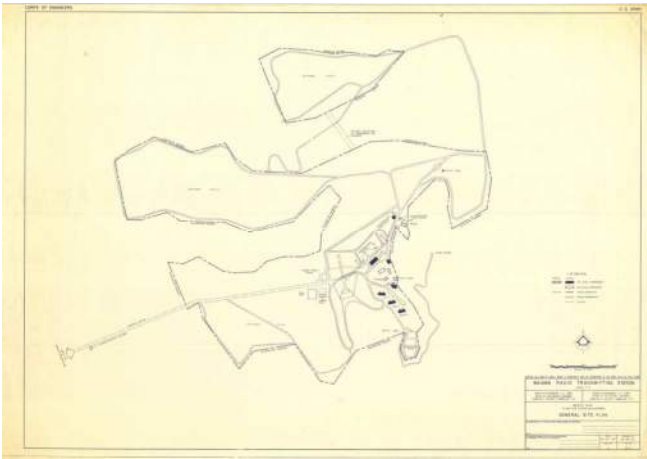


Figure 5: *Historic Map of Waiawa Radio Transmitting Station, October 24, 1957*

4 "Waiawa Barracks Contract Rewarded," 2.
5 "Full $4.2 Million For Isle Barracks Approved," 2.
6 "Army Would Build Recreation Spot at Schofield," *Honolulu Star-Bulletin*, July 11, 1955. http://www.newspapers.com/image/268858218/.
7 "$12 Million for Military Works Here," 1.
8 Ibid.
9 "Army Would Build Recreation Spot at Schofield," 6.
"Full $4.2 Million For Isle Barracks Approved," 2.

Figure 6: *Historic Image of Telecommunications Huts and Antenna Fields- April 12,1956*
Source: http://totakeresponsibility.blogspot.com/2013/02/waiahole-ditch.html

remains. The Y-shaped tunnel housed the reservation's five electrical transformers as well as other electronic equipment.[10]

Waiawa continued in active military use until the early 1980s. In 1982, learning that the military reservation was to be de-activated and the property deemed surplus, the Hawaii State Department of Social Services and Housing expressed interest in obtaining it for use as a minimal security prison. During this transition period, in early 1985, prisoners were put to work securing the property, clearing land, maintaining grounds, and rehabilitating the buildings which had been vandalized. In April of 1985, the property was officially transferred to the State. The transfer documents required the property be used for educational purposes, so as a condition of the agreement, the State had to provide remedial education, a high-school equivalency program and a pre-vocational program which would expose the inmates to building maintenance, agricultural/farming, or food service occupations for a thirty year period, with annual reports submitted to the U.S. Department of Education.[11] In addition to providing educational opportunities for the inmates, the new correctional facility provided the added bonus of providing food for the State prison system through the numerous farmlands and aquaponics farm on-site.

By June 1986 the facility housed approximately fifty prisoners, with that number increasing to ninety with the

10 "Legislators Tour Site of Prison 'Farm'," *The Honolulu Advertiser*, December 19, 1984. https://www.newspapers.com/image/263312262/.
11 "Site to Become Prison Work Camp." *The Honolulu Advertiser*, April 24, 1985. www.newspapers.com/image/262972210/.

renovation of the second (WCF-05) of the three former family housing buildings into a dormitory.

By the end of October 1986, the third (WCF-06) family housing building's renovation was completed, allowing the capacity of the facility to increase from 80 to 120 inmates.[12] Over the years the prison has expanded with a number of new buildings being erected on the property allowing the correctional facility to now handle 334 male inmates.

12 Helen Altonn, "Tunnel Transformers to Be Removed," *Honolulu Star-Bulletin*, June 7, 1986. https://www.newspapers.com/image/272181999/.

DATA SUMMARY & RECOMMENDATIONS

The survey identified three buildings and four structures in the survey area that appear to be over fifty years of age, retain their integrity and are eligible for listing on the Hawaii and National Register of Historic Places.

The three buildings are: Buildings WCF-04, WCF-05 and WCF-06, the former three-bedroom family housing units which in 1985-86 were converted into dormitories for the prison inmates. The three buildings are readily recognizable as a residential complex with unifying features such as: the intact laundry areas behind WCF-06 and the trash enclosure adjoining WCF-05. Character defining features include their flat roofs with overhanging eaves, thin concrete window hoods which run the length of the front of the building and wrap around its sides between the first and second stories, use of concrete, jalousie windows and 7" concrete window sills.

Although the interiors of these buildings have been reworked, the exteriors remain very much intact and retain their integrity of design, workmanship, material, setting, feeling and location. The buildings appear to meet **Criterion C** as examples of modern, international style buildings of the 1950s in Hawaii.

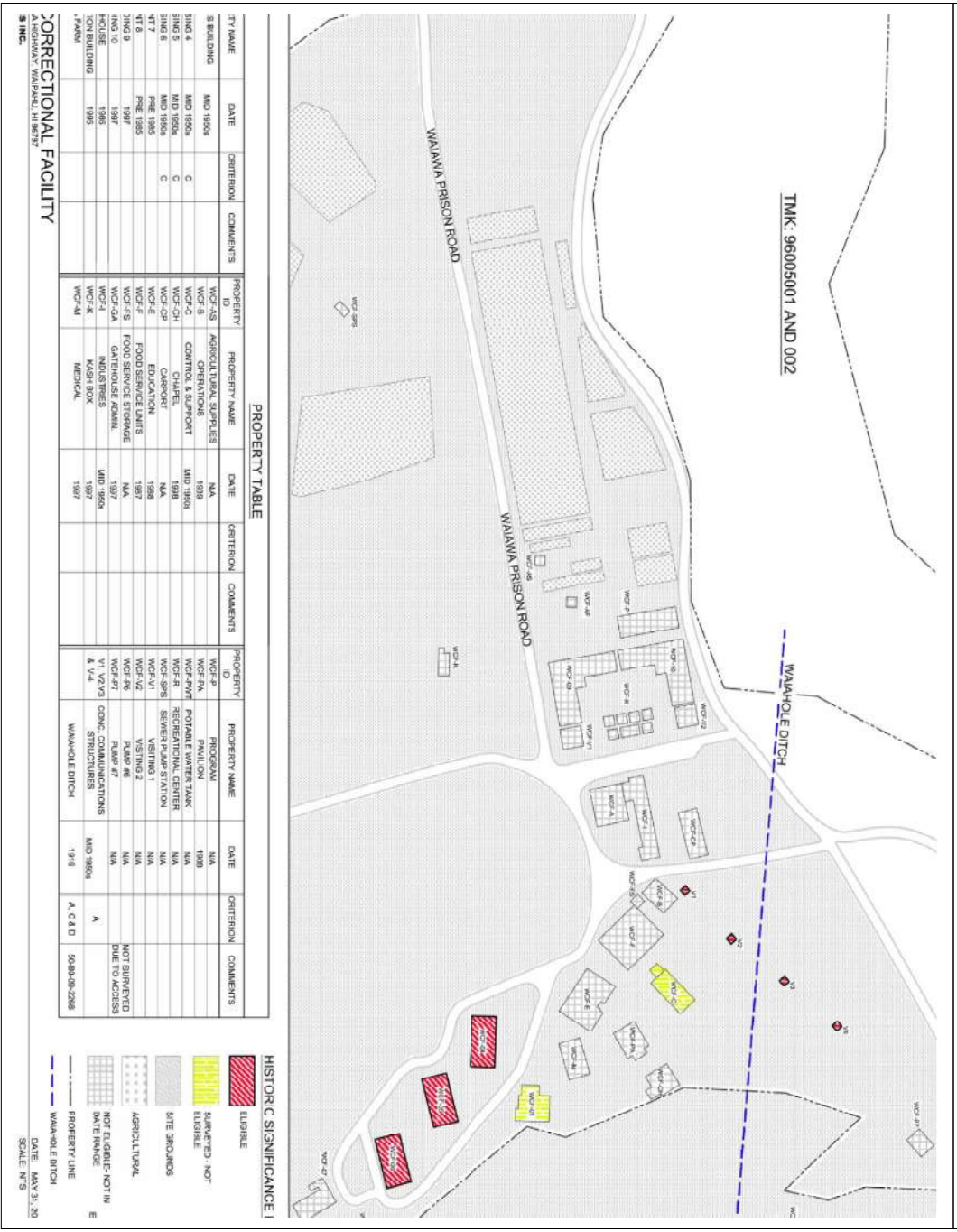
Four concrete splinter proof telecommunications cable huts appear to be eligible and retain sufficient integrity of design, workmanship, material, setting, feeling, location and association. The structures appear to meet **Criterion A** associated at the local level with military history and installation construction in Hawaii. The telecommunications huts are eligible for listing on the Hawaii and National Register of Historic Places.

The remaining buildings have undergone a number of alterations, and do not appear to meet the criteria for registration. In addition, these buildings do not appear to contribute to a historic district, as more recent construction projects have been undertaken to convert the property into a minimum-security prison, resulting in multiple intrusions that would interrupt the continuity of a district.

The station commander's house (WCF-01) has had several additions placed on it making its original function indiscernible. Similarly, the historic integrity of the barracks building (WCF-C) has been compromised on both the interior and exterior with modern vinyl windows supplanting the original windows that would be considered important character defining features of the buildings.

The underground tunnel system, while extant, was not surveyed as they are presently secured and abandoned. However, there are no current or future plans to utilize the tunnels.

Pertaining to the identification and evaluation of historic property there are not further architectural recommendations at this time. However, archaeological properties should be consulted separately with the State Historic Preservation Division (SHPD). Should the master plan include any work on the Waiahole Ditch, which was recommended eligible for listing in the National Register of Historic Places, DAGS should consult with SHPD.



BIBLIOGRAPHY

Addleman, William C. "History of the United States Army in Hawaii, 1849-1939." Unpublished Manuscript. John Bennett's collection.

Bennett, John D. "Oahu's Command and Fire Control Cable System." *The Coast Defense Journal*. Vol. 16, No. 2 (May 2002). pp. 42-54.

Coker, Katherine R. and Carol E. Rios. "A Concise History of the United States Army Signal Corps." Augusta, Georgia: U. S. Army Signal Center and Fort Gordon, 1988. Accessed May 19, 2019. https://apps.dtic.mil/dtic/tr/fulltext/u2/a208887.pdf.

Kwock Associates, Inc. *Water System Study for Waiawa Correctional Facility, Waiawa, Oahu, Hawaii. TMK:9-6-05: 11 and 12*. Honolulu: Department of Accounting and General Services,1989.

Newspaper

"12 Million for Military Works Here." *The Honolulu Advertiser,* July 2, 1955.

"$12 Million in Military Work OK'd." *Honolulu Star-Bulletin,* June 30, 1955.

"$221,000 Approved for Waiawa Station." *The Honolulu Advertiser,* July 17, 1954.

Altonn, Helen. "Tunnel Transformers to Be Removed." *Honolulu Star-Bulletin,* June 7, 1986.

"Army Would Build Recreation Spot at Schofield." *Honolulu Star-Bulletin,* July 11, 1955.

"Full $4.2 Million for Isle Barracks Approved." *The Honolulu Advertiser,* July 13, 1955.

"Goof nearly Costs the State a Prison Site." *The Honolulu Advertiser,* April 29, 1983.

"Hickam, Waiawa Fund Bills Signed." *The Honolulu Advertiser,* August 29, 1954.

"Land for Waiawa Prison Work Camp." *The Honolulu Advertiser,* April 24, 1985.

"Legislators Tour Site of Prison 'Farm'." *The Honolulu Advertiser*, December 19, 1984.

"Military Installations February 1962." *Honolulu Star-Bulletin,* February 25, 1962.

"Money Measure for Isle Military Projects Signed." *Honolulu Star-Bulletin,* August 5, 1955.

"Prison Success Story." *Honolulu Star-Bulletin,* September 24, 1986.

"Site to Become Prison Work Camp." *The Honolulu Advertiser*, April 24, 1985.

"State Hopes to Get Waiawa Land for Site of Prison Camp." *The Honolulu Advertiser,* July 7, 1984.

"Waiawa Barracks Contract Awarded." *The Honolulu Advertiser*, November 27, 1954.

DATA SHEETS

RECONNAISSANCE LEVEL SURVEY

State Historic Preservation Division

Reconnaissance Level Survey - Survey Form
General Information

Instructions:

Submit this completed form with the completed SIHP request form and 6E Filing Fee Form electronically to: dlnr.intake.shpd@hawaii.gov

For additional guidance on completing this form, please see the Architecture Branch Survey guidelines available on the SHPD website.

1. Review Type: Indicate which review process this survey was requested under

X HRS 6E-08, HAR 13-275

☐ HRS 6E-42, HAR 13-284

2. Project Information: Indicate the document in which this survey was requested

2.1) Log No. [e.g. 2017.1234]	
2.2) Doc No. [e.g. 1708MB27]	
2.3) Other:	

3. Contact Information:

3.1) Name:	3.2) Company:
Alison Chiu	Fung Associates
3.3) Street Address:	3.4) County:
1833 Kalakaua Avenue Suite 1008	Honolulu
3.5) State:	3.6) Zip Code:
Hawaii	96789
3.7) Phone:	3.8) Email:
(808) 941-3000	alison@funghawaii.com

State Historic Preservation Division

Reconnaissance Level Survey - Survey Form
Individual Resource Information

4. Property Location
4.1 TMK [e.g. (1) 1-2-003:004]:
(1) 9-6-005:011
4.2 Street Address:
94-560 Kamehameha Highway
4.3 County:
Honolulu
4.4 State:
Hawaii
4.5 Zip Code:
96797

5. Property Classification:	
5.1 Ownership	
Private	Public
	X
5.2 Classification	
[X] Building	[ ] Structure
[ ] District	[ ] Object
[ ] Site	

6. Property Function:	
6.1 Current: Inmate Housing	6.2 Historic: Family Housing Units

7. Property Description
7.1 Date of Construction: Circa 1956
7.2 Provide a description of the property, including the character defining features, summarize alterations to the property, and provide an evaluation of the property's integrity of materials, design, feeling, location, association, workmanship, and setting.

Housing Buildings WCF-4, WCF-5 and WCF-6 are presently inmate housing units. They are located south east on the site abutting the property line. They are south of the industries building, WCF-01, and north of tents WCF-07 and WCF-08. The buildings are located on a hill with building WCF-04 placed on top of the hill, with buildings WCF-05 and WCF-06 following consecutively downhill.

The three buildings are similar in design aside from a few modifications: an added enclosure on the lower level of the south elevation of buildings WCF-05 and WCF-06, the lower level on the north elevation of building WCF-06 does not appear to have been modified and differs from the lower level of buildings WCF-04 and WCF-05, added wooden enclosures on the west elevation of buildings WCF-04 and WCF-06, and the differing fenestration patterns on the lower level all three of the buildings north façades due to modifications.

All three buildings are rectangular in shape, two stories and have flat overhanging roofs. They sit upon a concrete slab, were constructed with 8" CMU, and some of the façades have a 4" thick concrete eyebrow. The buildings maintain their original jalousie windows, presently covered with metal mesh wood framed screens. Many of the windows have a 7" wide concrete sill running the length of the window. On the side (west) elevation of each building is a small, three-sided, CMU enclosure most likely originally used for trash bin storage.

Building WCF-04:

The façade of Building WCF-04 faces north and features a projected lower level comprised of 8" CMU with a sloped asphalt roll roof. On the lower level, multiple sizes of jalousie windows exist and single metal entry doors are positioned on the east and west side. The second level features multiple sizes of jalousie windows, some with concrete sills, and a flat overhanging roof. (Figure 7)

The side (west) elevation maintains a 4" concrete eyebrow dividing the upper and lower levels. The lower level has a projected wooden enclosure covered with a sloped asphalt shingle roof. The upper level features a set of two jalousie windows with a concrete sill. (Figure 8)

The rear (south) elevation shows the continuation of the 4" concrete eyebrow. On the west side of the lower level exists an exposed concrete patio segmented into four sections by 8" CMU partition walls, and in between each partition are jalousie windows. On the east side of the building is a covered lanai with a corrugated metal shed roof supported by two metal poles. The lanai has two sets of jalousie windows and a single metal door. (Figure 9)

The side (east) elevation is unadorned and features the continuation of the 4" concrete eyebrow and two sets of jalousie windows on the upper and lower levels. (Figure 10)

Building WCF-05:

The façade of Building WCF-05 faces north and features a projected lower level comprised of 8" CMU with a built-up sloped asphalt roll roof. Due to sagging, the sloped roof on the lower level was modified and is supported by a T1-11 header at the front and back. The lower level features multiple jalousie windows with concrete sills, and a single metal entry door is positioned on the east and west side of the façade. Positioned in the center of the building is a wooden enclosure, resembling a closet, with three doors. (Figure 12)

The side (west) elevation maintains a 4" concrete eyebrow dividing the upper and lower levels. The first and second levels feature a pair of jalousie windows with concrete sills. (Figure 13)

The rear (south) elevation features an open lanai on the west side with a set of two jalousie windows, followed by a central enclosed projected section with six sets of three jalousie windows, and a covered lanai on the east side. The lanai is sheltered with a corrugated metal shed roof supported with two metal poles, and has a set of two jalousie windows and a single metal entry door. The upper level is separated by the roof of the projected section and lanai, has eight sets of jalousie windows and a flat overhanging roof. (Figure 14)

The side (east) elevation is unadorned and features the continuation of the 4" concrete eyebrow and two sets of jalousie windows on the upper and lower levels. (Figure 15)

Building WCF-06:

The façade of Building WCF-06 faces north and does not have the same lower-level enclosed sections as Buildings WCF-04 and WCF-05. However, there are two sets of three-sided, 8” CMU enclosures, approximately 6’ in height, that face a larger two-sided, 8” CMU structure potentially used at one time for laundry tasks. There appear to be washer and dryer hook-ups as well as an outline of a drying rack on the wall of the larger CMU structure. The larger CMU structure has a flat roof and the four smaller CMU enclosures have openings in the rear wall, two rows of four, possibly for air flow. A single metal entry door exists on the east and west side of the lower level sheltered by a concrete eyebrow and supported with a single, metal pole. The upper level of the north façade is segmented by the roofs of the lower level CMU enclosures and a concrete eyebrow. There are multiple sizes of jalousie windows, some with concrete sills and a flat, overhanging roof. (Figure 17)

The side (west) elevation maintains a 4” concrete eyebrow dividing the upper and lower levels. The lower level has a projected wooden enclosure covered with a sloped asphalt shingle roof. The upper level features a set of two jalousie windows with concrete sills. (Figure 18)

The rear (south) elevation mimics Building WCF-05. On the west side there is an open lanai with a set of two jalousie windows, followed by a central enclosed projected section with six sets of three jalousie windows, and a covered lanai on the east side. The lanai is sheltered with a corrugated metal shed roof supported with two metal poles, and has a set of two jalousie windows and a single metal entry door. (Figure 19)

The side (east) elevation is unadorned and features the continuation of the 4” concrete eyebrow and two sets of jalousie windows on the upper and lower levels. (Figure 20)

Character Defining Features:

- The building massing, which consist of two-story, rectangular shaped units
- The building material, which consist of concrete and 8” CMU
- Flat, overhanging roofs
- 4” concrete eyebrow
- Original Jalousie windows
- 7” concrete window sill
- CMU enclosures for trash bins
- Stripped down, military residential character
- Low rise utilitarian structure
- Siting and orientation

Eligibility Recommendation:

Buildings WCF-04, WCF-05 and WCF-06 retain their integrity of design, workmanship, material, setting, feeling, location, and association. The buildings appear to meet **Criterion C** as examples of the modern, international building style in Hawaii in the 1950s. Buildings WCF-04, WCF-05, and WCF-06 are eligible for listing on the Hawaii and National Register of Historic Places.

Property Function:	
Current: Telecommunications Huts	Historic: Telecommunications Huts

Property Description
Date of Construction: Circa 1944
Provide a description of the property, including the character defining features, summarize alterations to the property, and provide an evaluation of the property's integrity of materials, design, feeling, location, association, workmanship, and setting.

Structures V1, V2, V3 and V4 are splinter-proof, telecommunications cable huts. The huts are located north east on the site in a semi-open field north of the food service (WCF-B) and the Control and Support Building (WCF-C). They are evenly spaced in the field and positioned in a row.

The four structures are identical in shape, size and material. They are asymmetrical in shape, four sided and comprised of concrete. Three-sides create a U-shape and the fourth side (south west) features a concrete ramp, with a metal vent placed above the ramp, and a metal door to the left of the ramp. The top is open with a ladder leading down into the structure; the depth of the structure is unknown. Presently, structure V1 has three metal storage containers surrounding it.

Character Defining Features:

- The structure massing and geometry, which consist of an identical asymmetrical shape
- The structure materials, which consist of concrete, metal doors and vents
- Linear placement in the field
- Proximity to and even spacing on both sides of Waiahole ditch
- Solid feeling and imposing nature characteristic of military structures
- Directional siting and orientation
- Lack of ornamentation

Eligibility Recommendation:

The telecommunication huts V1, V2, V3, and V4 retain their integrity of design, workmanship, material, setting, feeling, location, and association. The structures appear to meet **Criterion A** associated at the local level with military history and installation construction in Hawaii. The telecommunications huts are eligible for listing on the Hawaii and National Register of Historic Places.

9. Photographs

Attach Photographs: provide sufficient photographs to illustrate the property's main features. At a minimum provide the following:

Quantity	Description
1-2	Street view(s) of the resource setting
1-2	Main facades
1-2	Interior photos if applicable

Figure 8: *Building 4 North Facade*

Figure 9: *Building 4 West Facade*

Figure 10: *Building 4 South Facade*

Figure 11: *Building 4 East Facade*

Map
Attach Map showing the location of the property

Figure 12: *Building 4 Location Map*

Figure 13: *Building 5 North Facade*

Figure 14: *Building 5 West Facade*

Figure 15: *Building 5 South Facade*

Figure 16: *Building 5 East Facade*

Map
Attach Map showing the location of the property

Figure 17: *Building 5 Location Map*

Figure 18: *Building 6 North Facade*

Figure 19: *Building 6 West Facade*

Figure 20: *Building 6 South Facade*

Figure 21: *Building 6 East Facade*

Map
Attach Map showing the location of the property

Figure 22: *Building 6 Location Map*

Figure 23: *Telecommunication Huts Location*

Figure 24: *Telecommunication Huts*

Map
Attach Map showing the location of the property

Figure 25: *Telecommunications Huts Location Map*

APPENDIX D - SHPD Response Letter

DAVID Y. IGE
GOVERNOR OF
HAWAII

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

ROBERT K. MASUDA
FIRST DEPUTY

M. KALEO MANUEL
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

STATE HISTORIC PRESERVATION DIVISION
KAKUHIHEWA BUILDING
601 KAMOKILA BLVD, STE 555
KAPOLEI, HAWAII 96707

December 11, 2019

IN REPLY REFER TO:
LOG NO: 2019.01682
2019.01749
DOC NO: 1912TGM05
Architecture

Christine Kinimaka, Public Works Administrator
Planning Branch, Division of Public Works
Department of Accounting & General Services
650 S. King Street
Honolulu, HI 96813
Chris.kinimaka@hawaii.gov

Dear Ms. Kinimaka:

SUBJECT: HRS Chapter 6E-8 Historic Preservation Review
Waiawa Correctional Facility – Plan Review Use and Special Use Permit
DAGS Job No: 12-27-5715
94-560 Kamehameha Highway, Waipahu, HI 96797
Waiawa Ahupua'a, 'Ewa Moku, Island of O'ahu
TMK: (1) 9-6-005:011

Thank you for the opportunity to comment on this request from the Department of Accounting & General Services (DAGS) for Hawai'i Revised Statutes (HRS) Chapter 6E-8 review. The State Historic Preservation Division (SHPD) received this submittal on July 31, 2019 and additional information was received on August 6, 2019. The submittal included the SHPD 6E Submittal Form, permit set, photographs, and a Reconnaissance Level Survey (RLS). The proposed scope of work includes identifying and documenting eligible historic properties to prepare for a State Special Use Permit and County Plan Review Use Permit for the Waiawa Correctional Facility (WCF) located 94-560 Kamehameha Highway, Waipahu, HI.

The Waiawa Correctional Facility (WCF) campus contains twenty-nine buildings and ten structures. The RLS identified three buildings (Buildings WCF-04; WCF05; WCF-06) and four structures (V1; V2; V3; V4) as eligible for listing in the Hawai'i and National Register of Historic Places under Criteria A and C.

The SHPD agrees with the findings of the RLS.

Per §13-284-5(b)(5)(c), HAR, the Reconnaissance Level Survey (RLS) is considered an architectural survey report and thus subject to filing fees per §13-284-4(3), HAR.

The report must be accompanied by a completed State Inventory of Historic Places (SIHP) Number request form. The SIHP request form and directions on how to complete the form can be found on the SHPD website: http://dlnr.hawaii.gov/shpd/review-compliance/forms/

Please submit the SIHP request and the required payment payable to the Hawai'i Historic Preservation Special Fund. The RLS is part of the identification and inventory of historic resources process and SHPD may request subsequent reports per §13-284-8, HAR.

Per §13-275-7, HAR, the project will have no effect on significant historic properties and therefore SHPD concurs with DAGS determination of **"no historic properties affected"**.

The SHPD requests the opportunity to review future permit applications involving the Waiawa Correctional Facility (WCF) campus buildings and ground disturbing activities.

Please contact Tanya Gumapac-McGuire, Architectural Historian, at (808) 692-8022 or at Tanya.Gumapac-Mcguire@hawaii.gov regarding architectural resources or this letter.

Aloha,
Alan Downer

Alan Downer, PhD.
Deputy State Historic Preservation Officer
Administrator, State Historic Preservation Division

cc: Joseph Earing, joseph.m.earing@hawaii.gov
Lance Maja, lance.y.maja@hawaii.gov
Alison Chiu, alison@funghawaii.com

APPENDIX E - Site Plans, Floor Plans and Elevations

WAIAWA CORRECTIONAL FACILITY

PLAN REVIEW USE & SPECIAL USE PERMITS

WAIAWA, OAHU, HAWAII

FOR THE

DEPARTMENT OF ACCOUNTING & GENERAL SERVICES, PLANNING DIVISION

STATE OF HAWAII

HONOLULU, OAHU, HAWAII

D.A.G.S. PROJECT NO.:12-27-5715

TAX MAP KEY: (1) 9-6-005: 011, 012

ADDRESS: 94-560 KAMEHAMEHA HIGHWAY

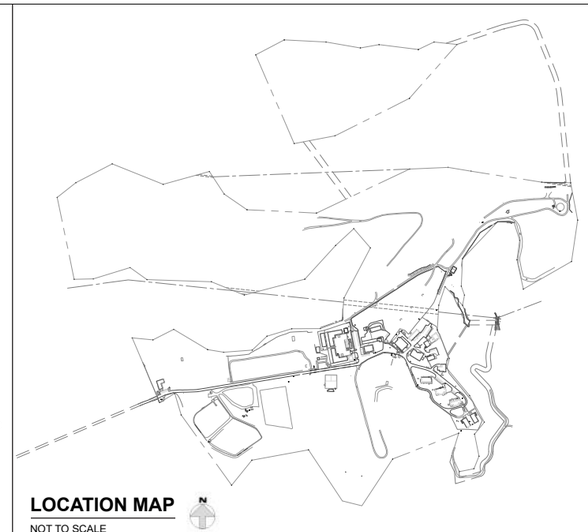
WAIPAHU, HI 96797

INDEX OF DRAWINGS

SHEET	BUILDING
1	TITLE SHEET, INDEX OF DRAWINGS
2	SITE PLAN
3	PARKING PLAN
4-5	WCF-01 FLOOR PLAN AND ELEVATIONS
6-7	WCF-04 FLOOR PLANS AND ELEVATIONS
8-9	WCF-05 FLOOR PLANS AND ELEVATIONS
10-11	WCF-06 FLOOR PLANS AND ELEVATION
12-13	WCF-07 FLOOR PLAN AND ELEVATIONS
12, 14	WCF-08 FLOOR PLAN AND ELEVATIONS
15-17	WCF-09 FLOOR PLAN AND ELEVATIONS
15, 18, 19	WCF-10 FLOOR PLAN AND ELEVATIONS
20-21	WCF-A FLOOR PLAN AND ELEVATIONS
22	WCF-A1 FLOOR PLAN AND ELEVATIONS
23	WCF-AF FLOOR PLAN AND ELEVATIONS
24	WCF-AS FLOOR PLAN AND ELEVATIONS
25-26	WCF-B FLOOR PLAN AND ELEVATIONS
27-29	WCF-C FLOOR PLANS AND ELEVATIONS
30-31	WCF-CH FLOOR PLAN AND ELEVATIONS
32-33	WCF-CP FLOOR PLAN AND ELEVATIONS
34-35	WCF-E FLOOR PLAN AND ELEVATIONS
36-37	WCF-F FLOOR PLAN AND ELEVATIONS
38	WCF-FS FLOOR PLAN AND ELEVATIONS
39	WCF-G FLOOR PLAN AND ELEVATIONS
40	WCF-G2 FLOOR PLAN AND ELEVATIONS
41	WCF-G3 FLOOR PLAN AND ELEVATIONS
42-43	WCF-GA FLOOR PLAN AND ELEVATIONS
44-45	WCF-I FLOOR PLAN AND ELEVATIONS
46-47	WCF-K FLOOR PLAN AND ELEVATIONS
48-49	WCF-M FLOOR PLAN AND ELEVATIONS
50-51	WCF-P FLOOR PLAN AND ELEVATIONS
52-53	WCF-PA FLOOR PLAN AND ELEVATIONS
54-55	WCF-R FLOOR PLAN AND ELEVATIONS
56	WCF-S1 FLOOR PLAN AND ELEVATIONS
57-58	WCF-V1 FLOOR PLAN AND ELEVATIONS
59-60	WCF-V2 FLOOR PLAN AND ELEVATIONS

PROJECT VICINITY MAP

NOT TO SCALE



LOCATION MAP

NOT TO SCALE

CONSULTANTS

SSFM INTERNATIONAL, INC.

AUSTIN, TSUTSUMI
& ASSOCIATES, INC.

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

WAIAWA CORRECTIONAL FACILITY
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

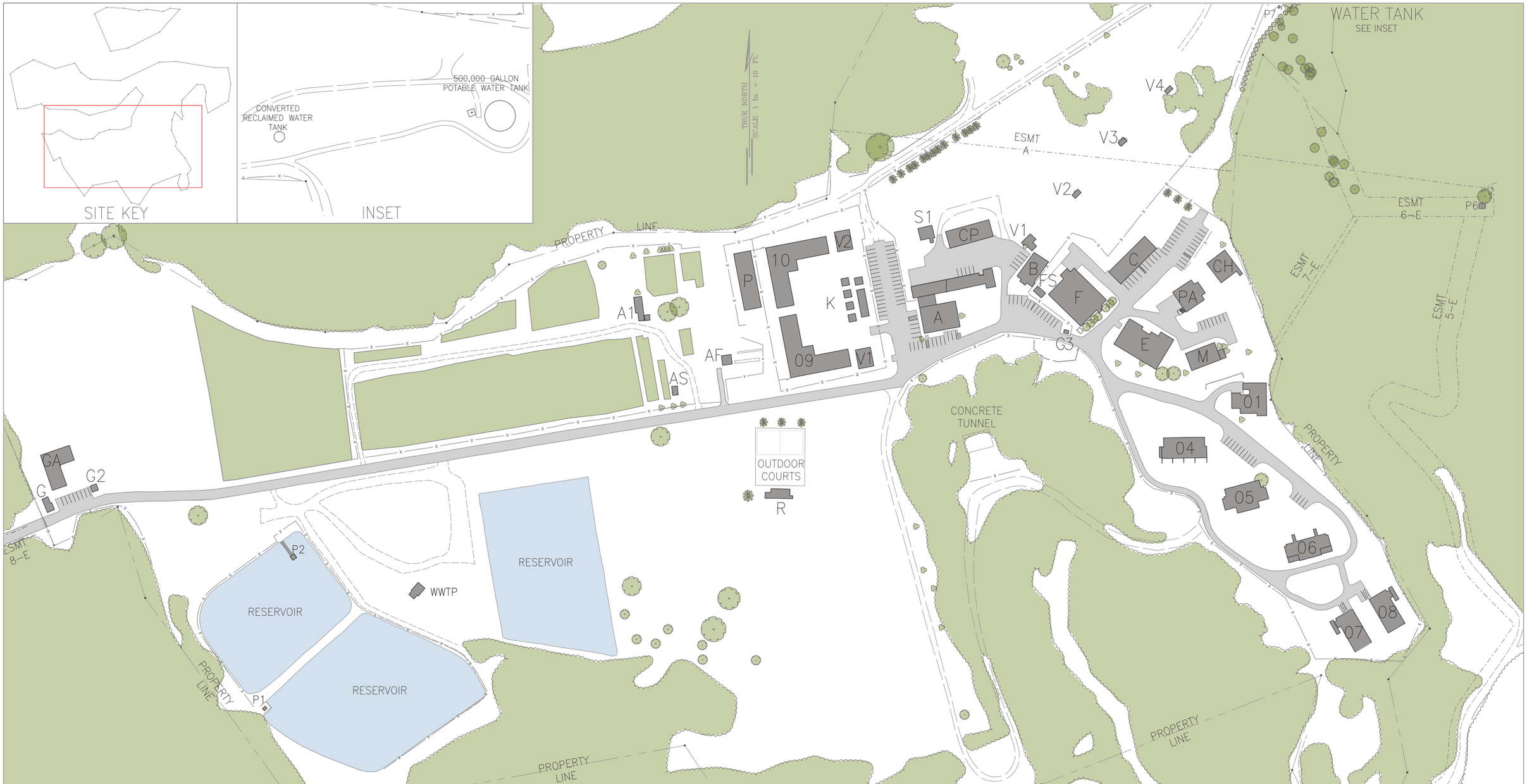
Title Sheet, Index of Drawings

DESIGNED BY: CM	CHECKED BY:	JOB NO. 12-10-0783	DRAWING NO.
DRAWN BY: RS	APPROVED BY:	DATE JULY 2019	SHEET OF_____ SHTS
SCALE:			

FILE_____ DRAWER_____ FOLDER_____

FINAL

M:\2018\2018_238.000 DAGS WAIAWA PRU-SUP\G DWGS\PM\FLOOR PLANS\ATA WCF FLOOR PLANS.DWG
JOB NO. 19-314 DATE: 112219



LEGEND

- PROPERTY LINE
- FENCE LINE
- UNPAVED ROAD
- EASEMENT
- RESERVOIR
- TREE CANOPY/GREEN SPACE
- BUILDING/STRUCTURE
- PAVED ROAD

GRAPHICAL SCALE:

100' 50' 0 100' 200'

SCALE: 1"= 100'

WCF-01	OFFICE SPACE
WCF-04	HOUSING 4
WCF-05	HOUSING 5
WCF-06	HOUSING 6
WCF-07	TENT 7
WCF-08	TENT 8
WCF-09	BUILDING 9
WCF-10	BUILDING 10
WCF-A	ADMINISTRATION BUILDING
WCF-A1	AGRICULTURAL STORAGE
WCF-AF	AQUA FARM STORAGE
WCF-AS	AGRICULTURAL STORAGE
WCF-B	OPERATIONS
WCF-C	CONTROL & SUPPORT
WCF-CH	CHAPEL
WCF-CP	CARPORT
WCF-E	EDUCATION
WCF-F	INMATE DINING FACILITY
WCF-FS	FOOD SERVICE STORAGE
WCF-G	GUARD SHACK
WCF-G2	GATEHOUSE STORAGE SHED
WCF-G3	VISITOR CHECK-IN OFFICE
WCF-GA	GUARD SHACK ADMINISTRATION
WCF-I	AUTO/LANDSCAPE SHOP & TOOL ROOM
WCF-K	KASHBOX COMPOUND
WCF-M	MEDICAL SERVICES
WCF-P	PROGRAM
WCF-P1	PUMP STATION 1
WCF-P2	PUMP STATION 2
WCF-P6	PUMP STATION 6
WCF-P7	PUMP STATION 7
WCF-PA	PAVILION & MULTI-PURPOSE AREA
WCF-R	RECREATION CENTER
WCF-S1	FUEL STORAGE
WCF-V1	KASHBOX COMPOUND – VISITING 1
WCF-V2	KASHBOX COMPOUND – VISITING 2
V1	CONCRETE COMM. STRUCTURE
V2	CONCRETE COMM. STRUCTURE
V3	CONCRETE COMM. STRUCTURE
V4	CONCRETE COMM. STRUCTURE

REVISION NO.	SYM.	DESCRIPTION	SHT. ___ OF ___	DATE	APPROVED

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

WAIAWA CORRECTIONAL FACILITY
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

Site Plan

SSFM International, Inc.		JOB NO.	DRAWING NO.
DESIGNED BY: CM	CHECKED BY: ___	12-10-0783	C000.00
DRAWN BY: RS	APPROVED BY: ___	DATE MAR. 2016	SHEET 2 OF 60 SHTS
SCALE: AS SHOWN			

FILE DRAWER FOLDER

FINAL

LEGEND

- PROPERTY LINE
- FENCE LINE
- UNPAVED ROAD
- EASEMENT
- RESERVOIR
- TREE CANOPY/GREEN SPACE
- BUILDING/STRUCTURE
- PAVED ROAD

GRAPHICAL SCALE:

50' 25' 0 50' 100'

SCALE: 1"= 50'

WCF–01	OFFICE SPACE
WCF–04	HOUSING 4
WCF–05	HOUSING 5
WCF–06	HOUSING 6
WCF–07	TENT 7
WCF–08	TENT 8
WCF–09	BUILDING 9
WCF–10	BUILDING 10
WCF–A	ADMINISTRATION BUILDING
WCF–A1	AGRICULTURAL STORAGE
WCF–AF	AQUA FARM STORAGE
WCF–AS	AGRICULTURAL STORAGE
WCF–B	OPERATIONS
WCF–C	CONTROL & SUPPORT
WCF–CH	CHAPEL
WCF–CP	CARPORT
WCF–E	EDUCATION
WCF–F	INMATE DINING FACILITY
WCF–FS	FOOD SERVICE STORAGE
WCF–G	GUARD SHACK
WCF–G2	GATEHOUSE STORAGE SHED
WCF–G3	VISITOR CHECK–IN OFFICE
WCF–GA	GUARD SHACK ADMINISTRATION
WCF–I	AUTO/LANDSCAPE SHOP & TOOL ROOM
WCF–K	KASHBOX COMPOUND
WCF–M	MEDICAL SERVICES
WCF–P	PROGRAM
WCF–P1	PUMP STATION 1
WCF–P2	PUMP STATION 2
WCF–P6	PUMP STATION 6
WCF–P7	PUMP STATION 7
WCF–PA	PAVILION & MULTI–PURPOSE AREA
WCF–R	RECREATION CENTER
WCF–S1	FUEL STORAGE
WCF–V1	KASHBOX COMPOUND – VISITING 1
WCF–V2	KASHBOX COMPOUND – VISITING 2
V1	CONCRETE COMM. STRUCTURE
V2	CONCRETE COMM. STRUCTURE
V3	CONCRETE COMM. STRUCTURE
V4	CONCRETE COMM. STRUCTURE

REVISION NO.	SYM.	DESCRIPTION	SHT. ___ OF ___	DATE	APPROVED

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

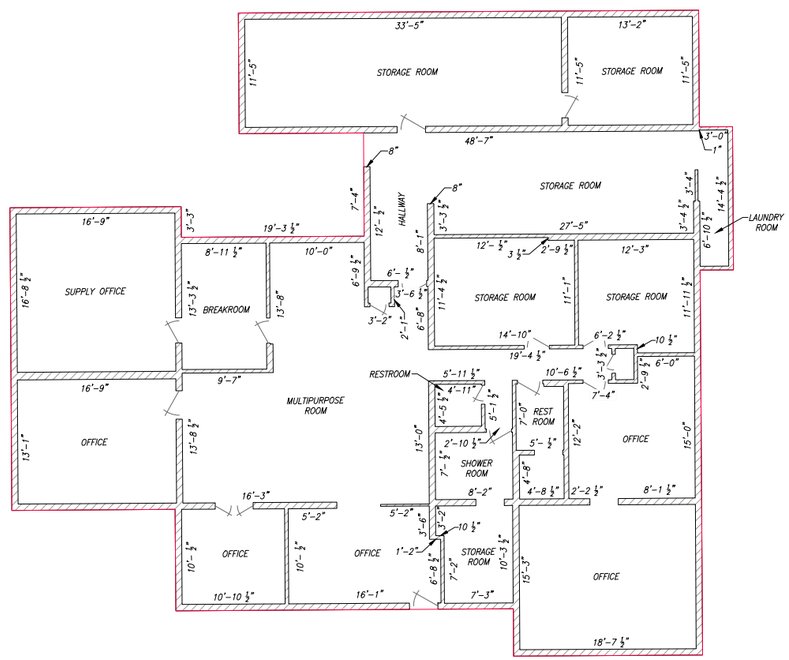
WAIAWA CORRECTIONAL FACILITY
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

Parking Plan

SSFM International, Inc.		JOB NO. 12-10-0783	DRAWING NO. C000.00
DESIGNED BY: CM	CHECKED BY: —		
DRAWN BY: RS	APPROVED BY: —	DATE MAR. 2016	SHEET 3 OF 60 SHTS
SCALE: AS SHOWN			

FILE DRAWER FOLDER

FINAL



GRAPHIC SCALE

16 8 4 0 8 24

(IN INCHES)
1/8 inch =1 ft.

BUILDING NO. WCF-01 (ABANDONED BUILDING)
BUILDING AREA = 3905 SQ. FT.

BL

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

WAIAWA CORRECTIONAL FACILITY
BUILDING NO. WCF-01 (ABANDONED BUILDING)
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

Floor Plans

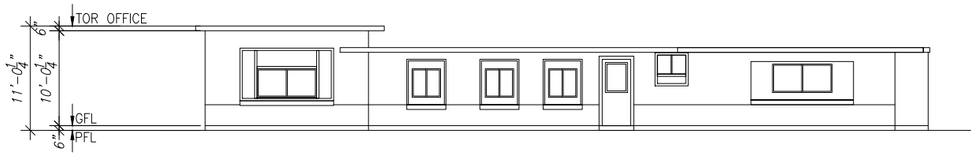
ATA AUSTIN, TSUTSUMI & ASSOCIATES, INC.
ENGINEERS, SURVEYORS • HONOLULU, MAPAHU, HAWAII

DESIGNED BY: CM	CHECKED BY: —	JOB NO. 12-10-0783	DRAWING NO. C000.00
DRAWN BY: RS	APPROVED BY: —	DATE JULY 2019	SHEET 4 OF 60 SHTS
SCALE: 1/8" = 1'			

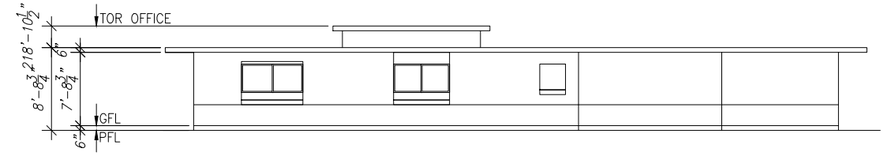
FILE_____ DRAWER_____ FOLDER_____

FINAL

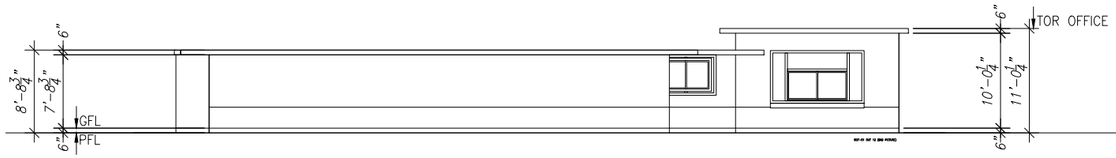
Y:\2019\19-314 WAIAWA FLOOR MAPPING\DONATA\WAIAWA CORRECTIONAL FLOOR PLAN SHEET.DWG
JOB NO. 19-314 DATE: 082819



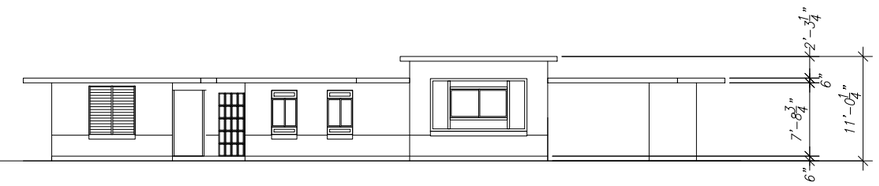
SOUTH SIDE ELEVATION
BUILDING NO. WCF-01



EAST SIDE ELEVATION
BUILDING NO. WCF-01



NORTH SIDE ELEVATION
BUILDING NO. WCF-01



WEST SIDE ELEVATION
BUILDING NO. WCF-01

GRAPHIC SCALE

16 8 4 0 8 24

(IN INCHES)
1/8 inch =1 ft.

BUILDING NO. WCF - 01 (ABANDONED BUILDING) ELEVATIONS

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

WAIAWA CORRECTIONAL FACILITY
BUILDING NO. WCF-01 (ABANDONED BUILDING)
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

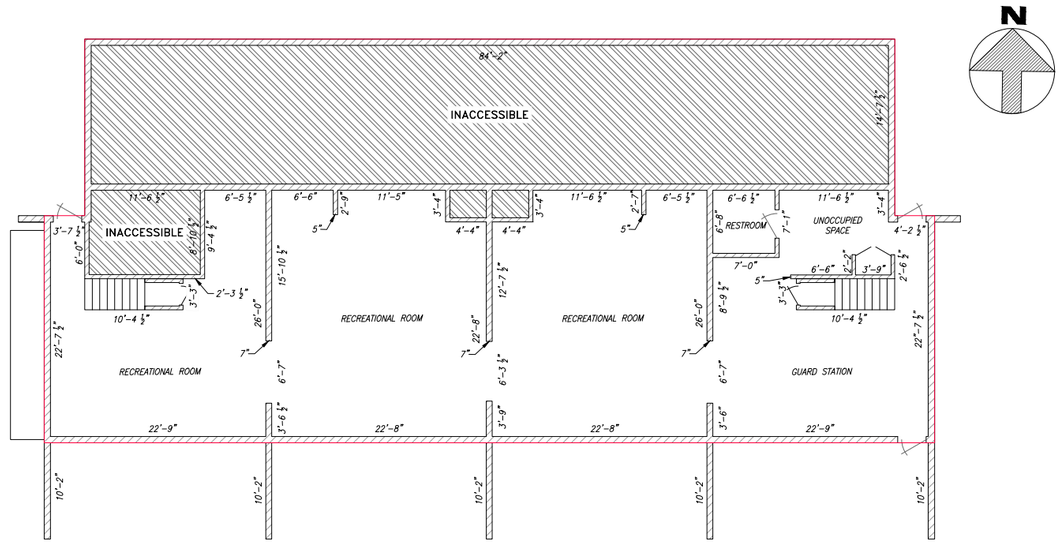
Elevations

SSFM International, Inc.		JOB NO.	DRAWING NO.
DESIGNED BY: CM	CHECKED BY: __	12-10-0783	C000.00
DRAWN BY: RCRA	APPROVED BY: __	DATE SEP 2019	SHEET 5
SCALE: 1/8" = 1'			OF 60 SHTS

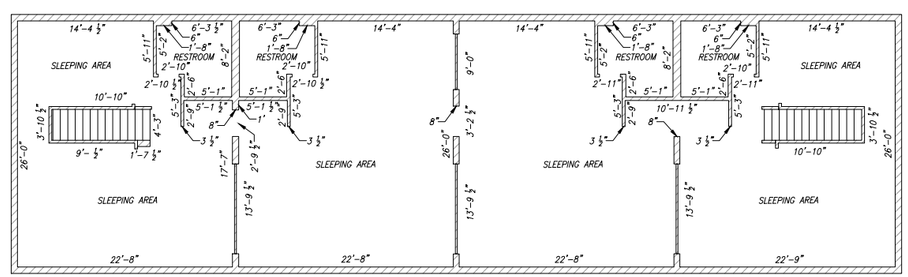
FILE_____ DRAWER_____ FOLDER_____

FINAL

M:\2018\2018_238.000 DAGS WAIAWA PRU-SUP\G DWGS\PM\ELEVATIONS\ELEVATIONS VER 01 191013 RROSAL\191002 RCRA WM WAIAWA CORRECTIONAL FLOOR PLAN SHEET_ADJUSTED.DWG
JOB NO. 19-314 DATE:



BUILDING NO. WCF-04 (HOUSING 4) FIRST FLOOR
BUILDING AREA = 3849 SQ. FT.



BUILDING NO. WCF-04 (HOUSING 4) SECOND FLOOR

GRAPHIC SCALE
16 8 4 0 8 24
(IN INCHES)
1/8 inch =1 ft.

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

WAIAWA CORRECTIONAL FACILITY
BUILDING NO. WCF-04 (HOUSING 4)
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

Floor Plans

AUSTIN, TSUTSUMI & ASSOCIATES, INC.
ENGINEERS, SURVEYORS • HONOLULU, WAIPAHU, HAWAII

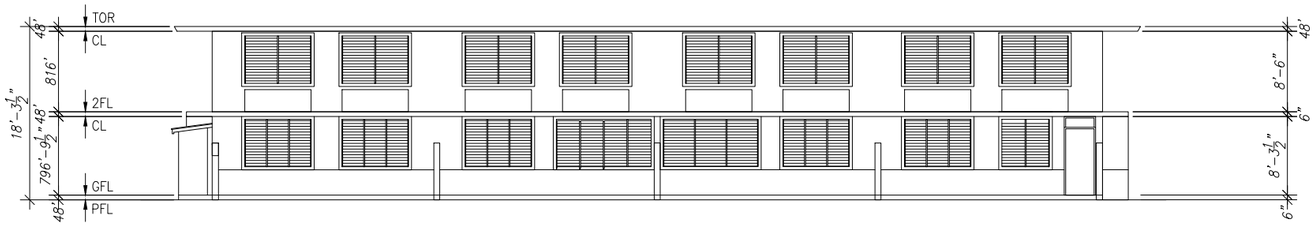
DESIGNED BY: CM	CHECKED BY: ___	JOB NO. 12-10-0783	DRAWING NO. C000.00
DRAWN BY: RS	APPROVED BY: ___	DATE JULY 2019	SHEET 6 OF 60 SHTS
SCALE: 1/8" = 1'			

BL

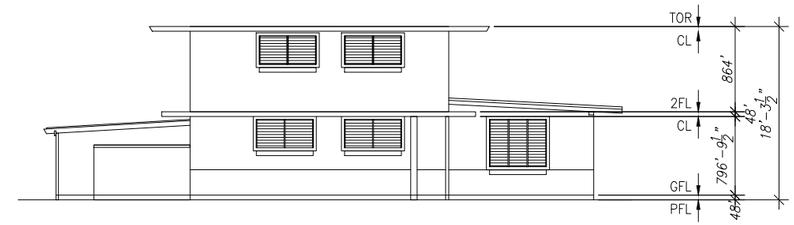
FILE_____ DRAWER_____ FOLDER_____

FINAL

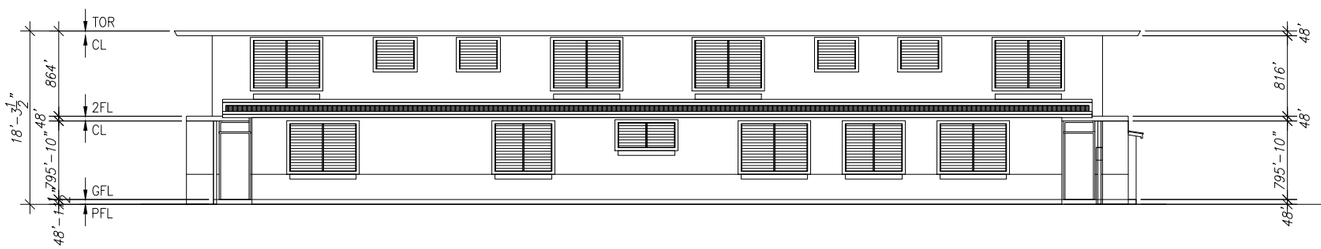
Y:\2019\19-314 WAIAWA FLOOR MAPPING\DONATA\WAIAWA CORRECTIONAL FLOOR PLAN SHEET.DWG
JOB NO. 19-314 DATE: 062819



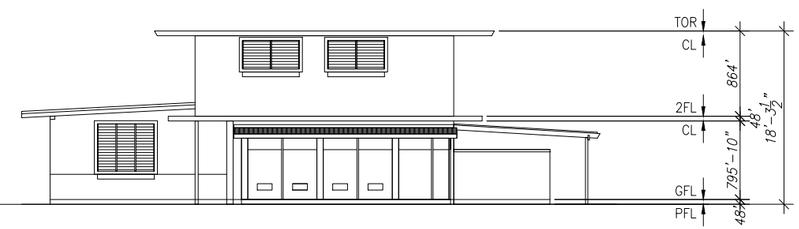
SOUTH SIDE ELEVATION
BUILDING NO. WCF-04 (HOUSING 4)



EAST SIDE ELEVATION
BUILDING NO. WCF-04 (HOUSING 4)



NORTH SIDE ELEVATION
BUILDING NO. WCF-04 (HOUSING 4)



WEST SIDE ELEVATION
BUILDING NO. WCF-04 (HOUSING 4)

GRAPHIC SCALE

16 8 4 0 8 24

(IN INCHES)
1/8 inch =1 ft.

BUILDING NO. WCF - 04 (HOUSING 4) ELEVATIONS

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

WAIAWA CORRECTIONAL FACILITY
BUILDING NO. WCF-04 (HOUSING 4)
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

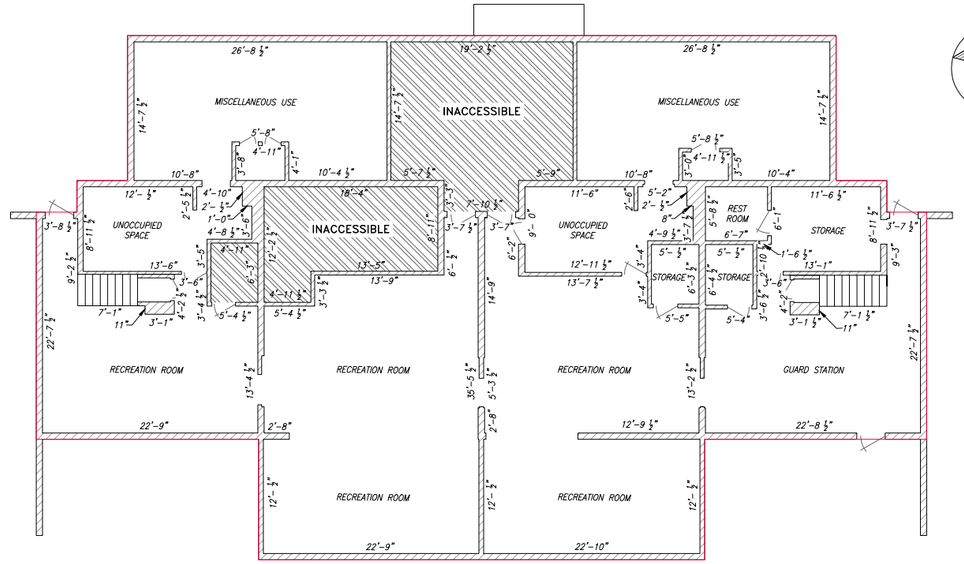
Elevations

SSFM International, Inc.		JOB NO.	DRAWING NO.
DESIGNED BY: CM	CHECKED BY: __	12-10-0783	C000.00
DRAWN BY: RCRA	APPROVED BY: __	DATE	SHEET 7
SCALE: 1/8" = 1'		SEP 2019	OF 60 SHTS

FILE_____ DRAWER_____ FOLDER_____

FINAL

M:\2018\2018_238.000 DAGS WAIAWA PRU-SUP\G DWGS\PM\ELEVATIONS\ELEVATIONS VER 01 191013 RROSAL\191002 RCRA WM WAIAWA CORRECTIONAL FLOOR PLAN SHEET_ADJUSTED.DWG
JOB NO. 19-314 DATE:

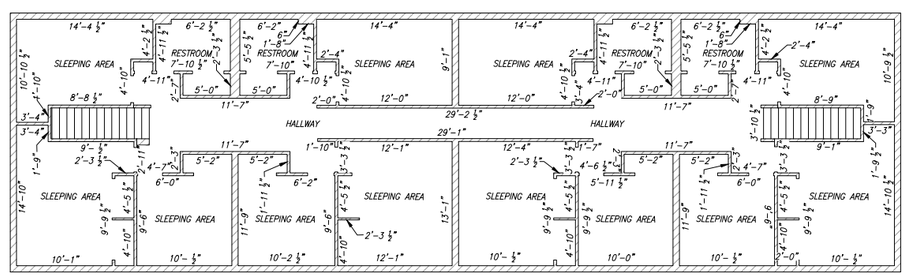


GRAPHIC SCALE

16 8 4 0 8 24

(IN INCHES)
1/8 inch =1 ft.

BUILDING NO. WCF-05 (HOUSING 5) FIRST FLOOR
BUILDING AREA = 4284 SQ. FT.



GRAPHIC SCALE

16 8 4 0 8 24

(IN INCHES)
1/8 inch =1 ft.

BUILDING NO. WCF-05 (HOUSING 5) SECOND FLOOR

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

WAIAWA CORRECTIONAL FACILITY
BUILDING NO. WCF-05 (HOUSING 5)
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

Floor Plans

AUSTIN, TSUTSUMI & ASSOCIATES, INC.
ENGINEERS, SURVEYORS • HONOLULU, WAIPAHU, HAWAII

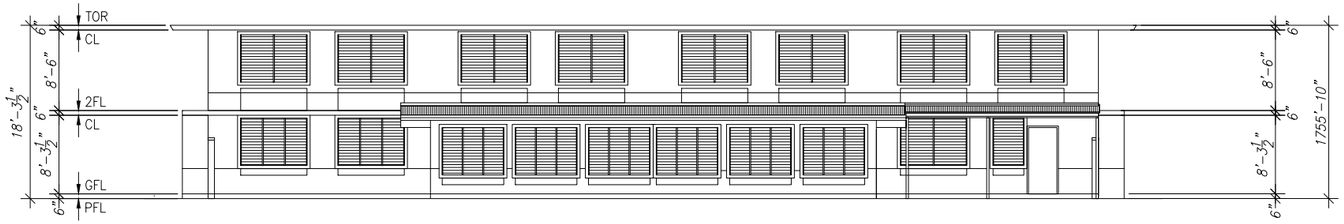
DESIGNED BY: CM	CHECKED BY: ___	JOB NO. 12-10-0783	DRAWING NO. C000.00
DRAWN BY: RS	APPROVED BY: ___	DATE JULY 2019	SHEET 8 OF 60 SHTS
SCALE: 1/8" = 1'			

BL

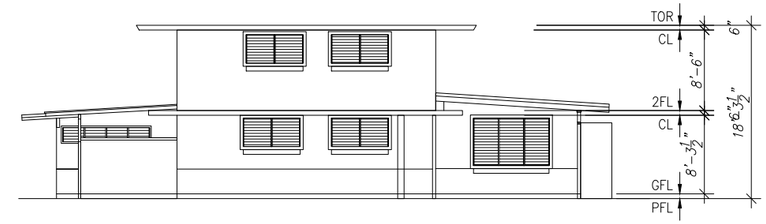
FILE_____ DRAWER_____ FOLDER_____

FINAL

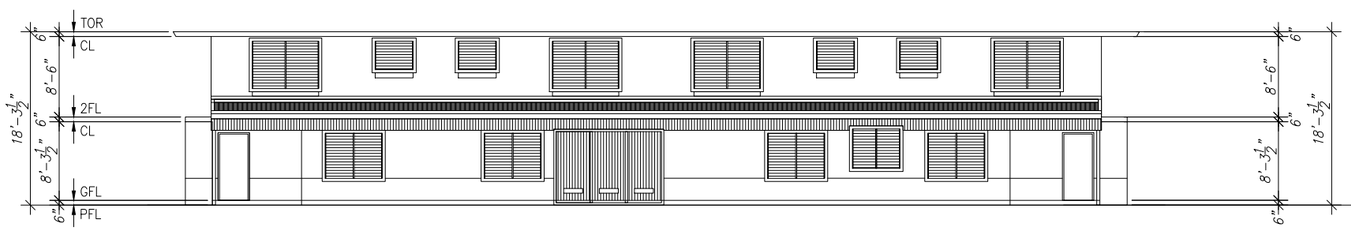
Y:\2019\19-314 WAIAWA FLOOR MAPPING\DONATA\WAIAWA CORRECTIONAL FLOOR PLAN SHEET.DWG
JOB NO. 19-314 DATE: 062819



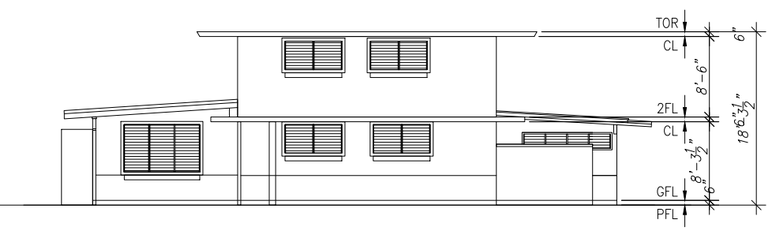
SOUTH SIDE ELEVATION
BUILDING NO. WCF-05 (HOUSING 5)



EAST SIDE ELEVATION
BUILDING NO. WCF-05 (HOUSING 5)



NORTH SIDE ELEVATION
BUILDING NO. WCF-05 (HOUSING 5)



WEST SIDE ELEVATION
BUILDING NO. WCF-05 (HOUSING 5)

GRAPHIC SCALE

16 8 4 0 8 24

(IN INCHES)
1/8 inch =1 ft.

BUILDING NO. WCF - 05 (HOUSING 5) ELEVATIONS

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

WAIAWA CORRECTIONAL FACILITY
BUILDING NO. WCF-05 (HOUSING 5)
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

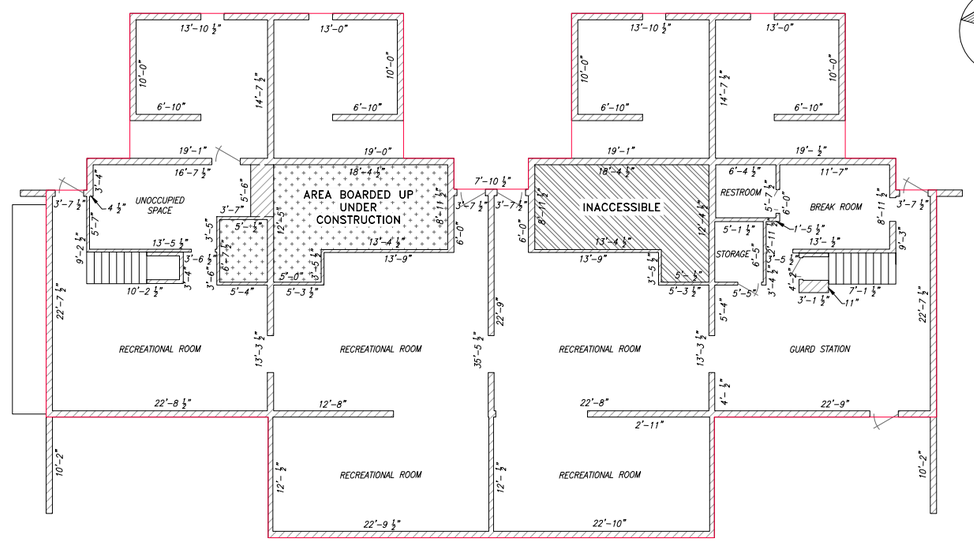
Elevations

SSFM International, Inc.		JOB NO.	DRAWING NO.
DESIGNED BY: CM	CHECKED BY: __	12-10-0783	C000.00
DRAWN BY: RCRA	APPROVED BY: __	DATE SEP 2019	SHEET 9
SCALE: 1/8" = 1'			OF 60 SHTS

FILE_____ DRAWER_____ FOLDER_____

FINAL

M:\2018\2018_238.000 DAGS WAIAWA PRU-SUP\G DWGS\PM\ELEVATIONS\ELEVATIONS VER 01 191013 RROSAL\191002 RCRA WM WAIAWA CORRECTIONAL FLOOR PLAN SHEET_ADJUSTED.DWG
JOB NO. 19-314 DATE:

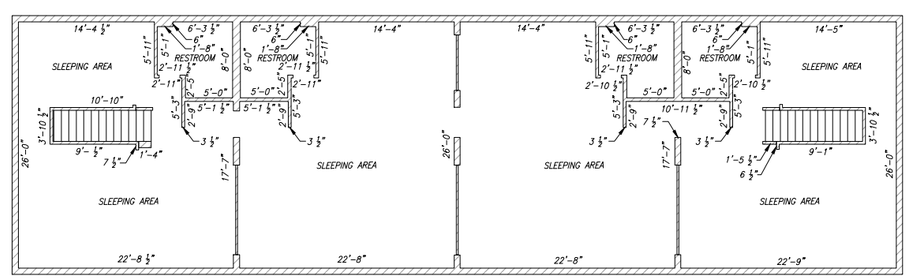


GRAPHIC SCALE

16 8 4 0 8 24

(IN INCHES)
1/8 inch =1 ft.

BUILDING NO. WCF-06 (HOUSING 6) FIRST FLOOR
BUILDING AREA = 3998 SQ. FT.



GRAPHIC SCALE

16 8 4 0 8 24

(IN INCHES)
1/8 inch =1 ft.

BUILDING NO. WCF-06 (HOUSING 6) SECOND FLOOR

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

WAIAWA CORRECTIONAL FACILITY
BUILDING NO. WCF-06 (HOUSING 6)
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

Floor Plans

AUSTIN, TSUTSUMI & ASSOCIATES, INC.
ENGINEERS, SURVEYORS • HONOLULU, WAIPAHU, HAWAII

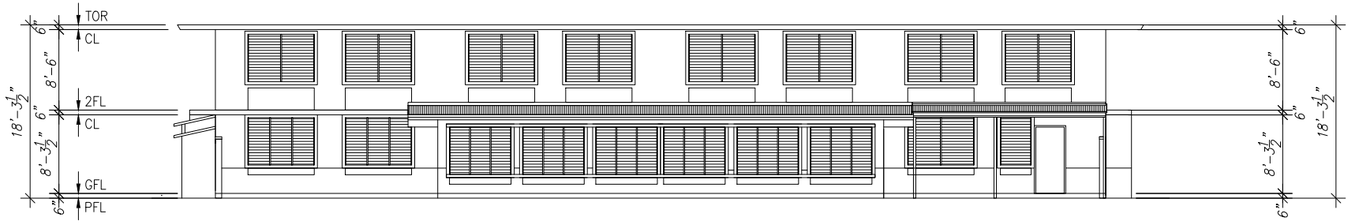
DESIGNED BY: CM	CHECKED BY: ___	JOB NO. 12-10-0783	DRAWING NO. C000.00
DRAWN BY: RS	APPROVED BY: ___	DATE JULY 2019	SHEET 10 OF 60 SHTS.
SCALE: 1/8" = 1'			

BL

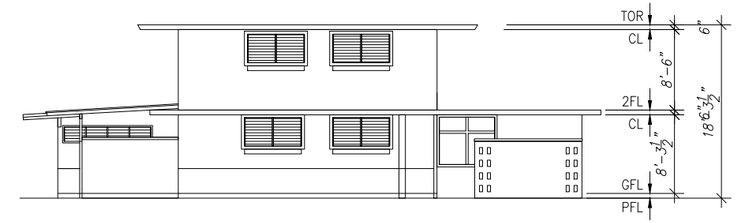
FILE_____ DRAWER_____ FOLDER_____

FINAL

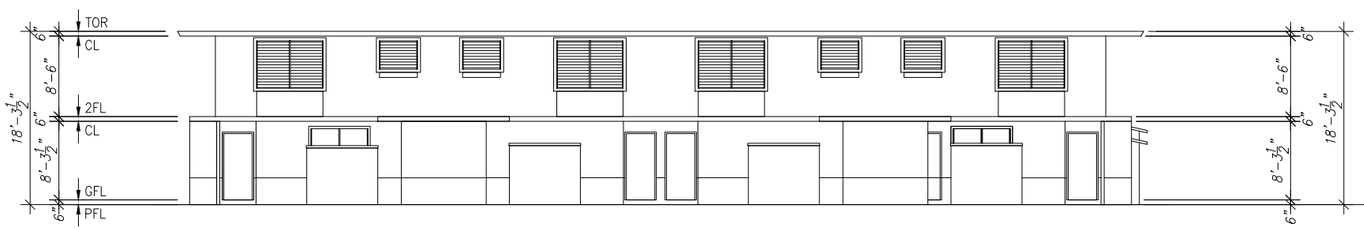
Y:\2019\19-314 WAIAWA FLOOR MAPPING\DONATA\WAIAWA CORRECTIONAL FLOOR PLAN SHEET.DWG
JOB NO. 19-314 DATE: 062819



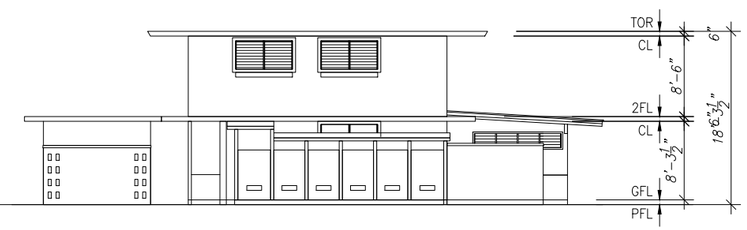
SOUTH SIDE ELEVATION
BUILDING NO. WCF-06 (HOUSING 6)



EAST SIDE ELEVATION
BUILDING NO. WCF-06 (HOUSING 6)



NORTH SIDE ELEVATION
BUILDING NO. WCF-06 (HOUSING 6)



WEST SIDE ELEVATION
BUILDING NO. WCF-06 (HOUSING 6)

GRAPHIC SCALE

16 8 4 0 8 24

(IN INCHES)
1/8 inch =1 ft.

BUILDING NO. WCF - 06 (HOUSING 6) ELEVATIONS

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

WAIAWA CORRECTIONAL FACILITY
BUILDING NO. WCF-06 (HOUSING 6)
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

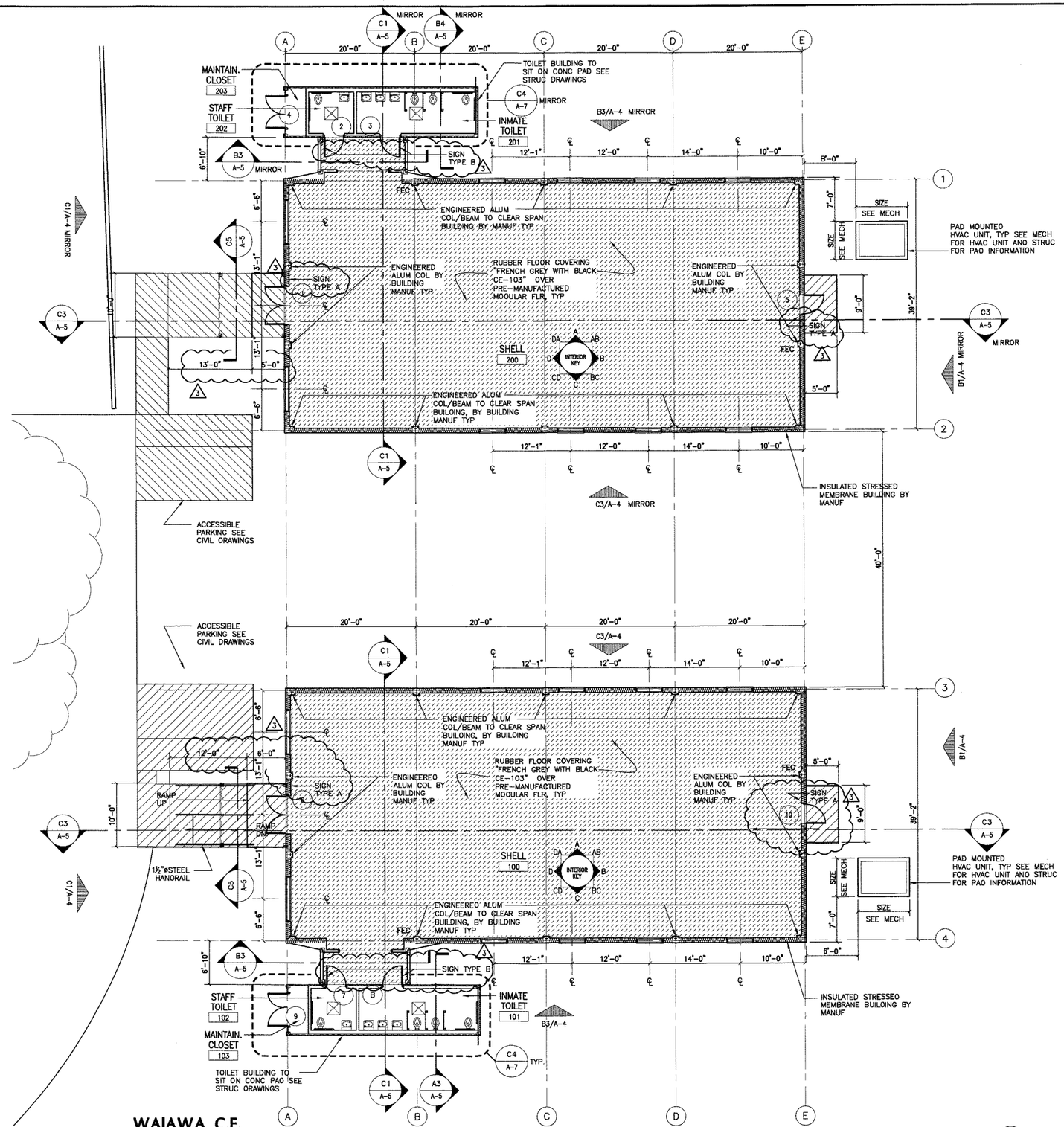
Elevations

SSFM International, Inc.		JOB NO.	DRAWING NO.
DESIGNED BY: CM	CHECKED BY: __	12-10-0783	C000.00
DRAWN BY: RCRA	APPROVED BY: __	DATE SEP 2019	SHEET 11
SCALE: 1/8" = 1'			OF 60 SHTS

FILE_____ DRAWER_____ FOLDER_____

FINAL

M:\2018\2018_238.000 DAGS WAIAWA PRU-SUP\G DWGS\PM\ELEVATIONS\ELEVATIONS VER 01 191013 RROSAL\191002 RCRA WM WAIAWA CORRECTIONAL FLOOR PLAN SHEET_ADJUSTED.DWG
JOB NO. 19-314 DATE:



WAIAWA C.F. BUILDING PLAN

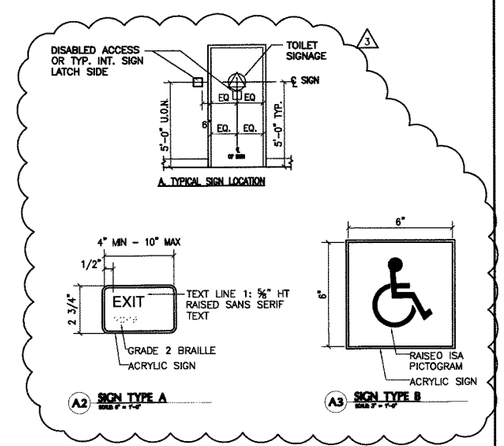
A1 SCALE: 1/6" = 1'-0"

LEGEND

	CONCRETE PAVING SEE STRUC DRAWINGS
	ALUMINUM FRAMED PRE-MANUF FLOOR
FEC	WALL MOUNTED FIRE EXTINGUISHER

SHEET NOTES

1. SEE BUILDING ELEVATIONS ON SHEET A-04 FOR EXTERIOR WINDOW INFORMATION
2. ALL STRUCTURAL COMPONENTS OF THE PRESTRESSED MEMBRANE STRUCTURE SHALL BE FROM A SINGLE MANUF
3. ALL COMPONENTS REQUIRED TO PROVIDE A WATERTIGHT ENCLOSURE SHALL BE FROM A SINGLE MANUF



AS BUILT DRAWING
ALLIED BUILDERS SYSTEM

REVISION NO.	SYM.	DESCRIPTION	SHT. OF	DATE	APPROVED: PUBLIC WORKS ADMINISTRATOR
PCD-3	3	DCAB COMMENTS	2/3	9-10-09	

STANLEY T. YASUMOTO LICENSED PROFESSIONAL ARCHITECT No. 3243 HAWAII, U.S.A.

This work was prepared by me or under my supervision and construction of this project will be under my observation. (Observation of construction as defined in Chapter 16-115, Subchapter 1 Definitions of the Hawaii Administrative Rules, "Professional Engineers, Architects, Surveyors, and Landscape Architects.")

signature — 04/30/10 expiration date of the license

NOTE: Contractor to check and verify dimensions at job before proceeding with work.

DEPT. OF ACCOUNTING & GENERAL SERVICES
DIVISION OF PUBLIC WORKS
STATE OF HAWAII

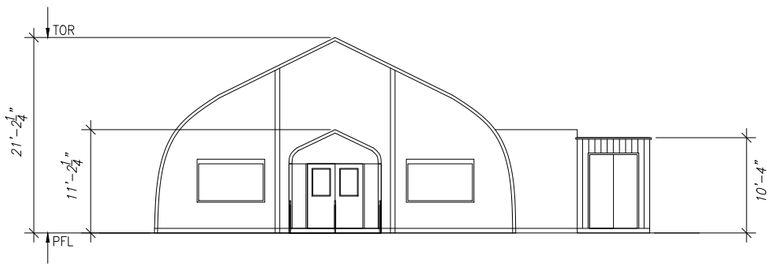
DEPARTMENT OF PUBLIC SAFETY
WAIAWA TEMPORARY PROGRAM FACILITIES 1
WAIAWA, HAWAII

57

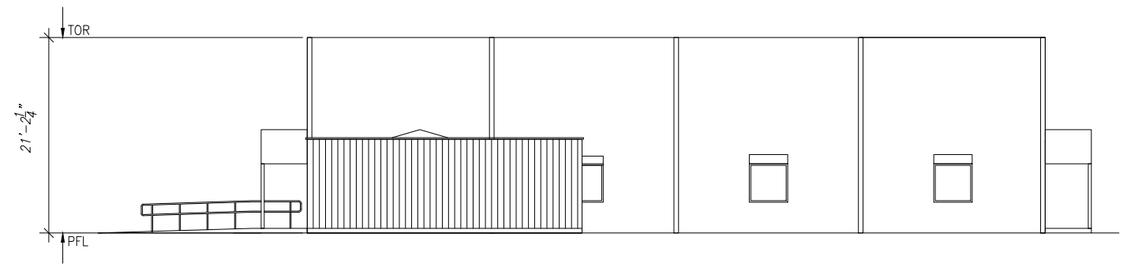
BUILDING PLAN

ARCHITECTS HAWAII, LTD.		DASS JOB NO.	DRAWING NO.
DESIGNED BY: AHL	CHECKED BY: AHL	22-27-5609	A-2
DRAWN BY: AHL	APPROVED BY: SY	DATE: APRIL 3, 2009	SHEET 23 OF ___ SHTS.
SCALE: AS SHOWN			

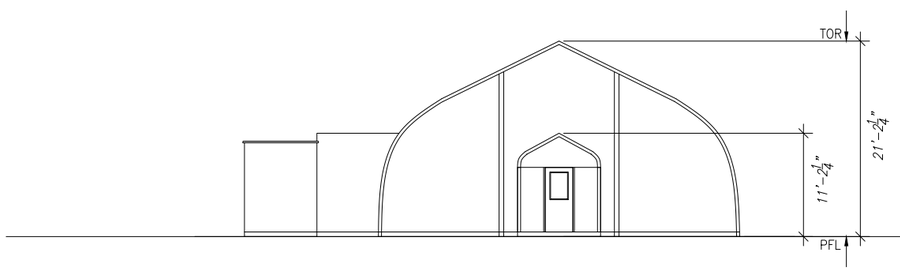
FILE ___ DRAW ___ FOLDER ___



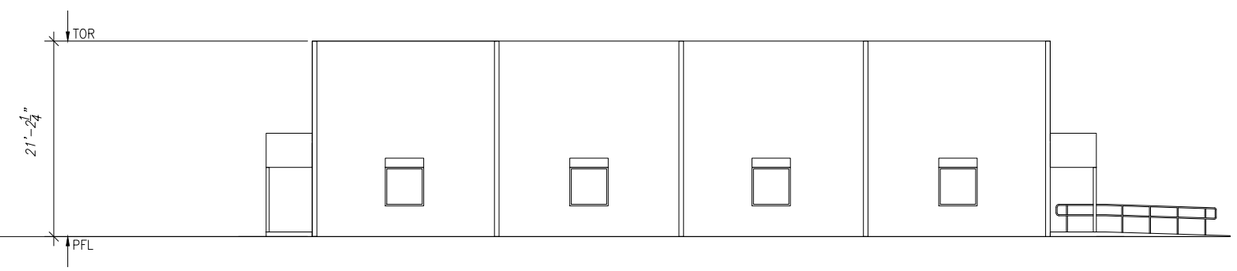
NORTHWEST SIDE ELEVATION
BUILDING NO. TENT-7



SOUTHWEST SIDE ELEVATION
BUILDING NO. TENT-7



SOUTHEAST SIDE ELEVATION
BUILDING NO. TENT-7



NORTHEAST SIDE ELEVATION
BUILDING NO. TENT-7

GRAPHIC SCALE

16 8 4 0 8 24

(IN INCHES)
1/8 inch =1 ft.

BUILDING NO. WCF - 07 (TENT 7) ELEVATIONS

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

WAIAWA CORRECTIONAL FACILITY
BUILDING NO. WCF-07 (TENT 07)
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

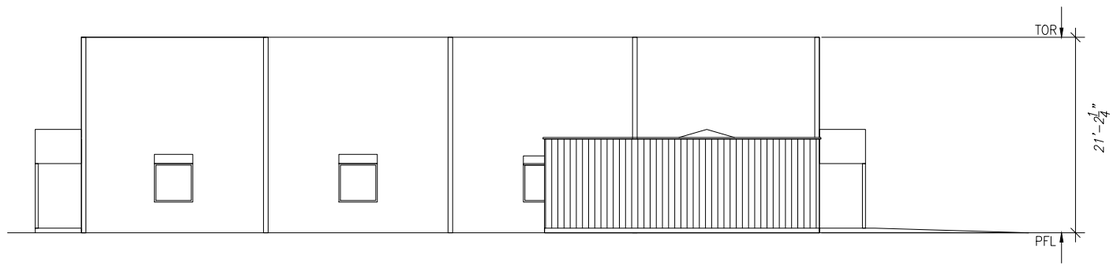
Elevations

SSFM International, Inc.		JOB NO.	DRAWING NO.
DESIGNED BY: CM	CHECKED BY: ___	12-10-0783	C000.00
DRAWN BY: RCRA	APPROVED BY: ___	DATE	SHEET 13
SCALE: 1/8" = 1'		SEP 2019	OF 60 SHTS

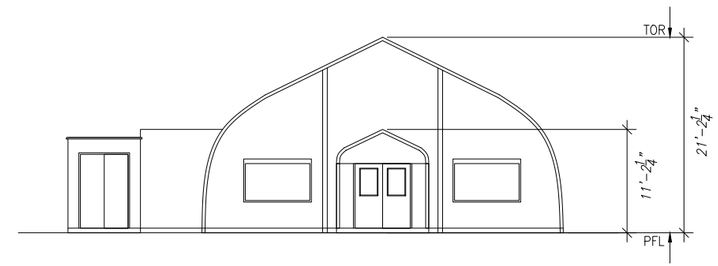
FILE_____ DRAWER_____ FOLDER_____

FINAL

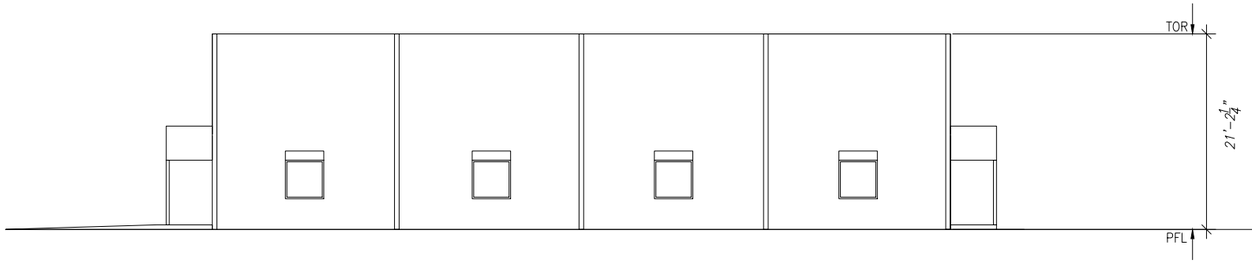
D:\WAIWA CORRECTIONAL FACILITY HAWAII\191002 RCRA WM WAIAWA CORRECTIONAL FLOOR PLAN SHEET_ADJUSTED.DWG
JOB NO. 19-314 DATE:



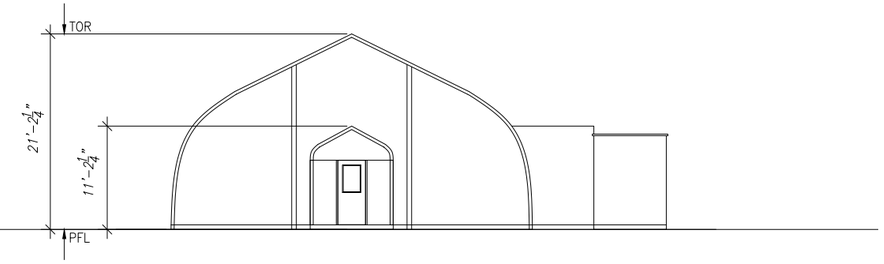
NORTHEAST SIDE ELEVATION
BUILDING NO. TENT-8



NORTHWEST SIDE ELEVATION
BUILDING NO. TENT-8



SOUTHWEST SIDE ELEVATION
BUILDING NO. TENT-8



SOUTHEAST SIDE ELEVATION
BUILDING NO. TENT-8

GRAPHIC SCALE

16 8 4 0 8 24

(IN INCHES)
1/8 inch =1 ft.

BUILDING NO. WCF - 08 (TENT 8) ELEVATIONS

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

WAIAWA CORRECTIONAL FACILITY
BUILDING NO. WCF-08 (TENT 08)
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

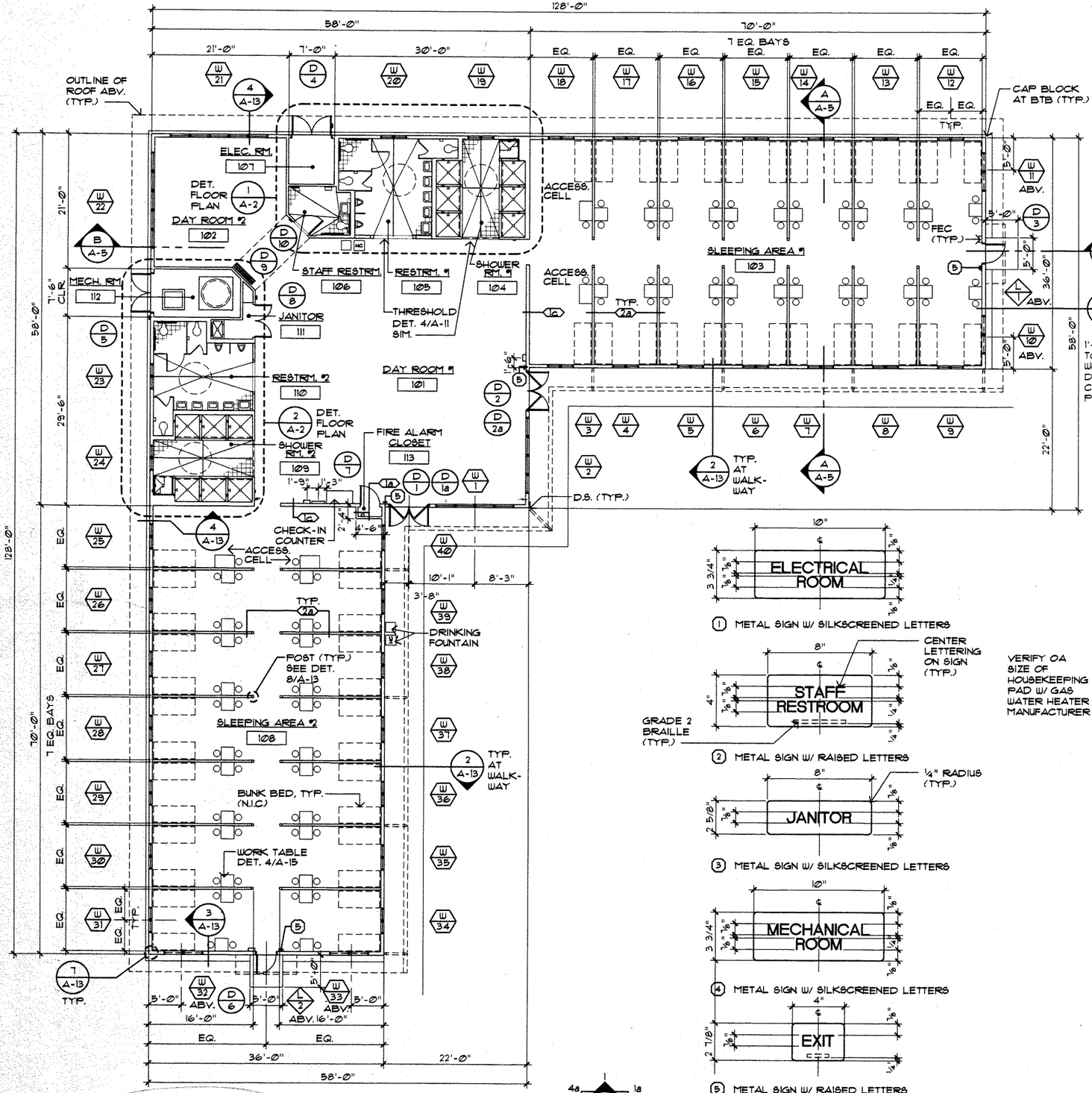
Elevations

SSFM International, Inc.		JOB NO.	DRAWING NO.
DESIGNED BY: CM	CHECKED BY: __	12-10-0783	C000.00
DRAWN BY: RCRA	APPROVED BY: __	DATE	SHEET 14
SCALE: 1/8" = 1'		SEP 2019	OF 60 SHTS

FILE_____ DRAWER_____ FOLDER_____

FINAL

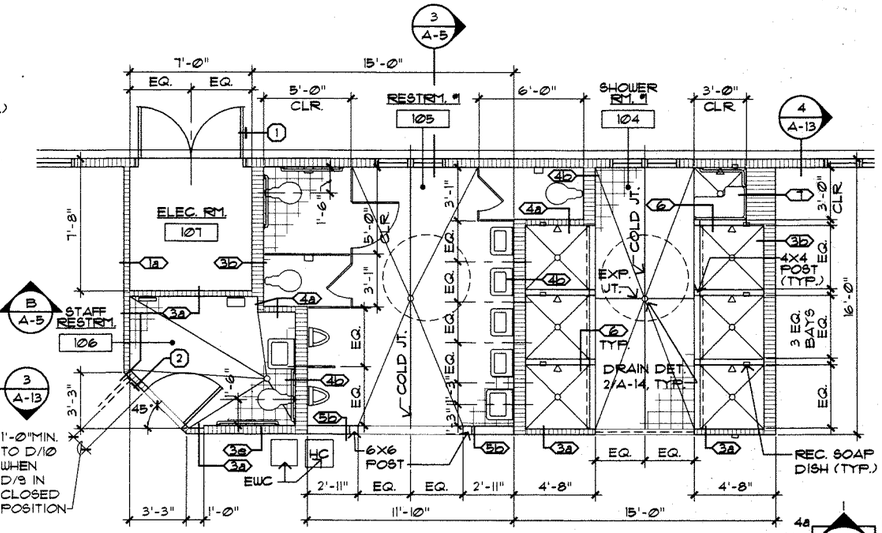
D:\WAIAWA CORRECTIONAL FACILITY HAWAII\191002 RCRA WM WAIAWA CORRECTIONAL FLOOR PLAN SHEET_ADJUSTED.DWG
JOB NO. 19-314 DATE:



FLOOR PLAN

SCALE: 1/8" = 1'-0"

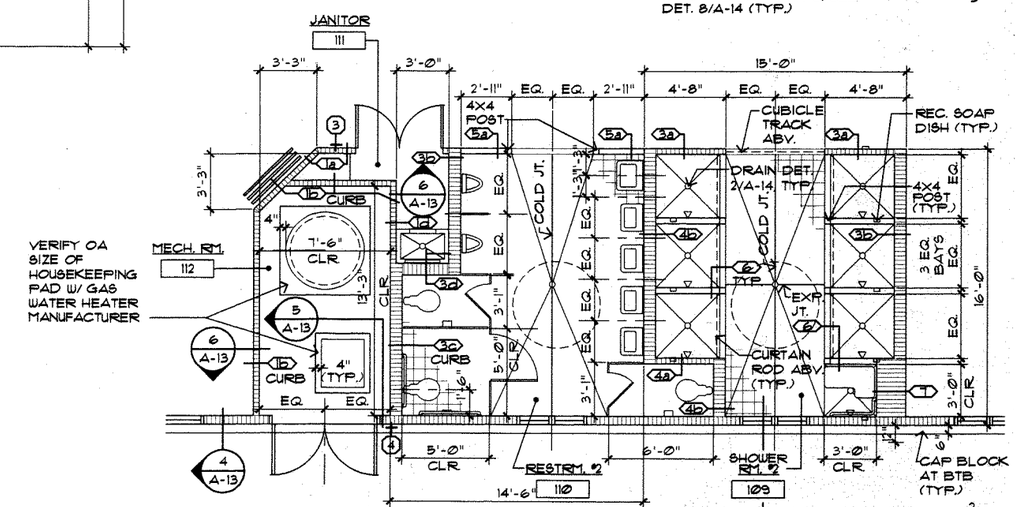
NOTE: PLANS DRAWN FOR BUILDING "A" BUILDING "B" SIMILAR, MIRRORED



DETAILED FLOOR PLAN

SCALE: 1/4" = 1'-0"

NOTE: FOR CER. TILE COLD JOINTS, SEE DET. 4/A-14. FOR CER. TILE EXP. JOINTS, SEE DET. 8/A-14 (TYP.)

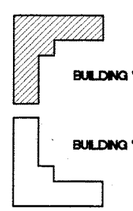


DETAILED FLOOR PLAN

SCALE: 1/4" = 1'-0"

SIGN TYPES

SCALE: 3" = 1'-0"



KEY PLAN
NOT TO SCALE

REVISION NO.	SYM.	DESCRIPTION	SHT.__ OF__	DATE	APPROVED: STATE PUBLIC WORKS ENGINEER

DEPT. OF ACCOUNTING AND GENERAL SERVICES
DIVISION OF PUBLIC WORKS
STATE OF HAWAII

WAIAWA CORRECTIONAL FACILITY
"KASHBOX" COMPOUND
OAHU CCC
WAIAWA, EWA, OAHU, HAWAII

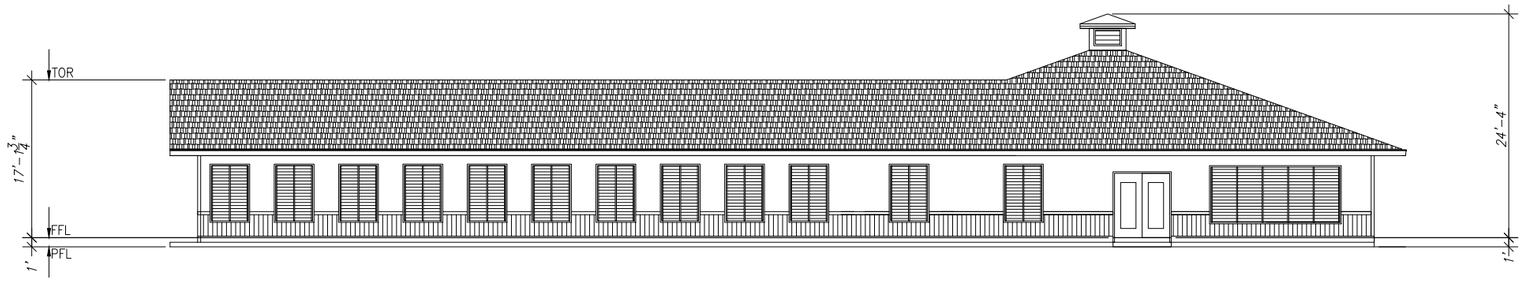
BUILDING "A" FLOOR PLAN & DETAILED FLOOR PLANS, SIGN TYPES

STANLEY T. YASUMOTO LICENSED PROFESSIONAL ARCHITECT No. 5545 HAWAII, U.S.A.

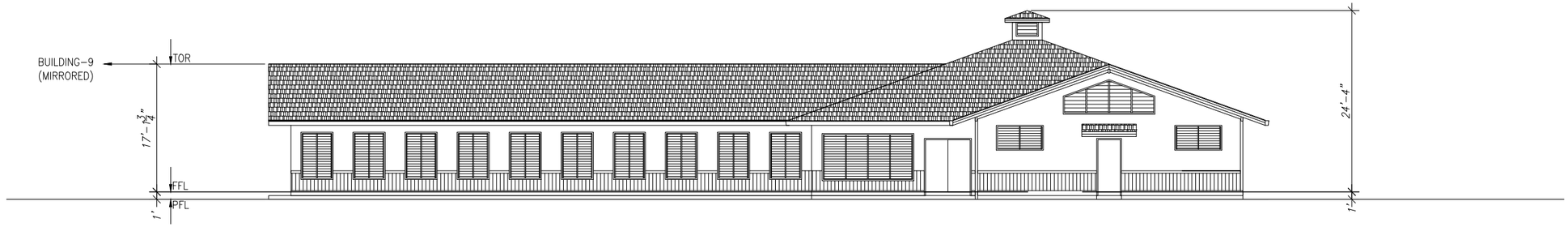
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

ARCHITECTS HAWAII LIMITED		D.A.G.S. JOB NO.	DRAWING NO.
DESIGNED BY: SY,DU	CHECKED BY: DU	12-27-5522	A-2
DRAWN BY: JSS	APPROVED BY: SY	DATE 10-1-1997	SHEET 20 OF 28 SHTS
SCALE: AS NOTED			

FILE..... DRAWER..... FOLDER..... Waiawa



WEST SIDE ELEVATION
BUILDING NO. WCF-9



NORTH SIDE ELEVATION
BUILDING NO. WCF-9

GRAPHIC SCALE

16 8 4 0 8 24

(IN INCHES)
1/8 inch =1 ft.

BUILDING NO. WCF - 9 ELEVATIONS

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

WAIAWA CORRECTIONAL FACILITY
BUILDING NO. WCF-09 (HOUSING 09)
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

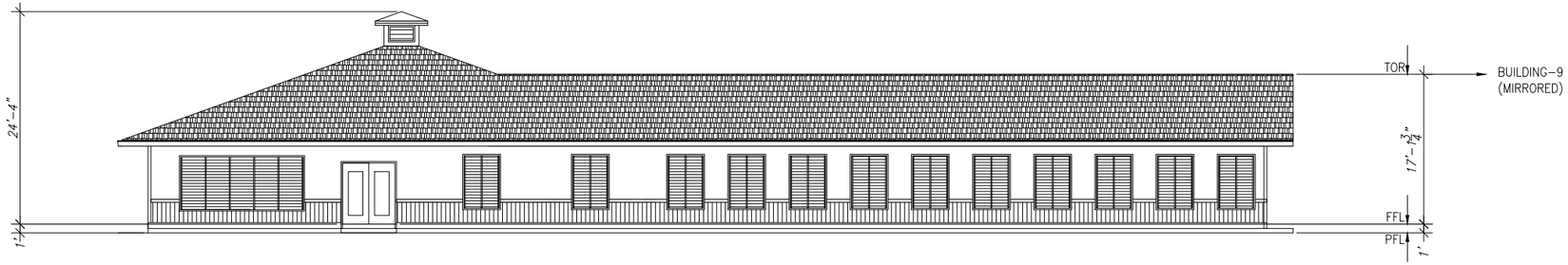
Elevations

SSFM International, Inc.		JOB NO.	DRAWING NO.
DESIGNED BY: CM	CHECKED BY: —	12-10-0783	C000.00
DRAWN BY: RCRA	APPROVED BY: —	DATE	SHEET 16
SCALE: 1/8" = 1'		SEP 2019	OF 60 SHTS

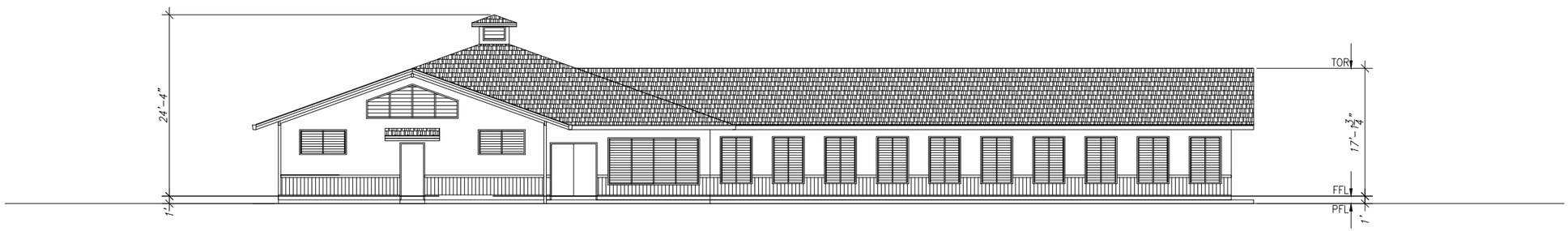
FILE_____ DRAWER_____ FOLDER_____

FINAL

D:\WAIWA CORRECTIONAL FACILITY HAWAII\191002 RCRA WM WAIAWA CORRECTIONAL FLOOR PLAN SHEET_ADJUSTED.DWG
JOB NO. 19-314 DATE:



SOUTH SIDE ELEVATION
BUILDING NO. WCF-9



EAST SIDE ELEVATION
BUILDING NO. WCF-9

GRAPHIC SCALE

16 8 4 0 8 24

(IN INCHES)
1/8 inch =1 ft.

BUILDING NO. WCF - 9 ELEVATIONS

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

WAIAWA CORRECTIONAL FACILITY
BUILDING NO. WCF-09 (HOUSING 09)
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

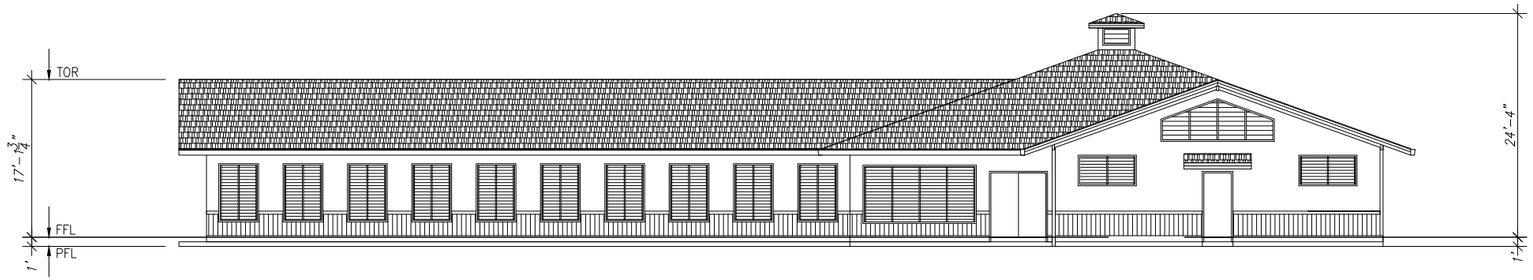
Elevations

SSFM International, Inc.		JOB NO.	DRAWING NO.
DESIGNED BY: CM	CHECKED BY: __	12-10-0783	C000.00
DRAWN BY: RCRA	APPROVED BY: __	DATE	SHEET 17
SCALE: 1/8" = 1'		SEP 2019	OF 60 SHTS

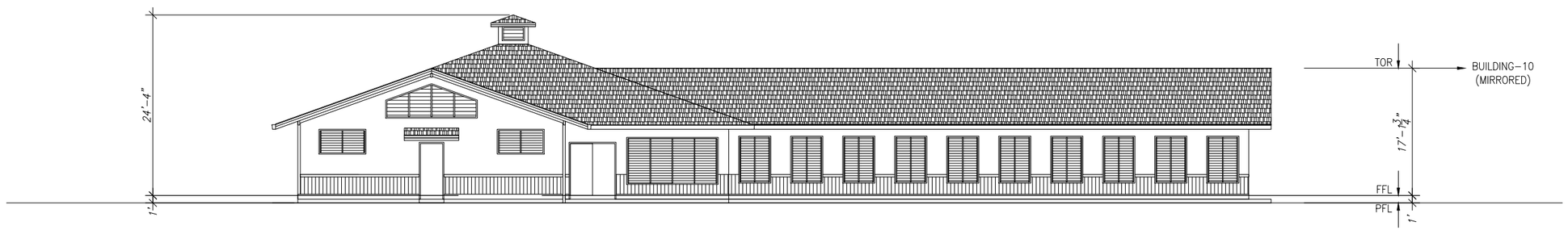
FILE_____ DRAWER_____ FOLDER_____

FINAL

D:\WAIWA CORRECTIONAL FACILITY HAWAII\191002 RCRA WM WAIAWA CORRECTIONAL FLOOR PLAN SHEET_ADJUSTED.DWG
JOB NO. 19-314 DATE:



EAST SIDE ELEVATION
BUILDING NO. WCF-10



SOUTH SIDE ELEVATION
BUILDING NO. WCF-10

D:\WAIWA CORRECTIONAL FACILITY HAWAII\191002 RCRA WM WAIAWA CORRECTIONAL FLOOR PLAN SHEET_ADJUSTED.DWG
JOB NO. 19-314 DATE:

GRAPHIC SCALE
16 8 4 0 8 24
(IN INCHES)
1/8 inch =1 ft.

BUILDING NO. WCF - 10 ELEVATIONS

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

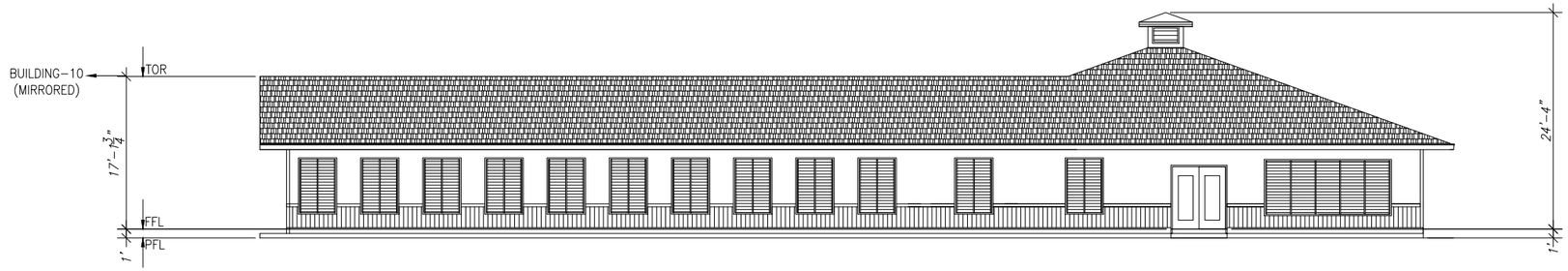
WAIAWA CORRECTIONAL FACILITY
BUILDING NO. WCF-10 (HOUSING 10)
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

Elevations

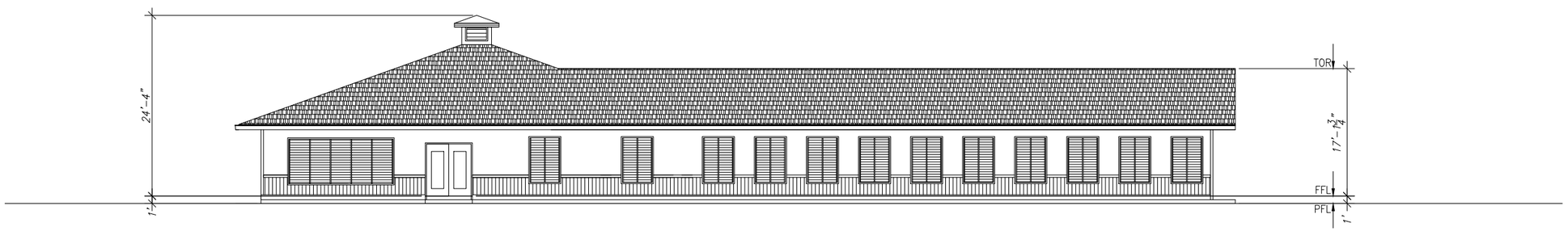
SSFM International, Inc.		JOB NO.	DRAWING NO.
DESIGNED BY: CM	CHECKED BY: __	12-10-0783	C000.00
DRAWN BY: RCRA	APPROVED BY: __	DATE	SHEET 18
SCALE: 1/8" = 1'		SEP 2019	OF 60 SHTS

FILE_____ DRAWER_____ FOLDER_____

FINAL



NORTH SIDE ELEVATION
BUILDING NO. WCF-10



WEST SIDE ELEVATION
BUILDING NO. WCF-10

GRAPHIC SCALE

16 8 4 0 8 24

(IN INCHES)
1/8 inch =1 ft.

BUILDING NO. WCF - 10 ELEVATIONS

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

WAIAWA CORRECTIONAL FACILITY
BUILDING NO. WCF-10 (HOUSING 10)
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

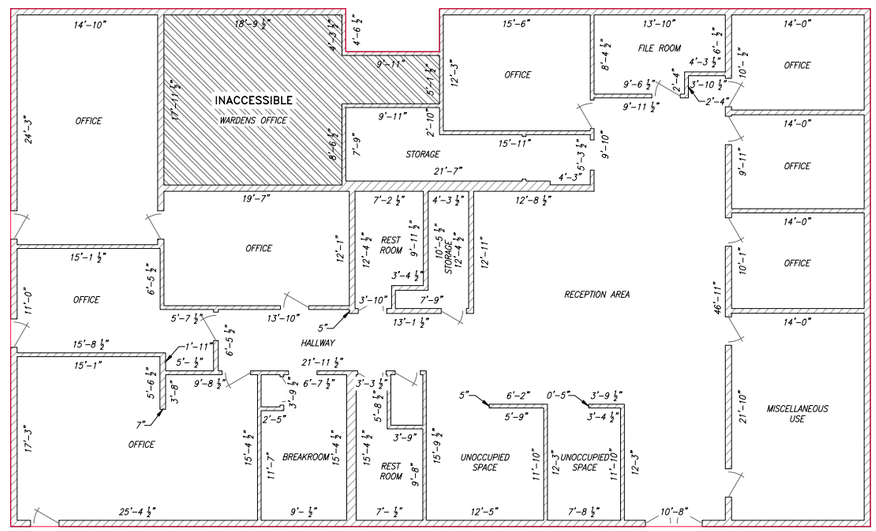
Elevations

SSFM International, Inc.		JOB NO.	DRAWING NO.
DESIGNED BY: CM	CHECKED BY: —	12-10-0783	C000.00
DRAWN BY: RCRA	APPROVED BY: —	DATE	SHEET 19
SCALE: 1/8" = 1'		SEP 2019	OF 60 SHTS

FILE_____ DRAWER_____ FOLDER_____

FINAL

D:\WAIWA CORRECTIONAL FACILITY HAWAII\191002 RCRA WM WAIAWA CORRECTIONAL FLOOR PLAN SHEET_ADJUSTED.DWG
JOB NO. 19-314 DATE:



GRAPHIC SCALE

16 8 4 0 8 24

(IN INCHES)
1/8 inch =1 ft.

BUILDING NO. WCF-A (ADMINISTRATON BUILDING)
BUILDING AREA = 4919 SQ. FT.

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

WAIAWA CORRECTIONAL FACILITY
BUILDING NO. WCF-A (ADMINISTRATON BUILDING)
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

Floor Plans

AUSTIN, TSUTSUMI & ASSOCIATES, INC.
ENGINEERS, SURVEYORS • HONOLULU, MAPPING, HAWAII

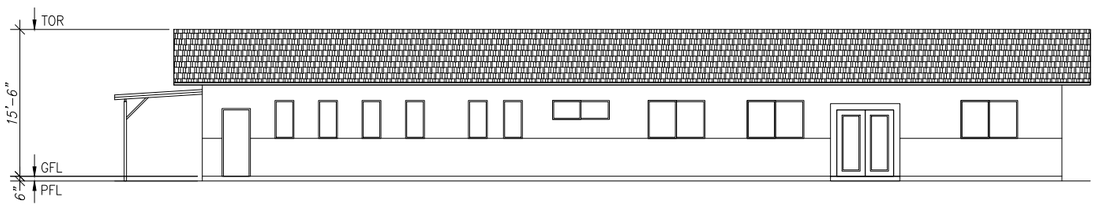
DESIGNED BY: CM	CHECKED BY: ___	JOB NO. 12-10-0783	DRAWING NO. C000.00
DRAWN BY: RS	APPROVED BY: ___	DATE JULY 2019	SHEET 20 OF 60 SHTS
SCALE: 1/8" = 1'			

BL

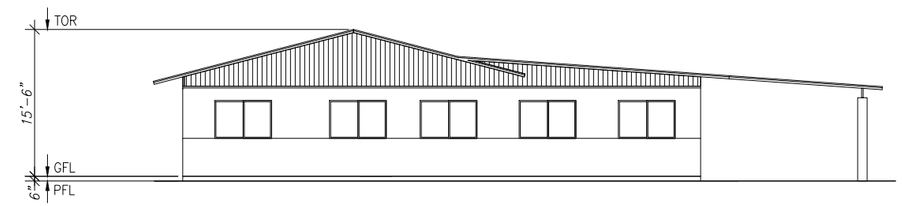
FILE_____ DRAWER_____ FOLDER_____

FINAL

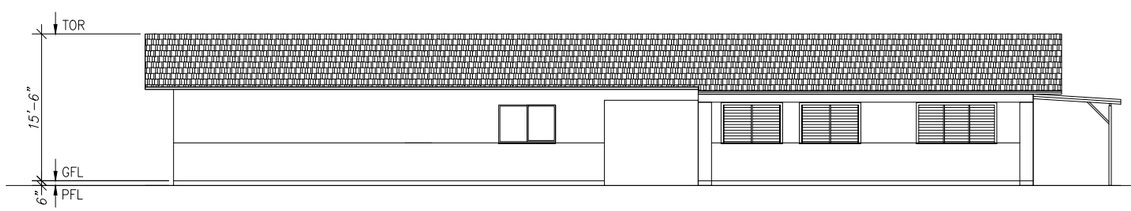
Y:\2019\19-314 WAIAWA FLOOR MAPPING\DONATA\WAIAWA CORRECTIONAL FLOOR PLAN SHEET.DWG
JOB NO. 19-314 DATE: 08219



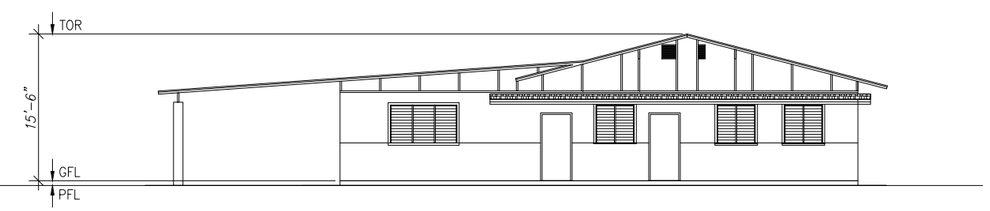
SOUTH SIDE ELEVATION
BUILDING NO. WCF-A



EAST SIDE ELEVATION
BUILDING NO. WCF-A



NORTH SIDE ELEVATION
BUILDING NO. WCF-A



WEST SIDE ELEVATION
BUILDING NO. WCF-A

GRAPHIC SCALE

16 8 4 0 8 24

(IN INCHES)
1/8 inch =1 ft.

BUILDING NO. WCF - A ELEVATIONS

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

WAIAWA CORRECTIONAL FACILITY
BUILDING NO. WCF-A (ADMINISTRATON BUILDING)
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

Elevations

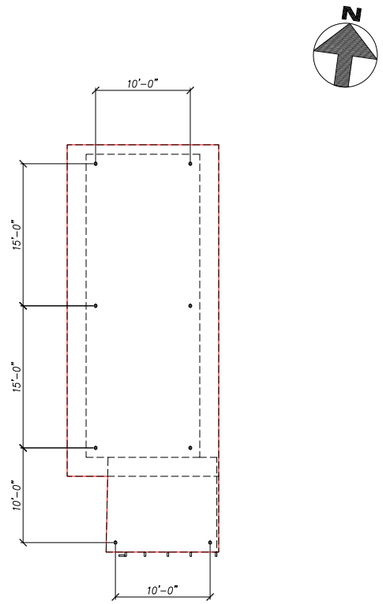
SSFM International, Inc.

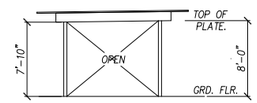
DESIGNED BY: CM	CHECKED BY: __	JOB NO. 12-10-0783	DRAWING NO. C000.00
DRAWN BY: RCRA	APPROVED BY: __	DATE SEP 2019	SHEET 21 OF 60 SHTS
SCALE: 1/8" = 1'			

FILE_____ DRAWER_____ FOLDER_____

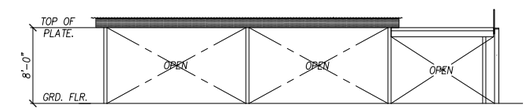
FINAL

M:\2018\2018_238.000 DAGS WAIAWA PRU-SUP\G DWGS\PM\ELEVATIONS\ELEVATIONS VER 01 191013 RROSAL\191002 RCRA WM WAIAWA CORRECTIONAL FLOOR PLAN SHEET_ADJUSTED.DWG
JOB NO. 19-314 DATE:

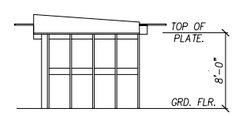




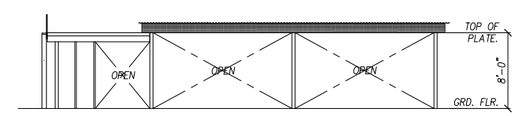
NORTH SIDE ELEVATION
BUILDING NO. WCF-A1



WEST SIDE ELEVATION
BUILDING NO. WCF-A1



SOUTH SIDE ELEVATION
BUILDING NO. WCF-A1



EAST SIDE ELEVATION
BUILDING NO. WCF-A1

GRAPHIC SCALE

16 8 4 0 8 24

(IN INCHES)
1/8 inch =1 ft.

BUILDING NO. WCF-A1
BUILDING AREA = 695 SQ. FT.

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

WAIAWA CORRECTIONAL FACILITY
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

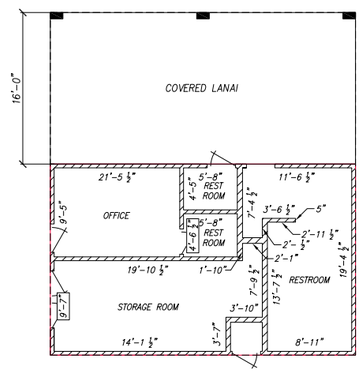
Floor Plans and Elevations

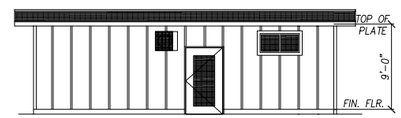
SSFM International, Inc.		JOB NO.	DRAWING NO.
DESIGNED BY: CM	CHECKED BY: —	12-10-0783	
DRAWN BY: NS	APPROVED BY: —	DATE	SHEET 22
SCALE: 1/8" = 1'-0"		SEP 2019	OF 60 SHTS

FILE_____ DRAWER_____ FOLDER_____

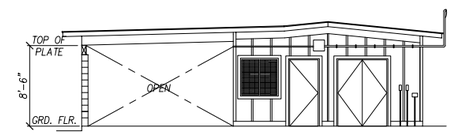
FINAL

M:\2018\2018_238.000 DAGS WAIAWA PRU-SUP\G DWGS\PM\ELEVATIONS\ELEVATIONS VER 01 191013 RROSAL\DRAWINGS\WCF - A1.DWG
JOB NO. 19-314 DATE:

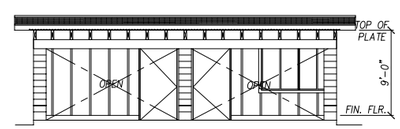




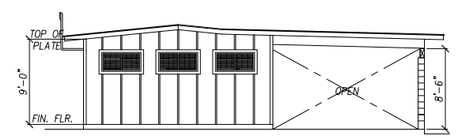
NORTH SIDE ELEVATION
BUILDING NO. WCF-AF



WEST SIDE ELEVATION
BUILDING NO. WCF-AF



SOUTH SIDE ELEVATION
BUILDING NO. WCF-AF



EAST SIDE ELEVATION
BUILDING NO. WCF-AF

GRAPHIC SCALE

16 8 4 0 8 24

(IN INCHES)
1/8 inch =1 ft.

BUILDING NO. WCF-AF

BUILDING AREA = 1232 SQ. FT.

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

WAIAWA CORRECTIONAL FACILITY
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

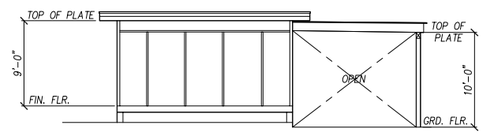
Floor Plans and Elevations

SSFM International, Inc.		JOB NO.	DRAWING NO.
DESIGNED BY: CM	CHECKED BY: —	12-10-0783	
DRAWN BY: NS	APPROVED BY: —	DATE SEP 2019	SHEET 23 OF 60 SHTS
SCALE: 1/8" = 1'-0"			

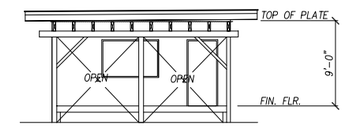
FILE_____ DRAWER_____ FOLDER_____

FINAL

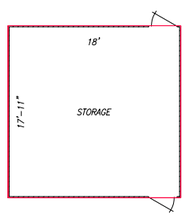
M:\2018\2018_238.000 DAGS WAIAWA PRU-SUP\G DWGS\PM\ELEVATIONS\ELEVATIONS VER 01 191013 RROSAL\DRAWINGS\WCF - AF.DWG
JOB NO. 19-314 DATE:

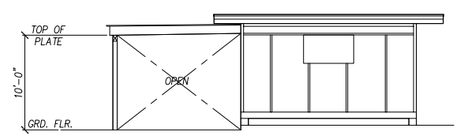


NORTH SIDE ELEVATION
BUILDING NO. WCF-AS

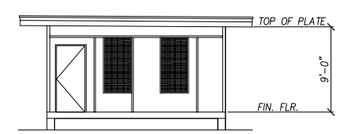


WEST SIDE ELEVATION
BUILDING NO. WCF-AS





SOUTH SIDE ELEVATION
BUILDING NO. WCF-AS



EAST SIDE ELEVATION
BUILDING NO. WCF-AS

GRAPHIC SCALE

16 8 4 0 8 24

(IN INCHES)
1/8 inch =1 ft.

BUILDING NO. WCF-AS (AGRICULTURAL STORAGE)
BUILDING AREA = 331 SQ. FT.

BL

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

WAIAWA CORRECTIONAL FACILITY
BUILDING NO. WCF-AS (AGRICULTURAL STORAGE)
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

Floor Plans and Elevations

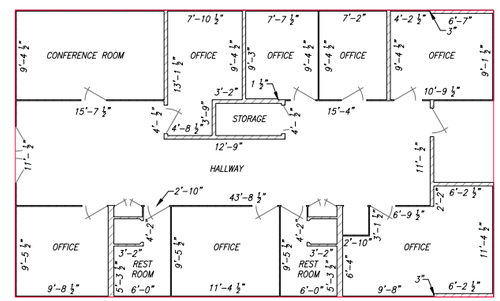
AUSTIN, TSUTSUMI & ASSOCIATES, INC.
ENGINEERS, SURVEYORS * HONOLULU, WAIPAHU, HAWAII

DESIGNED BY: CM	CHECKED BY: —	JOB NO. 12-10-0783	DRAWING NO. C000.00
DRAWN BY: RS	APPROVED BY: —	DATE JULY 2019	SHEET 24 OF 60 SHTS
SCALE: 1/8" = 1'			

FILE_____ DRAWER_____ FOLDER_____

FINAL

M:\2018\2018_238.000 DAGS WAIAWA PRU-SUP\G DWGS\PM\FLOOR PLANS\VER 06 191022\WAIAWA CORRECTIONAL FLOOR PLAN SHEET.DWG
JOB NO. 19-314 DATE: 111819



GRAPHIC SCALE

16 8 4 0 8 24

(IN INCHES)
1/8 inch =1 ft.

BUILDING NO. WCF-B (OPERATIONS)
BUILDING AREA = 1529 SQ. FT.

BL

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

WAIAWA CORRECTIONAL FACILITY
BUILDING NO. WCF-B (OPERATIONS)
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

Floor Plans

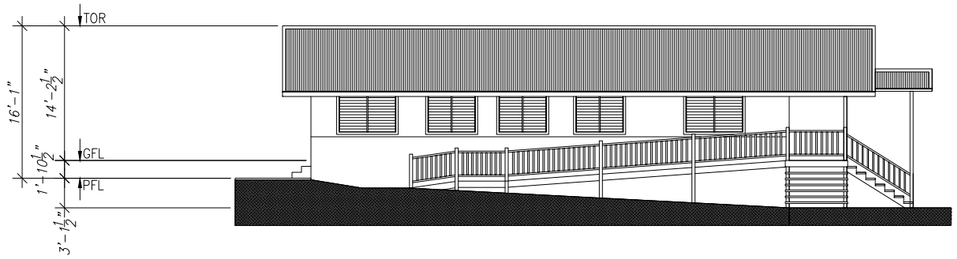
AUSTIN, TSUTSUMI & ASSOCIATES, INC.
ENGINEERS, SURVEYORS • HONOLULU, WAIPAHU, HAWAII

DESIGNED BY: CM	CHECKED BY: ___	JOB NO. 12-10-0783	DRAWING NO. C000.00
DRAWN BY: RS	APPROVED BY: ___	DATE JULY 2019	SHEET 25 OF 60 SHTS
SCALE: 1/8" = 1'			

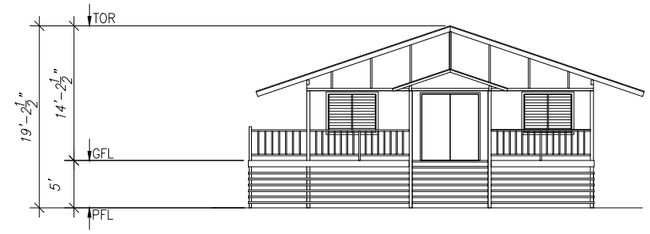
FILE_____ DRAWER_____ FOLDER_____

FINAL

Y:\2019\19-314 WAIAWA FLOOR MAPPING\DONATA\WAIAWA CORRECTIONAL FLOOR PLAN SHEET.DWG
JOB NO. 19-314 DATE: 062819



NORTHWEST SIDE ELEVATION
BUILDING NO. WCF- B



SOUTWEST SIDE ELEVATION
BUILDING NO. WCF- B

SOUTHEAST SIDE ELEVATION
BUILDING NO. WCF- B

NORTHEAST SIDE ELEVATION
BUILDING NO. WCF- B

GRAPHIC SCALE

16 8 4 0 8 24

(IN INCHES)
1/8 inch =1 ft.

BUILDING NO. WCF - B (OPERATIONS) ELEVATIONS

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

WAIAWA CORRECTIONAL FACILITY
BUILDING NO. WCF-B (OPERATIONS)
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

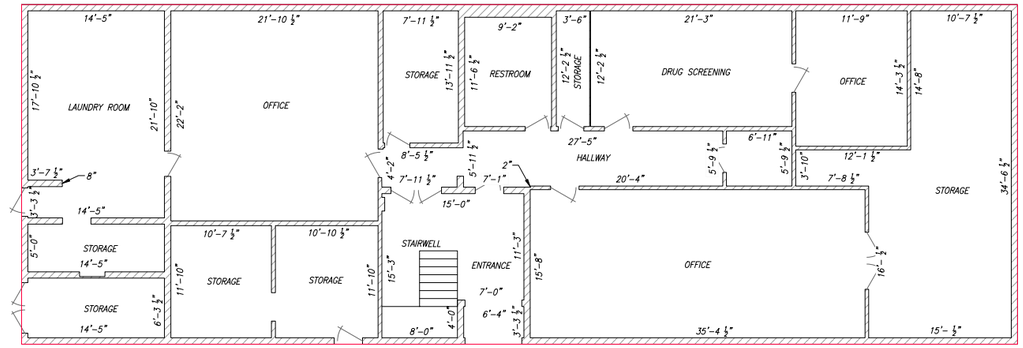
Elevations

SSFM International, Inc.		JOB NO.	DRAWING NO.
DESIGNED BY: CM	CHECKED BY: __	12-10-0783	C000.00
DRAWN BY: RCRA	APPROVED BY: __	DATE	SHEET 26
SCALE: 1/8" = 1'		SEP 2019	OF 60 SHTS

FILE_____ DRAWER_____ FOLDER_____

FINAL

M:\2018\2018_238.000 DAGS WAIAWA PRU-SUP\G DWGS\PM\ELEVATIONS\ELEVATIONS VER 01 191013 RROSAL\191002 RCRA WM WAIAWA CORRECTIONAL FLOOR PLAN SHEET_ADJUSTED.DWG
JOB NO. 19-314 DATE:

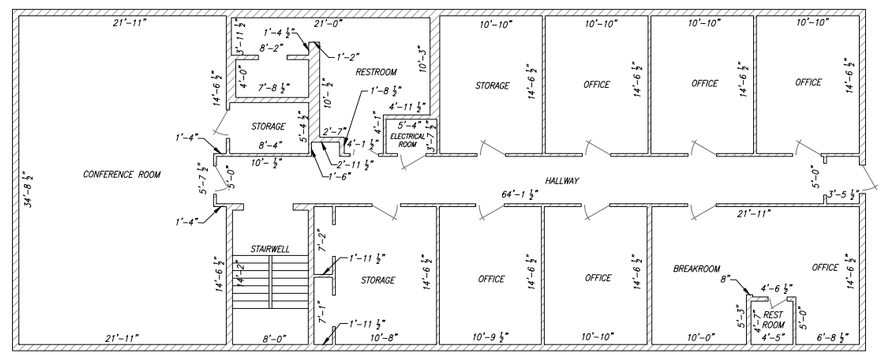


GRAPHIC SCALE

16 8 4 0 8 24

(IN INCHES)
1/8 inch =1 ft.

BUILDING NO. WCF–C (CONTROLS & SUPPORT) FIRST FLOOR
BUILDING AREA = 3770 SQ. FT.

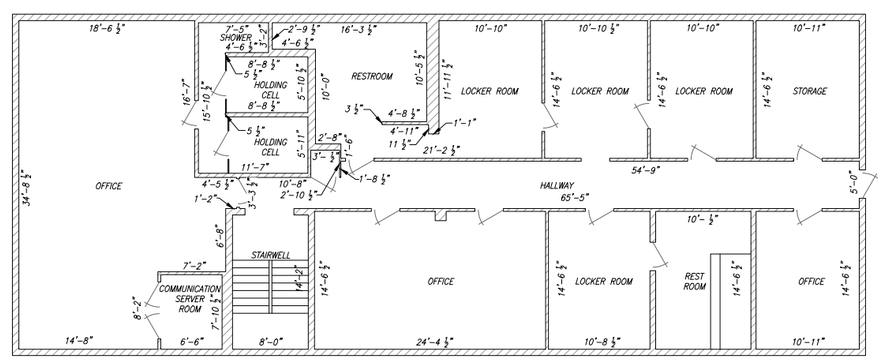


GRAPHIC SCALE

16 8 4 0 8 24

(IN INCHES)
1/8 inch =1 ft.

BUILDING NO. WCF–C (CONTROLS & SUPPORT) SECOND FLOOR



GRAPHIC SCALE

16 8 4 0 8 24

(IN INCHES)
1/8 inch =1 ft.

BUILDING NO. WCF–C (CONTROLS & SUPPORT) THIRD FLOOR

BL

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

WAIAWA CORRECTIONAL FACILITY
BUILDING NO. WCF-C (CONTROLS & SUPPORT)
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

Floor Plans

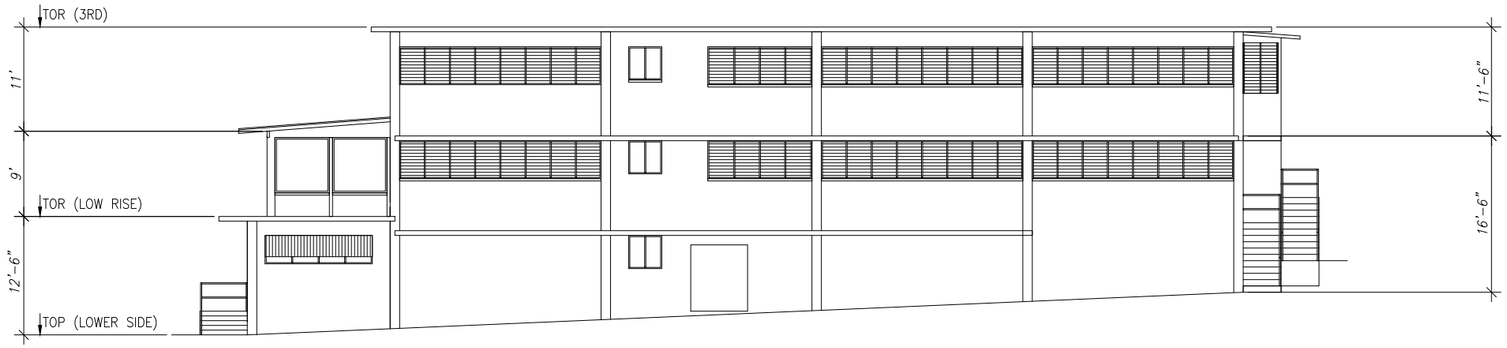
AUSTIN, TSUTSUMI & ASSOCIATES, INC.
ENGINEERS, SURVEYORS • HONOLULU, MAPAHU, HAWAII

DESIGNED BY: CM	CHECKED BY:	JOB NO. 12-10-0783	DRAWING NO. C000.00
DRAWN BY: RS	APPROVED BY:	DATE JULY 2019	SHEET 27 OF 60 SHTS
SCALE: 1/8" = 1'			

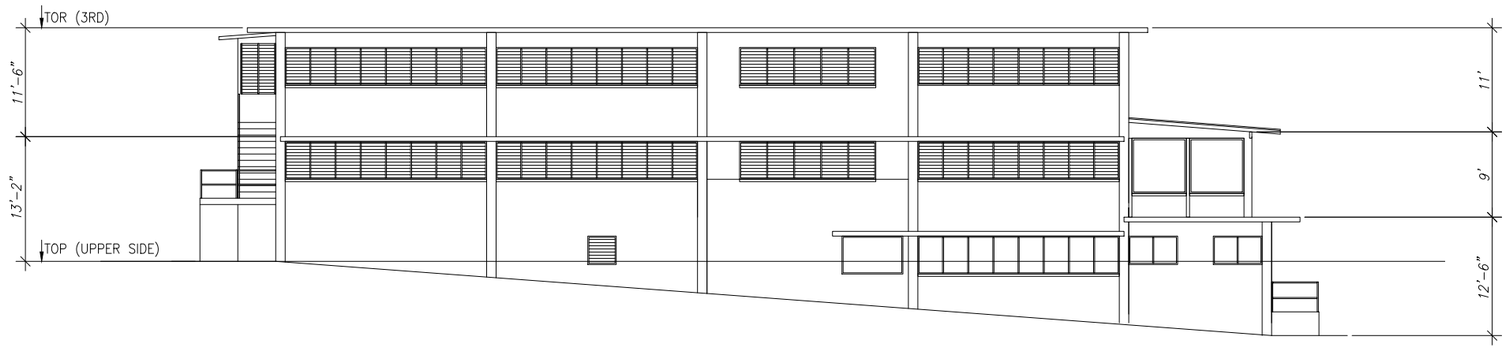
FILE_____ DRAWER_____ FOLDER_____

FINAL

Y:\2019\19-314 WAIAWA FLOOR MAPPING\DONATA\WAIAWA CORRECTIONAL FLOOR PLAN SHEET.DWG
JOB NO. 19-314 DATE: 062819



SOUTHEAST SIDE ELEVATION
BUILDING NO. WCF- C



NORTHWEST SIDE ELEVATION
BUILDING NO. WCF- C

GRAPHIC SCALE

16 8 4 0 8 24

(IN INCHES)
1/8 inch =1 ft.

BUILDING NO. WCF - C (CONTROL & SUPPORT) ELEVATIONS

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

WAIAWA CORRECTIONAL FACILITY
BUILDING NO. WCF-C (CONTROLS & SUPPORT)
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

Elevations

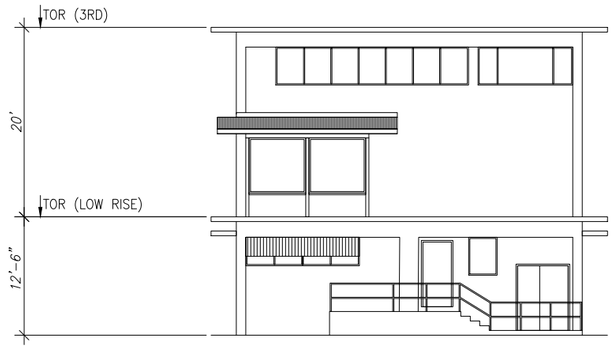
SSFM International, Inc.

DESIGNED BY: CM	CHECKED BY: __	JOB NO. 12-10-0783	DRAWING NO. C000.00
DRAWN BY: RCRA	APPROVED BY: __	DATE SEP 2019	SHEET 28 OF 60 SHTS
SCALE: 1/8" = 1'			

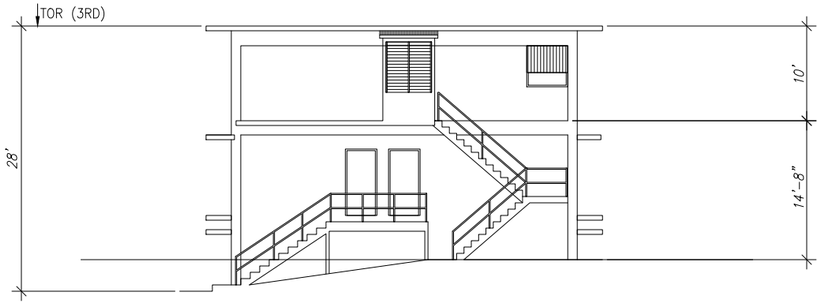
FILE_____ DRAWER_____ FOLDER_____

FINAL

M:\2018\2018_238.000 DAGS WAIAWA PRU-SUP\G DWGS\PM\ELEVATIONS\ELEVATIONS VER 01 191013 RROSAL\191002 RCRA WM WAIAWA CORRECTIONAL FLOOR PLAN SHEET_ADJUSTED.DWG
JOB NO. 19-314 DATE:



SOUTHWEST SIDE ELEVATION
BUILDING NO. WCF- C



NORTHEAST SIDE ELEVATION
BUILDING NO. WCF- C

GRAPHIC SCALE

16 8 4 0 8 24

(IN INCHES)
1/8 inch =1 ft.

BUILDING NO. WCF - C (CONTROL & SUPPORT) ELEVATIONS

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

WAIAWA CORRECTIONAL FACILITY
BUILDING NO. WCF-C (CONTROLS & SUPPORT)
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

Elevations

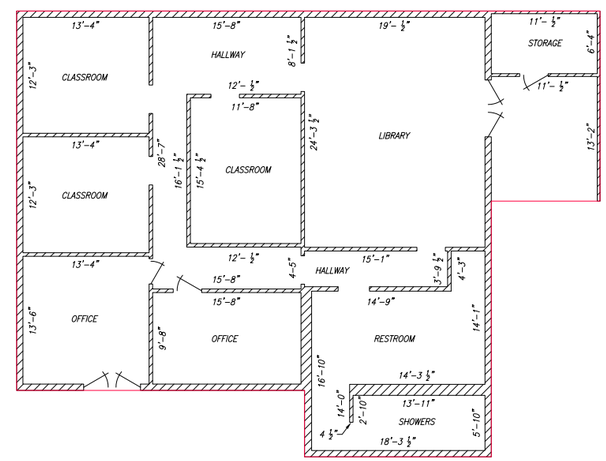
SSFM International, Inc.

DESIGNED BY: CM	CHECKED BY: __	JOB NO. 12-10-0783	DRAWING NO. C000.00
DRAWN BY: RCRA	APPROVED BY: __	DATE SEP 2019	SHEET 29 OF 60 SHTS
SCALE: 1/8" = 1'			

FILE_____ DRAWER_____ FOLDER_____

FINAL

M:\2018\2018_238.000 DAGS WAIAWA PRU-SUP\G DWGS\PM\ELEVATIONS\ELEVATIONS VER 01 191013 RROSAL\191002 RCRA WM WAIAWA CORRECTIONAL FLOOR PLAN SHEET_ADJUSTED.DWG
JOB NO. 19-314 DATE:



GRAPHIC SCALE

16 8 4 0 8 24

(IN INCHES)
1/8 inch =1 ft.

BUILDING NO. WCF-CH (CHAPEL)
BUILDING AREA = 2376 SQ. FT.

BL

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

WAIAWA CORRECTIONAL FACILITY
BUILDING NO. WCF-CH (CHAPEL)
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

Floor Plans

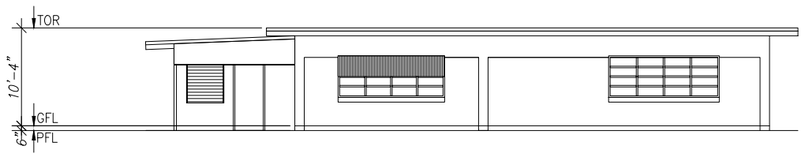
AUSTIN, TSUTSUMI & ASSOCIATES, INC.
ENGINEERS, SURVEYORS • HONOLULU, WAIPAHU, HAWAII

DESIGNED BY: CM	CHECKED BY: __	JOB NO. 12-10-0783	DRAWING NO. C000.00
DRAWN BY: RS	APPROVED BY: __	DATE JULY 2019	SHEET 30 OF 60 SHTS
SCALE: 1/8" = 1'			

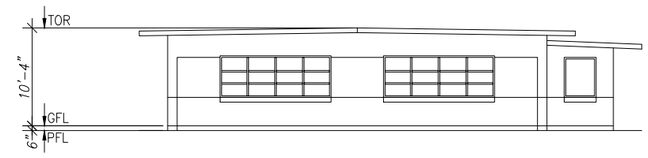
FILE_____ DRAWER_____ FOLDER_____

FINAL

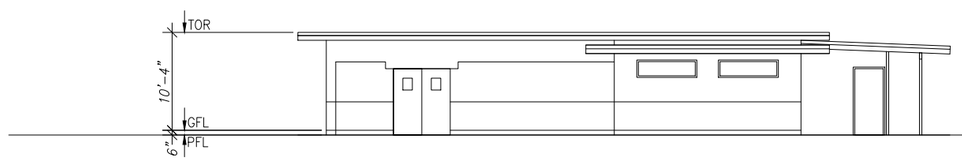
C:\USERS\CKADOTA\APPDATA\LOCAL\MICROSOFT\WINDOWS\INETCACHE\CONTENT.OUTLOOK\8IHY3B3T\WAIAWA CORRECTIONAL FLOOR PLAN SHEET.DWG
JOB NO. 19-314 DATE: 10219



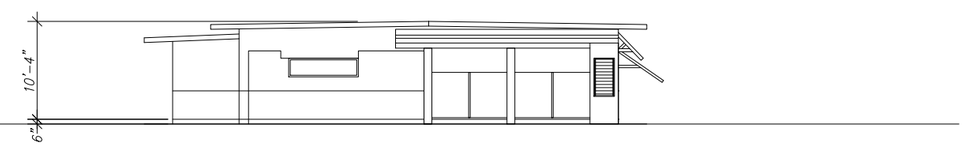
NORTHEAST SIDE ELEVATION
BUILDING NO. WCF- CH



NORTHWEST SIDE ELEVATION
BUILDING NO. WCF- CH



SOUTHWEST SIDE ELEVATION
BUILDING NO. WCF- CH



SOUTHEAST SIDE ELEVATION
BUILDING NO. WCF- CH

GRAPHIC SCALE

16 8 4 0 8 24

(IN INCHES)
1/8 inch =1 ft.

BUILDING NO. WCF - CH (CHAPEL) ELEVATIONS

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

WAIAWA CORRECTIONAL FACILITY
BUILDING NO. WCF-CH (CHAPEL)
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

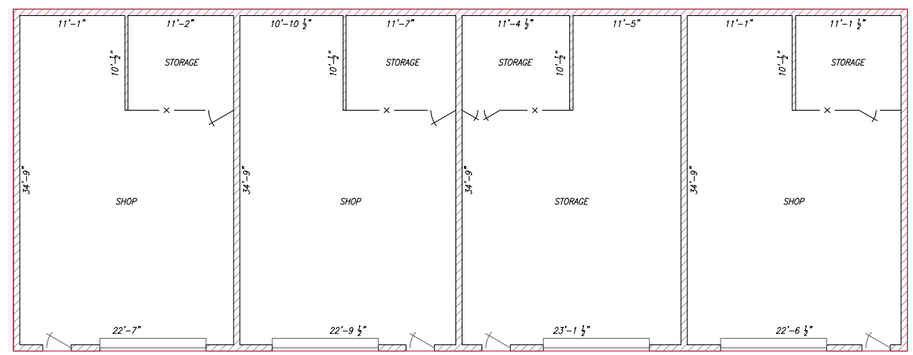
Elevations

SSFM International, Inc.		JOB NO.	DRAWING NO.
DESIGNED BY: CM	CHECKED BY: __	12-10-0783	C000.00
DRAWN BY: RCRA	APPROVED BY: __	DATE SEP 2019	SHEET 31
SCALE: 1/8" = 1'			OF 60 SHTS

FILE_____ DRAWER_____ FOLDER_____

FINAL

M:\2018\2018_238.000 DAGS WAIAWA PRU-SUP\G DWGS\PM\ELEVATIONS\ELEVATIONS VER 01 191013 RROSAL\191002 RCRA WM WAIAWA CORRECTIONAL FLOOR PLAN SHEET_ADJUSTED.DWG
JOB NO. 19-314 DATE:



N

GRAPHIC SCALE

16 8 4 0 8 24

(IN INCHES)
1/8 inch =1 ft.

BUILDING NO. WCF-CP (CARPORT)
BUILDING AREA = 3406 SQ. FT.

BL

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

WAIAWA CORRECTIONAL FACILITY
BUILDING NO. WCF-CP (CARPORT)
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

Floor Plans

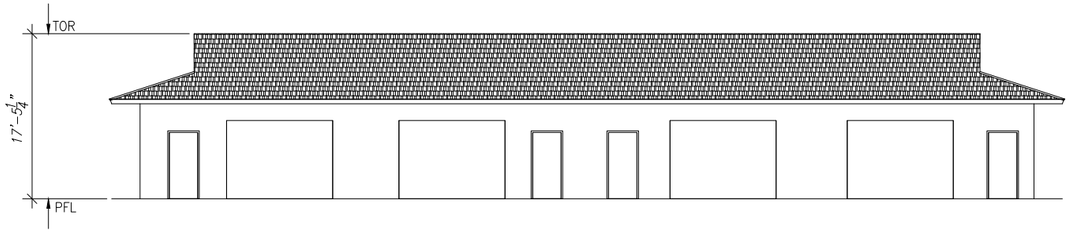
AUSTIN, TSUTSUMI & ASSOCIATES, INC.
ENGINEERS, SURVEYORS • HONOLULU, WAIPAHU, HAWAII

DESIGNED BY: CM	CHECKED BY: —	JOB NO. 12-10-0783	DRAWING NO. C000.00
DRAWN BY: RS	APPROVED BY: —	DATE JULY 2019	SHEET 32 OF 60 SHTS.
SCALE: 1/8" = 1'			

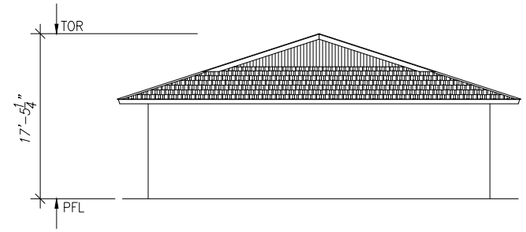
FILE_____ DRAWER_____ FOLDER_____

FINAL

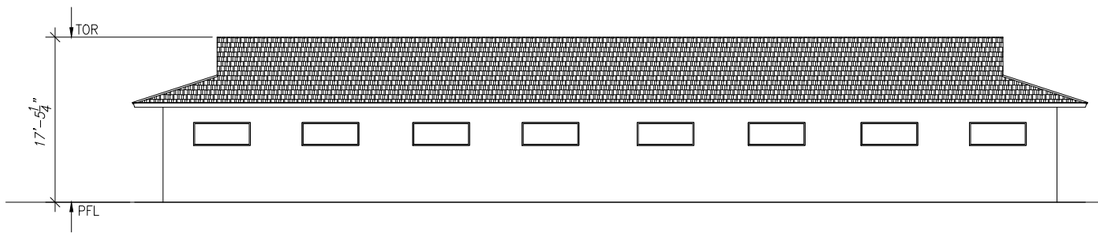
Y:\2019\19-314 WAIAWA FLOOR MAPPING\DONATA\WAIAWA CORRECTIONAL FLOOR PLAN SHEET.DWG
JOB NO. 19-314 DATE: 062819



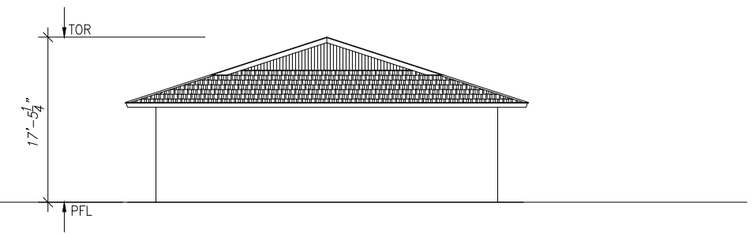
SOUTHEAST SIDE ELEVATION
BUILDING NO. WCF- CP



NORTHEAST SIDE ELEVATION
BUILDING NO. WCF- CP



NORTHWEST SIDE ELEVATION
BUILDING NO. WCF- CP



SOUTHWEST SIDE ELEVATION
BUILDING NO.WCF- CP

GRAPHIC SCALE

16 8 4 0 8 24

(IN INCHES)
1/8 inch =1 ft.

BUILDING NO. WCF - CP (CARPORT) ELEVATIONS

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

WAIAWA CORRECTIONAL FACILITY
BUILDING NO. WCF-CP (CARPORT)
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

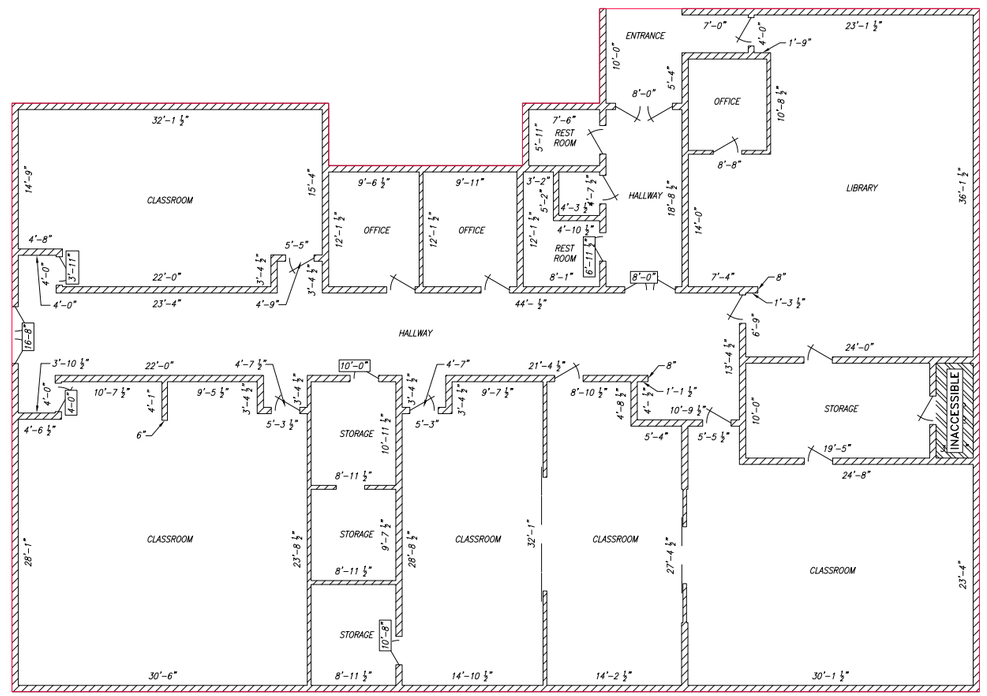
Elevations

SSFM International, Inc.		JOB NO.	DRAWING NO.
DESIGNED BY: CM	CHECKED BY: __	12-10-0783	C000.00
DRAWN BY: RCRA	APPROVED BY: __	DATE	SHEET 33
SCALE: 1/8" = 1'		SEP 2019	OF 60 SHTS

FILE_____ DRAWER_____ FOLDER_____

FINAL

M:\2018\2018_238.000 DAGS WAIAWA PRU-SUP\G DWGS\PM\ELEVATIONS\ELEVATIONS VER 01 191013 RROSAL\191002 RCRA WM WAIAWA CORRECTIONAL FLOOR PLAN SHEET_ADJUSTED.DWG
JOB NO. 19-314 DATE:



GRAPHIC SCALE

16 8 4 0 8 24

(IN INCHES)
1/8 inch =1 ft.

BUILDING NO. WCF-E (EDUCATION)
BUILDING AREA = 6613 SQ. FT.

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

WAIAWA CORRECTIONAL FACILITY
BUILDING NO. WCF-E (EDUCTION)
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

Floor Plans

AUSTIN, TSUTSUMI & ASSOCIATES, INC.
ENGINEERS, SURVEYORS • HONOLULU, WAIPAHU, HAWAII

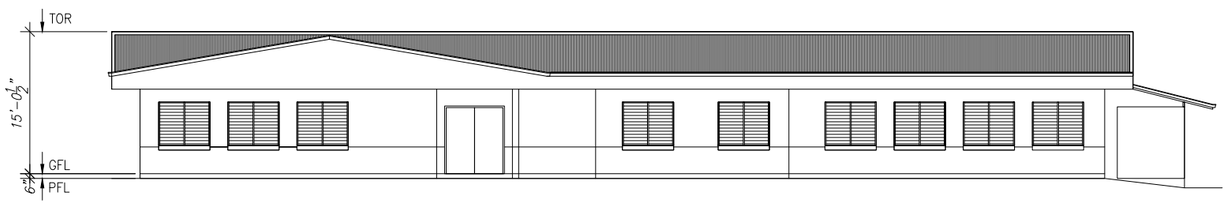
DESIGNED BY: CM	CHECKED BY:	JOB NO. 12-10-0783	DRAWING NO. C000.00
DRAWN BY: RS	APPROVED BY:	DATE JULY 2019	SHEET 34 OF 60 SHTS
SCALE: 1/8" = 1'			

BL

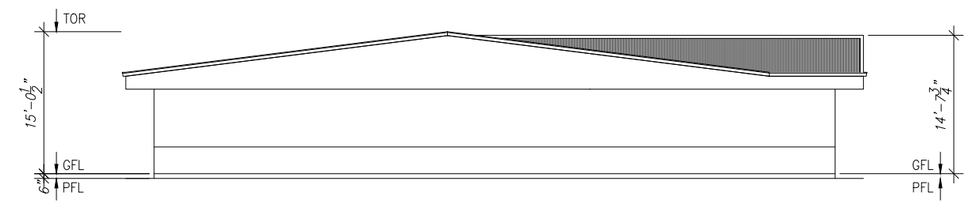
FILE_____ DRAWER_____ FOLDER_____

FINAL

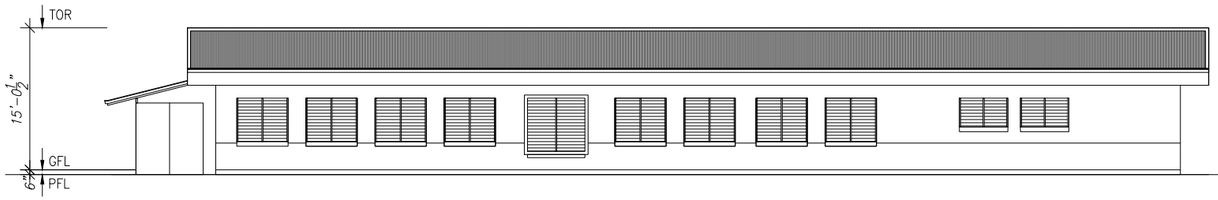
M:\2018\2018_238.000 DAGS WAIAWA PRU-SUP\G DWGS\PM\FLOOR PLANS\VER 06 191022\WAIAWA CORRECTIONAL FLOOR PLAN SHEET.DWG
JOB NO. 19-314 DATE: 11819



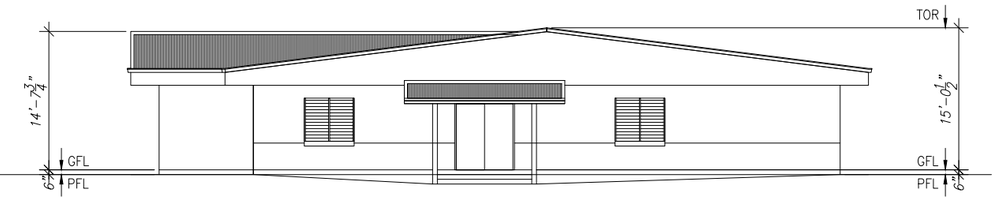
NORTHEAST SIDE ELEVATION
BUILDING NO. WCF-E



SOUTHEAST SIDE ELEVATION
BUILDING NO. WCF-E



SOUTHWEST SIDE ELEVATION
BUILDING NO. WCF-E



NORTHWEST SIDE ELEVATION
BUILDING NO. WCF-E

GRAPHIC SCALE

16 8 4 0 8 24

(IN INCHES)
1/8 inch =1 ft.

BUILDING NO. WCF - E ELEVATIONS

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

WAIAWA CORRECTIONAL FACILITY
BUILDING NO. WCF-E (EDUCTION)
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

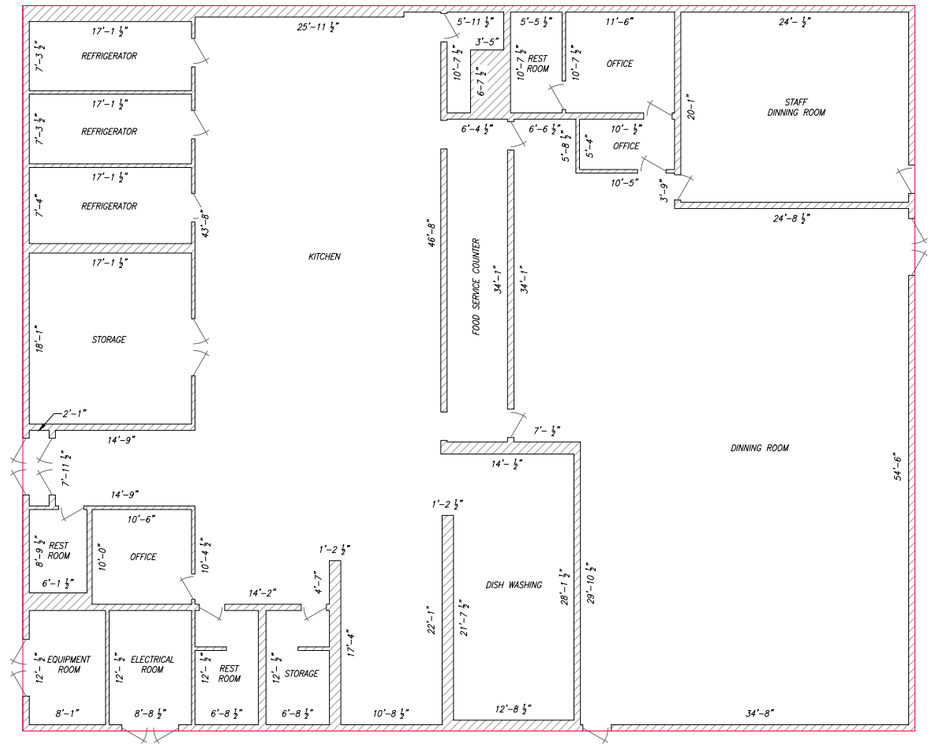
Elevations

SSFM International, Inc.		JOB NO.	DRAWING NO.
DESIGNED BY: CM	CHECKED BY:	12-10-0783	C000.00
DRAWN BY: RCRA	APPROVED BY:	DATE	SHEET 35
SCALE: 1/8" = 1'		SEP 2019	OF 60 SHTS

FILE_____ DRAWER_____ FOLDER_____

FINAL

M:\2018\2018_238.000 DAGS WAIAWA PRU-SUP\G DWGS\PM\ELEVATIONS\ELEVATIONS VER 01 191013 RROSAL\191002 RCRA WM WAIAWA CORRECTIONAL FLOOR PLAN SHEET_ADJUSTED.DWG
JOB NO. 19-314 DATE:



GRAPHIC SCALE

16 8 4 0 8 24

(IN INCHES)
1/8 inch =1 ft.

BUILDING NO. WCF-F (INMATE DINING FACILITY)
BUILDING AREA = 7212 SQ. FT.

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

WAIAWA CORRECTIONAL FACILITY
BUILDING NO. WCF-F (INMATE DINING FACILITY)
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

Floor Plans

AUSTIN, TSUTSUMI & ASSOCIATES, INC.
ENGINEERS, SURVEYORS • HONOLULU, MAPAHALI, HAWAII

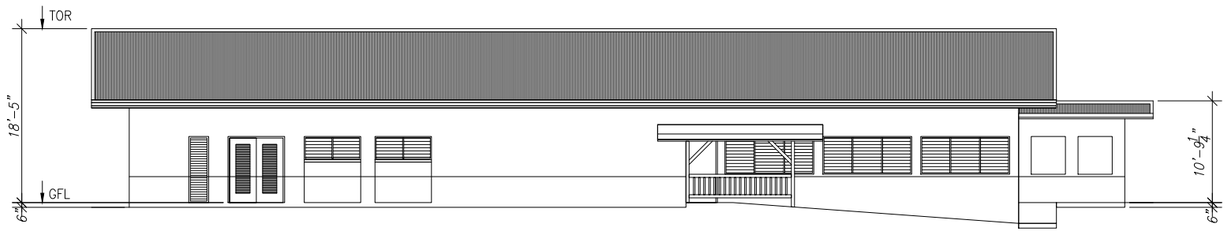
DESIGNED BY: CM	CHECKED BY: ___	JOB NO. 12-10-0783	DRAWING NO. C000.00
DRAWN BY: RS	APPROVED BY: ___	DATE JULY 2019	SHEET 36 OF 60 SHTS.
SCALE: 1/8" = 1'			

BL

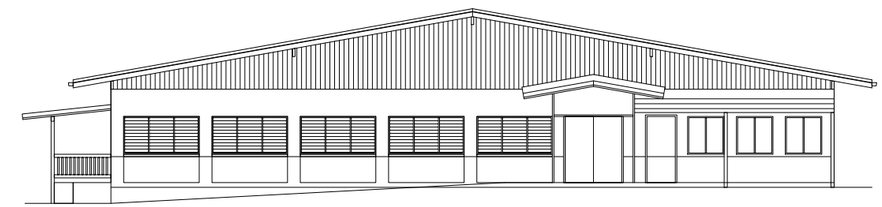
FILE_____ DRAWER_____ FOLDER_____

FINAL

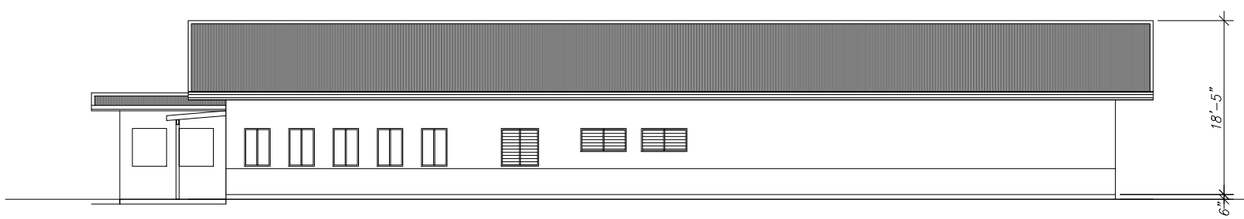
Y:\2019\19-314 WAIAWA FLOOR MAPPING\DONATA\WAIAWA CORRECTIONAL FLOOR PLAN SHEET.DWG
JOB NO. 19-314 DATE: 082819



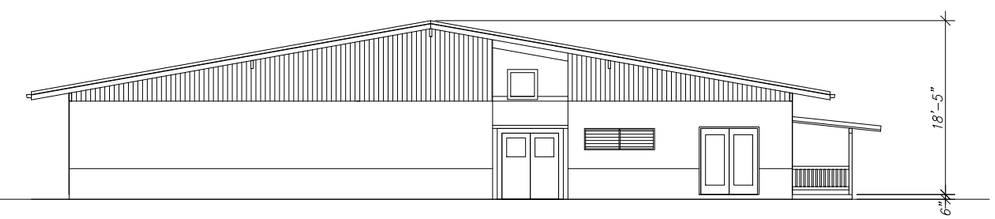
SOUTHWEST SIDE ELEVATION
BUILDING NO. WCF-F



SOUTHEAST SIDE ELEVATION
BUILDING NO. WCF-F



NORTHEAST SIDE ELEVATION
BUILDING NO. WCF-F



NORTHWEST SIDE ELEVATION
BUILDING NO. WCF-F

GRAPHIC SCALE

16 8 4 0 8 24

(IN INCHES)
1/8 inch =1 ft.

BUILDING NO. WCF - F (INMATE DINING FACILITY) ELEVATIONS

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

WAIAWA CORRECTIONAL FACILITY
BUILDING NO. WCF-F (INMATE DINING FACILITY)
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

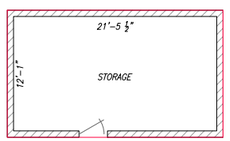
Elevations

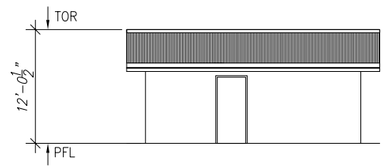
SSFM International, Inc.		JOB NO.	DRAWING NO.
DESIGNED BY: CM	CHECKED BY: __	12-10-0783	C000.00
DRAWN BY: RCRA	APPROVED BY: __	DATE	SHEET 37
SCALE: 1/8" = 1'		SEP 2019	OF 60 SHTS

FILE_____ DRAWER_____ FOLDER_____

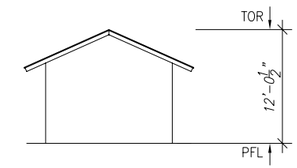
FINAL

M:\2018\2018_238.000 DAGS WAIAWA PRU-SUP\G DWGS\PM\ELEVATIONS\ELEVATIONS VER 01 191013 RROSAL\191002 RCRA WM WAIAWA CORRECTIONAL FLOOR PLAN SHEET_ADJUSTED.DWG
JOB NO. 19-314 DATE:

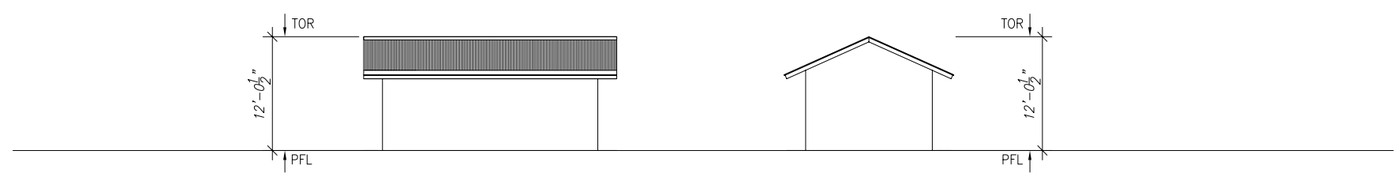




SOUTHWEST SIDE ELEVATION
BUILDING NO. WCF-FS



SOUTHEAST SIDE ELEVATION
BUILDING NO. WCF-FS



NORTHEAST SIDE ELEVATION
BUILDING NO. WCF-FS

NORTHWEST SIDE ELEVATION
BUILDING NO. WCF-FS

GRAPHIC SCALE

16 8 4 0 8 24

(IN INCHES)
1/8 inch =1 ft.

BUILDING NO. WCF-FS
BUILDING AREA = 306 SQ. FT.

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

WAIAWA CORRECTIONAL FACILITY
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

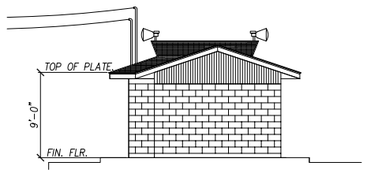
Floor Plans and Elevations

SSFM International, Inc.		JOB NO.	DRAWING NO.
DESIGNED BY: CM	CHECKED BY:	12-10-0783	C000.00
DRAWN BY: RCRA	APPROVED BY:	DATE	SHEET 38
SCALE: 1/8" = 1'		SEP 2019	OF 60 SHTS

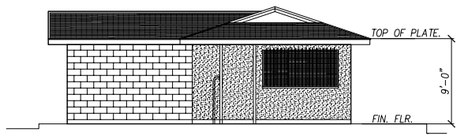
FILE_____ DRAWER_____ FOLDER_____

FINAL

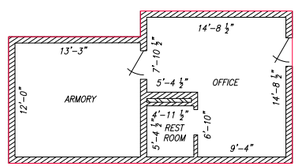
M:\2018\2018_238.000 DAGS WAIAWA PRU-SUP\G DWGS\PM\ELEVATIONS\ELEVATIONS VER 01 191013 RROSAL\191002 RCRA WM WAIAWA CORRECTIONAL FLOOR PLAN SHEET_ADJUSTED.DWG
JOB NO. 19-314 DATE:

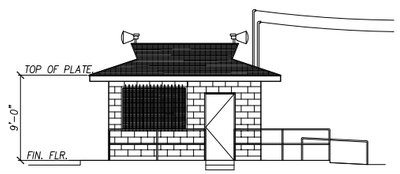


NORTH SIDE ELEVATION
BUILDING NO. WCF-G

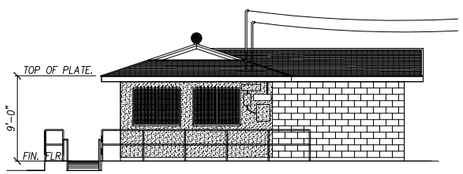


WEST SIDE ELEVATION
BUILDING NO. WCF-G





SOUTH SIDE ELEVATION
BUILDING NO. WCF-G



EAST SIDE ELEVATION
BUILDING NO. WCF-G

GRAPHIC SCALE

16 8 4 0 8 24

(IN INCHES)
1/8 inch =1 ft.

BUILDING NO. WCF-G (GUARD SHACK)
BUILDING AREA = 443 SQ. FT.

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

WAIAWA CORRECTIONAL FACILITY
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

Floor Plans and Elevations

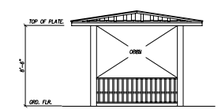
DESIGNED BY: CM	CHECKED BY:	JOB NO. 12-10-0783	DRAWING NO.
DRAWN BY: RS	APPROVED BY:	DATE SEP 2019	SHEET 39 OF 60 SHTS
SCALE: 1/8" = 1'			

BL

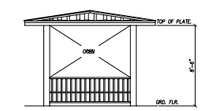
FILE_____ DRAWER_____ FOLDER_____

FINAL

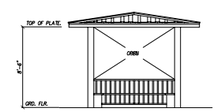
M:\2018\2018_238.000 DAGS WAIAWA PRU-SUP\G DWGS\PM\FLOOR PLANS\VER 06 191022\WAIAWA CORRECTIONAL FLOOR PLAN SHEET.DWG
JOB NO. 19-314 DATE: 111819



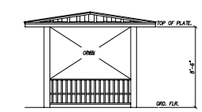
NORTH SIDE ELEVATION
BUILDING NO. WCF-G2



WEST SIDE ELEVATION
BUILDING NO. WCF-G2



SOUTH SIDE ELEVATION
BUILDING NO. WCF-G2



EAST SIDE ELEVATION
BUILDING NO. WCF-G2

GRAPHIC SCALE

16 8 4 0 8 24

(IN INCHES)
1/8 inch =1 ft.

BUILDING NO. WCF-G2
BUILDING AREA = 96 SQ. FT.

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

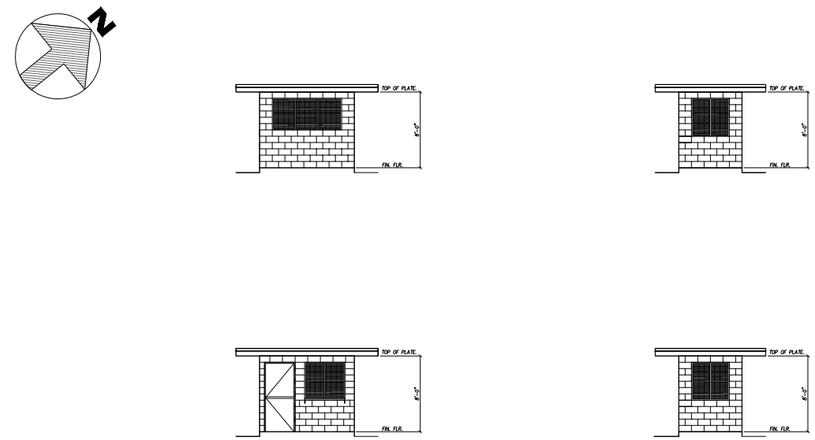
WAIAWA CORRECTIONAL FACILITY
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

Floor Plans and Elevations

SSFM International, Inc.		JOB NO.	DRAWING NO.
DESIGNED BY: CM	CHECKED BY:	12-10-0783	
DRAWN BY: NS	APPROVED BY:	DATE NOV 2019	SHEET 40
SCALE: 1/8" = 1'-0"			OF 60 SHTS

FILE_____ DRAWER_____ FOLDER_____

C:\USERS\CKADOTA\DESKTOP\ELEVATIONS\WCF-G2.DWG
JOB NO. 19-314 DATE:



GRAPHIC SCALE

16 8 4 0 8 24

(IN INCHES)
1/8 inch =1 ft.

BUILDING NO. WCF-G3
BUILDING AREA = 70 SQ. FT.

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

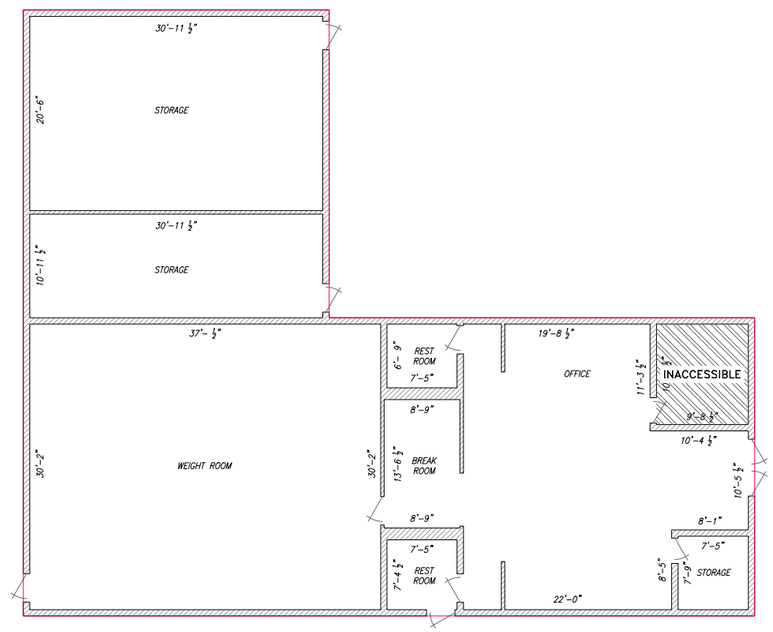
WAIAWA CORRECTIONAL FACILITY
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

Floor Plans and Elevations

SSFM International, Inc.		JOB NO.	DRAWING NO.
DESIGNED BY: CM	CHECKED BY: —	12-10-0783	
DRAWN BY: NS	APPROVED BY: —	DATE NOV 2019	SHEET 41
SCALE: 1/8" = 1'-0"			OF 60 SHTS

FILE_____ DRAWER_____ FOLDER_____

C:\USERS\CKADOTA\DESKTOP\ELEVATIONS\COMPOUND GATE CHECK -IN.DWG
JOB NO. 19-314 DATE:



GRAPHIC SCALE

16 8 4 0 8 24

(IN INCHES)
1/8 inch =1 ft.

BUILDING NO. WCF-GA (GUARD SHACK ADMINISTRATION)
BUILDING AREA = 3480 SQ. FT.

BL

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

WAIAWA CORRECTIONAL FACILITY
BUILDING NO. WCF-GA (GUARD SHACK ADMINISTRATION)
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

Floor Plans

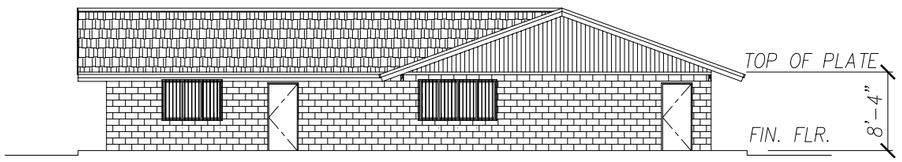
ATA AUSTIN, TSUTSUMI & ASSOCIATES, INC.
ENGINEERS, SURVEYORS • HONOLULU, WAIPAHU, HAWAII

DESIGNED BY: CM	CHECKED BY: ___	JOB NO. 12-10-0783	DRAWING NO. C000.00
DRAWN BY: RS	APPROVED BY: ___	DATE JULY 2019	SHEET 42 OF 60 SHTS.
SCALE: 1/8" = 1'			

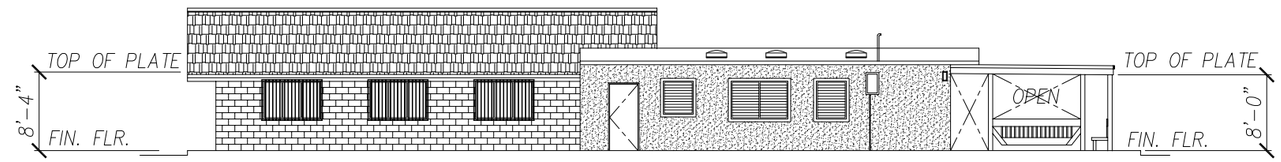
FILE_____ DRAWER_____ FOLDER_____

FINAL

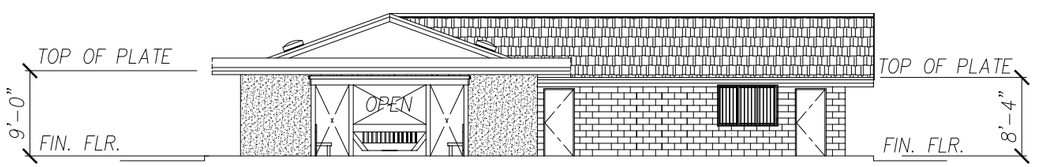
Y:\2019\19-314 WAIAWA FLOOR MAPPING\DONATA\WAIAWA CORRECTIONAL FLOOR PLAN SHEET.DWG
JOB NO. 19-314 DATE: 082819



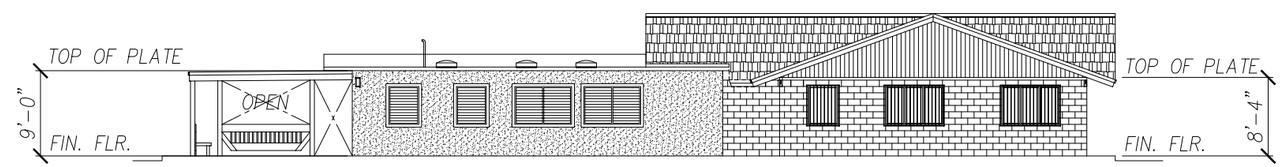
NORTH SIDE ELEVATION
BUILDING NO. WCF-GA



WEST SIDE ELEVATION
BUILDING NO. WCF-GA



SOUTH SIDE ELEVATION
BUILDING NO. WCF-GA



EAST SIDE ELEVATION
BUILDING NO. WCF-GA

GRAPHIC SCALE

16 8 4 0 8 24

(IN INCHES)
1/8 inch =1 ft.

BUILDING NO. WCF-GA ELEVATIONS

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

WAIAWA CORRECTIONAL FACILITY
BUILDING NO. WCF-GA (GUARD SHACK ADMINISTRATION)
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

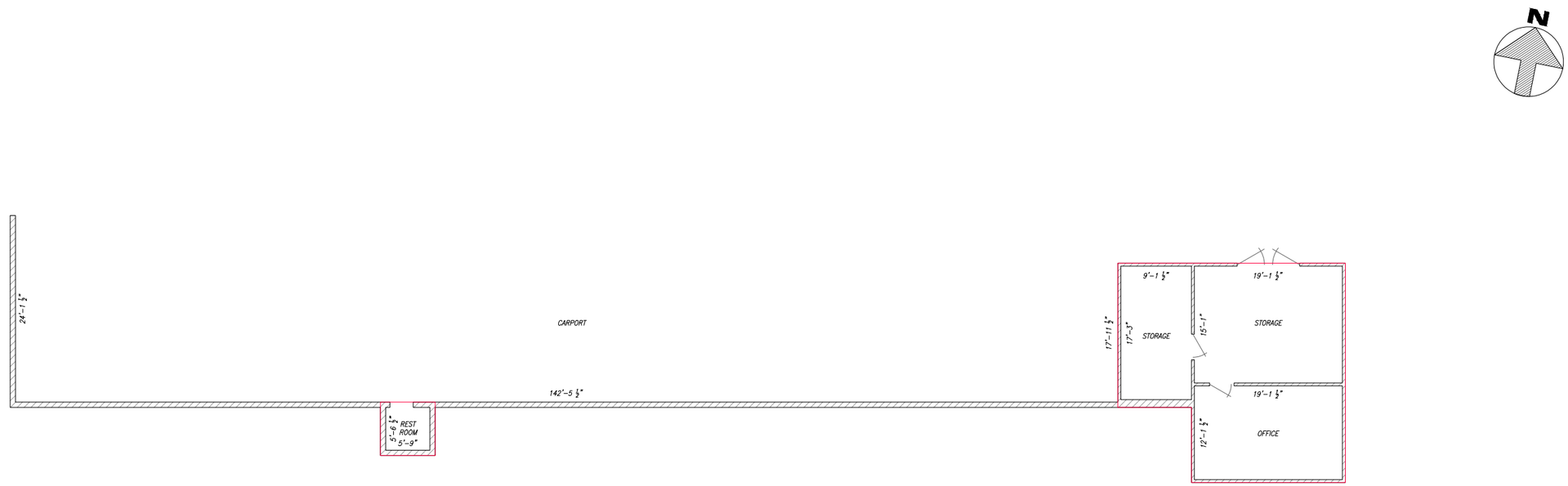
Elevations

SSFM International, Inc.		JOB NO.	DRAWING NO.
DESIGNED BY: CM	CHECKED BY: —	12-10-0783	
DRAWN BY: NS	APPROVED BY: —	DATE	SHEET 43
SCALE: 1/8" = 1'-0"		SEP 2019	OF 60 SHTS

FILE_____ DRAWER_____ FOLDER_____

FINAL

M:\2018\2018_238.000 DAGS WAIAWA PRU-SUP\G DWGS\PM\ELEVATIONS\ELEVATIONS VER 01 191013 RROSAL\DRAWINGS\WCF-GA.DWG
JOB NO. 19-314 DATE:



GRAPHIC SCALE

16 8 4 0 8 24

(IN INCHES)
1/8 inch =1 ft.

BUILDING NO. WCF-I (INDUSTRIES)
BUILDING AREA = 790 SQ. FT.

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

WAIAWA CORRECTIONAL FACILITY
BUILDING NO. WCF-I (INDUSTRIES)
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

Floor Plans

ATA AUSTIN, TSUTSUMI & ASSOCIATES, INC. ENGINEERS, SURVEYORS • HONOLULU, WAIPAHU, HAWAII

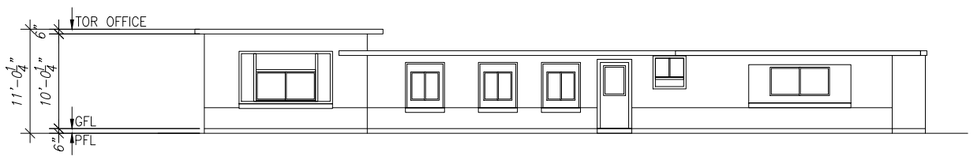
DESIGNED BY: CM	CHECKED BY: —	JOB NO. 12-10-0783	DRAWING NO. C000.00
DRAWN BY: RS	APPROVED BY: —	DATE JULY 2019	SHEET 44 OF 60 SHTS.
SCALE: 1/8" = 1'			

BL

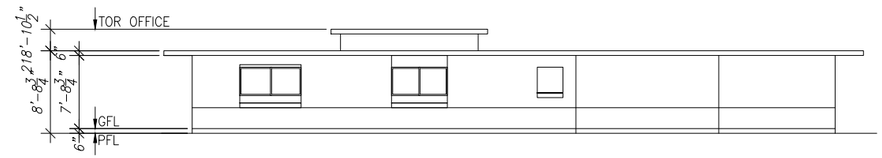
FILE_____ DRAWER_____ FOLDER_____

FINAL

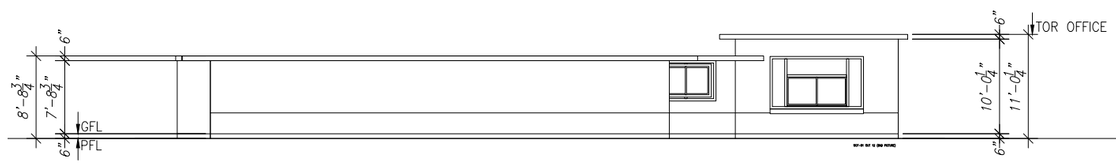
Y:\2019\19-314 WAIAWA FLOOR MAPPING\DONATA\WAIAWA CORRECTIONAL FLOOR PLAN SHEET.DWG
JOB NO. 19-314 DATE: 082819



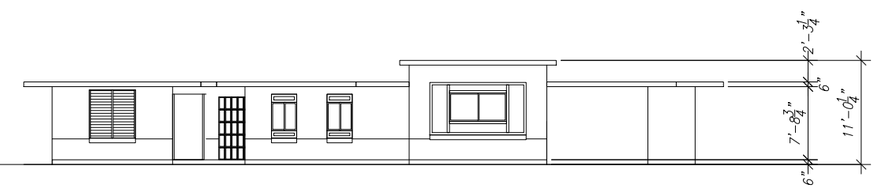
SOUTH SIDE ELEVATION
BUILDING NO. WCF-I



EAST SIDE ELEVATION
BUILDING NO. WCF-I



NORTH SIDE ELEVATION
BUILDING NO. WCF-I



WEST SIDE ELEVATION
BUILDING NO. WCF-I

GRAPHIC SCALE

16 8 4 0 8 24

(IN INCHES)
1/8 inch =1 ft.

BUILDING NO. WCF-I (INDUSTRIES) ELEVATIONS

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

WAIAWA CORRECTIONAL FACILITY
BUILDING NO. WCF-I (INDUSTRIES)
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

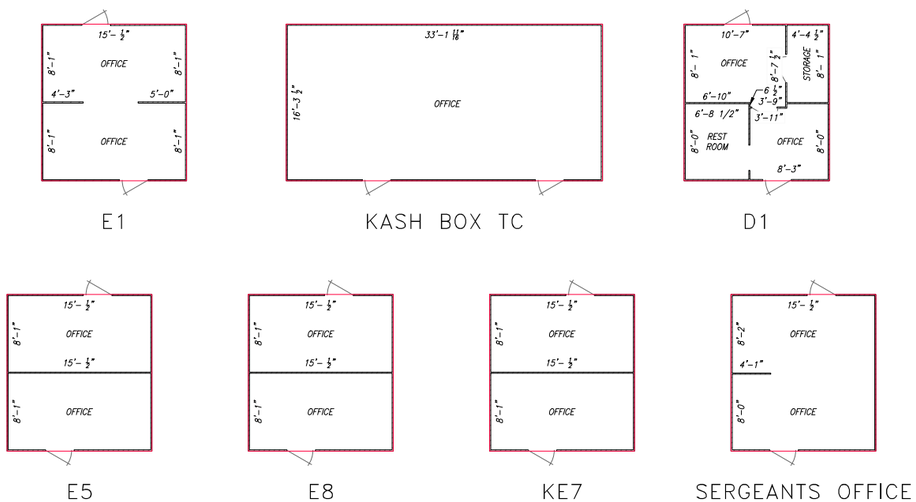
Elevations

SSFM International, Inc.		JOB NO.	DRAWING NO.
DESIGNED BY: CM	CHECKED BY:	12-10-0783	C000.00
DRAWN BY: RCRA	APPROVED BY:	DATE	SHEET 45
SCALE: 1/8" = 1'		SEP 2019	OF 60 SHTS

FILE_____ DRAWER_____ FOLDER_____

FINAL

M:\2018\2018_238.000 DAGS WAIAWA PRU-SUP\G DWGS\PM\ELEVATIONS\ELEVATIONS VER 01 191013 RROSAL\191002 RCRA WM WAIAWA CORRECTIONAL FLOOR PLAN SHEET_ADJUSTED.DWG
JOB NO. 19-314 DATE:



GRAPHIC SCALE

16 8 4 0 8 24

(IN INCHES)
1/8 inch =1 ft.

BUILDING NO. WCF-K (KASHBOX COMPOUND)
BUILDING AREA = 2071 SQ. FT.

BL

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

WAIAWA CORRECTIONAL FACILITY
BUILDING NO. WCF-K (KASHBOX COMPOUND)
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

Floor Plans

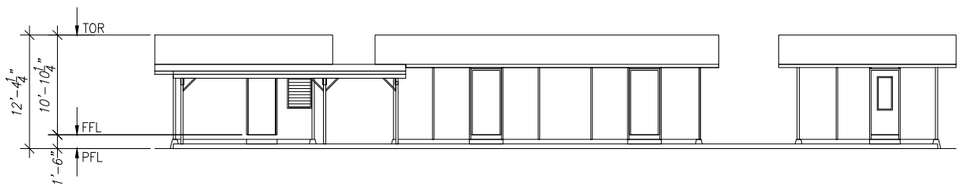
AUSTIN, TSUTSUMI & ASSOCIATES, INC.
ENGINEERS, SURVEYORS • HONOLULU, MAPAHALI, HAWAII

DESIGNED BY: CM	CHECKED BY: ___	JOB NO. 12-10-0783	DRAWING NO. C000.00
DRAWN BY: RS	APPROVED BY: ___	DATE JULY 2019	SHEET 46 OF 60 SHTS.
SCALE: 1/8" = 1'			

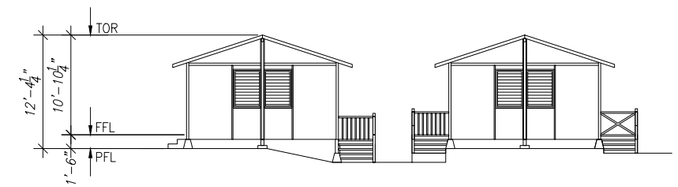
FILE_____ DRAWER_____ FOLDER_____

FINAL

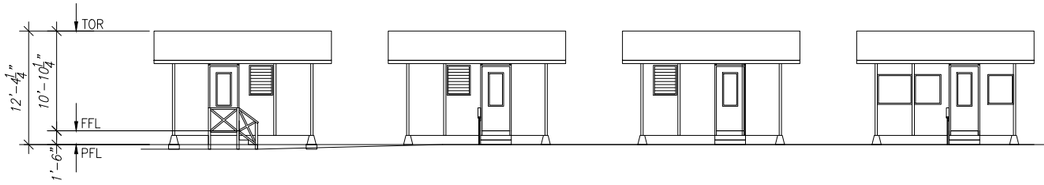
Y:\2019\19-314 WAIAWA FLOOR MAPPING\DONATA\WAIAWA CORRECTIONAL FLOOR PLAN SHEET.DWG
JOB NO. 19-314 DATE: 062819



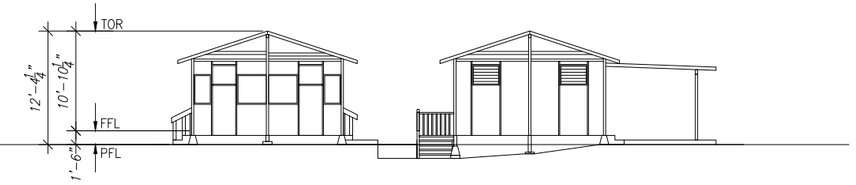
EAST SIDE ELEVATION
BUILDING NO. WCF-K



NORTH SIDE ELEVATION
BUILDING NO. WCF-K



WEST SIDE ELEVATION
BUILDING NO. WCF-K



SOUTH SIDE ELEVATION
BUILDING NO. WCF-K

GRAPHIC SCALE

16 8 4 0 8 24

(IN INCHES)
1/8 inch =1 ft.

BUILDING NO. WCF - K (KASHBOX COMPOUND) ELEVATIONS

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

WAIAWA CORRECTIONAL FACILITY
BUILDING NO. WCF-K (KASHBOX COMPOUND)
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

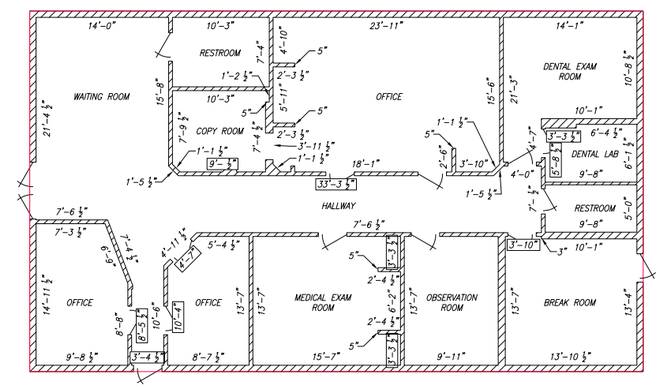
Elevations

SSFM International, Inc.		JOB NO.	DRAWING NO.
DESIGNED BY: CM	CHECKED BY: __	12-10-0783	C000.00
DRAWN BY: RCRA	APPROVED BY: __	DATE	SHEET 47
SCALE: 1/8" = 1'		SEP 2019	OF 60 SHTS

FILE_____ DRAWER_____ FOLDER_____

FINAL

/VOLUMES/RCRA_32GB/WAIAWA CORRECTIONAL FACILITY HAWAII/191002 RCRA WM WAIAWA CORRECTIONAL FLOOR PLAN SHEET_ADJUSTED.DWG
JOB NO. 19-314 DATE:



GRAPHIC SCALE

16 8 4 0 8 24

(IN INCHES)
1/8 inch =1 ft.

BUILDING NO. WCF-M (MEDICAL SERVICES)
BUILDING AREA = 2465 SQ. FT.

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

WAIAWA CORRECTIONAL FACILITY
BUILDING NO. WCF-M (MEDICAL SERVICES)
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

Floor Plans

AUSTIN, TSUTSUMI & ASSOCIATES, INC.
ENGINEERS, SURVEYORS • HONOLULU, WAIPAHU, HAWAII

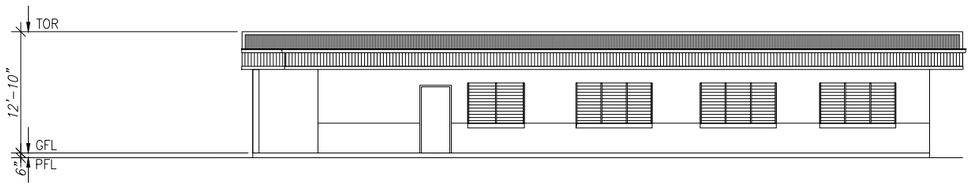
DESIGNED BY: CM	CHECKED BY: —	JOB NO. 12-10-0783	DRAWING NO. C000.00
DRAWN BY: RS	APPROVED BY: —	DATE JULY 2019	SHEET 48 OF 60 SHTS
SCALE: 1/8" = 1'			

BL

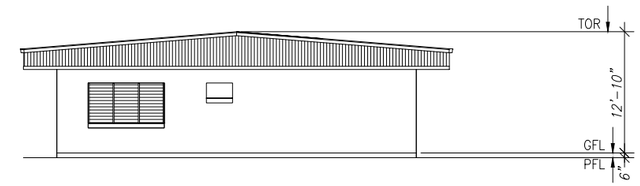
FILE_____ DRAWER_____ FOLDER_____

FINAL

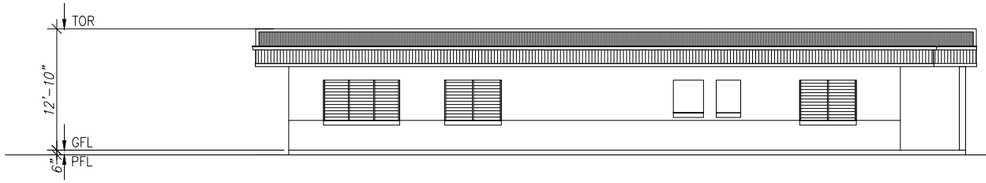
C:\USERS\CKADOTA\APPDATA\LOCAL\MICROSOFT\WINDOWS\INETCACHE\CONTENT.OUTLOOK\8IHY3B3T\WAIAWA CORRECTIONAL FLOOR PLAN SHEET.DWG
JOB NO. 19-314 DATE: 10229



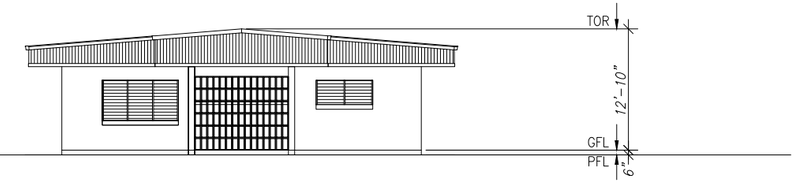
SOUTHWEST SIDE ELEVATION
BUILDING NO. WCF-M



SOUTHEAST SIDE ELEVATION
BUILDING NO. WCF-M



NORTH EAST SIDE ELEVATION
BUILDING NO. WCF-M



NORTHWEST SIDE ELEVATION
BUILDING NO. WCF-M

GRAPHIC SCALE

16 8 4 0 8 24

(IN INCHES)
1/8 inch =1 ft.

BUILDING NO. WCF - M (MEDICAL SERVICES)

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

WAIAWA CORRECTIONAL FACILITY
BUILDING NO. WCF-M (MEDICAL SERVICES)
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

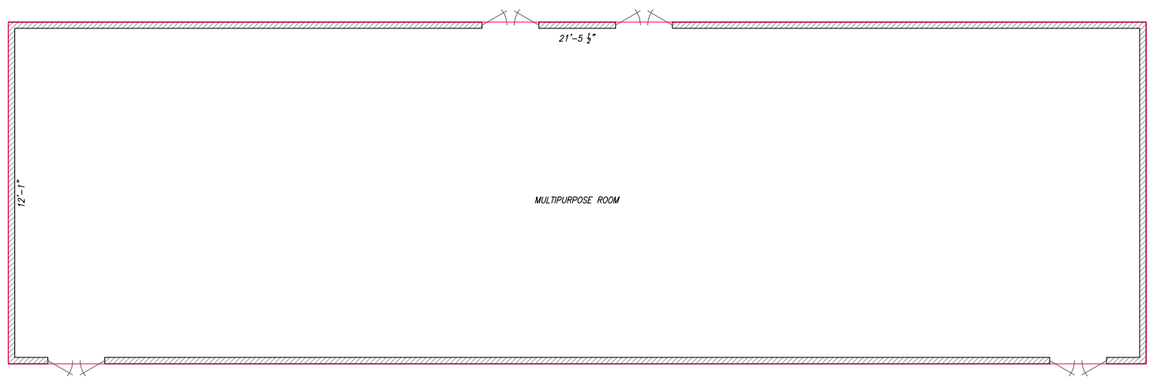
Elevations

SSFM International, Inc.		JOB NO.	DRAWING NO.
DESIGNED BY: CM	CHECKED BY: __	12-10-0783	C000.00
DRAWN BY: RCRA	APPROVED BY: __	DATE	SHEET 49
SCALE: 1/8" = 1'		SEP 2019	OF 60 SHTS

FILE_____ DRAWER_____ FOLDER_____

FINAL

M:\2018\2018_238.000 DAGS WAIAWA PRU-SUP\G DWGS\PM\ELEVATIONS\ELEVATIONS VER 01 191013 RROSAL\191002 RCRA WM WAIAWA CORRECTIONAL FLOOR PLAN SHEET_ADJUSTED.DWG
JOB NO. 19-314 DATE:



GRAPHIC SCALE

16 8 4 0 8 24

(IN INCHES)
1/8 inch =1 ft.

BUILDING NO. WCF-P (PROGRAM)
BUILDING AREA = 4333 SQ. FT.

BL

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

WAIAWA CORRECTIONAL FACILITY
BUILDING NO. WCF-P (PROGRAM)
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

Floor Plans

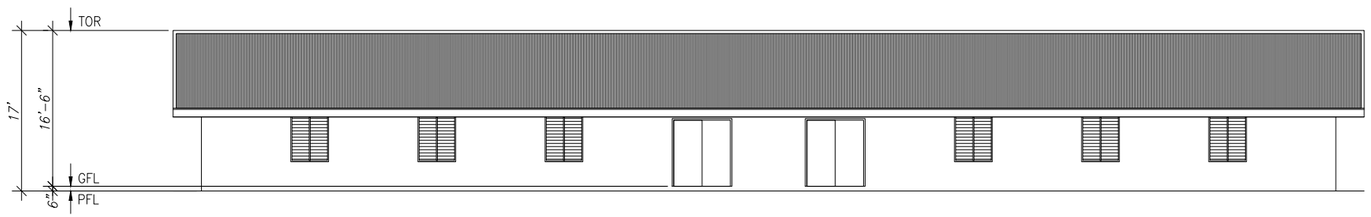
AUSTIN, TSUTSUMI & ASSOCIATES, INC.
ENGINEERS, SURVEYORS • HONOLULU, MAPPING, HAWAII

DESIGNED BY: CM	CHECKED BY: ___	JOB NO. 12-10-0783	DRAWING NO. C000.00
DRAWN BY: RS	APPROVED BY: ___	DATE JULY 2019	SHEET 50 OF 60 SHTS
SCALE: 1/8" = 1'			

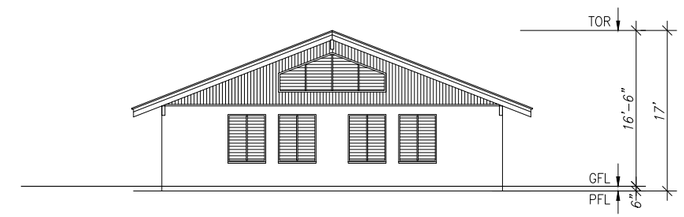
FILE_____ DRAWER_____ FOLDER_____

FINAL

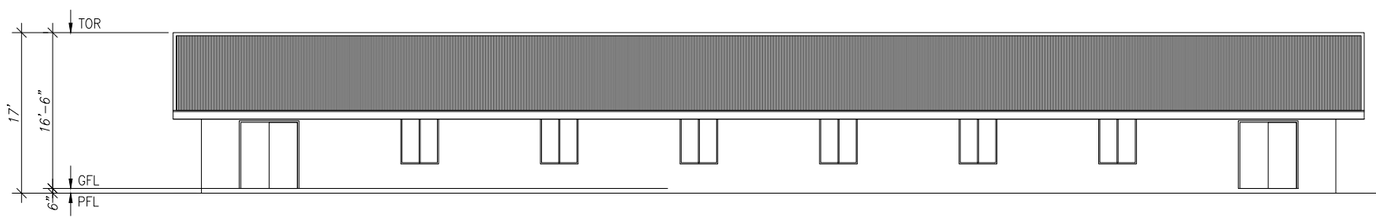
Y:\2019\19-314 WAIAWA FLOOR MAPPING\DONATA\WAIAWA CORRECTIONAL FLOOR PLAN SHEET.DWG
JOB NO. 19-314 DATE: 08219



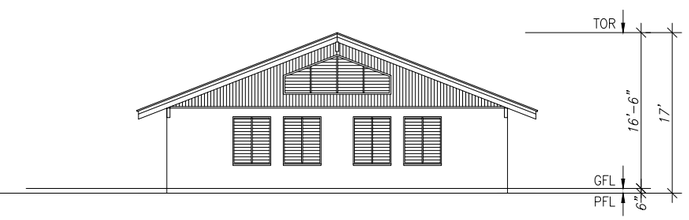
EAST SIDE ELEVATION
BUILDING NO. WCF-P



SOUTH SIDE ELEVATION
BUILDING NO. WCF-P



WEST SIDE ELEVATION
BUILDING NO. WCF-P



NORTH SIDE ELEVATION
BUILDING NO. WCF-P

GRAPHIC SCALE

16 8 4 0 8 24

(IN INCHES)
1/8 inch =1 ft.

BUILDING NO. WCF - P (PROGRAM) ELEVATIONS

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

WAIAWA CORRECTIONAL FACILITY
BUILDING NO. WCF-P (PROGRAM)
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

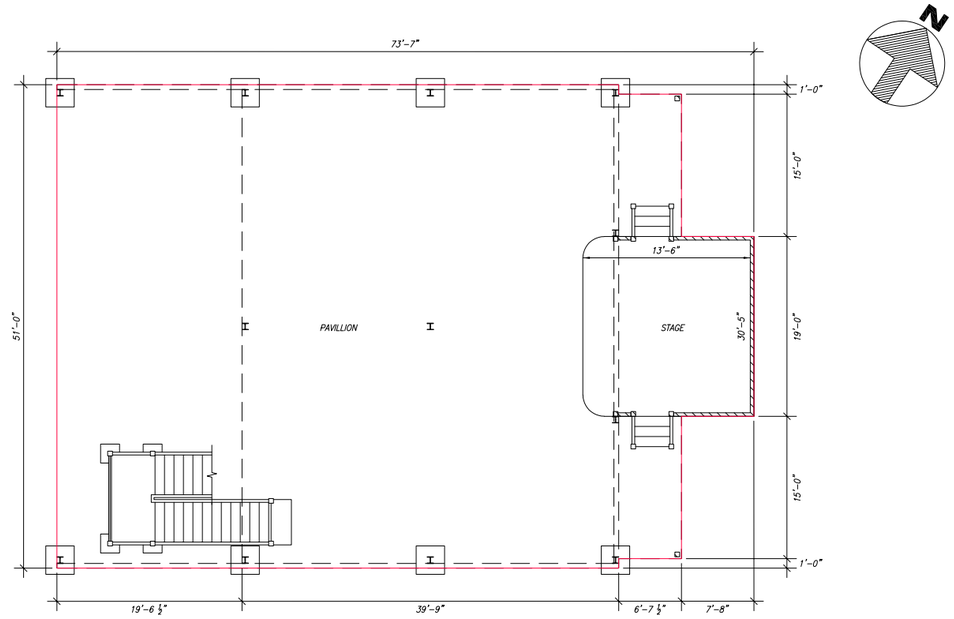
Elevations

SSFM International, Inc.		JOB NO.	DRAWING NO.
DESIGNED BY: CM	CHECKED BY: ___	12-10-0783	C000.00
DRAWN BY: RCRA	APPROVED BY: ___	DATE	SHEET 51
SCALE: 1/8" = 1'		SEP 2019	OF 60 SHTS

FILE_____ DRAWER_____ FOLDER_____

FINAL

M:\2018\2018_238.000 DAGS WAIAWA PRU-SUP\G DWGS\PM\ELEVATIONS\ELEVATIONS VER 01 191013 RROSAL\191002 RCRA WM WAIAWA CORRECTIONAL FLOOR PLAN SHEET_ADJUSTED.DWG
JOB NO. 19-314 DATE:

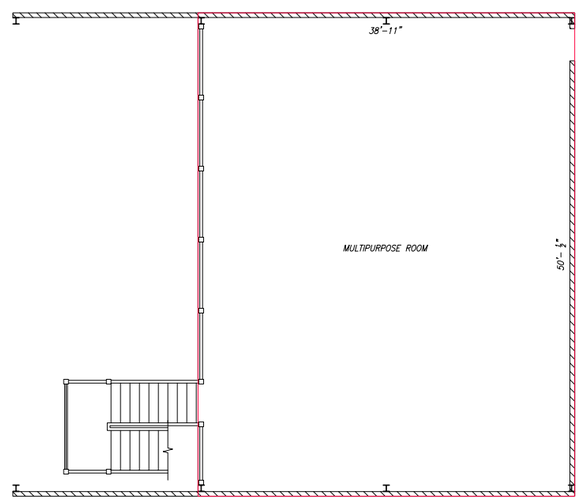


GRAPHIC SCALE

16 8 4 0 8 24

(IN INCHES)
1/8 inch =1 ft.

BUILDING NO. WCF-PA (PAVILION AND MULTI-PURPOSE AREA) FIRST FLOOR
BUILDING AREA = 3498 SQ. FT.



GRAPHIC SCALE

16 8 4 0 8 24

(IN INCHES)
1/8 inch =1 ft.

BUILDING NO. WCF-PA (PAVILION AND MULTI-PURPOSE AREA) SECOND FLOOR
BUILDING AREA = 2030 SQ. FT.

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

WAIAWA CORRECTIONAL FACILITY
BUILDING NO. WCF-PA (PAVILION AND MULTI-PURPOSE AREA)
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

Floor Plans

AUSTIN, TSUTSUMI & ASSOCIATES, INC.
ENGINEERS, SURVEYORS • HONOLULU, WAIPAHU, HAWAII

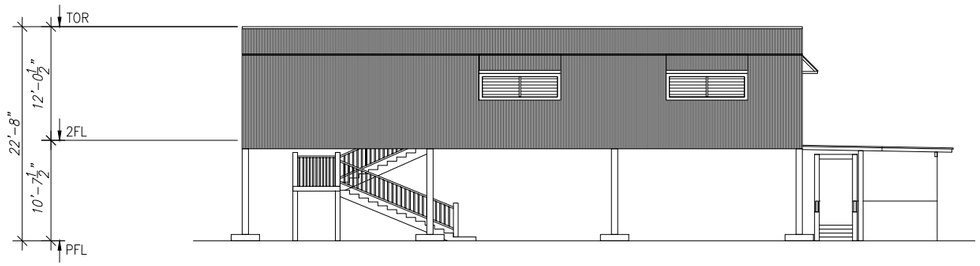
DESIGNED BY: CM	CHECKED BY:	JOB NO. 12-10-0783	DRAWING NO. C000.00
DRAWN BY: RS	APPROVED BY:	DATE JULY 2019	SHEET 52 OF 60 SHTS
SCALE: 1/8" = 1'			

BL

FILE_____ DRAWER_____ FOLDER_____

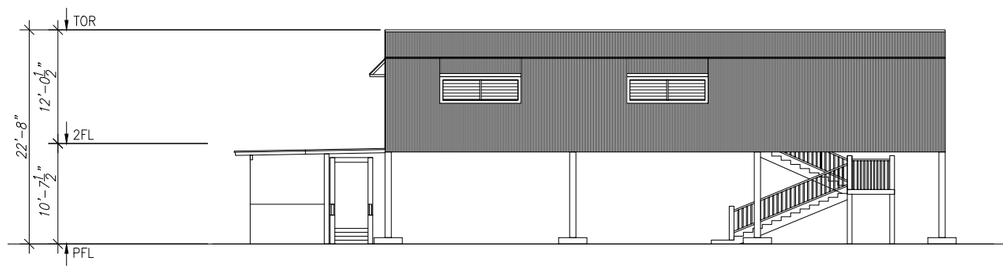
FINAL

C:\USERS\CKADOTA\APPDATA\LOCAL\MICROSOFT\WINDOWS\INETCACHE\CONTENT.OUTLOOK\8IHY3B3T\WAIAWA CORRECTIONAL FLOOR PLAN SHEET.DWG
JOB NO. 19-314 DATE: 102219

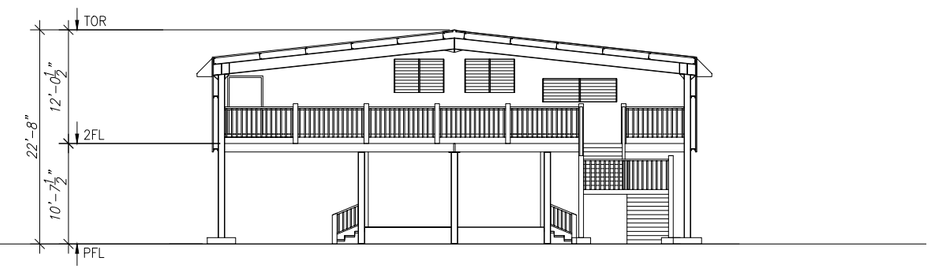


SOUTHWEST SIDE ELEVATION
BUILDING NO. WCF-PA

SOUTHEAST SIDE ELEVATION
BUILDING NO. WCF-PA



NORTH EAST SIDE ELEVATION
BUILDING NO. WCF-PA



NORTHWEST SIDE ELEVATION
BUILDING NO. WCF-PA

GRAPHIC SCALE

16 8 4 0 8 24

(IN INCHES)
1/8 inch =1 ft.

BUILDING NO. WCF - PA (PAVILION AND MULTI - PURPOSE AREA)

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

WAIAWA CORRECTIONAL FACILITY
BUILDING NO. WCF-PA (PAVILION AND MULTI-PURPOSE AREA)
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

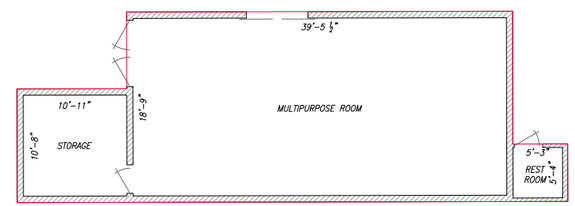
Elevations

SSFM International, Inc.		JOB NO.	DRAWING NO.
DESIGNED BY: CM	CHECKED BY: __	12-10-0783	C000.00
DRAWN BY: RCRA	APPROVED BY: __	DATE	SHEET 53
SCALE: 1/8" = 1'		SEP 2019	OF 60 SHTS

FILE_____ DRAWER_____ FOLDER_____

FINAL

M:\2018\2018_238.000 DAGS WAIAWA PRU-SUP\C DWGS\PM\ELEVATIONS\ELEVATIONS VER 01 191013 RROSAL\191002 RCRA WM WAIAWA CORRECTIONAL FLOOR PLAN SHEET_ADJUSTED.DWG
JOB NO. 19-314 DATE:



N

GRAPHIC SCALE

16 8 4 0 8 24

(IN INCHES)
1/8 inch =1 ft.

BUILDING NO. WCF-R (RECREATIONAL COURT)
BUILDING AREA = 993 SQ. FT.

BL

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

WAIAWA CORRECTIONAL FACILITY
BUILDING NO. WCF-R (RECREATIONAL COURT)
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

Floor Plans

ATA AUSTIN, TSUTSUMI & ASSOCIATES, INC.
ENGINEERS, SURVEYORS • HONOLULU, WAIPAHU, HAWAII

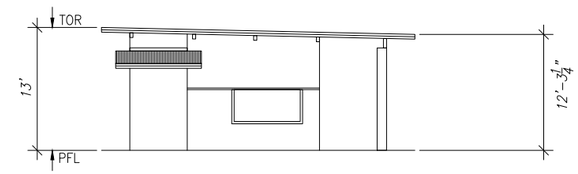
DESIGNED BY: CM	CHECKED BY: ___	JOB NO. 12-10-0783	DRAWING NO. C000.00
DRAWN BY: RS	APPROVED BY: ___	DATE JULY 2019	SHEET 54 OF 60 SHTS
SCALE: 1/8" = 1'			

FILE_____ DRAWER_____ FOLDER_____

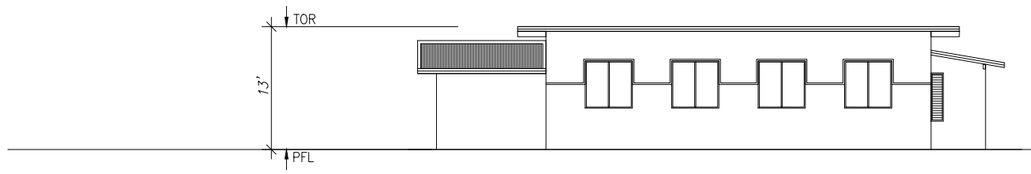
FINAL

Y:\2019\19-314 WAIAWA FLOOR MAPPING\DONATA\WAIAWA CORRECTIONAL FLOOR PLAN SHEET.DWG
JOB NO. 19-314 DATE: 082819

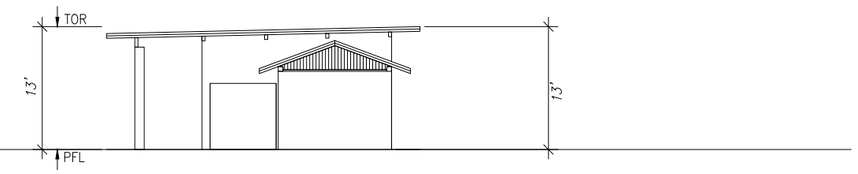
NORTH SIDE ELEVATION
BUILDING NO. WCF-R



EAST SIDE ELEVATION
BUILDING NO. WCF-R



SOUTH SIDE ELEVATION
BUILDING NO. WCF-R



WEST SIDE ELEVATION
BUILDING NO. WCF-R

GRAPHIC SCALE

16 8 4 0 8 24

(IN INCHES)
1/8 inch =1 ft.

BUILDING NO. WCF - R (RECREATIONAL COURT) ELEVATIONS

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

WAIAWA CORRECTIONAL FACILITY
BUILDING NO. WCF-R (RECREATIONAL COURT)
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

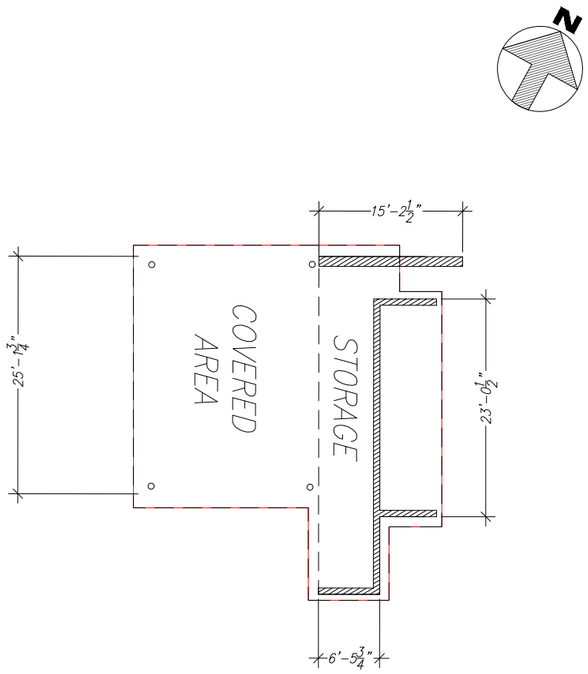
Elevations

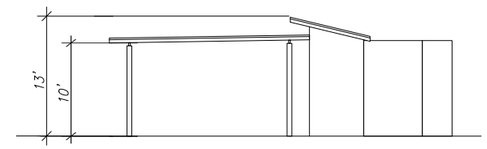
SSFM International, Inc.		JOB NO.	DRAWING NO.
DESIGNED BY: CM	CHECKED BY: __	12-10-0783	C000.00
DRAWN BY: RCRA	APPROVED BY: __	DATE	SHEET 55
SCALE: 1/8" = 1'		SEP 2019	OF 60 SHTS

FILE_____ DRAWER_____ FOLDER_____

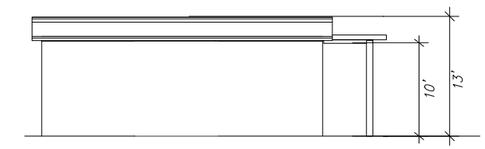
FINAL

M:\2018\2018_238.000 DAGS WAIAWA PRU-SUP\G DWGS\PM\ELEVATIONS\ELEVATIONS VER 01 191013 RROSAL\191002 RCRA WM WAIAWA CORRECTIONAL FLOOR PLAN SHEET_ADJUSTED.DWG
JOB NO. 19-314 DATE:

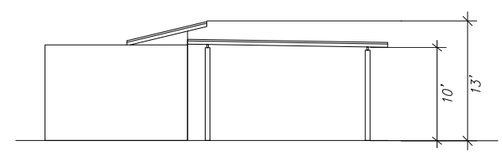




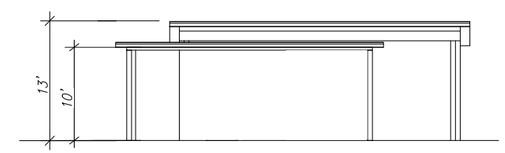
SOUTHEAST SIDE ELEVATION
BUILDING NO. WCF-S1



NORTHEAST SIDE ELEVATION
BUILDING NO. WCF-S1



`NORTHWEST SIDE ELEVATION
BUILDING NO. WCF-S1



SOUTHWEST SIDE ELEVATION
BUILDING NO. WCF-S1

GRAPHIC SCALE

16 8 4 0 8 24

(IN INCHES)
1/8 inch =1 ft.

BUILDING NO. WCF-S1 (FUEL STORAGE)
BUILDING AREA = 981 SQ. FT.

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

WAIAWA CORRECTIONAL FACILITY
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

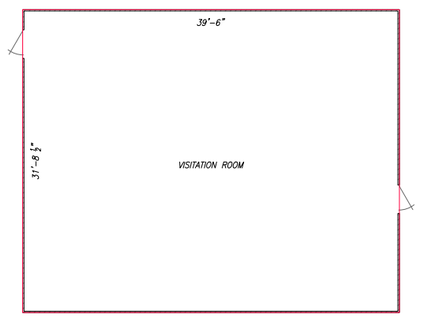
Floor Plans and Elevations

SSFM International, Inc.		JOB NO.	DRAWING NO.
DESIGNED BY: CM	CHECKED BY: —	12-10-0783	C000.00
DRAWN BY: RCRA	APPROVED BY: —	DATE	SHEET 56
SCALE: 1/8" = 1'		SEP 2019	OF 60 SHTS

FILE_____ DRAWER_____ FOLDER_____

FINAL

C:\USERS\CKADOTA\DESKTOP\ELEVATIONS\191002 RCRA WM WAIAWA CORRECTIONAL FLOOR PLAN SHEET_ADJUSTED.DWG
JOB NO. 19-314 DATE:



GRAPHIC SCALE

16 8 4 0 8 24

(IN INCHES)
1/8 inch =1 ft.

BUILDING NO. WCF-V1 (KASHBOX COMPOUND - VISITING 1)
BUILDING AREA = 1272 SQ. FT.

BL

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

WAIAWA CORRECTIONAL FACILITY
BUILDING NO. WCF-V1 (KASHBOX COMPOUND - VISITING 1)
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

Floor Plans

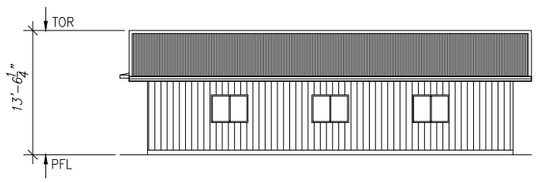
ATA AUSTIN, TSUTSUMI & ASSOCIATES, INC.
ENGINEERS, SURVEYORS • HONOLULU, WAIPAHU, HAWAII

DESIGNED BY: CM	CHECKED BY: —	JOB NO. 12-10-0783	DRAWING NO. C000.00
DRAWN BY: RS	APPROVED BY: —	DATE JULY 2019	SHEET 57 OF 60 SHTS
SCALE: 1/8" = 1'			

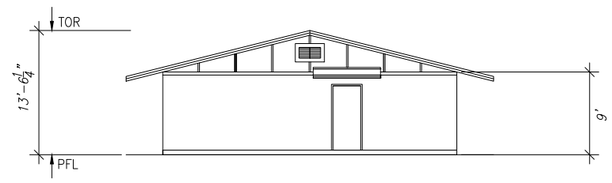
FILE_____ DRAWER_____ FOLDER_____

FINAL

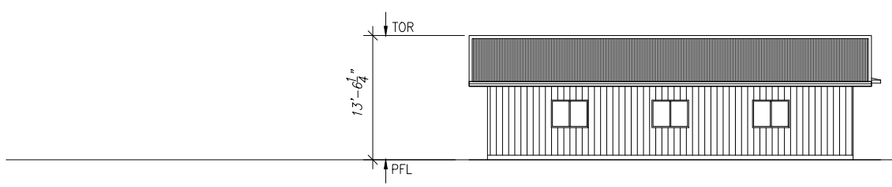
Y:\2019\19-314 WAIAWA FLOOR MAPPING\DONATA\WAIAWA CORRECTIONAL FLOOR PLAN SHEET.DWG
JOB NO. 19-314 DATE: 062819



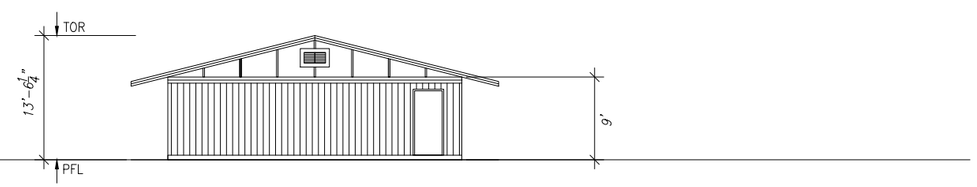
WEST SIDE ELEVATION
BUILDING NO. WCF-V1



NORTH SIDE ELEVATION
BUILDING NO. WCF-V1



EAST SIDE ELEVATION
BUILDING NO. WCF-V1



SOUTH SIDE ELEVATION
BUILDING NO. WCF-V1

GRAPHIC SCALE

16 8 4 0 8 24

(IN INCHES)
1/8 inch =1 ft.

BUILDING NO. WCF - V1 (KASHBOX COMPOUND - VISITING 1) ELEVATIONS

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

WAIAWA CORRECTIONAL FACILITY
BUILDING NO. WCF-V1 (KASHBOX COMPOUND - VISITING 1)
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

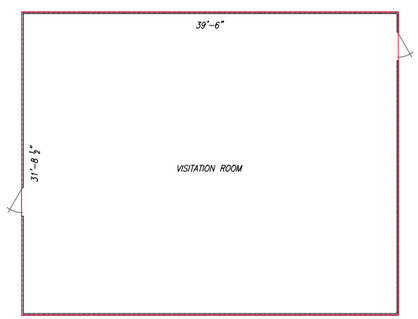
Elevations

SSFM International, Inc.		JOB NO.	DRAWING NO.
DESIGNED BY: CM	CHECKED BY: __	12-10-0783	C000.00
DRAWN BY: RCRA	APPROVED BY: __	DATE SEP 2019	SHEET 58
SCALE: 1/8" = 1'			OF 60 SHTS

FILE_____ DRAWER_____ FOLDER_____

FINAL

/VOLUMES/RCRA_32GB/WAIWA CORRECTIONAL FACILITY HAWAII/191002 RCRA WM WAIAWA CORRECTIONAL FLOOR PLAN SHEET_ADJUSTED.DWG
JOB NO. 19-314 DATE:



GRAPHIC SCALE

16 8 4 0 8 24

(IN INCHES)
1/8 inch =1 ft.

BUILDING NO. WCF-V2 (KASHBOX COMPOUND - VISITING 2)
BUILDING AREA = 1272 SQ. FT.

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

WAIAWA CORRECTIONAL FACILITY
BUILDING NO. WCF-V2 (KASHBOX COMPOUND - VISITING 2)
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

Floor Plans

ATA AUSTIN, TSUTSUMI & ASSOCIATES, INC.
ENGINEERS, SURVEYORS • HONOLULU, WAIPAHU, HAWAII

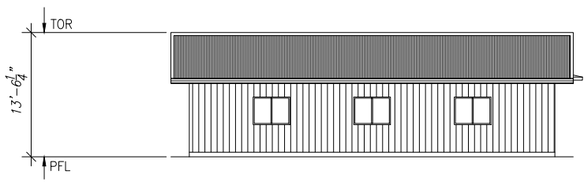
DESIGNED BY: CM	CHECKED BY: —	JOB NO. 12-10-0783	DRAWING NO. C000.00
DRAWN BY: RS	APPROVED BY: —	DATE JULY 2019	SHEET 59 OF 60 SHTS
SCALE: 1/8" = 1'			

BL

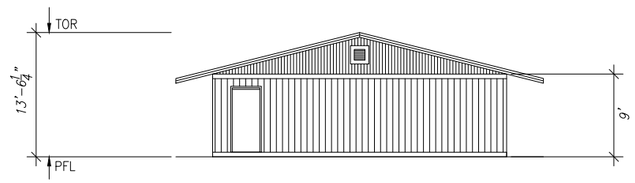
FILE_____ DRAWER_____ FOLDER_____

FINAL

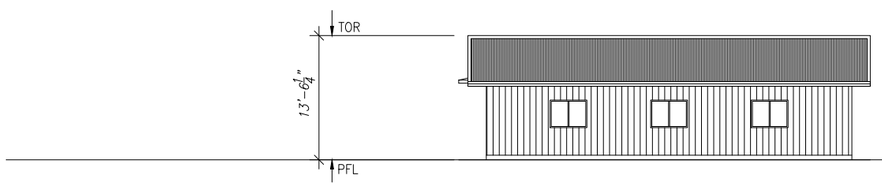
Y:\2019\19-314 WAIAWA FLOOR MAPPING\DONATA\WAIAWA CORRECTIONAL FLOOR PLAN SHEET.DWG
JOB NO. 19-314 DATE: 082819



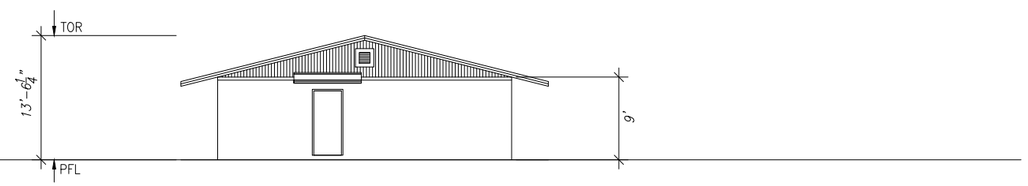
WEST SIDE ELEVATION
BUILDING NO. WCF-V2



NORTH SIDE ELEVATION
BUILDING NO. WCF-V2



EAST SIDE ELEVATION
BUILDING NO. WCF-V2



SOUTH SIDE ELEVATION
BUILDING NO. WCF-V2

GRAPHIC SCALE

16 8 4 0 8 24

(IN INCHES)
1/8 inch =1 ft.

BUILDING NO. WCF - V2 (KASHBOX COMPOUND - VISITING 2) ELEVATIONS

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

WAIAWA CORRECTIONAL FACILITY
BUILDING NO. WCF-V2 (KASHBOX COMPOUND - VISITING 2)
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

Elevations

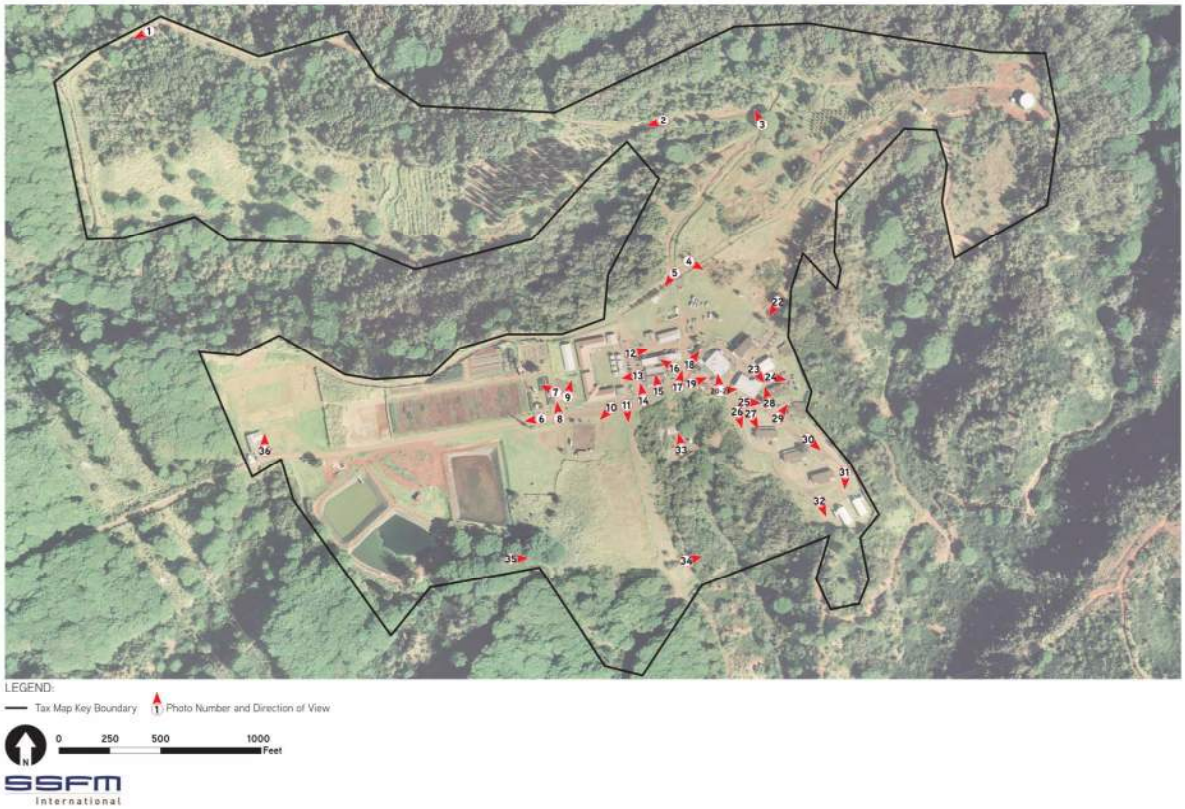
SSFM International, Inc.		JOB NO.	DRAWING NO.
DESIGNED BY: CM	CHECKED BY: __	12-10-0783	C000.00
DRAWN BY: RCRA	APPROVED BY: __	DATE SEP 2019	SHEET 60
SCALE: 1/8" = 1'			OF 60 SHTS

FILE_____ DRAWER_____ FOLDER_____

FINAL

/VOLUMES/RCRA_32GB/WAIWA CORRECTIONAL FACILITY HAWAII/191002 RCRA WM WAIAWA CORRECTIONAL FLOOR PLAN SHEET_ADJUSTED.DWG
JOB NO. 19-314 DATE:

APPENDIX F - Photo Appendix



1. Looking towards north-west boundary

2. Looking toward northern landscaped area

3. Looking towards northern boundary

4. Looking towards splinter proof concrete cable huts formerly used by the military for telecommunications

5. Storage containers

6. Looking down Waiawa Prison Rd towards entrance

7. View of 8-acre farm

8. Driveway leading to agricultural structures and farm

9. View of hydroponics plants and rear-side of WCF-P, WCF-09 and WCF-10

10. View of WCF-R

11. Looking towards southern boundary

12. Looking towards WCF-S1, WCF-CP and WCF-I

13. Looking towards WCF-V1, WCF-09 and WCF-K

14. Looking towards WCF-K parking

15. Front view of WCF-A

16. Looking towards WCF-I

17. Looking towards WCF-B and parking

18. Front view of WCF-B

19. Side view of WCF-F and parking

20. Front view of WCF-F

21. Front view of WCF-E

22. Side view of WCF-C and parking

23. Front view of WCF-M

24. View of WCF-M parking

25. View of WCF-01

26. View of road leading to WCF-07 and WCF-08, and the southern boundary

27. View of WCF-04

28. View of WCF-PA

29. View of WCF-01 parking

30. View of parking for WCF-05 and WCF-06

31. View of WCF-07 and WCF-08

32. View of southern boundary

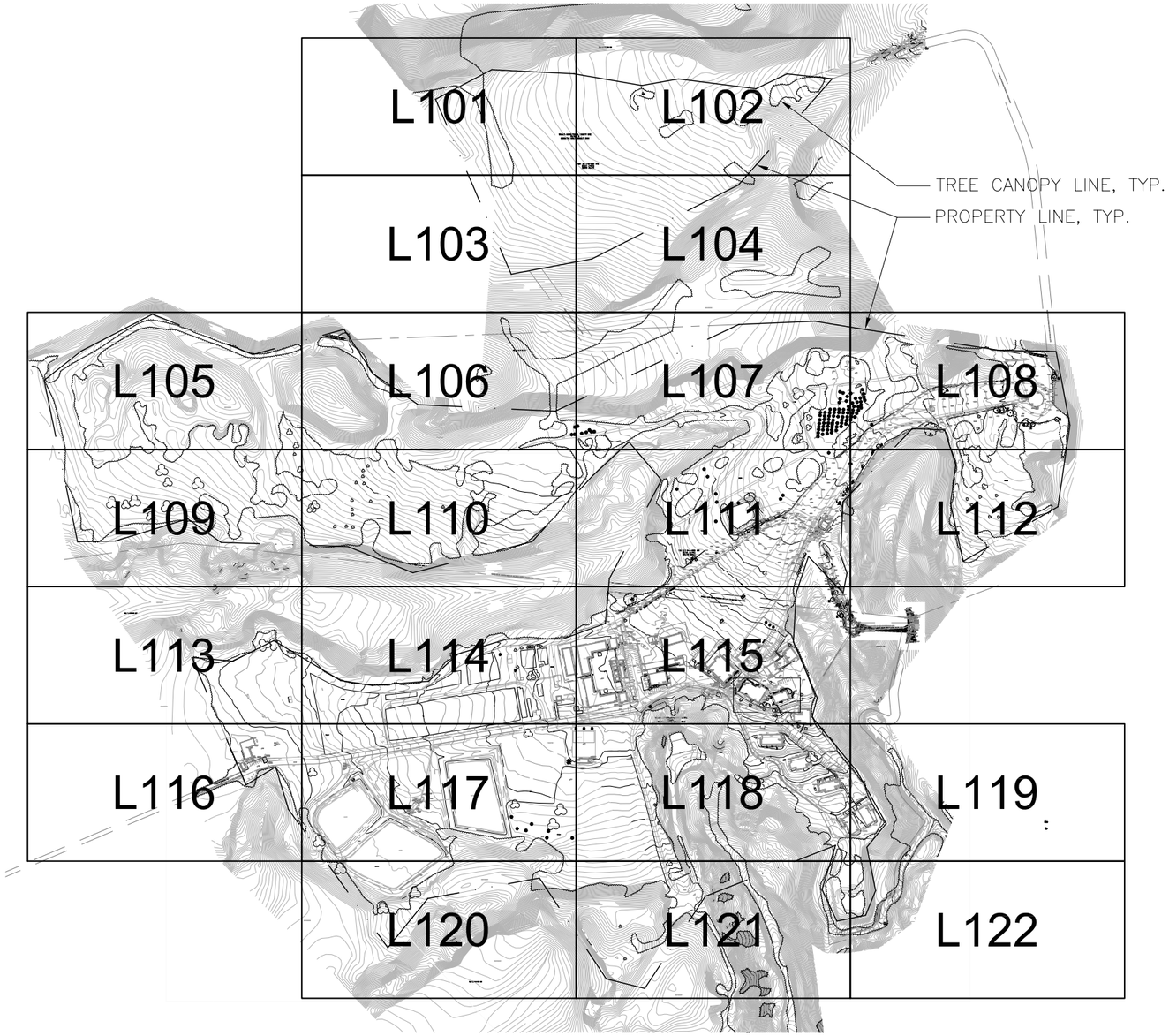
33. View of underground concrete tunnel

34. View of dense vegetation below concrete tunnel

35. View along southern boundary

36. View towards northern boundary

APPENDIX G - Landscape Plan

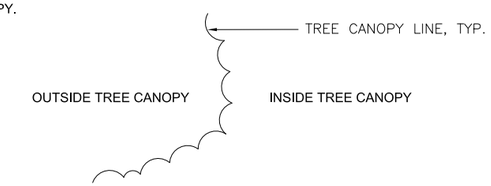


OVERALL LANDSCAPE SHEET LAYOUT

SCALE: 1" = 300'

NOTES:

1. DUE TO THE SITE BEING LARGE, DENSE VEGETATION, AND SOME AREAS NOT BEING ACCESSIBLE; IT WAS NOT PRACTICAL TO IDENTIFY EVERY SINGLE PLANT.
2. THE PREDOMINANT TREES, SHRUBS AND GROUND COVERS ARE LISTED PER SHEET.
3. TREE SIZES VARY BUT IN A STAND/GROVE OF TREES, DIMENSIONS WERE MEASURED OF AN AVERAGE SIZED TREE.
4. TREE CANOPY OUTLINE IS INDICATED BY SCALLOPED EDGE LINE. INSIDE OF THE CONCAVE SIDE IS WITHIN THE CANOPY AND THE CONVEX SIDE IS OUTSIDE THE CANOPY.



ABBREVIATIONS:

BTH	BROWN TRUNK HEIGHT (FROM THE GROUND TO BASE OF CROWNSHAFT)
CAL	CALIPER (DIAMETER MEASURED 6" ABOVE GROUND)
DBH	DIAMETER AT BREAST HEIGHT (MEASURED AT 4'-6" ABOVE THE GROUND)
H	HEIGHT
S	SPREAD
TYP.	TYPICAL

TRUE NORTH
SCALE: 1 In. = 300 Ft.

300' 0 300'

SCALE: 1" = 300'
AT FULL SIZE 22"x34" BL

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

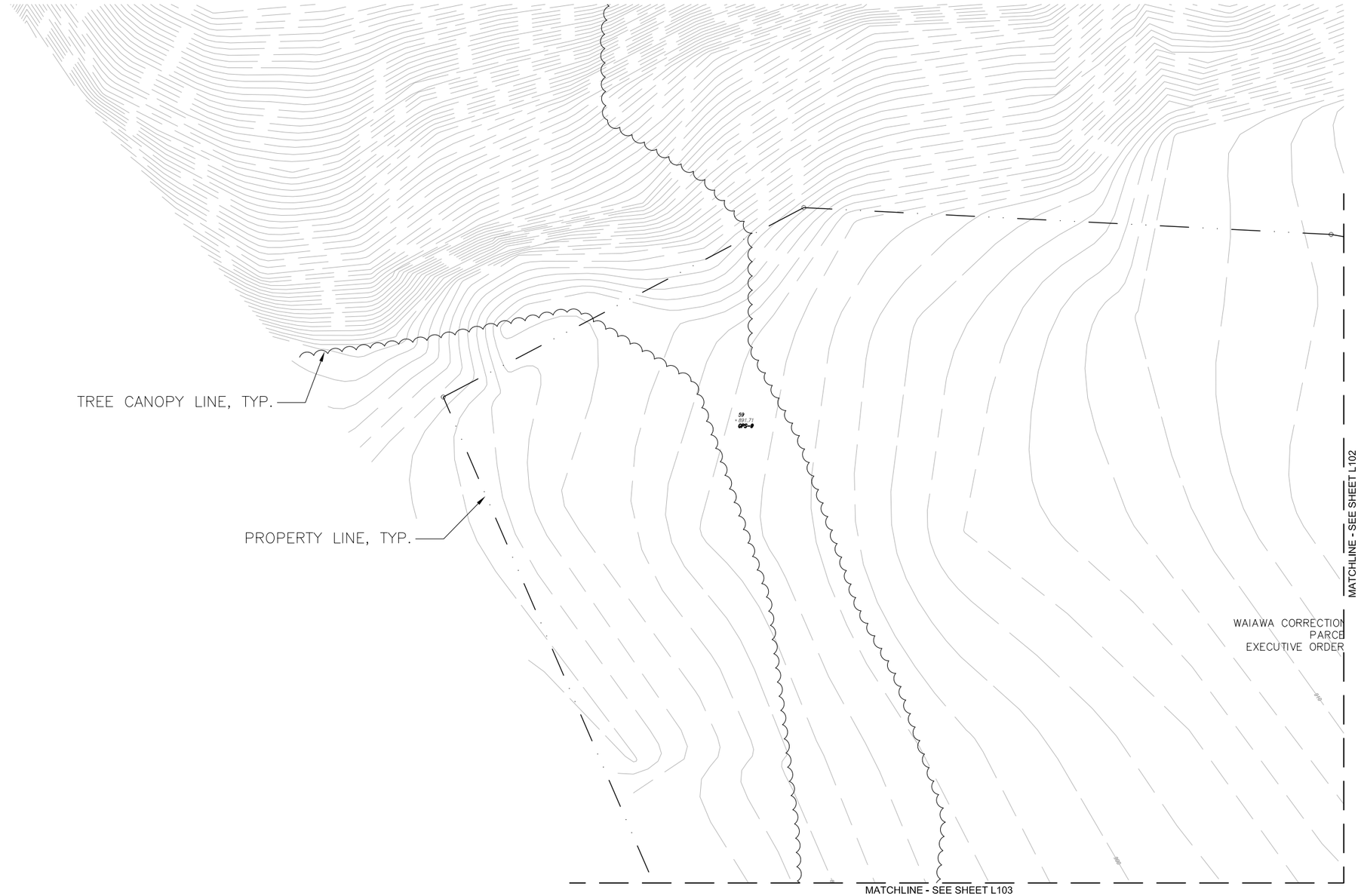
WAIAWA CORRECTIONAL FACILITY
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

Overall Landscape Sheet Layout

Ki Concepts, LLC		JOB NO.	DRAWING NO.
DESIGNED BY: KS	CHECKED BY: —	12-10-0783	L100
DRAWN BY: LK	APPROVED BY: —	DATE	SHEET 1
SCALE: AS SHOWN		AUG. 2019	OF 28 SHTS

FILE_____ DRAWER_____ FOLDER_____

FINAL



LANDSCAPE SURVEY

SCALE: 1" = 40'

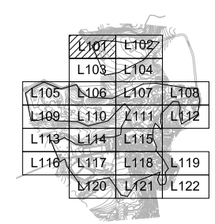
PREDOMINANT TREE/PLANT SPECIES:

1. ALBIZIA (FALCATARIA MOLUCCANA) - 29" DBH, 60'-70' H., 70' S
2. GUINEA GRASS (PANICUM MAXIMUM)

40' 0 40'

SCALE: 1" = 40'
AT FULL SIZE 22"x34"

TRUE NORTH
SCALE: 1 in. = 40 FT.



KEY MAP – N.T.S.

BL

REVISION NO.	SYM.	DESCRIPTION	SHT. ___ OF ___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

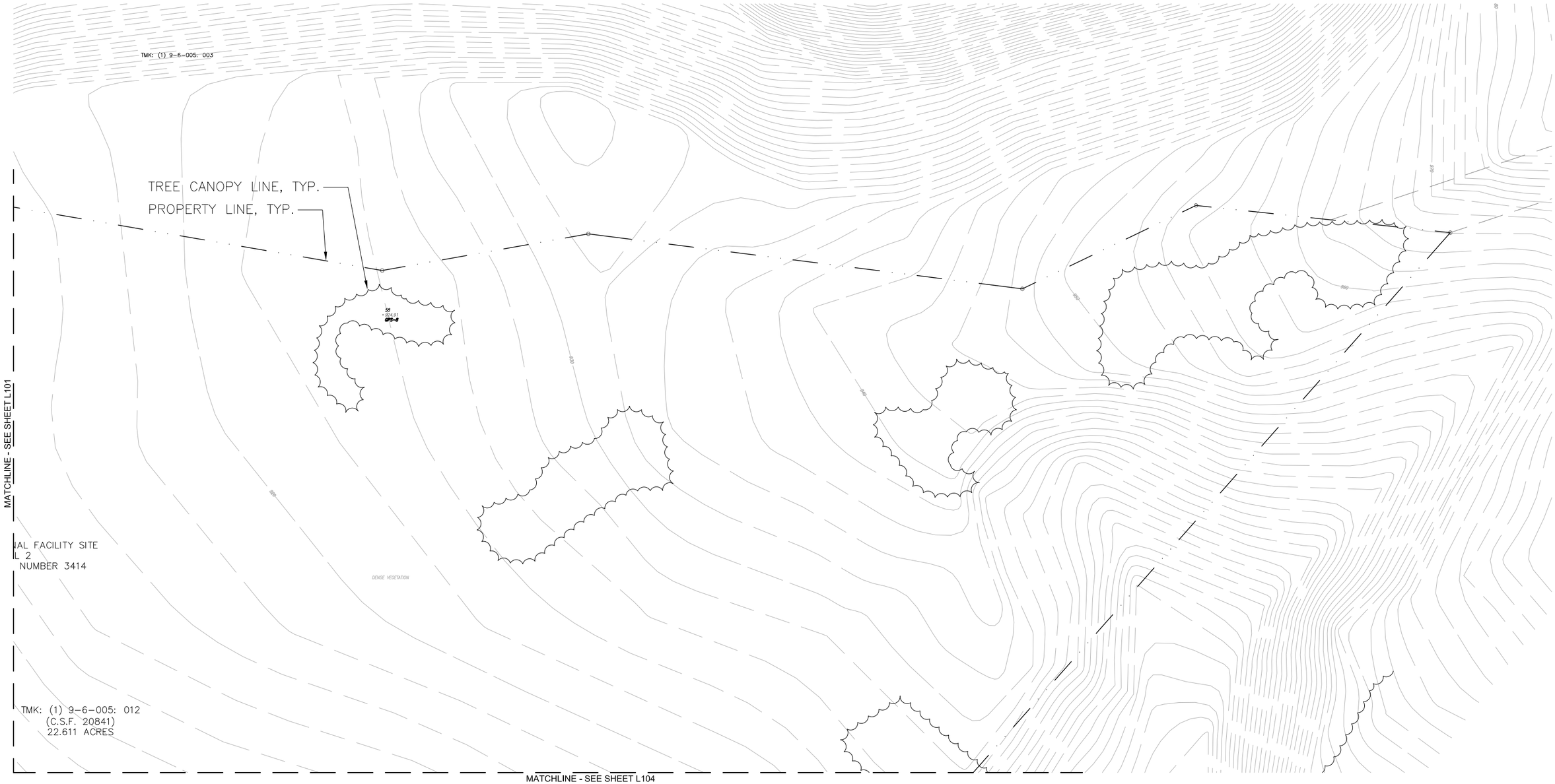
WAIAWA CORRECTIONAL FACILITY
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

Landscape Survey

Ki Concepts, LLC		JOB NO.	DRAWING NO.
DESIGNED BY: KS	CHECKED BY: —	12-10-0783	L101
DRAWN BY: LK	APPROVED BY: —	DATE	SHEET 2
SCALE: AS SHOWN		AUG, 2019	OF 28 SHTS

FILE_____ DRAWER_____ FOLDER_____

FINAL



LANDSCAPE SURVEY

SCALE: 1" = 40'

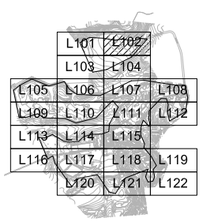
PREDOMINANT TREE/PLANT SPECIES:

1. COAST CYPRESS-PINE (CALLITRIS COLUMELLARIS) - 13" DBH, 35' H, 15' S
2. MANGIUM (ACACIA MANGIUM) - 6.5" DBH, 30' H, 15' S
3. IRONWOOD (CASUARINA EQUISETIFOLIA) - 17.5" DBH, 45' H, 20' S
4. STRAWBERRY GUAVA (PSIDIUM CATTLEIANUM)
5. FIDDLEWOOD (CITHAREXYLUM SPINOSUM)
6. ULUHE FERN (DICRANOPTERIS LINEARIS)
7. CLIDEMIA (CLIDEMIA HIRTA)
8. PORTERWEED (STACHYTARPHETA SP.)

40' 0 40'

SCALE: 1" = 40'
AT FULL SIZE 22"x34"

TRUE NORTH
SCALE: 1 In. = 40 Ft.



KEY MAP – N.T.S.

BL

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

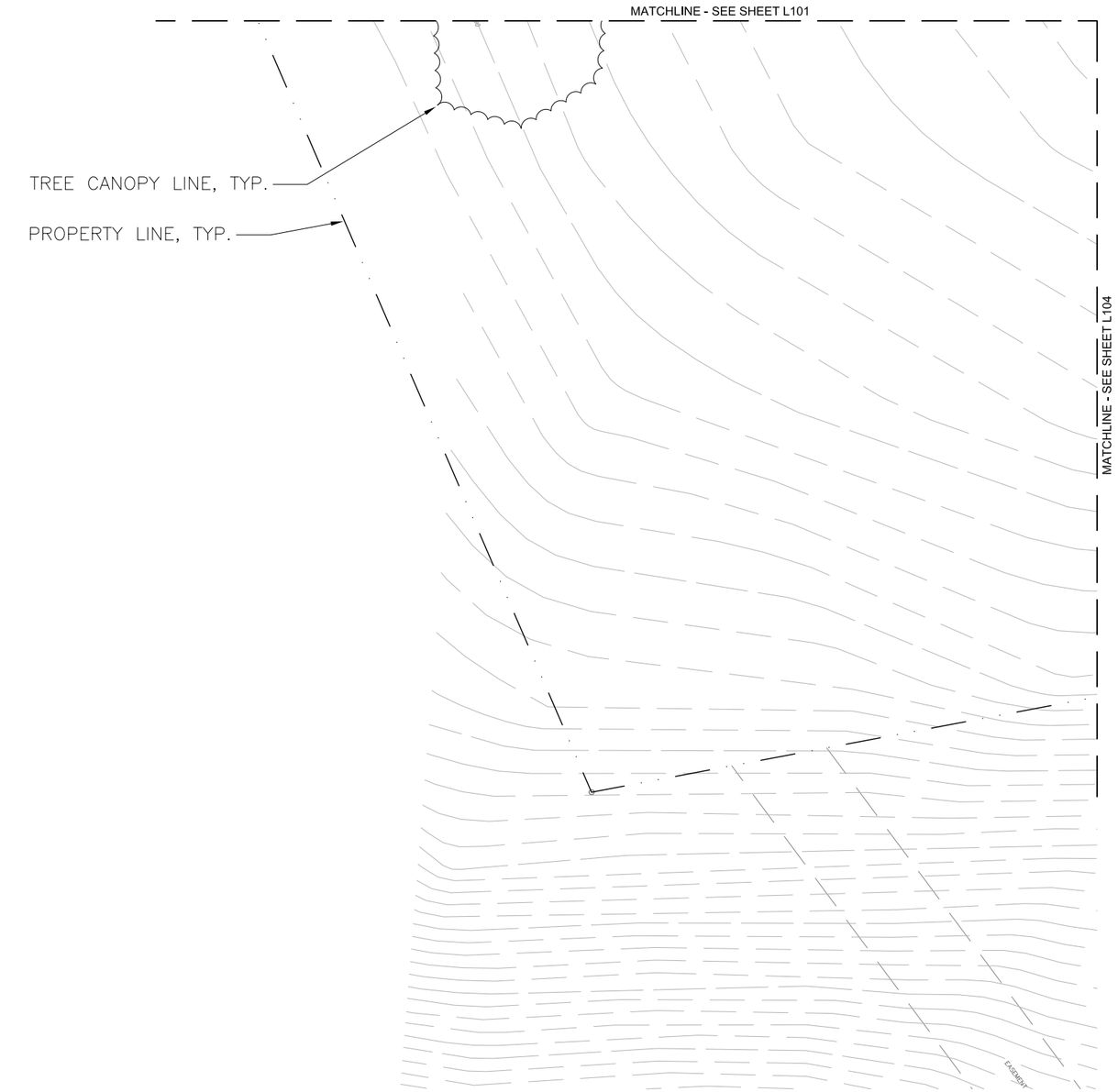
WAIAWA CORRECTIONAL FACILITY
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

Landscape Survey

Ki Concepts, LLC		JOB NO.	DRAWING NO.
DESIGNED BY: KS	CHECKED BY: —	12-10-0783	L102
DRAWN BY: LK	APPROVED BY: —	DATE	SHEET 3
SCALE: AS SHOWN		AUG. 2019	OF 28 SHTS

FILE_____ DRAWER_____ FOLDER_____

FINAL



LANDSCAPE SURVEY

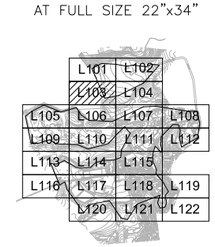
SCALE: 1" = 40'

PREDOMINANT TREE/PLANT SPECIES:

1. ALBIZIA (FALCATARIA MOLUCCANA) - 29" DBH, 60'-70' H., 70' S
2. GUINEA GRASS (PANICUM MAXIMUM)

40' 0 40'

SCALE: 1" = 40'
AT FULL SIZE 22"x34"



KEY MAP – N.T.S.

TRUE NORTH
SCALE: 1 in. = 40 FT.

BL

REVISION NO.	SYM.	DESCRIPTION	SHT. ___ OF ___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

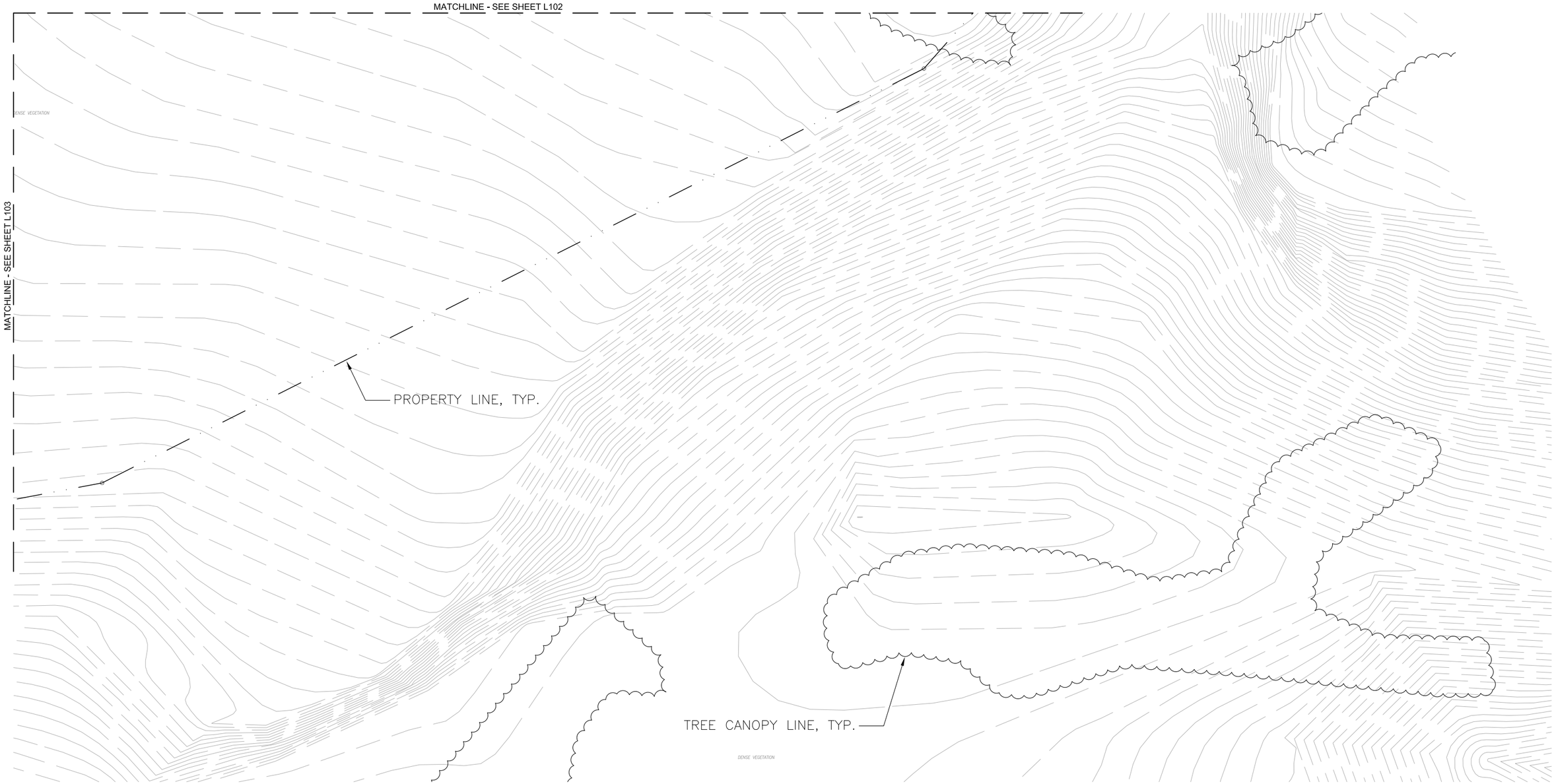
WAIAWA CORRECTIONAL FACILITY
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

Landscape Survey

Ki Concepts, LLC		JOB NO.	DRAWING NO.
DESIGNED BY: KS	CHECKED BY: __	12-10-0783	L103
DRAWN BY: LK	APPROVED BY: __	DATE	SHEET 4
SCALE: AS SHOWN		AUG. 2019	OF 28 SHTS

FILE_____ DRAWER_____ FOLDER_____

FINAL



LANDSCAPE SURVEY

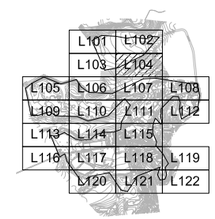
SCALE: 1" = 40'

PREDOMINANT TREE/PLANT SPECIES:

1. COAST CYPRESS-PINE (CALLITRIS COLUMELLARIS) - 13" DBH, 35' H, 15' S
2. MANGIUM (ACACIA MANGIUM) - 6.5" DBH, 30' H, 15' S
3. IRONWOOD (CASUARINA EQUISETIFOLIA) - 17.5" DBH, 45' H, 20' S
4. STRAWBERRY GUAVA (PSIDIUM CATTLEIANUM)
5. FIDDLEWOOD (CITHAREXYLUM SPINOSUM)
6. ULUHE FERN (DICRANOPTERIS LINEARIS)
7. CLIDEMIA (CLIDEMIA HIRTA)
8. PORTERWEED (STACHYTARPHETA SP.)

40' 0 40'

SCALE: 1" = 40'
AT FULL SIZE 22"x34"



KEY MAP – N.T.S.

TRUE NORTH
SCALE: 1 In. = 40 Ft.

BL

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

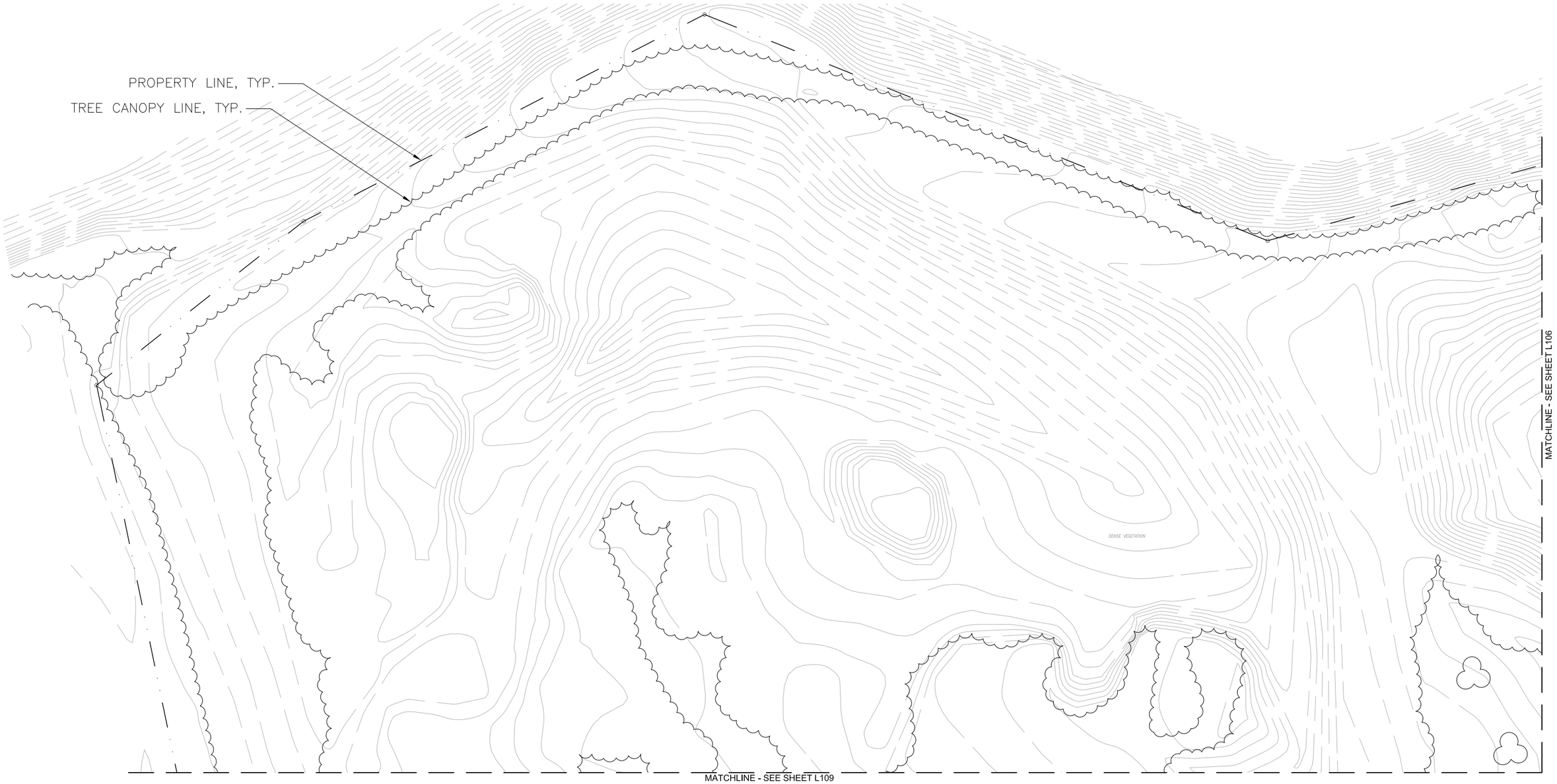
WAIAWA CORRECTIONAL FACILITY
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

Landscape Survey

Ki Concepts, LLC		JOB NO.	DRAWING NO.
DESIGNED BY: KS	CHECKED BY: —	12-10-0783	L104
DRAWN BY: LK	APPROVED BY: —	DATE	SHEET 5
SCALE: AS SHOWN		AUG, 2019	OF 28 SHTS

FILE_____ DRAWER_____ FOLDER_____

FINAL



LANDSCAPE SURVEY

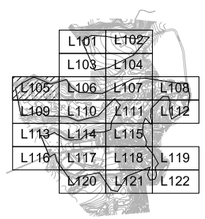
SCALE: 1" = 40'

PREDOMINANT TREE/PLANT SPECIES:

1. ALBIZIA (FALCATARIA MOLUCCANA) - 60' H
2. MANGIUM (ACACIA MANGIUM) - 8" DBH, 40' H, 15' S
3. KOA (ACACIA KOA)
4. KOAIA (ACACIA KOAIA)
5. FORMOSAN KOA (ACACIA CONFUSA)
6. STRAWBERRY GUAVA (PSIDIUM CATTLEIANUM)
7. SILK OAK (GREVILLEA ROBUSTA)
8. FIDDLEWOOD (CITHAREXYLUM SPINOSUM)
9. EUCALYPTUS
10. CLIDEMIA (CLIDEMIA HIRTA)

40' 0 40'

SCALE: 1" = 40'
AT FULL SIZE 22"x34"



KEY MAP – N.T.S.

TRUE NORTH
SCALE: 1 In. = 40 Ft.

BL

REVISION NO.	SYM.	DESCRIPTION	SHT. ___ OF ___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

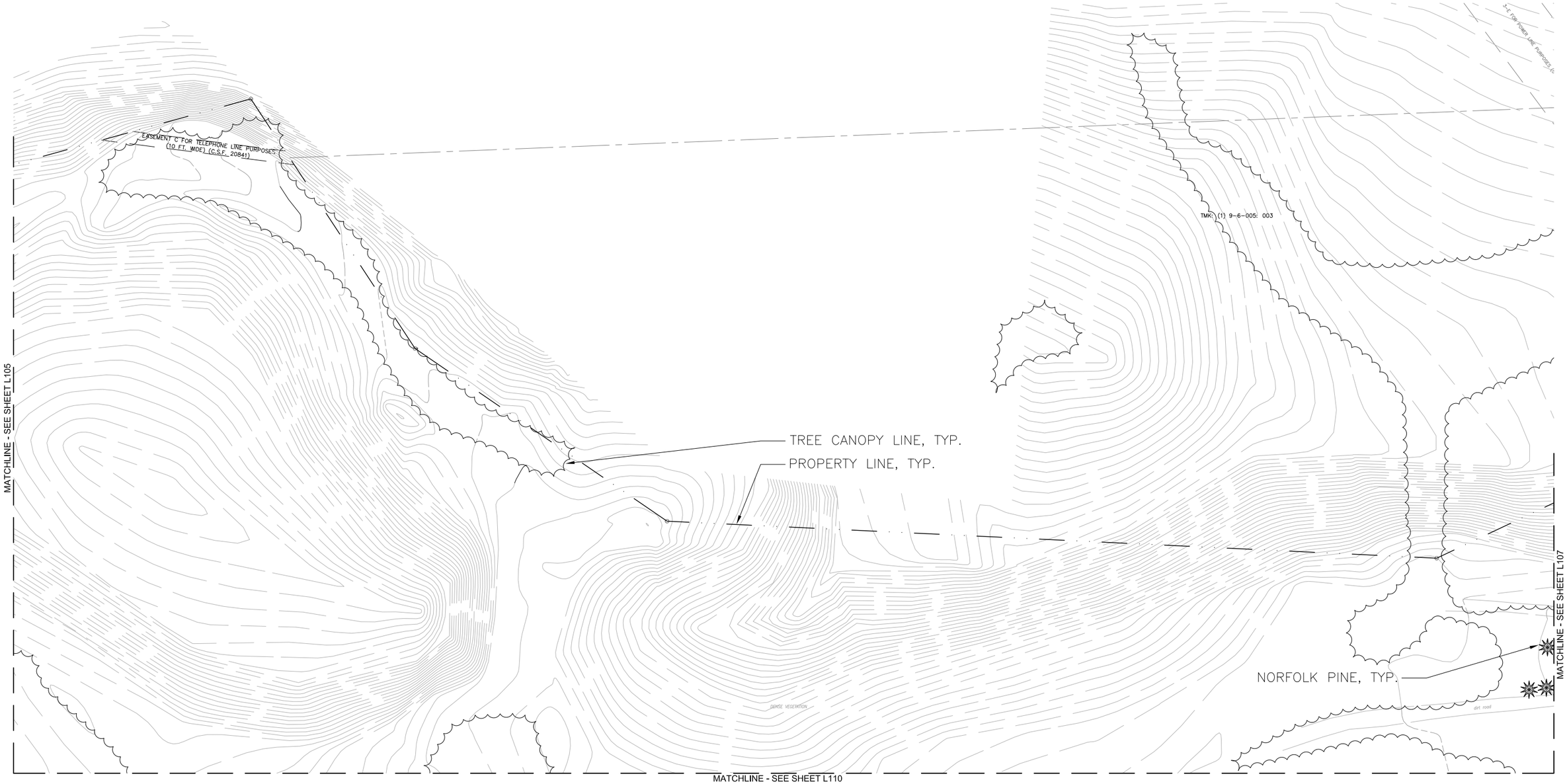
WAIAWA CORRECTIONAL FACILITY
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

Landscape Survey

Ki Concepts, LLC		JOB NO.	DRAWING NO.
DESIGNED BY: KS	CHECKED BY: —	12-10-0783	L105
DRAWN BY: LK	APPROVED BY: —	DATE AUG, 2019	SHEET 6 OF 28 SHTS
SCALE: AS SHOWN			

FILE_____ DRAWER_____ FOLDER_____

FINAL



LANDSCAPE SURVEY

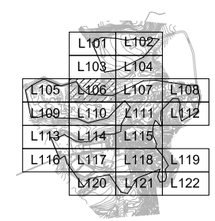
SCALE: 1" = 40'

PREDOMINANT TREE/PLANT SPECIES:

1. ALBIZIA (FALCATARIA MOLUCCANA)
2. MANGIUM (ACACIA MANGIUM) - 8" DBH, 40' H, 15' S
3. KOA (ACACIA KOA)
4. STRAWBERRY GUAVA (PSIDIUM CATTLEIANUM)
5. SILK OAK (GREVILLEA ROBUSTA)
6. FIDDLEWOOD (CITHAREXYLUM SPINOSUM)
7. EUCALYPTUS
8. IRONWOOD (CASUARINA EQUISETIFOLIA)
9. NORFOLK PINE (ARAUCARIA HETEROPHYLLA)
10. CLIDEMIA (CLIDEMIA HIRTA)

40' 0 40'

SCALE: 1" = 40'
AT FULL SIZE 22"x34"



KEY MAP – N.T.S.

TRUE NORTH
SCALE: 1 In. = 40 Ft.

BL

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

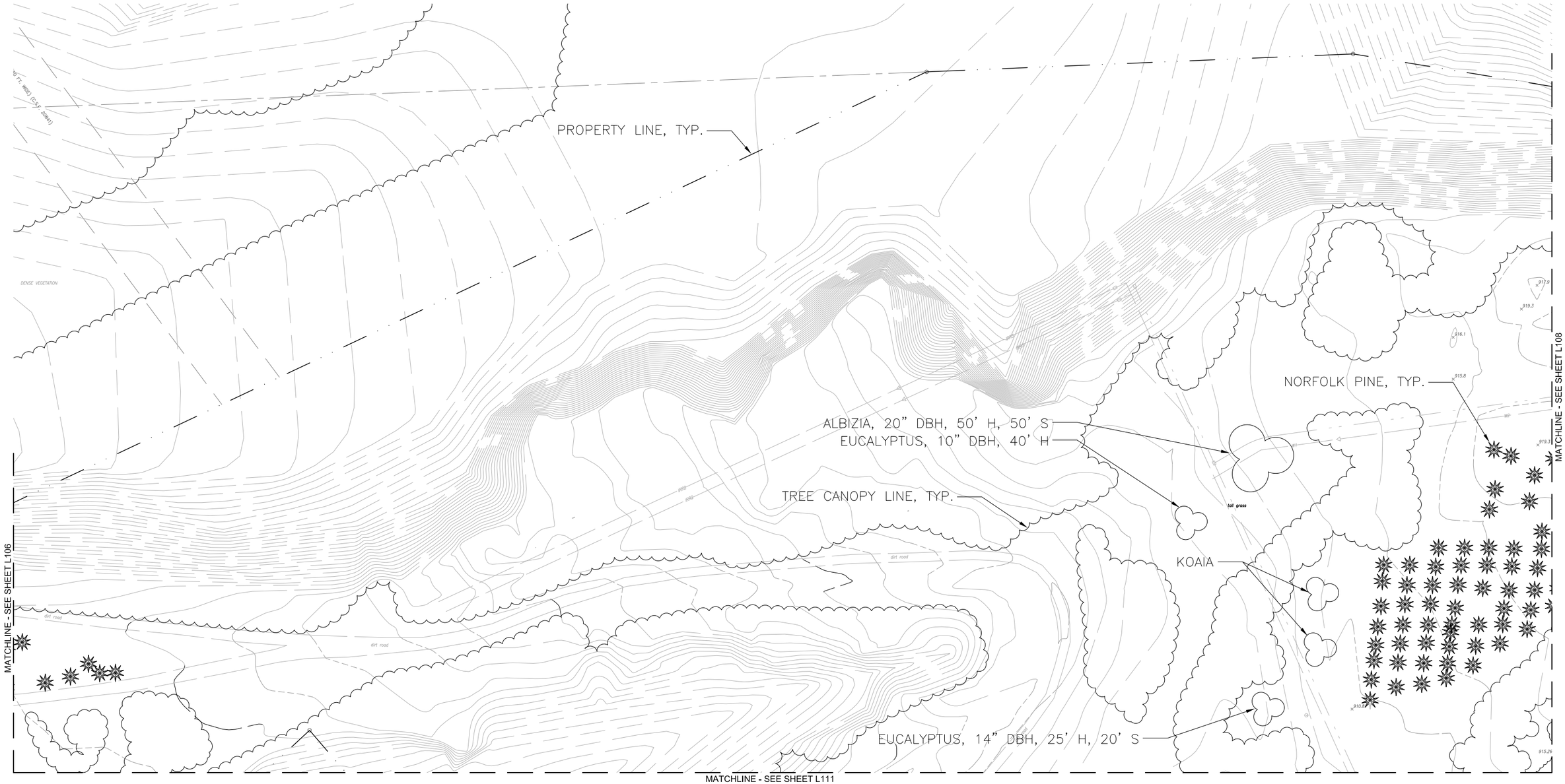
WAIAWA CORRECTIONAL FACILITY
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

Landscape Survey

Ki Concepts, LLC		JOB NO.	DRAWING NO.
DESIGNED BY: KS	CHECKED BY: —	12-10-0783	L106
DRAWN BY: LK	APPROVED BY: —	DATE	SHEET 7
SCALE: AS SHOWN		AUG. 2019	OF 28 SHTS

FILE_____ DRAWER_____ FOLDER_____

FINAL



LANDSCAPE SURVEY

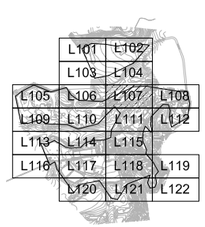
SCALE: 1" = 40'

PREDOMINANT TREE/PLANT SPECIES:

1. ALBIZIA (FALCATARIA MOLUCCANA)
2. KOAIA (ACACIA KOAIA) - 8" DBH, 20' H, 20' S
3. STRAWBERRY GUAVA (PSIDIUM CATTLEIANUM)
4. SILK OAK (GREVILLEA ROBUSTA) - 16" DBH, 40' H, 35' S
5. EUCALYPTUS - 15" DBH, 45' H, 20' S
6. IRONWOOD (CASUARINA EQUISETIFOLIA) - 30' H
7. NORFOLK PINE (ARAUCARIA HETEROPHYLLA)
8. CHRISTMAS BERRY (SCHINUS TEREBINTHIFOLIUS)
9. OCTOPUS TREE (SCHEFFLERA ACTINOPHYLLA)
10. LANTANA (LANTANA CAMARA)

40' 0 40'

SCALE: 1" = 40'
AT FULL SIZE 22"x34"



KEY MAP – N.T.S.

TRUE NORTH
SCALE: 1 in. = 40 Ft.

BL

REVISION NO.	SYM.	DESCRIPTION	SHT. ___ OF ___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

WAIAWA CORRECTIONAL FACILITY
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

Landscape Survey

Ki Concepts, LLC		JOB NO. 12-10-0783	DRAWING NO. L107
DESIGNED BY: KS	CHECKED BY: __		
DRAWN BY: LK	APPROVED BY: __	DATE AUG, 2019	SHEET 8 OF 28 SHTS
SCALE: AS SHOWN			

FILE_____ DRAWER_____ FOLDER_____

FINAL

LANDSCAPE SURVEY

SCALE: 1" = 40'

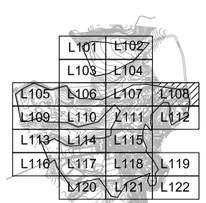
PREDOMINANT TREE/PLANT SPECIES:

1. ALBIZIA (FALCATARIA MOLUCCANA) - 24" DBH, 40' H, 35' S
2. KOA (ACACIA KOA) - 11.5" DBH, 15' H, 15' S
3. KOAIA (ACACIA KOAIA) - 13" DBH, 18' H, 20' S
4. MANGIUM (ACACIA MANGIUM) - 8" DBH, 40' H, 20' S
5. STRAWBERRY GUAVA (PSIDIUM CATTLEIANUM)
6. JUNIPER
7. EUCALYPTUS
8. IRONWOOD (CASUARINA EQUISETIFOLIA) - 8" DBH, 50' H, 15' S
9. NORFOLK PINE (ARAUCARIA HETEROPHYLLA)
10. CHRISTMAS BERRY (SCHINUS TEREBINTHIFOLIUS) - 8" DBH, 25' H, 15' S
11. JAVA PLUM (SYZYGIUM CUMINI) - 19" DBH, 50' H, 30' S
12. CLIDEMIA (CLIDEMIA HIRTA)
13. WEDELIA (SPHAGNETICOLA TRILOBATA)

40' 0 40'

SCALE: 1" = 40'
AT FULL SIZE 22"x34"

TRUE NORTH
SCALE: 1 In. = 40 FT.



KEY MAP – N.T.S.

BL

REVISION NO.	SYM.	DESCRIPTION	SHT. ___ OF ___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

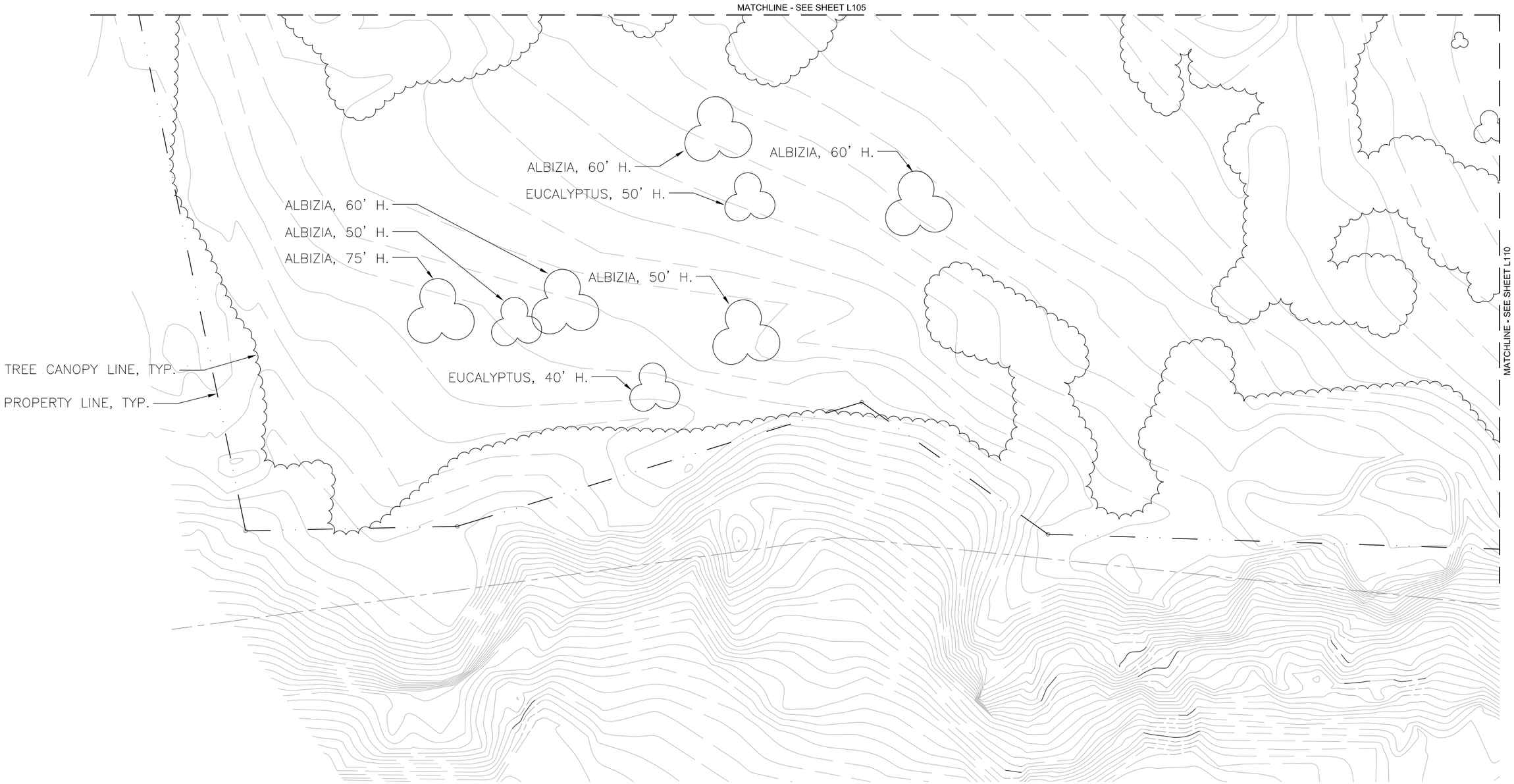
WAIAWA CORRECTIONAL FACILITY
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

Landscape Survey

Ki Concepts, LLC		JOB NO.	DRAWING NO.
DESIGNED BY: KS	CHECKED BY: —	12-10-0783	L108
DRAWN BY: LK	APPROVED BY: —	DATE	SHEET 9
SCALE: AS SHOWN		AUG. 2019	OF 28 SHTS

FILE_____ DRAWER_____ FOLDER_____

FINAL



LANDSCAPE SURVEY

SCALE: 1" = 40'

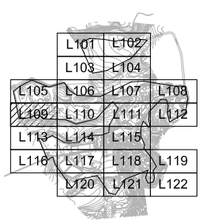
PREDOMINANT TREE/PLANT SPECIES:

1. ALBIZIA (FALCATARIA MOLUCCANA) - 60' H
2. EUCALYPTUS - 45' H
3. FORMOSAN KOA (ACACIA CONFUSA) - 10" DBH, 18' H, 15' S
4. IRONWOOD (CASUARINA EQUISETIFOLIA)
5. WEDELIA (SPHAGNETICOLA TRILOBATA)

40' 0 40'

SCALE: 1" = 40'
AT FULL SIZE 22"x34"

TRUE NORTH
SCALE: 1 In. = 40 Ft.



KEY MAP – N.T.S.

BL

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF____	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

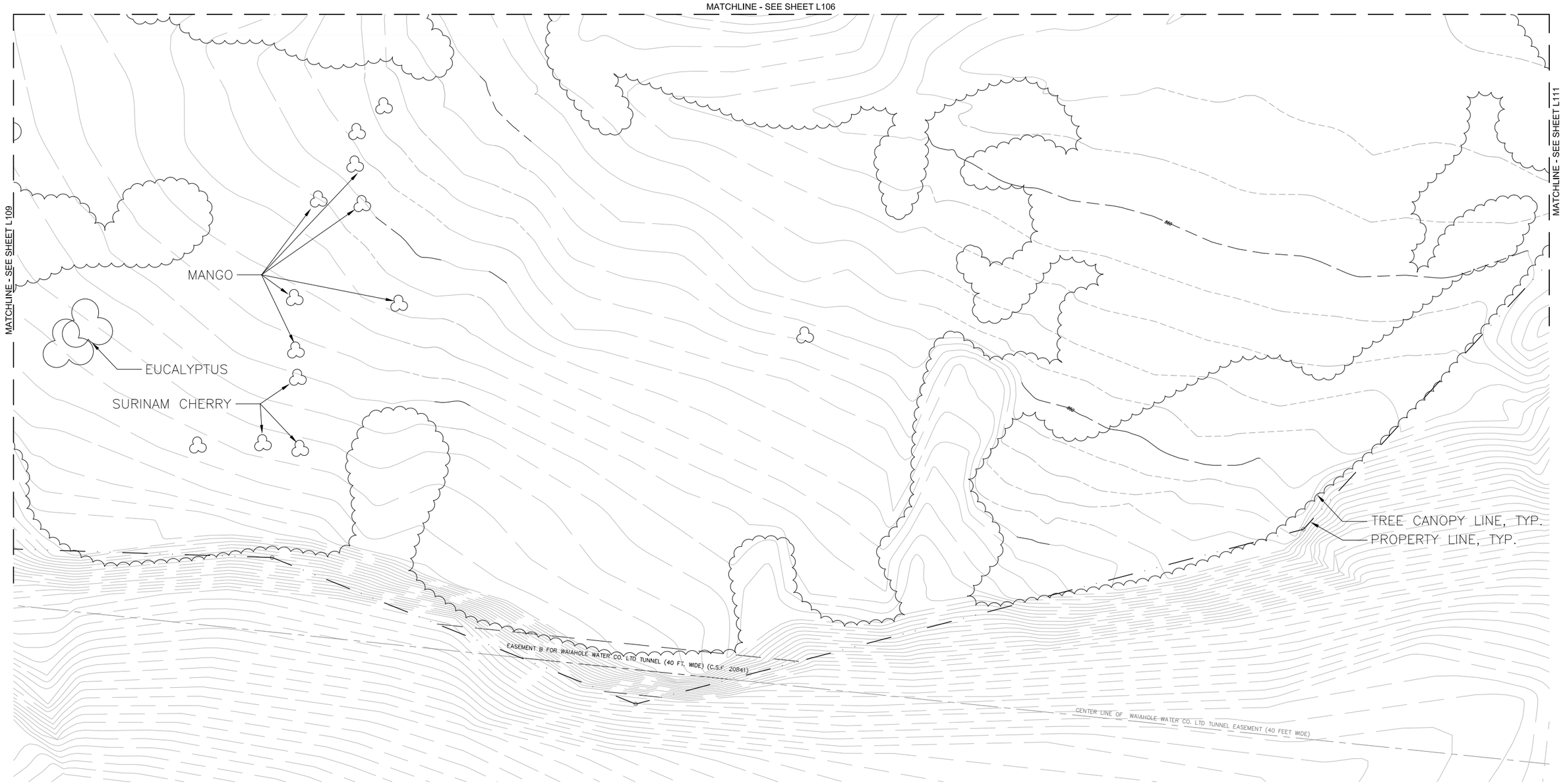
WAIAWA CORRECTIONAL FACILITY
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

Landscape Survey

Ki Concepts, LLC		JOB NO.	DRAWING NO.
DESIGNED BY: KS	CHECKED BY: —	12-10-0783	L109
DRAWN BY: LK	APPROVED BY: —	DATE	SHEET 10
SCALE: AS SHOWN		AUG, 2019	OF 28 SHTS

FILE_____ DRAWER_____ FOLDER_____

FINAL



LANDSCAPE SURVEY

SCALE: 1" = 40'

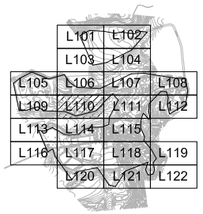
PREDOMINANT TREE/PLANT SPECIES:

1. ALBIZIA (FALCATARIA MOLUCCANA) - 60' H
2. EUCALYPTUS - 50' H
3. MANGO (MANGIFERA INDICA) - 11" DBH, 18' H, 10' S
4. SURINAM CHERRY (EUGENIA UNIFLORA)
5. MULBERRY (MORUS SP.) - 6' H
6. PEAR? (PYRUS SP.)
7. CITRUS - 3" CAL, 10' H, 8' S
8. GUAVA (PSIDIUM GUAJAVA) - 3" CAL, 10' H, 8' S
9. FORMOSAN KOA (ACACIA CONFUSA) - 40' H
10. IRONWOOD (CASUARINA EQUISETIFOLIA)
11. NORFOLK PINE (ARAUCARIA HETEROPHYLLA)
12. HICKORY WATTLE (ACACIA AULACOCARPA) - 40' H, 40' S
13. WEDELIA (SPHAGNETICOLA TRILOBATA)

40' 0 40'

SCALE: 1" = 40'
AT FULL SIZE 22"x34"

TRUE NORTH
SCALE: 1 in. = 40 Ft.



KEY MAP – N.T.S.

BL

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

WAIAWA CORRECTIONAL FACILITY
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

Landscape Survey

Ki Concepts, LLC		JOB NO.	DRAWING NO.
DESIGNED BY: KS	CHECKED BY: __	12-10-0783	L110
DRAWN BY: LK	APPROVED BY: __	DATE	SHEET 11
SCALE: AS SHOWN		AUG. 2019	OF 28 SHTS

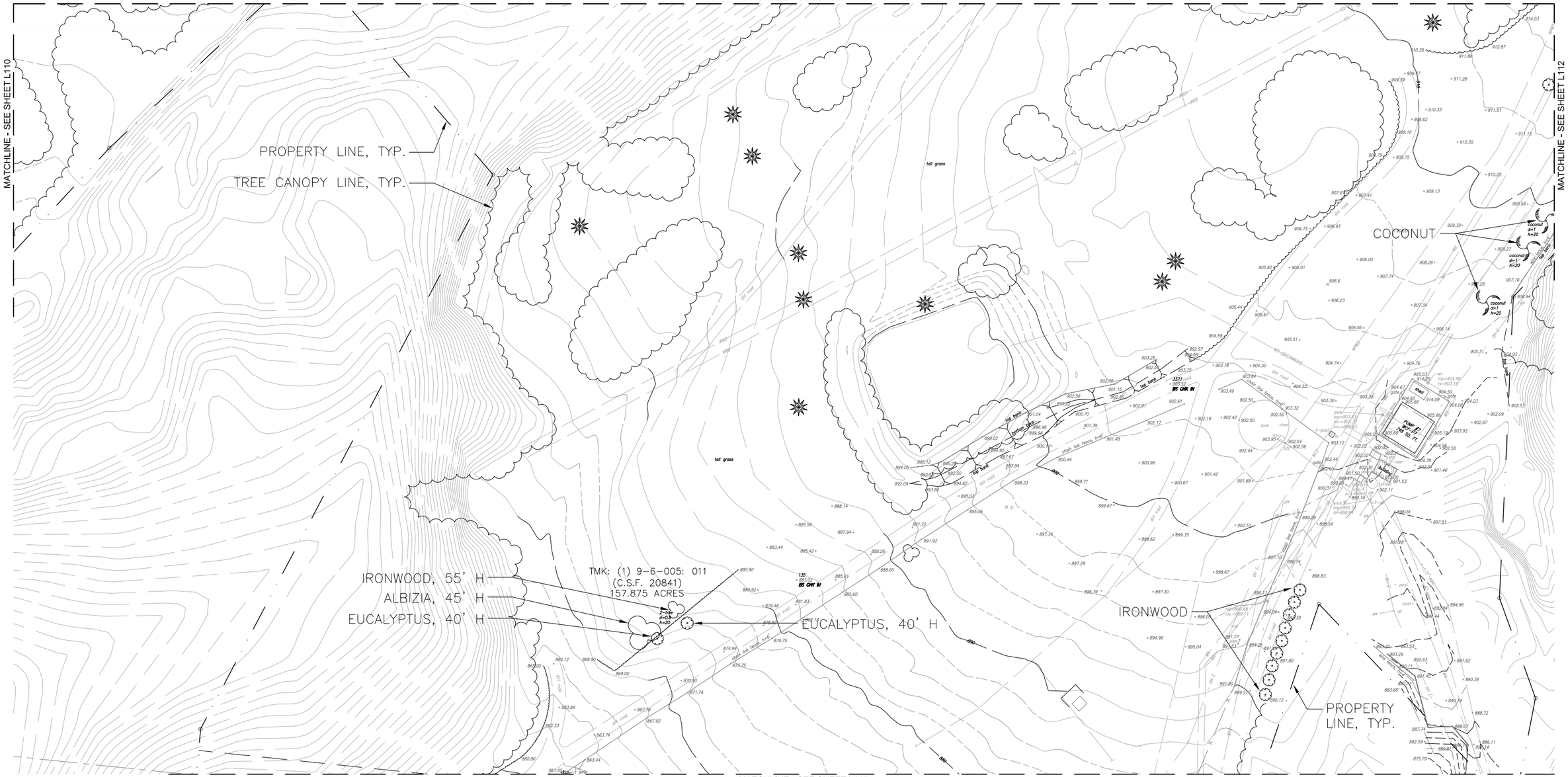
FILE_____ DRAWER_____ FOLDER_____

FINAL

MATCHLINE - SEE SHEET L107

MATCHLINE - SEE SHEET L110

MATCHLINE - SEE SHEET L112



MATCHLINE - SEE SHEET L115

LANDSCAPE SURVEY

SCALE: 1" = 40'

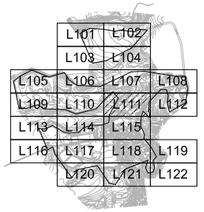
PREDOMINANT TREE/PLANT SPECIES:

1. ALBIZIA (FALCATARIA MOLUCCANA) - 45' H
2. EUCALYPTUS - 60' H
3. GUAVA (PSIDIUM GUAJAVA)
4. IRONWOOD (CASUARINA EQUISETIFOLIA) - 40' H
5. SILK OAK (GREVILLEA ROBUSTA) - 25' H
6. SATIN LEAF (CHRYSOPHYLLUM OLIVIFORME) - 25' H
7. MILO (THESPESIA POPULNEA) - 8' H
8. STRAWBERRY GUAVA (PSIDIUM CATTLEYANUM) - 20' H
9. COCONUT (COCOS NUCIFERA) - 5' - 22' BTH
10. UHALOA (WALTHERIA INDICA)

40' 0 40'

SCALE: 1" = 40'
AT FULL SIZE 22"x34"

TRUE NORTH
SCALE: 1 in. = 40 Ft.



KEY MAP – N.T.S.

BL

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

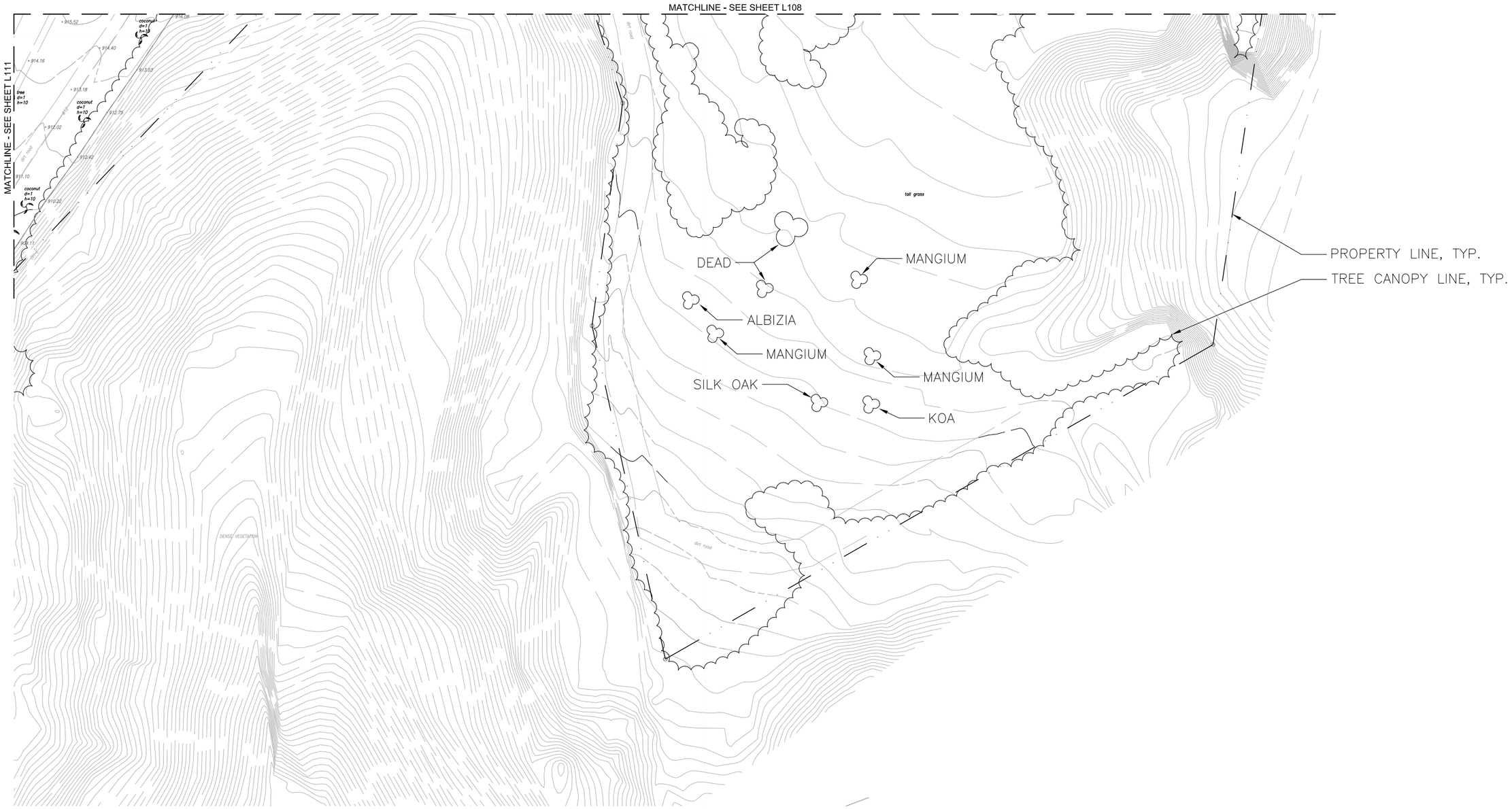
WAIAWA CORRECTIONAL FACILITY
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

Landscape Survey

Ki Concepts, LLC		JOB NO.	DRAWING NO.
DESIGNED BY: KS	CHECKED BY: —	12-10-0783	L111
DRAWN BY: LK	APPROVED BY: —	DATE	SHEET 12
SCALE: AS SHOWN		AUG. 2019	OF 28 SHTS

FILE_____ DRAWER_____ FOLDER_____

FINAL



LANDSCAPE SURVEY

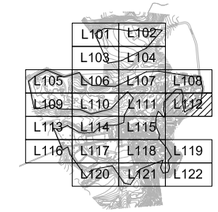
SCALE: 1" = 40'

PREDOMINANT TREE/PLANT SPECIES:

1. ALBIZIA (FALCATARIA MOLUCCANA) - 7.5" DBH, 20' H, 18' S
2. EUCALYPTUS - 9" DBH, 20' H, 20' S
3. IRONWOOD (CASUARINA EQUISETIFOLIA) -
4. KOA (ACACIA KOA) - 19" DBH, 30' H, 20' S
5. KOAIA (ACACIA KOAIA) - 16" DBH, 20' H, 30' S
6. MANGIUM (ACACIA MANGIUM) - 11" DBH, 30' H, 30' S
7. SILK OAK (GREVILLEA ROBUSTA) - 9" DBH, 25' H, 20' S
8. STRAWBERRY GUAVA (PSIDIUM CATTLEYANUM)
9. CLIDEMIA (CLIDEMIA HIRTA)
10. JAVA PLUM (SYZYGIUM CUMINI)

40' 0 40'

SCALE: 1" = 40'
AT FULL SIZE 22"x34"



KEY MAP – N.T.S.

TRUE NORTH
SCALE: 1 in. = 40 Ft.

BL

REVISION NO.	SYM.	DESCRIPTION	SHT. ___ OF ___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

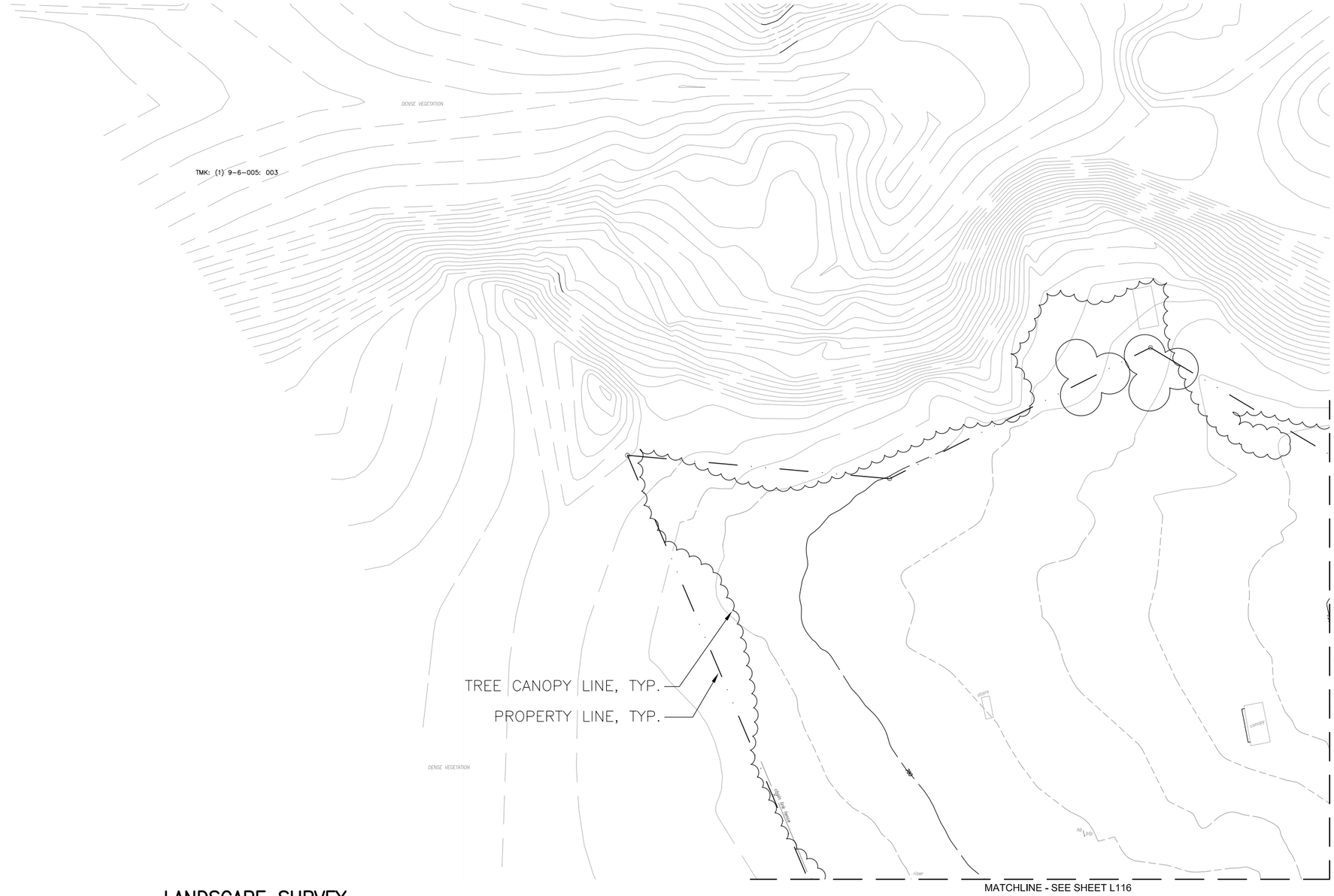
WAIAWA CORRECTIONAL FACILITY
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

Landscape Survey

Ki Concepts, LLC		JOB NO.	DRAWING NO.
DESIGNED BY: KS	CHECKED BY: ___	12-10-0783	L112
DRAWN BY: LK	APPROVED BY: ___	DATE	SHEET 13
SCALE: AS SHOWN		AUG. 2019	OF 28 SHTS

FILE_____ DRAWER_____ FOLDER_____

FINAL



LANDSCAPE SURVEY

SCALE: 1" = 40'

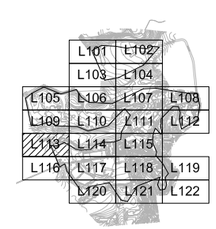
PREDOMINANT TREE/PLANT SPECIES:

1. GUINEA GRASS (PANICUM MAXIMUM)
2. VARIOUS MOWED TURF GRASSES

40' 0 40'

SCALE: 1" = 40'
AT FULL SIZE 22"x34"

TRUE NORTH
SCALE: 1 in. = 40 Ft.



KEY MAP – N.T.S.

BL

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

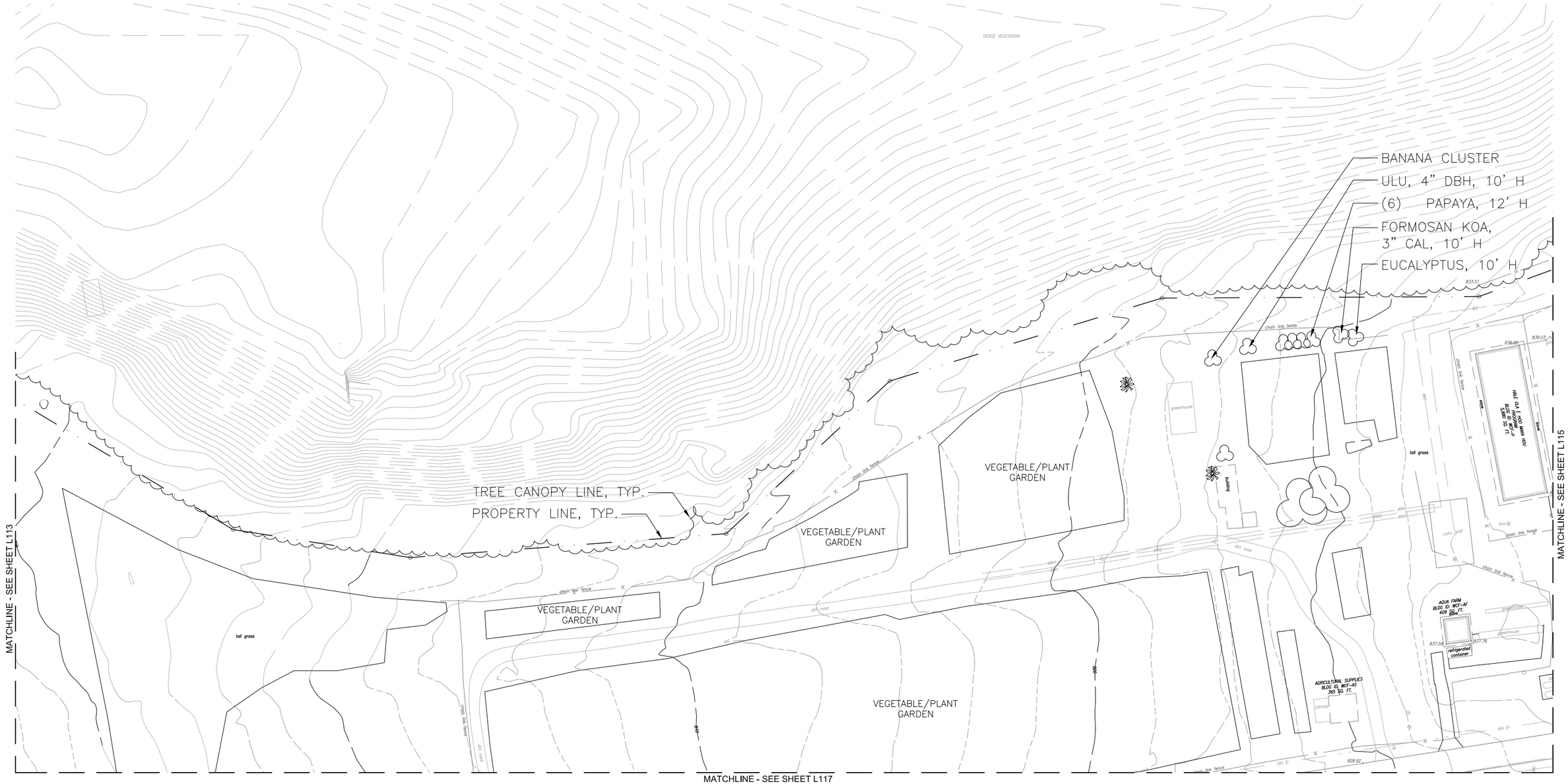
WAIAWA CORRECTIONAL FACILITY
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

Landscape Survey

Ki Concepts, LLC		JOB NO.	DRAWING NO.
DESIGNED BY: KS	CHECKED BY: —	12-10-0783	L113
DRAWN BY: LK	APPROVED BY: —	DATE	SHEET 14
SCALE: AS SHOWN		AUG. 2019	OF 28 SHTS

FILE_____ DRAWER_____ FOLDER_____

FINAL



LANDSCAPE SURVEY

SCALE: 1" = 40'

PREDOMINANT TREE/PLANT SPECIES:

1. GUINEA GRASS (PANICUM MAXIMUM)
2. VARIOUS MOWED TURF GRASSES
3. BANANA (MUSA SP.)
4. ULU (ARCTOCARPUS ALTILIS) - 4" DBH, 10' H
5. PAPAYA (CARICA PAPAYA) - 12' H
6. FORMOSAN KOA (ACACIA CONFUSA) - 3" CAL, 10' H
7. EUCALYPTUS, 10' H

40' 0 40'

SCALE: 1" = 40'
AT FULL SIZE 22"x34"

TRUE NORTH
SCALE: 1 in. = 40 FT.

	L101	L102	
	L103	L104	
L105	L106	L107	L108
L109	L110	L111	L112
L113	L114	L115	
L116	L117	L118	L119
	L120	L121	L122

KEY MAP – N.T.S.

BL

REVISION NO.	SYM.	DESCRIPTION	SHT. ___ OF ___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

WAIAWA CORRECTIONAL FACILITY
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

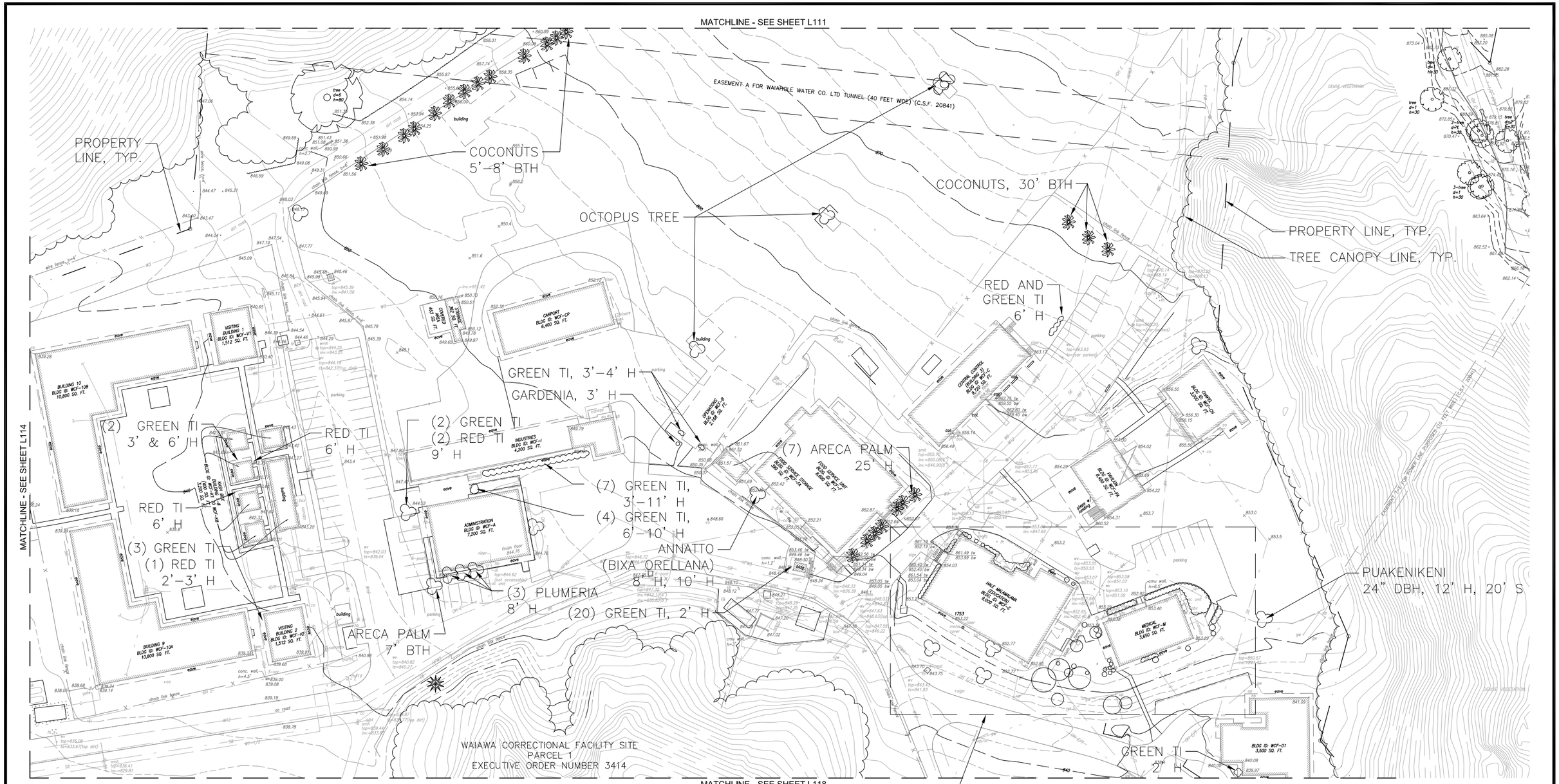
Landscape Survey

Ki Concepts, LLC

DESIGNED BY: KS	CHECKED BY:	JOB NO. 12-10-0783	DRAWING NO. L114
DRAWN BY: LK	APPROVED BY:	DATE AUG. 2019	SHEET 15 OF 28 SHTS
SCALE: AS SHOWN			

FILE_____ DRAWER_____ FOLDER_____

FINAL



LANDSCAPE SURVEY

SCALE: 1" = 40'

PREDOMINANT TREE/PLANT SPECIES:

1. GUINEA GRASS (PANICUM MAXIMUM)
2. VARIOUS MOWED TURF GRASSES
3. EUCALYPTUS (EUCALYPTUS SP.), 60' H
4. PUAKENIKENI (FAGRAEA BERTEROANA) - 6' H
5. COCONUT (COCOS NUCIFERA)
6. OCTOPUS TREE (SCHEFFLERA ACTINOPHYLLA)
7. GREEN AND RED TI LEAF (CORDYLINE FRUTICOSA)
8. ARECA PALMS (DYPSIS LUTESCENS)

40' 0 40'

SCALE: 1" = 40'
AT FULL SIZE 22"x34"

TRUE NORTH
SCALE: 1 in. = 40 FT.

L101	L102		
	L103	L104	
L105	L106	L107	L108
L109	L110	L111	L112
L113	L114	L115	
L116	L117	L118	L119
	L120	L121	L122

KEY MAP – N.T.S.

BL

REVISION NO.	SYM.	DESCRIPTION	SHT. ___ OF ___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

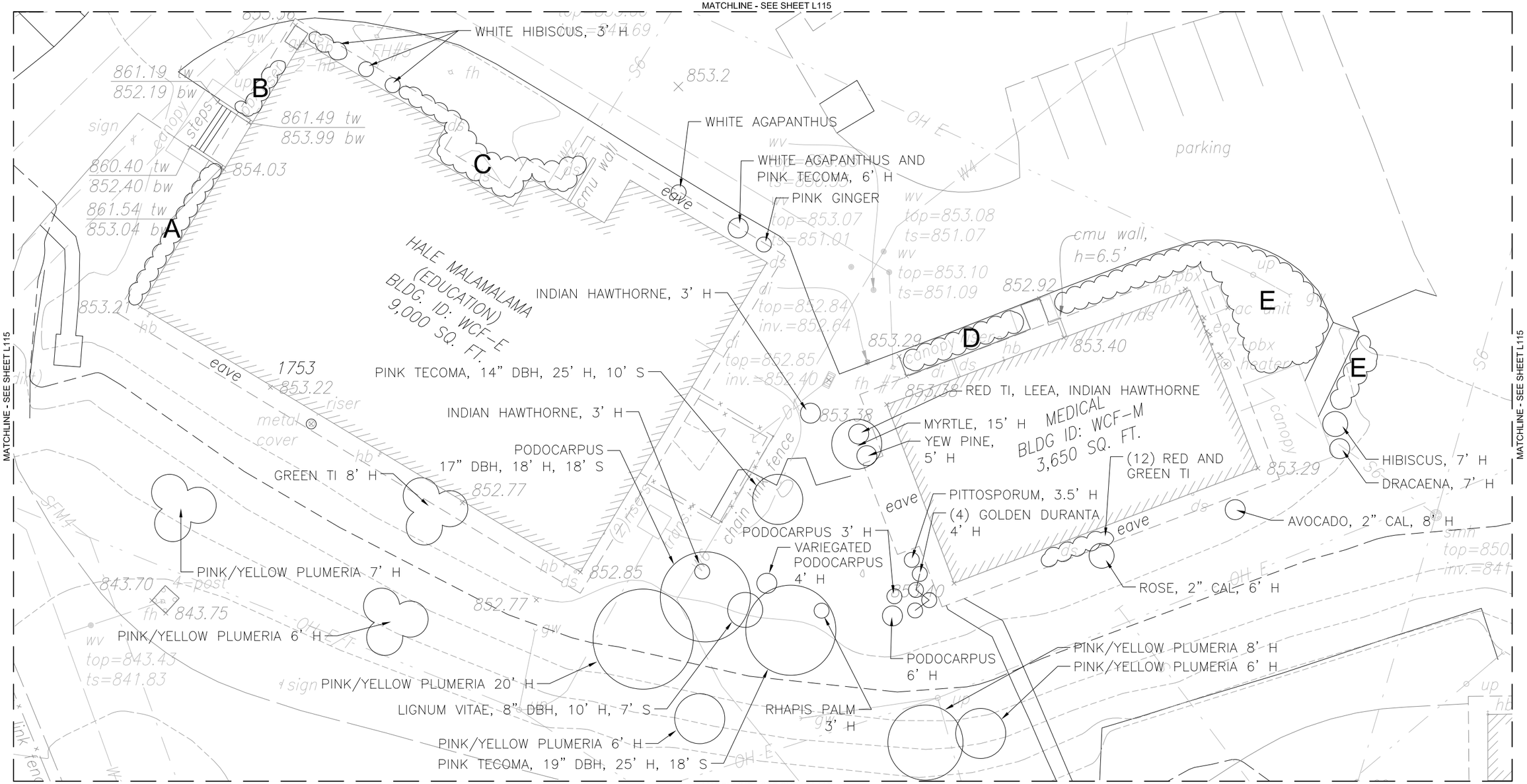
WAIAWA CORRECTIONAL FACILITY
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

Landscape Survey

Ki Concepts, LLC		JOB NO.	DRAWING NO.
DESIGNED BY: KS	CHECKED BY: ___	12-10-0783	L115
DRAWN BY: LK	APPROVED BY: ___	DATE	SHEET 16
SCALE: AS SHOWN		AUG. 2019	OF 28 SHTS

FILE_____ DRAWER_____ FOLDER_____

FINAL



LANDSCAPE SURVEY ENLARGEMENT

SCALE: 1" = 10'

A PREDOMINANT TREE/PLANT SPECIES:
1. CROTON (CODIAEUM VARIEGATUM)
2. (15) GREEN TI LEAF (CORDYLINE FRUTICOSA)
3. DRYLAND TARO (COLOCASIA ESCULENTA)

B PREDOMINANT TREE/PLANT SPECIES:
1. RED HIBISCUS (HIBISCUS ROSA-SINENSIS)
2. (15) GREEN TI LEAF (CORDYLINE FRUTICOSA)
3. DRYLAND TARO (COLOCASIA ESCULENTA)

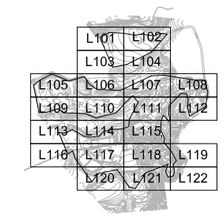
C PREDOMINANT TREE/PLANT SPECIES:
1. GINGER (ALPINIA SP.)
2. RED AND GREEN TI LEAF (CORDYLINE FRUTICOSA)
3. FERN (CYCLOSORUS SP.)

D PREDOMINANT TREE/PLANT SPECIES:
1. GREEN AND RED TI LEAF (CORDYLINE FRUTICOSA)
2. GINGER (ALPINIA SP.)
3. SONG OF INDIA (DRACAENA REFLEXA)
4. FERN (CYCLOSORUS SP.)
5. PLECTRANTHUS? (PLECTRANTHUS SP.)

E PREDOMINANT TREE/PLANT SPECIES:
1. FALSE HEATHER (CUPHEA HYSSOPIFOLIA)
2. GREEN AND RED TI LEAF (CORDYLINE FRUTICOSA)
3. DRYLAND TARO (COLOCASIA ESCULENTA)
4. RED GINGER (ALPINIA PURPURATA)
5. SONG OF INDIA (DRACAENA REFLEXA)
6. LAUAE (PHYMATOSORUS GROSSUS)
7. ASPARAGUS FERN (ASPARAGUS AETHIOPICUS)
8. EUCALYPTUS
9. GUAVA (PSIDIUM GUAJAVA)
10. HIBISCUS (HIBISCUS SP.)
11. SPIDER LILY (CRINUM ASIATICUM)
12. DRACAENA (DRACAENA MARGINATA)
13. WHITE AGAPANTHUS (AGAPANTHUS SP.)
14. FERN (CYCLOSORUS SP.)

10' 0 10'
SCALE: 1" = 10'
AT FULL SIZE 22"x34"

TRUE NORTH
SCALE: 1 in. = 10 ft.



KEY MAP – N.T.S.

BL

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

WAIAWA CORRECTIONAL FACILITY
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

Landscape Survey

Ki Concepts, LLC		JOB NO.	DRAWING NO.
DESIGNED BY: KS	CHECKED BY: —	12-10-0783	L115A
DRAWN BY: LK	APPROVED BY: —	DATE	SHEET 17
SCALE: AS SHOWN		AUG. 2019	OF 28 SHTS

FILE_____ DRAWER_____ FOLDER_____

FINAL

LANDSCAPE SURVEY

SCALE: 1" = 40'

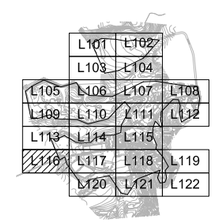
PREDOMINANT TREE/PLANT SPECIES:

1. GUINEA GRASS (PANICUM MAXIMUM)
2. VARIOUS MOWED TURF GRASSES

40' 0 40'

SCALE: 1" = 40'
AT FULL SIZE 22"x34"

TRUE NORTH
SCALE: 1 in. = 40 Ft.



KEY MAP – N.T.S.

BL

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

WAIAWA CORRECTIONAL FACILITY
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

Landscape Survey

Ki Concepts, LLC		JOB NO.	DRAWING NO.
DESIGNED BY: KS	CHECKED BY: —	12-10-0783	L116
DRAWN BY: LK	APPROVED BY: —	DATE	SHEET 18
SCALE: AS SHOWN		AUG. 2019	OF 28 SHTS

FILE_____ DRAWER_____ FOLDER_____

FINAL

LANDSCAPE SURVEY

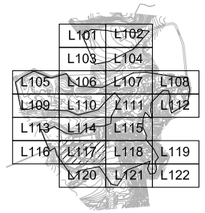
SCALE: 1" = 40'

PREDOMINANT TREE/PLANT SPECIES:

1. GUINEA GRASS (PANICUM MAXIMUM)
2. VARIOUS MOWED TURF GRASSES
3. JAVA PLUM (SYZYGIUM CUMINI) - 36" DBH, 40' H, 45' S
4. NORFOLK PINE (ARAUCARIA HETEROPHYLLA) - 14" DBH, 60' H, 20' S
5. FORMOSAN KOA (ACACIA CONFUSA) - 30' H
6. HAOLE KOA (LEUCAENA LEUCOCEPHALA)
7. COCONUT (COCOS NUCIFERA)
8. ALBIZIA (FALCATARIA MOLUCCANA) - 60' H

40' 0 40'

SCALE: 1" = 40'
AT FULL SIZE 22"x34"



KEY MAP – N.T.S.

TRUE NORTH
SCALE: 1 in. = 40 Ft.

BL

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

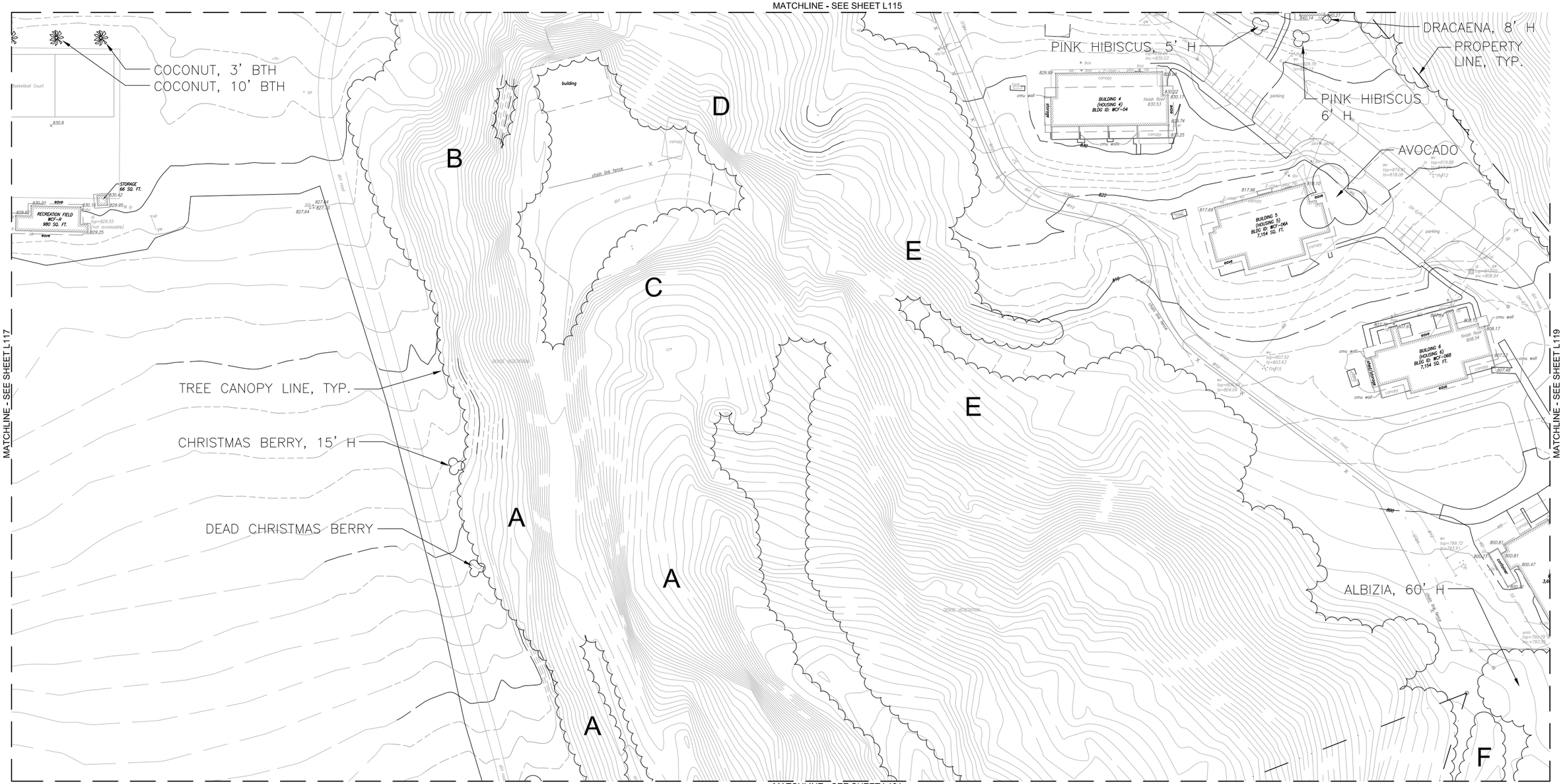
WAIAWA CORRECTIONAL FACILITY
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

Landscape Survey

Ki Concepts, LLC		JOB NO.	DRAWING NO.
DESIGNED BY: KS	CHECKED BY: —	12-10-0783	L117
DRAWN BY: LK	APPROVED BY: —	DATE	SHEET 19
SCALE: AS SHOWN		AUG. 2019	OF 28 SHTS

FILE_____ DRAWER_____ FOLDER_____

FINAL



LANDSCAPE SURVEY

SCALE: 1" = 40'

PREDOMINANT TREE/PLANT SPECIES:
1. GUINEA GRASS (PANICUM MAXIMUM)
2. VARIOUS MOWED TURF GRASSES

A PREDOMINANT TREE/PLANT SPECIES:
1. CHRISTMAS BERRY (SCHINUS TEREBINTHIFOLIUS)
2. HAOLE KOA (LEUCAENA LEUCOCEPHALA)
3. STRAWBERRY GUAVA (PSIDIUM CATTLEYANUM)
4. SILK OAK (GREVILLEA ROBUSTA)
5. MELOCHIA (MELOCHIA UMBELLATA)
6. EUCALYPTUS
7. JAVA PLUM (SYZYGIUM CUMINI)
8. OCTOPUS TREE (SCHEFFLERA ACTINOPHYLLA)

B PREDOMINANT TREE/PLANT SPECIES:
1. CHRISTMAS BERRY (SCHINUS TEREBINTHIFOLIUS)
2. IRONWOOD (CASURINA EQUISETIFOLIA)
3. HAOLE KOA (LEUCAENA LEUCOCEPHALA)
4. JAVA PLUM (SYZYGIUM CUMINI)
5. STRAWBERRY GUAVA (PSIDIUM CATTLEYANUM)

C PREDOMINANT TREE/PLANT SPECIES:
1. FORMOSAN KOA (ACACIA CONFUSA)
2. HAOLE KOA (LEUCAENA LEUCOCEPHALA)
3. EGGPLANT (SOLANUM SP.)
4. CASTOR BEAN (RICINUS COMMUNIS)
5. GUINEA GRASS (PANICUM MAXIMUM)

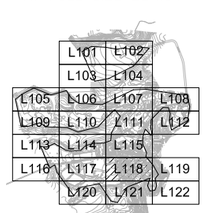
D PREDOMINANT TREE/PLANT SPECIES:
1. CHRISTMAS BERRY (SCHINUS TEREBINTHIFOLIUS)
2. ALBIZIA (FALCATARIA MOLUCCANA)

D (CONTINUED):
3. HAOLE KOA (LEUCAENA LEUCOCEPHALA)
4. EUCALYPTUS
5. OCTOPUS TREE (SCHEFFLERA ACTINOPHYLLA)
6. CHRISTMAS BERRY (SCHINUS TEREBINTHIFOLIUS)
7. IRONWOOD (CASURINA EQUISETIFOLIA)
8. ULUHE FERN (DICRANOPTERIS LINEARIS)

E PREDOMINANT TREE/PLANT SPECIES:
1. SATIN LEAF (CHRYSOPHYLLUM OLIVIFORME)
2. SURINAM CHERRY (EUGENIA UNIFLORA)
3. HAOLE KOA (LEUCAENA LEUCOCEPHALA)
4. STRAWBERRY GUAVA (PSIDIUM CATTLEYANUM)
5. FORMOSAN KOA (ACACIA CONFUSA)
6. OCTOPUS TREE (SCHEFFLERA ACTINOPHYLLA)
7. IRONWOOD (CASURINA EQUISETIFOLIA)
8. GUINEA GRASS (PANICUM MAXIMUM)

F PREDOMINANT TREE/PLANT SPECIES:
1. CHRISTMAS BERRY (SCHINUS TEREBINTHIFOLIUS)
2. OCTOPUS TREE (SCHEFFLERA ACTINOPHYLLA)
3. HAOLE KOA (LEUCAENA LEUCOCEPHALA)

40' 0 40'
SCALE: 1" = 40'
AT FULL SIZE 22"x34"



KEY MAP – N.T.S.

TRUE NORTH
SCALE: 1 in. = 40 FT.

BL

REVISION NO.	SYM.	DESCRIPTION	SHT. ___ OF ___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

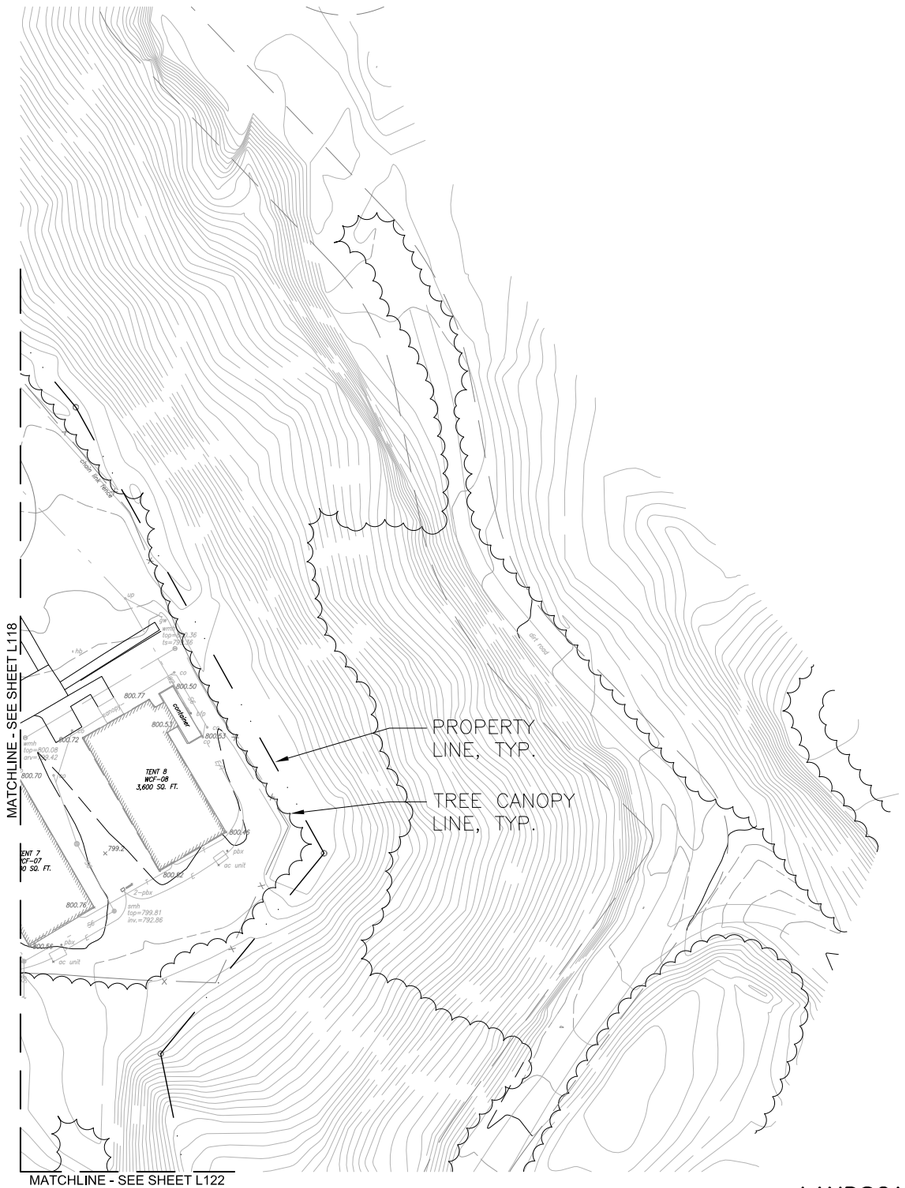
WAIAWA CORRECTIONAL FACILITY
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

Landscape Survey

Ki Concepts, LLC		JOB NO.	DRAWING NO.
DESIGNED BY: KS	CHECKED BY: ___	12-10-0783	L118
DRAWN BY: LK	APPROVED BY: ___	DATE	SHEET 20
SCALE: AS SHOWN		AUG. 2019	OF 28 SHTS

FILE_____ DRAWER_____ FOLDER_____

FINAL



LANDSCAPE SURVEY

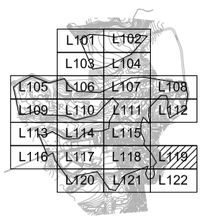
SCALE: 1" = 40'

PREDOMINANT TREE/PLANT SPECIES:

1. GUINEA GRASS (PANICUM MAXIMUM)
2. VARIOUS MOWED TURF GRASSES
3. HAOLE KOA (LEUCAENA LEUCOCEPHALA)
4. ALBIZIA (FALCATARIA MOLUCCANA) - 70' H
5. IRONWOOD (CASUARINA EQUISETIFOLIA) - 35' H
6. STRAWBERRY GUAVA (PSIDIUM CATTLEYANUM)

40' 0 40'

SCALE: 1" = 40'
AT FULL SIZE 22"x34"



KEY MAP – N.T.S.

TRUE NORTH
SCALE: 1 In. = 40 Ft.

BL

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

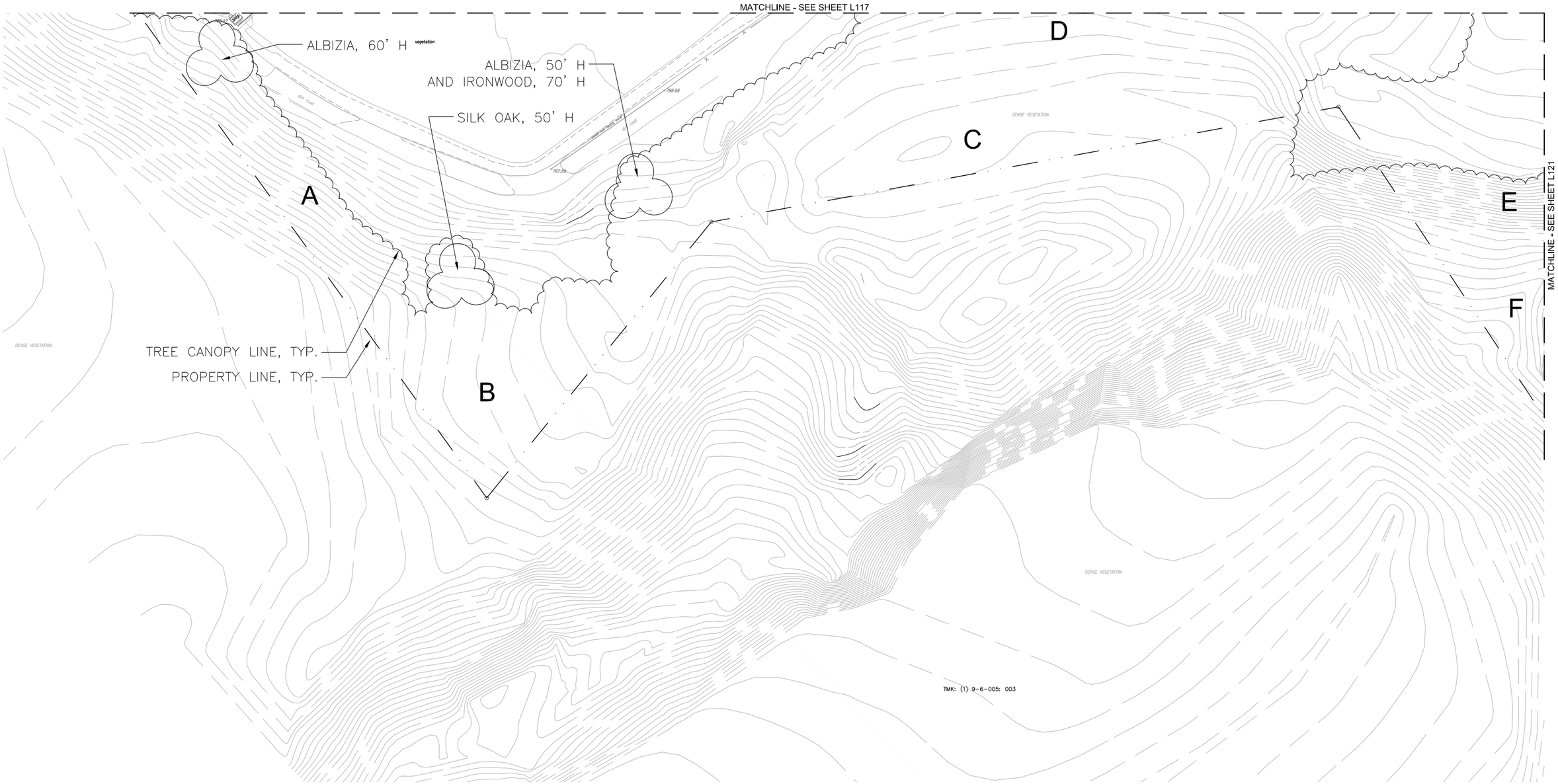
WAIAWA CORRECTIONAL FACILITY
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

Landscape Survey

Ki Concepts, LLC		JOB NO.	DRAWING NO.
DESIGNED BY: KS	CHECKED BY: __	12-10-0783	L119
DRAWN BY: LK	APPROVED BY: __	DATE	SHEET 21
SCALE: AS SHOWN		AUG. 2019	OF 28 SHTS

FILE_____ DRAWER_____ FOLDER_____

FINAL



LANDSCAPE SURVEY

SCALE: 1" = 40'

PREDOMINANT TREE/PLANT SPECIES:
1. GUINEA GRASS (PANICUM MAXIMUM)
2. VARIOUS MOWED TURF GRASSES

A PREDOMINANT TREE/PLANT SPECIES:
1. GUINEA GRASS (PANICUM MAXIMUM)
2. HAOLE KOA (LEUCAENA LEUCOCEPHALA)
3. ALBIZIA (FALCATARIA MOLUCCANA) - 60' H
4. STRAWBERRY GUAVA (PSIDIUM CATTLEYANUM) - 15' H
5. CHRISTMAS BERRY (SCHINUS TEREBINTHIFOLIUS)

B PREDOMINANT TREE/PLANT SPECIES:
1. ALBIZIA (FALCATARIA MOLUCCANA) - 45' H

C PREDOMINANT TREE/PLANT SPECIES:
1. ALBIZIA (FALCATARIA MOLUCCANA) - 60' H
2. STRAWBERRY GUAVA (PSIDIUM CATTLEYANUM) - 15' H

D PREDOMINANT TREE/PLANT SPECIES:
1. ALBIZIA (FALCATARIA MOLUCCANA) - 60' H

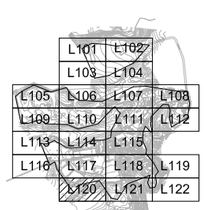
E PREDOMINANT TREE/PLANT SPECIES:
1. ALBIZIA (FALCATARIA MOLUCCANA)
2. CHRISTMAS BERRY (SCHINUS TEREBINTHIFOLIUS)

F PREDOMINANT TREE/PLANT SPECIES:
1. HAOLE KOA (LEUCAENA LEUCOCEPHALA) - 15'-20' H
2. ALBIZIA (FALCATARIA MOLUCCANA) - 50' H
3. STRAWBERRY GUAVA (PSIDIUM CATTLEYANUM) - 20' H
4. CHRISTMAS BERRY (SCHINUS TEREBINTHIFOLIUS)

40' 0 40'

SCALE: 1" = 40'
AT FULL SIZE 22"x34"

TRUE NORTH
SCALE: 1 in. = 40 FT.



KEY MAP – N.T.S.

BL

REVISION NO.	SYM.	DESCRIPTION	SHT. ___ OF ___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

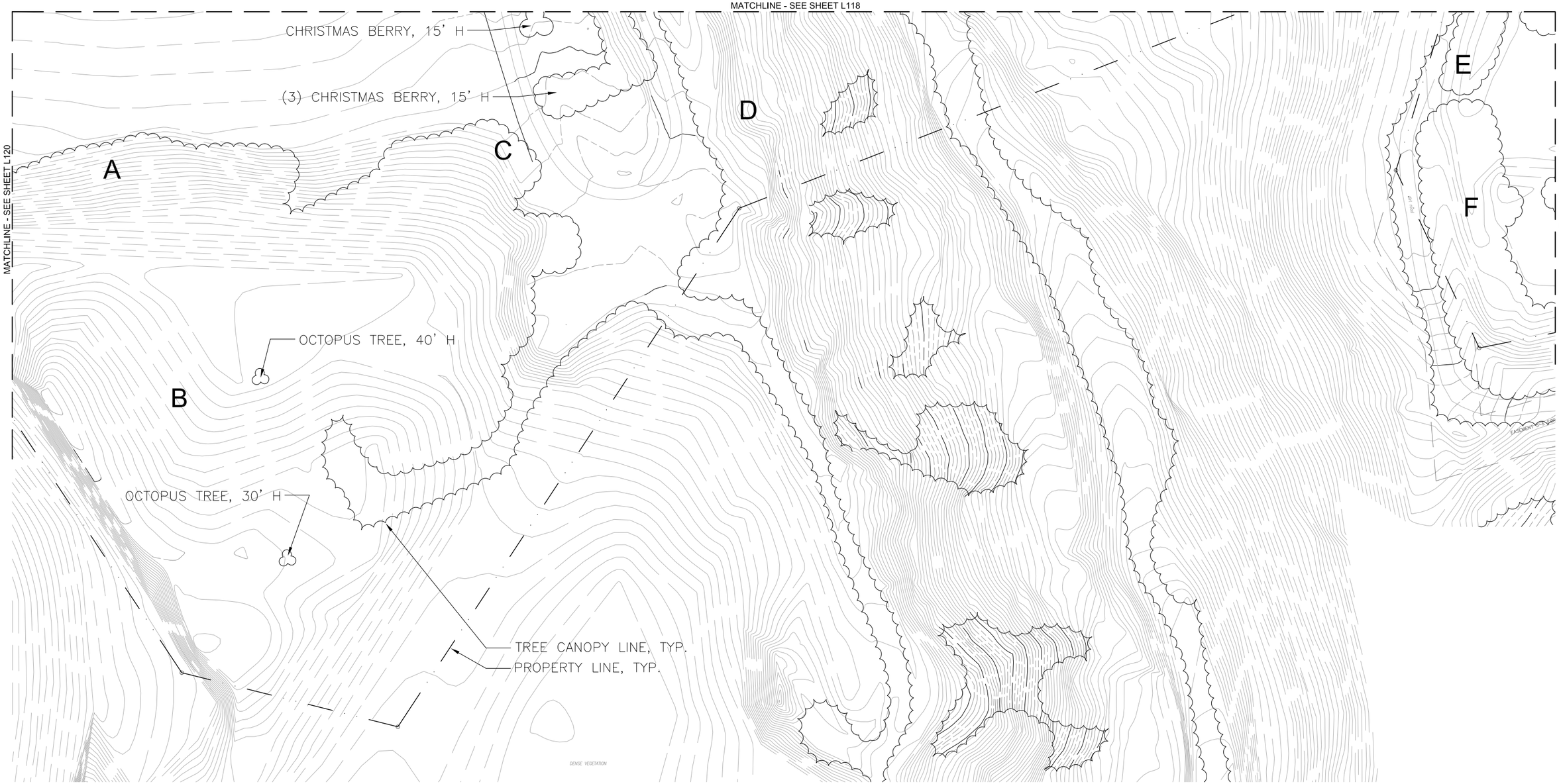
WAIAWA CORRECTIONAL FACILITY
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

Landscape Survey

Ki Concepts, LLC		JOB NO.	DRAWING NO.
DESIGNED BY: KS	CHECKED BY: __	12-10-0783	L120
DRAWN BY: LK	APPROVED BY: __	DATE	SHEET 22
SCALE: AS SHOWN		AUG. 2019	OF 28 SHTS

FILE_____ DRAWER_____ FOLDER_____

FINAL



LANDSCAPE SURVEY

SCALE: 1" = 40'

PREDOMINANT TREE/PLANT SPECIES:
1. GUINEA GRASS (PANICUM MAXIMUM)
2. VARIOUS MOWED TURF GRASSES

A PREDOMINANT TREE/PLANT SPECIES:
1. ALBIZIA (FALCATARIA MOLUCCANA)
2. CHRISTMAS BERRY (SCHINUS TEREBINTHIFOLIUS)

B PREDOMINANT TREE/PLANT SPECIES:
1. HAOLE KOA (LEUCAENA LEUCOCEPHALA) - 15'-20' H
2. ALBIZIA (FALCATARIA MOLUCCANA) - 50' H
3. STRAWBERRY GUAVA (PSIDIUM CATTLEYANUM) - 20' H
4. CHRISTMAS BERRY (SCHINUS TEREBINTHIFOLIUS)

C PREDOMINANT TREE/PLANT SPECIES:
1. CHRISTMAS BERRY (SCHINUS TEREBINTHIFOLIUS) - 18' H

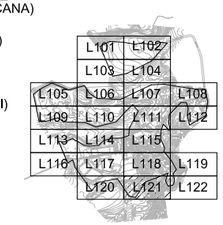
D PREDOMINANT TREE/PLANT SPECIES:
1. CHRISTMAS BERRY (SCHINUS TEREBINTHIFOLIUS)
2. AVOCADO (PERSEA AMERICANA) - 36.5" DBH, 40' H, 30' S
3. HAOLE KOA (LEUCAENA LEUCOCEPHALA)
4. STRAWBERRY GUAVA (PSIDIUM CATTLEYANUM)
5. SILK OAK (GREVILLEA ROBUSTA)
6. MELOCHIA (MELOCHIA UMBELLATA)
7. EUCALYPTUS
8. JAVA PLUM (SYZYGIUM CUMINI)
9. OCTOPUS TREE (SCHEFFLERA ACTINOPHYLLA)

E PREDOMINANT TREE/PLANT SPECIES:
1. CHRISTMAS BERRY (SCHINUS TEREBINTHIFOLIUS)
2. OCTOPUS TREE (SCHEFFLERA ACTINOPHYLLA)
3. HAOLE KOA (LEUCAENA LEUCOCEPHALA)

F PREDOMINANT TREE/PLANT SPECIES:
1. ALBIZIA (FALCATARIA MOLUCCANA)
2. OCTOPUS TREE (SCHEFFLERA ACTINOPHYLLA)
3. HAOLE KOA (LEUCAENA LEUCOCEPHALA)
4. EUCALYPTUS
5. JAVA PLUM (SYZYGIUM CUMINI)
6. STRAWBERRY GUAVA (PSIDIUM CATTLEYANUM)

40' 0 40'
SCALE: 1" = 40'
AT FULL SIZE 22"x34"

TRUE NORTH
SCALE: 1 In. = 40 Ft.



KEY MAP – N.T.S.

BL

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

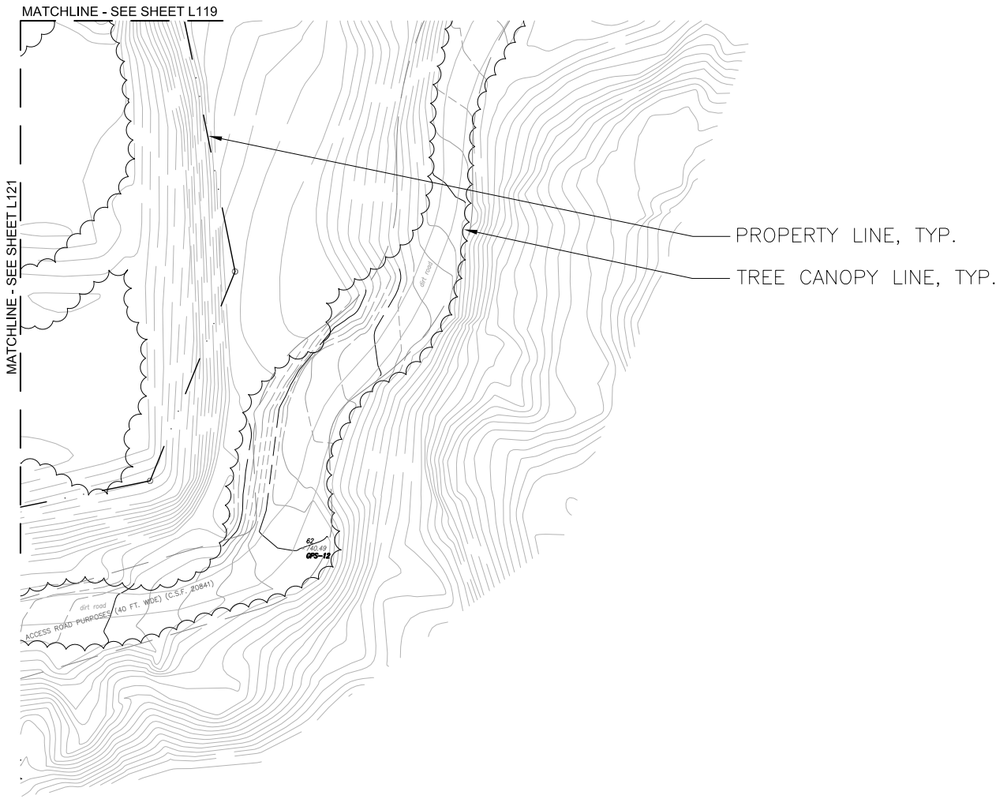
WAIAWA CORRECTIONAL FACILITY
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

Landscape Survey

Ki Concepts, LLC		JOB NO.	DRAWING NO.
DESIGNED BY: KS	CHECKED BY: —	12-10-0783	L121
DRAWN BY: LK	APPROVED BY: —	DATE	SHEET 23
SCALE: AS SHOWN		AUG. 2019	OF 28 SHTS

FILE_____ DRAWER_____ FOLDER_____

FINAL



LANDSCAPE SURVEY

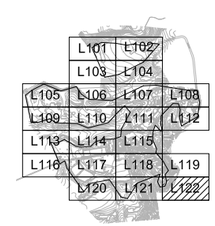
SCALE: 1" = 40'

PREDOMINANT TREE/PLANT SPECIES:

1. GUINEA GRASS (PANICUM MAXIMUM)
2. HAOLE KOA (LEUCAENA LEUCOCEPHALA)
3. KOA (ACACIA KOA)
4. MANGIUM (ACACIA MANGIUM)
5. ALBIZIA (FALCATARIA MOLUCCANA) - 60' H
6. IRONWOOD (CASUARINA EQUISETIFOLIA) - 35' H
7. STRAWBERRY GUAVA (PSIDIUM CATTLEYANUM)
8. JAVA PLUM (SYZYGIUM CUMINI)

40' 0 40'

SCALE: 1" = 40'
AT FULL SIZE 22"x34"



KEY MAP – N.T.S.

TRUE NORTH
SCALE: 1 in. = 40 Ft.

BL

REVISION NO.	SYM.	DESCRIPTION	SHT. ___ OF ___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

WAIAWA CORRECTIONAL FACILITY
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

Landscape Survey

Ki Concepts, LLC		JOB NO.	DRAWING NO.
DESIGNED BY: KS	CHECKED BY: __	12-10-0783	L122
DRAWN BY: LK	APPROVED BY: __	DATE	SHEET 24
SCALE: AS SHOWN		AUG. 2019	OF 28 SHTS

FILE_____ DRAWER_____ FOLDER_____

FINAL

L101 & L103

L102 & L104

L105

L106

L107

L108

L109

L110

EXISTING LANDSCAPE PHOTOS

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

WAIAWA CORRECTIONAL FACILITY
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

Existing Landscape Photos

Ki Concepts, LLC		JOB NO.	DRAWING NO.
DESIGNED BY: KS	CHECKED BY: __	12-10-0783	L123
DRAWN BY: LK	APPROVED BY: __	DATE	SHEET 25
SCALE: AS SHOWN		AUG. 2019	OF 28 SHTS

BL

FILE_____ DRAWER_____ FOLDER_____

FINAL

L111

L112

L113 & 116

L114

L115

L115 (continued)

L115 (continued)

EXISTING LANDSCAPE PHOTOS

BL

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

WAIAWA CORRECTIONAL FACILITY
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

Existing Landscape Photos

Ki Concepts, LLC		JOB NO.	DRAWING NO.
DESIGNED BY: KS	CHECKED BY: __	12-10-0783	L124
DRAWN BY: LK	APPROVED BY: __	DATE	SHEET 26
SCALE: AS SHOWN		AUG. 2019	OF 28 SHTS

FILE_____ DRAWER_____ FOLDER_____

FINAL

L117

L118

L118 (continued)

L119

L120

L121

L121 (continued)

L122

EXISTING LANDSCAPE PHOTOS

BL

REVISION NO.	SYM.	DESCRIPTION	SHT.___ OF___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

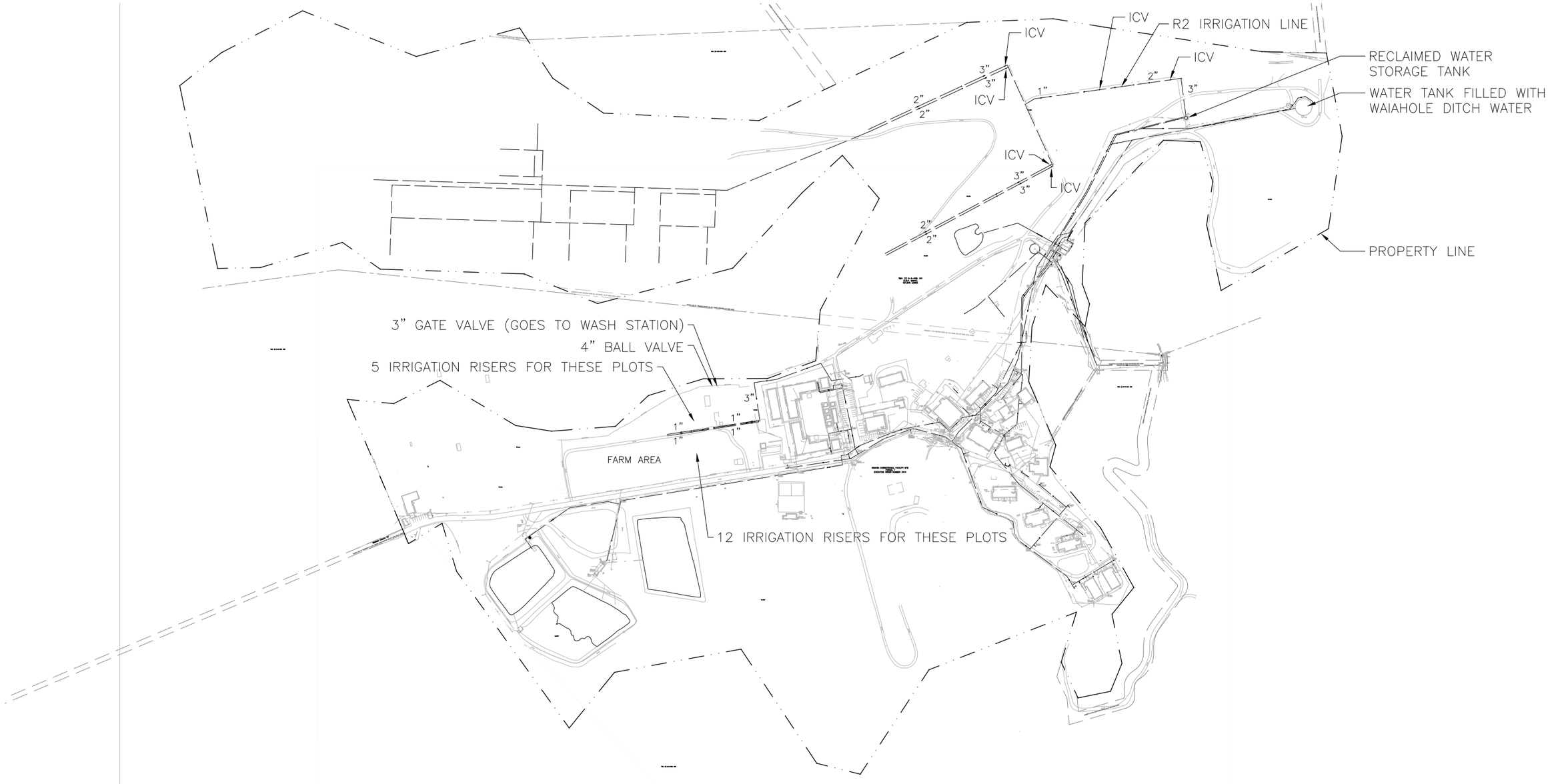
WAIAWA CORRECTIONAL FACILITY
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

Existing Landscape Photos

Ki Concepts, LLC		JOB NO.	DRAWING NO.
DESIGNED BY: KS	CHECKED BY: __	12-10-0783	L125
DRAWN BY: LK	APPROVED BY: __	DATE	SHEET 27
SCALE: AS SHOWN		AUG, 2019	OF 28 SHTS

FILE_____ DRAWER_____ FOLDER_____

FINAL



OVERALL IRRIGATION SYSTEM

SCALE: 1" = 200'

NOTES:

1. IRRIGATION SYSTEM INFORMATION BASED ON DISCUSSION WITH MILTON SATO, WAIAWA PRISON FARM DIRECTOR ON MAY 8, 2019.
2. IT IS BELIEVED THAT ONLY THE FARM IS ACTIVELY IRRIGATED. THE OTHER AREAS ARE MAINTAINED BY OTHER ENTITIES AND NOT SURE IF THEIR IRRIGATION SYSTEMS ARE BEING RUN OR STILL INTACT.
3. FARM AREA HAS A 4" MAIN LINE FROM WATER TANK THAT IS FILLED WITH RAW WATER FROM WAIAHOLE DITCH. THEY ARE IN THE PROCESS OF SWITCHING TO POTABLE WATER. THEY HAVE 1-1/4" LINES THAT FEED 1/2" AND 1" NETAFIM DRIP LINES.
4. ADDITIONAL INFORMATION FROM THE FOLLOWING DRAWING SETS:
   - 4.1. WAIAWA CORRECTIONAL FACILITY INTERIM INFRASTRUCTURE IMPROVEMENTS, DECEMBER 1996. DAGS JOB NO. 12-27-5510.
   - 4.2. WAIAWA CORRECTIONAL FACILITY WASTEWATER SYSTEM IMPROVEMENTS, NOVEMBER 2006 (APPROVED DECEMBER 2012). DAGS JOB NO. 12-27-5563.
   - 4.3. WAIAWA CORRECTIONAL FACILITY NEW DOMESTIC WATER SYSTEM AND RELATED IMPROVEMENS, APRIL 2018. DAGS JOB NO. 12-27-5657.
5. NORTHERN PROPERTY AREA IS NOT SHOWN AS THERE IS NO IRRIGATION LINES.

TRUE NORTH
SCALE: 1 in. = 200 Ft.

200' 0 200'
SCALE: 1" = 200'
AT FULL SIZE 22"X34" BL

REVISION NO.	SYM.	DESCRIPTION	SHT. ___ OF ___	DATE	APPROVED:

DEPT. OF ACCOUNTING & GENERAL SERVICES
PLANNING DIVISION
STATE OF HAWAII

WAIAWA CORRECTIONAL FACILITY
PLAN REVIEW USE & SPECIAL USE PERMITS
WAIAWA, OAHU, HAWAII

Overall Irrigation System

Ki Concepts, LLC		JOB NO.	DRAWING NO.
DESIGNED BY: KS	CHECKED BY: __	12-10-0783	L200
DRAWN BY: LK	APPROVED BY: __	DATE	SHEET 28
SCALE: AS SHOWN		AUG. 2019	OF 28 SHTS

FILE_____ DRAWER_____ FOLDER_____

FINAL

APPENDIX H - Biological Survey Report

H. T. HARVEY & ASSOCIATES
Ecological Consultants
50 years of field notes, exploration, and excellence

Waiawa Correctional Facility Project
Biological Survey Report

Project # 4456-01

Prepared for:

Carah Kadota
SSFM International
501 Sumner Street, Suite 620
Honolulu, HI 96817

Prepared by:

H. T. Harvey & Associates

December 22, 2020

91-1020 Kai Loli Street • Ewa Beach, HI 96706 • 808.441.2080 • www.harveyecology.com

Table of Contents

Section 1.0 Project Description and Background 1
Section 2.0 Methods 3
Section 3.0 Results 5
3.1 Flora 5
3.2 Fauna 13
Section 4.0 Conclusions and Discussion 16
4.1 Flora 16
4.2 Fauna 17
Section 5.0 References 20

Tables

Table 1. Plant Species Observed at the Waiawa Correctional Facility 5
Table 2. Bird Species Observed at the Waiawa Correctional Faciltiy 13

Figures

Figure 1. Project Vicinity Map 2
Figure 2. Vegetation Communities at Waiawa Correctional Facility 4
Figure 3. Acacia Dominated Forest in the Northern Part of the Project Site 8
Figure 4. Cook Pine (*Araucaria columnaris*) Plantation in the Northwestern Part of the Project Site 8
Figure 5. Acacia Dominated Forest in the Northeastern Part of the Project Site. 9
Figure 6. Ironwood (*Casuarina equisetifolia*) Stand along the Northeastern Border of the Project Site 9
Figure 7. Mixed Alien Forest in the Gulch in the Southern Part of the Project Site 11
Figure 8. Guinea Grass Grassland in the South and Central Part of the Project Site. 11
Figure 9. Albizia Dominated Forest along the Southern Border of the Project Site 12
Figure 10. Agriculture Farm at the Waiawa Correctional Facility 12
Figure 11. A Pond in the Southwest of the Project Site Covered with Aquatic Plant, Water Hyacinth (*Eichhornia crassipes*) 13
Figure 12. Endangered Hawaiian Waterbirds Hawaiian coot (*Fulica alai*) and Hawaiian stilt (*Himantopus mexicanus knudseni*) at a Pond at the Project Site 15

Section 1.0 Project Description and Background

The State of Hawaii Department of Public Safety (PSD) operates the Waiawa Correctional Facility (WCF, henceforth also referred to as the Project Site), located in Waiawa in central Oahu (Figure 1). The State acquired the former U. S. Army Waiawa Military Reservation and established the WCF in 1985. The WCF encompasses approximately 158 acres (Tax Map Key (1) 9-6-005: 011) and is a 334-bed minimum-security prison for sentenced male inmates. The facility provides education and training in various fields such as food service, building maintenance, operation of heavy equipment, farming, and landscaping to help inmates successfully re-enter the community from prison. PSD and the Department of Accounting and General Services (DAGS) are applying for the State Special Use Permit and City's Plan Review Use Permit, and are planning several maintenance and construction activities at the WCF, which triggered an environmental review process under Hawaii Revised Statutes Chapter 343. DAGS and SSFM International, on behalf of PSD, are in the process of conducting the environmental review. This biological study was conducted to support the environmental planning and permitting for the proposed activities at WCF. This report presents the findings of the flora and fauna studies, the objectives of which were as follows:

- Conduct a reconnaissance-level wildlife survey to identify and document wildlife species (birds and mammals).
- Conduct a reconnaissance-level botanical survey to identify and document the vegetation communities and the plant species.
- Identify and document biological issues of concern, including the presence of any taxa that are state or federally listed as threatened or endangered, candidate species for listing, and sensitive habitats.
- Identify potential impacts and conservation measures that may be considered for inclusion into the planning and permitting phase of the project if any taxa that are state or federally listed as threatened or endangered or candidate species for listing are found at the Project Site.

The WCF lands fall within the State's "Agricultural" land use district. The WCF is situated in the Ewa District of Oahu, in an isolated location on a broad ridge on the western slopes of the Koolau Range, at an elevation of about 800 ft above mean sea level. It is surrounded by undeveloped forests of the Ewa Forest Reserve. It is about 1.5 miles east of Interstate Freeway H-2 and is accessed via the Waiawa Prison Road. The nearest developed areas include Pacific Palisades residential development about 1.2 miles to the south, Mililani Memorial Park about 1.7 miles to the west, and Mililani Mauka neighborhood about 2.25 miles to the north (Figure 1). The Waiawa Stream flows to the south of the Project Site. However, there are no natural surface waters, nor are there any wetland features identified by the National Wetlands Inventory (USFWS 2020a) at the Project Site. The Project Site does not overlap with designated or proposed critical habitat for any federally endangered or threatened taxa (USFWS 2020b).

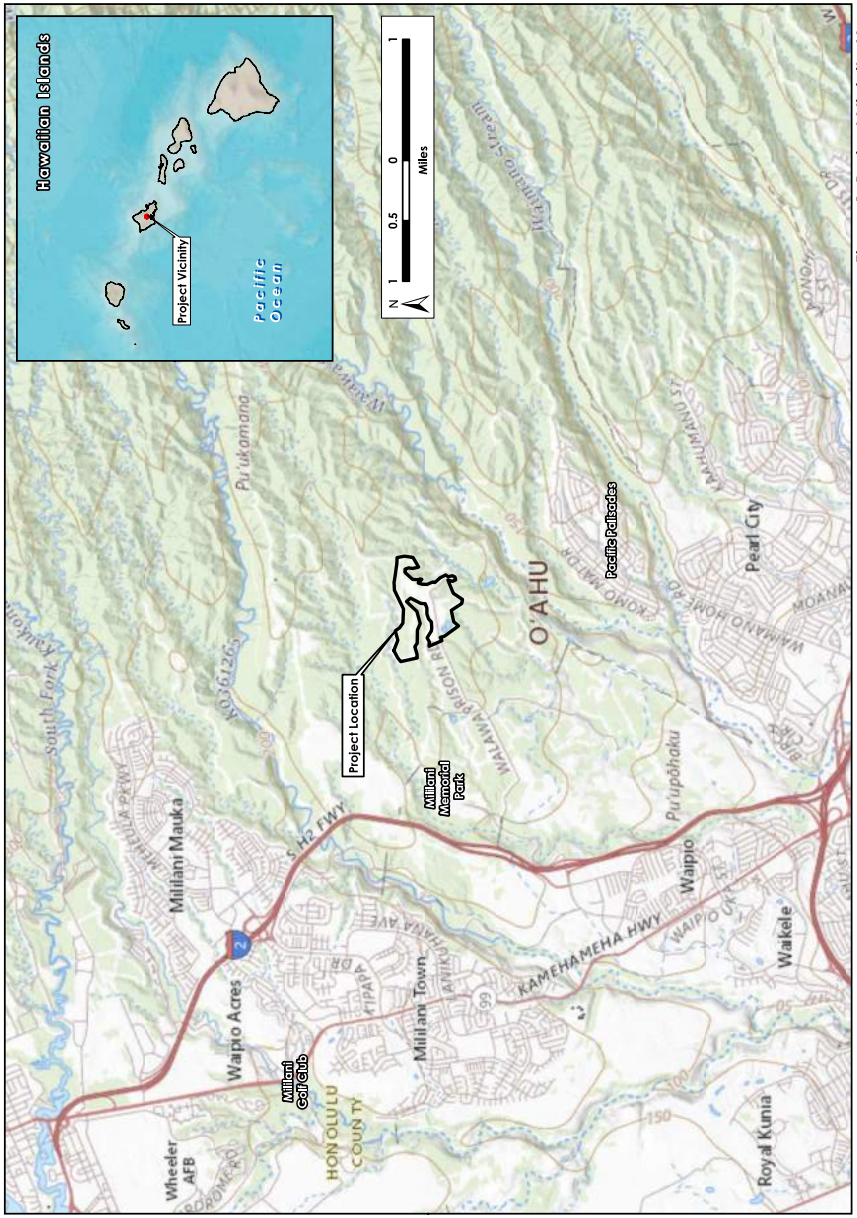


Figure 1. Project Vicinity Map
Waiawa Correctional Facility Biological Survey (4456-01)
December 2020

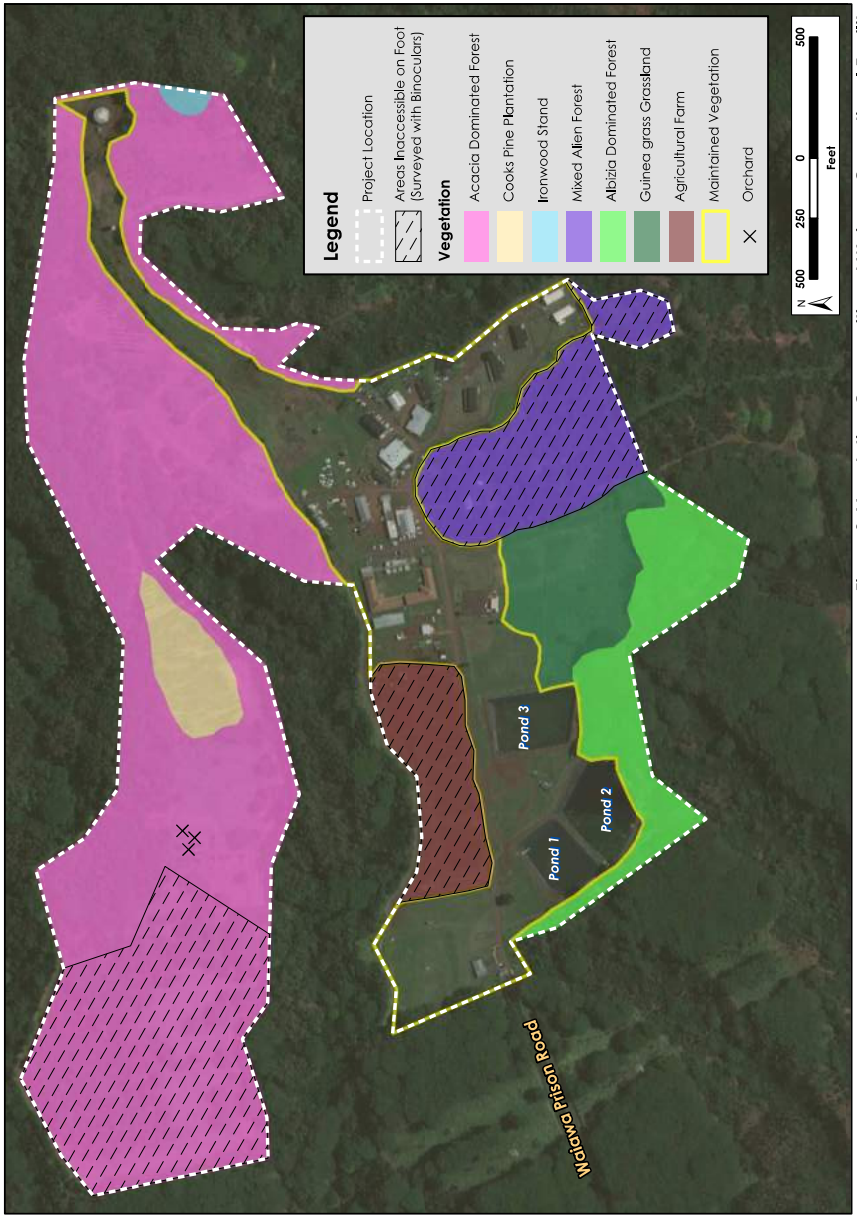
H. T. HARVEY & ASSOCIATES
Ecological Consultants

Section 2.0 Methods

A reconnaissance-level biological survey of the Project Site was conducted on August 26, 2020, from 9:00 a.m. to 4:00 p.m. Sunny to partially cloudy skies and moderate trade winds prevailed during the survey period. One botanist and one wildlife biologist (hereafter referred to as biologists) conducted the survey together. A handheld Global Positioning System (GPS) device preloaded with spatial details was used to navigate during the survey and record field observations. A security escort from the WCF accompanied the biologists throughout the survey. They used the paved and dirt roads to drive to different areas of the Project Site and then walked the accessible portions of that area and documented the vegetation types, plants, birds, and mammals. In general, rocky outcrops, shaded areas, and topographic depressions, which are more likely to support native plant species, were intensively surveyed.

Visual or auditory detection and identification of birds and mammals and identification of animal signs (e.g., scats, tracks, and nests) were used to document the presence of bird and mammal species. In addition to general observations made throughout the survey, six 10-minute point counts were conducted between 10 a.m. and 3 p.m. This effort included tallying all birds seen or heard by a single observer from a fixed point over a period of 10 minutes. Hawaii does not have native reptiles and amphibians. The only native terrestrial mammal, the endangered Hawaiian hoary bat (*Lasiurus cinereus semotus*), is known to occur on Oahu (Tomich 1986). Protocol level Hawaiian hoary bat surveys to detect their activity at the Project Site were not part of the scope of this biological study to support the planning phase of the Project. Incidental observation of non-native mammal species were recorded during the survey. These were based on visual and auditory detection, coupled with visual observation of scat, tracks, and other animal signs.

The biologists were not able to survey some areas of the Project Site on foot either because the vegetation was too dense to walk through or because that area was not accessible (Figure 2). Tall dense thickets of guinea grass (*Megathyrsus maximus*) precluded surveying the northwestern corner of the Project Site on foot (Figure 2). The biologists scanned this area from strategic vantage points with binoculars, and to the extent possible, identified plant species and the vegetation types. The gulch vegetation surrounding an underground concrete tunnel in the southern part of the Project Site was fenced off and precluded access on foot. Also, in the southeastern corner of the Project Site, there was a locked gate south of Tents 7 and 8 which prevented access. The vegetation in these areas was also mostly assessed by scanning with binoculars from vantage points. The agricultural farm at WCF was also surveyed from the outside using binoculars (Figure 2).



N:\Projects\4400\4456-01\reports\Fig 2 Vegetation Communities.mxd

Figure 2. Vegetation Communities at Waiawa Correctional Facility
Waiawa Correctional Facility Biological Survey (4456-01)
December 2020

H. T. HARVEY & ASSOCIATES
Ecological Consultants

Section 3.0 Results

3.1 Flora

The taxa recorded during the biological reconnaissance survey are indicative of the season (i.e., rainy) and the environmental conditions at the time of the survey. No plant species that are state or federally listed as threatened, endangered, or candidates for listing, and no rare native Hawaiian plant species, were observed in the accessible parts of the Project Site. A total of 57 plant species were observed at the Project Site. The vast majority (53 species, about 93%) of these are either alien (non-native) or cultivated species, three (about 5%) are Polynesian introductions, and only one species (2%)—koa (*Acacia koa*), is native (endemic) to Hawaii (Wagner et al. 1999). Table 1 provides a list of the plant species observed in the accessible parts of the Project Site.

In general the vegetation at the Project Site is highly disturbed with several different vegetation communities that represent past and ongoing modifications here. The vegetation types found in the Project Site can be characterized as Acacia Dominated Forests, Cook Pine Plantation, Ironwood Stand, Mixed Alien Forest, Albizia Dominated Forest, Guinea Grass Grassland, Maintained Vegetation, and Agricultural Farm (Figure 2). Described below is the distribution and composition of these vegetation communities at the WCF Project Site.

Table 1. Plant Species Observed at the Waiawa Correctional Facility

Family	Scientific Name	Common name	Status[1]	Relative Abundance[2]
Gymnosperms				
	Araucaria columnaris (G.Forst.) Hook.	Cook pine	A	C
Angiosperms – Monocots				
Agavaceae	*Cordyline fruticosa* (L.) A.Chev.	Ti, ki	pol	R
	Dracaena sp.	Money plant	A	R
Araceae	*Colocasia esculenta* (L.) Schott	Taro	pol	U
	Syngonium podophyllum Schott	Arrowhead plant	A	R
Arecaceae	*Cocos nucifera* L.	Coconut	pol	U
Musaceae	*Musa sp.*	Banana	cul	U
Pandanaceae	*Pandanus sp.*	Screwpine	cul	R
Poaceae	*Axonopus compressus* (Sw.) P.Beauv.	Wide leaved carpet grass	A	C
	Anthoxanthum odoratum L.	Sweet vernalgrass	A	C
	Chloris radiata (L.) Sw.	Radiate finger grass	A	C
	Cynodon dactylon (L.) Pers.	Bermuda grass	A	C
	Digitaria ciliaris (Retz.) Koeler	Henry's crab grass	A	C
	Eragrostis pectinacea (Michx.) Nees var. *pectinacea*	Carolina love grass	A	U
	Urochloa maxima (Jacq.) R. Webster	Guinea grass	A	A
	Melinis repens (Willd.) Zizka	Natal red top	A	U
	Paspalum conjugatum P.J.Bergius	Hilo grass	A	U

Family	Scientific Name	Common name	Status[1]	Relative Abundance[2]
	Setaria parviflora (Poir.) Kerguélen	Yellow foxtail	A	C
	Stenotaphrum secundatum (Walter) Kuntze	Centipede grass	A	U
Pontideriaceae	*Eichhornia crassipes* (Mart.) Solms	Water hyacinth	A	U
Angiosperms – Dicots				
Anacardiaceae	*Mangifera indica* L.	Mango	A	U
	Schinus terebinthifolius Raddi	Christmas berry	A	U
Apocynaceae	*Plumeria* L.	Plumeria	A	R
Araliaceae	*Schefflera actinophylla* (Endl.) Harms	Octopus tree	A	C
Asteraceae	*Bidens alba* (L.) DC. var. *radiata* (Sch.Bip.) Ballard ex Melchert	Beggartick	A	C
	Bidens pilosa L.	Spanish needle	A	U
	Pluchea carolinensis (Jacq.) G.Don	Sourbush	A	R
	Sphagneticola trilobata (L.) Pruski	Wedelia	A	A
Caricaceae	*Carica papaya* L.	Papaya	cul	R
Casuarinaceae	*Casuarina equisetifolia* L.	Ironwood	A	A
Euphorbiaceae	*Macaranga mappa* (L.) Müll.Arg.	Bingabing	A	U
Fabaceae	*Acacia confusa* Merr.	Formosa koa	A	R
	Acacia koa A.Gray	Koa	E	U
	Acacia mangium Willd.	Mangium wattle	A	A
	Acacia melanoxylon R.Br. ex Aiton	Australian blackwood	A	A
	Chamaecrista nictitans (L.) Moench ssp. *patellaria* (DC. ex Collad.) H.S.Irwin & Barneby var. *glabrata* (Vogel) H.S.Irwin & Barneby	Partridge pea	A	U
	Desmodium incanum DC.	Spanish clover	A	U
	Falcataria moluccana (Miq.) Barneby & J.W.Grimes	Albizia	A	A
	Leucaena leucocephala (Lam.) de Wit	Haole koa	A	C
	Mimosa pudica L. var. *unijuga* (Duchass. & Walp.) Griseb.	Sensitive plant	A	U
	Pithecellobium dulce (Roxb.) Benth.	Opiuma	A	U
Lamiaceae	*Ocimum basilicum* L.	Sweet basil	A	U
Malvaceae	*Hibiscus sp.*	Hibiscus	A	R
	Sida rhombifolia L.	Cuban jute	A	R
Melastomaceae	*Clidemia hirta* (L.) D.Don var. *hirta*	Clidemia	A	U
Myrtaceae	*Psidium cattleyanum* Sabine	Strawberry guava	A	U
	Syzygium cumini (L.) Skeels	Java plum	A	U
Oxalidaceae	*Averrhoa carambola* L.	Carambola	cul	R
Passifloraceae	*Passiflora suberosa* L.	Huehue haole	A	R
Plantaginaceae	*Plantago lanceolata* L.	Narrow leaf plantain	A	U
Proteaceae	*Grevillea robusta* A.Cunn. ex R.Br.	Silk oak	A	U
Rosaceae	*Rosa sp.*	Rose	cul	R
Sapotaceae	*Chrysophyllum oliviforme* L.	Satin leaf	A	U
Solanaceae	*Solanum lycopersicum* L. var. *cerasiforme* (Dunal)	Tomato	cul	U

Family	Scientific Name	Common name	Status[1]	Relative Abundance[2]
	D.M.Spooner, G.J.Anderson & R.K.Jansen			
	Solanum tuberosum L.	Potato	cul	U
Verbenaceae	*Citharexylum caudatum* L.	Juniperberry	A	C
	Stachytarpheta cayennensis (Rich.) Vahl	Vervain	A	U

[1] **Status Notes:** pol = Polynesian introduction. A = introduced or alien (all those plants brought to the Hawaiian Islands by humans, intentionally or accidentally, after Western contact [i.e., Cook's arrival in the islands in 1778]). E = endemic = species that occur naturally only in the Hawaiian Islands. cul = cultivated = species that are known to be cultivated but, not naturalized in the Hawaiian Islands.

[2] **Qualitative Relative Abundance of Observed Species at the Project Site:** A = abundant—forming a major part of the vegetation in the survey on the project site. C = common—widely scattered throughout the area or locally abundant in a portion of it. U = uncommon—scattered sparsely throughout the area or occurring in a few small patches. R = rare—only a few isolated individuals on the project site.

Additional Notes: This table is an inventory of plant species observed on August 26, 2020, at the Waiawa Correctional Facility on Oahu. The plant names are arranged alphabetically by family, then by species, into each of three groups: ferns and fern allies, and monocots and dicots within the subdivision of angiosperm (flowering plants) and gymnosperm. The taxonomy and nomenclature of the flowering plants are in accordance with Wagner et al. (1999); recent name changes are those recorded in Imada 2019.

Approximately 73 acres of the Project Site in the north comprises Acacia Dominated Forest (Figure 2). Two *Acacia* species, Mangium wattle (*Acacia mangium*) and Australian blackwood (*Acacia melanoxylon*) were the dominant canopy species in the forest here (Figure 3). A few native (endemic) koa (*Acacia koa*) trees were also seen along the dirt road leading into this area, and appeared to have been planted. Other tree species common in the forest were juniperberry (*Citharexylum caudatum*), ironwood (*Casuarina equisetifolia*), albizia (*Falcataria moluccana*), octopus tree (*Schefflera actinophylla*), and Christmas berry (*Schinus terebinthifolius*). The forest understory comprised herbaceous plants such as Koster's curse (*Clidemia hirta*), wedelia (*Sphagneticola trilobata*), beggars ticks (*Bidens alba*), and grasses such sweet vernalgrass (*Anthoxanthum odoratum*) and yellow foxtail (*Setaria parviflora*).

In the northwestern portion, the forested area was mostly along the northern border, while the southern portion was a mosaic of small forest patches surrounded by dense thickets of guinea grass (*Megathyrsus maximus*). In the center of this northwestern portion there is stand of Cook pine (*Araucaria columnaris*) trees (Figures 2 and 4). These pine trees appeared to be planted, as there were several rows of trees of about the same size. Also, further to the west, in this northwestern corner, there was a small orchard bordering the forest and the open grassland with several fruit trees such as mango (*Mangifera indica*) and star fruit (*Averrhoa carambola*).

Compared to the northwestern side, the Acacia Dominated Forest in the northeastern part of the Project Site was more open. The *Acacia* trees were more scattered and the understory was predominantly sweet vernalgrass and guinea grass (Figure 5). Other tree species such as albizia, ironwood, strawberry guava (*Psidium cattleiyanum*), and satin leaf (*Chrysophyllum oliviforme*) were also more widespread here. Thickets of strawberry guava and albizia trees, in particular, were common around the water tank in the northeastern corner. A small, but dense, stand of about half acre of ironwood (*Casuarina equisetifolia*) trees was present along the eastern border of the Project

Site (Figure 6). Other than the litter of ironwood tree needles, there was little to no vegetation in the understory of this Ironwood Stand.

Figure 3. Acacia Dominated Forest in the Northern Part of the Project Site
Note: Australian blackwood (*Acacia melanoxylon*) and Mangium wattle (*Acacia mangium*) surrounding the dirt road leading to the northwestern part of the Project Site. Guinea grass (*Megathyrsus maximus*) is seen here in the ground vegetation.

Figure 4. Cook Pine (*Araucaria columnaris*) Plantation in the Northwestern Part of the Project Site

Figure 5. Acacia Dominated Forest in the Northeastern Part of the Project Site
Note: Australian blackwood (*Acacia melanoxylon*) and Mangium wattle (*Acacia mangium*) here were more scattered forming an open forest. The understory is predominantly sweet vernalgrass (*Anthoxanthum odoratum*) and guinea grass (*Megathyrsus maximus*).

Figure 6. Ironwood (*Casuarina equisetifolia*) Stand along the Northeastern Border of the Project Site
Note: Other than litter of ironwood tree needles, there was little to no vegetation in the understory of this Ironwood Stand.

Vegetation in the gulch area in the south, which surrounds an underground tunnel, as well as in the southeastern corner can be described as Mixed Alien Forest (Figure 2). A variety of alien tree species such as octopus tree, juniperberry, Christmas berry , ironwood, silk oak, Australian blackwood, Mangium wattle, strawberry guava, bingabing (*Macaranga mappa*), opiuma (*Pithecellobium dulce*) were common in the gulch (Figure 7). The ground vegetation was mostly dominated by guinea grass. Immediately to the west of the Alien Mixed Forest in the gulch, and separated by a dirt road, was Guinea Grass Grassland vegetation dominated by tall guinea grass (Figures 2 and 8). This grassland extended toward the center of the WCF. Weedy herbaceous plants such as beggar's tick, vervain (*Stachytarpheta cayennensis*), Bermuda grass (*Cynodon dactylon*), and radiate finger grass (*Chloris radiata*) were common along the dirt road between the Guinea Grass Grassland and the Alien Mixed Forest in the gulch.

The vast majority of the southern border of the WCF comprised Albizia Dominated Forest (Figure 2). Tall albizia trees with predominantly guinea grass in the understory was characteristic of this vegetation, which stretched all along the southern border of the Project Site (Figure 9). In several places strawberry guava thickets were seen in the understory of the albizia trees. Other scattered tree species in this forest included octopus tree, bingabing, and Mangium wattle.

Agriculture Farm comprises about seven acres immediately to the north of the Waiawa Prison Road that runs through the Project Site (Figure 2). Several fruit and vegetable species such as taro (*Colocasia esculenta*), banana (*Musa* sp.), tomato (*Solanum lycopersicum*) and collard greens (*Brassica* spp.) and herbs such as basil (*Ocimum basilicum*) were seen in cultivation in the farm here (Figure 10). An aquaponics setup was also seen at the eastern end of the farm.

The remaining areas (about 45 acres) of the WCF can be characterized as having Maintained Vegetation. This vegetation type comprised manicured lawns, landscaped plants, mowed areas, scrub vegetation as well as roadside weeds. Generally the areas around office buildings and housing in central and the southeastern corner had mowed lawns and cultivated plants such as ti (*Cordyline fruticosa*), *Hibiscus* spp., and *Dracaena* sp. The areas to the west of the Agricultural Farm (near the entrance of WCF), along the main access road of the WCF, in between the ponds and to the east of Pond 3, and along the dirt road leading to the water tank in the northeastern corner—mostly comprised scrub vegetation that was maintained at a low height by periodic mowing.

There are three ponds in the southwestern part of the WCF (Figure 2). The aquatic plant, water hyacinth (*Eichhornia crassipes*) entirely covered Pond 2 (Figure 11) however, it was absent in Ponds 1 and 3. Albizia Dominated Forest borders these ponds along the western and/or the southern boundary (Figure 2).

Figure 7. Mixed Alien Forest in the Gulch in the Southern Part of the Project Site
Note: A variety of alien tree species comprise this vegetation. Seen here are octopus tree (*Schefflera actinophylla*), ironwood (*Casuarina equisetifolia*), Mangium wattle (*Acacia mangium*), strawberry guava (*Psidium cattleiyanum*) and bingabing (*Macaranga mappa*).Guinea grass (*Megathyrsus maximus*), the dominant understory in the foreground.

Figure 8. Guinea Grass Grassland in the South and Central Part of the Project Site
Note: Guinea grass (*Megathyrsus maximus*) was the dominant grass. Albizia Dominated Forest is seen here in the background.

Figure 9. Albizia Dominated Forest along the Southern Border of the Project Site
Note: Guinea grass (*Megathyrsus maximus*) predominantly comprised the understory of this forest

Figure 10. Agriculture Farm at the Waiawa Correctional Facility
Note: Several vegetables species such as tomato tomoto (*Solanum lycopersicum*) and collard greens (*Brassica* spp.) and herbs such as basil (*Ocimum basilicum*)were seen under cultivation here.

Figure 11. A Pond in the Southwest of the Project Site Covered with Aquatic Plant, Water Hyacinth (*Eichhornia crassipes*)
Note: Albizia Dominated Forest seen in the background, west of this pond.

3.2 Fauna

Point-count surveys at the WCF identified 107 individual birds comprising 18 species. Of these 18 species, 2 are endemic and endangered Hawaiian waterbirds—the Hawaiian coot (*Fulica alai*) and Hawaiian stilt (*Himantopus mexicanus knudseni*); and one—the Pacific golden plover (*Pluvialis fulva*), is a migratory shorebird recognized as an indigenous species. The remaining 15 species are alien to the Hawaiian Islands (Table 2). Two Hawaiian coots and three Hawaiian stilts were observed in Pond 1 (Figure 2). The stilts were observed walking along the edge of the pond, and the coots were seen foraging within the pond (Figure 12). Although not native, five mallards (*Anas platyrhynchos*) were also seen wading in Pond 1. No birds were observed in Pond 2, which contained water hyacinth plants, or in Pond 3. No Hawaiian waterbird nests or nesting behavior was observed. The Pacific golden plover was seen in the Maintained Vegetation area to the east of the ponds.

Table 2. Bird Species Observed at the Waiawa Correctional Faciltiy

Scientific Name	Common Name	Status	Number Observed on Point Count Stations (n=6)	Average Number per Station (n=6)	Number of Stations Occupied (n = 6)	Qualitative Relative Abundance
Acridotheres tristis	Common myna	X	9	1.50	3	common
Anas platyrhynchos	Mallard	X	2	0.33	1	rare

Scientific Name	Common Name	Status	Number Observed on Point Count Stations (n=6)	Average Number per Station (n=6)	Number of Stations Occupied (n = 6)	Qualitative Relative Abundance
Cardinalis cardinalis	Northern cardinal	X, M	1	0.17	1	rare
Carpodacus mexicanus	House finch	X, M	4	0.67	2	uncommon
Estrilda astrild	Common waxbill	X	9	1.50	4	common
Fulica alai	Hawaiian Coot	E	2	0.33	1	rare
Garrulax canorus	Chinese Hwamei	X	1	0.17	1	rare
Geopelia striata	Zebra dove	X	6	1.00	2	common
Himantopus mexicanus knudseni	Hawaiian Stilt	E	3	0.50	1	rare
Leiothrix lutea	Red Billed Leiothrix	X	5	0.83	2	uncommon
Mimus polyglottos	Northern mockingbird	X, M	2	0.33	1	rare
Passer domesticus	House sparrow	X	2	0.33	2	rare
Pluvialis fulva	Kolea, Pacific Golden Plover	I	6	1.00	1	common
Paroaria coronata	Red-crested cardinal	X, M	7	1.17	2	common
Psittacula krameri	Rose-ringed parakeet	X, IW	11	1.83	3	common
Pycnonotus cafer	Red-vented bulbul	X, IW	29	4.83	5	abundant
Streptopelia chinensis	Spotted Dove	X, IW	2	0.33	1	rare
Zosterops japonicus	Warbling White-eye	X, IW	7	1.17	4	common

Notes: Abundance based on the average number of individuals observed per count station, averaged across all point count stations, as follows:
Abundant – average ≥ 3.0 individuals observed per station
Common – average 1.0 – 3.0 individuals observed per station
Uncommon – average 0.5 – 1.0 individuals observed per station
Rare – average < 0.5 individual2 observed per station
ES = state or federally listed as endangered
I = indigenous (native to the Hawaiian Islands and elsewhere)
IW = State (HAR 12-124, Exhibit 5) or Federal (18 U.S.C. 42) injurious wildlife species
X = introduced or alien (non-native species)
M= Listed as a Migratory Bird Treaty Act Protected Species (10.13 List)

Red-vented bulbul was the most abundant species at the Project Site and was observed in all habitat types and at all point count stations. Other commonly seen species at WCF were the common myna (*Acridotheres tristis*), common waxbill (*Estrilda astrild*), zebra dove (*Geopelia striata*), red-crested cardinal (*Paroaria coronate*), rose-ringed parakeet (*Psittacula krameri*), and the warbling white-eye (*Zosterops japonicas*). Groups of rose-ringed parakeets were also considered common and heard and observed in the Acacia Dominated Forest in the northern part of the WCF near the orchard. The red billed leiothrix (*Leiothrix lutea*) and house finch (*Carpodacus mexicanus*) were uncommon and the remaining eight species, of which, three or fewer individuals were observed, were considered rare. This group included the two endangered waterbirds, the Hawaiian coot and Hawaiian stilt. The

Acacia Dominated Forest had the highest diversity of birds observed (12 species), whereas the areas with Maintained Vegetation had the lowest diversity of birds observed (4 species) at WCF. Four of the observed species are on the state list of injurious wildlife species (DLNR 2015) and are known to be harmful to agriculture, aquaculture, or indigenous wildlife or plants or to constitute a nuisance or health hazard: rose-ringed parakeet, red-vented bulbul, spotted dove (*Streptopelia chinensis*), and warbling white-eye.

Figure 12. Endangered Hawaiian Waterbirds Hawaiian coot (*Fulica alai*) and Hawaiian stilt (*Himantopus mexicanus knudseni*) at a Pond at the Project Site

No non-native mammal species were observed during the survey at WCF. However, feral pig wallows, scat, and rooting signs were observed in the Acacia Dominated Forest near the orchard in the northwestern part of the Project Site. Also, it should be noted that the biologists did see mongoose (*Herpestes javanicus*), feral cat (*Felis catus*), and rat (*Rattus rattus*) along the Waiawa Prison Road leading up to the Project Site.

Section 4.0 Conclusions and Discussion

4.1 Flora

It is unlikely that maintenance and construction activities at the WCF will result in a substantial adverse impact on any plant species that is state or federally listed as threatened or endangered, candidate species for listing as endangered, species of concern, or rare native Hawaiian plant species. The Project Site was highly disturbed, with primarily alien forestry trees species such as Mangium wattle and Australian blackwood that are part of the large scale plantations that were created decades ago to protect the watersheds on Oahu. This study did not find any botanical concerns at the Project Site. The plants observed are predominantly (98%) alien species or Polynesian introductions. The endemic koa trees seen at the Project Site appear to have been planted. To the extent feasible, H. T. Harvey & Associates recommends that these endemic koa trees be preserved in place. However, if removal of the koa trees is necessary, it would not be expected to have a significant impact on the local population or species persistence because this species has a widespread distribution on Oahu as well as elsewhere in Hawaii (Wagner et al. 1999, Imada 2019).

H. T. Harvey & Associates recommends that the Project design specifications for revegetation of areas disturbed during or after construction activities include the use of native plants to the extent feasible. Potential native plants that are ecologically suitable for revegetation in mesic habitat at the Project Site include koa (*Acacia koa*), hala, aalii (*Dodonea viscosa*), kului (*Nototrichum sandwicense*), and Oahu sedge (*Carex wahuensis*). If native plants do not meet landscaping objectives, plants with a low risk of becoming invasive may be substituted. Additional information on selecting appropriate plants for landscaping can be obtained from the Plant Pono website (http://www.plantpono.org/).

A potential impact of construction work is likely the introduction and spread of invasive species. H. T. Harvey & Associates understands that this biological study is in support of the Project's planning phase. Nonetheless, we recommend that the Project consider incorporating specifications that will result in the adoption of best management practices to minimize the introduction and spread of invasive species at the Project Site. These best management practices may include the following:

- All construction equipment and vehicles should arrive at the Project Site the first time clean and free of: any soil; plants or plant parts, including seeds; insects, including eggs; and reptiles and amphibians, including their eggs. Similarly, all construction equipment and vehicles should also be cleaned after use on the Project and before leaving to another site.
- All materials imported to the Project Site, including gravel, soil, rock, and sand, should be free of invasive plants. Invasive species found on the stockpile should be removed either chemically or mechanically.

- Only plants grown on Oahu should be used for landscaping purposes. If locally grown plants are unavailable, then imported plants may be used, but they should be thoroughly inspected or quarantined if necessary to ensure that they are free from invasive pests such as the coconut coqui frogs (*Eleutherodactylus coqui*) and little fire ants (*Wasmannia auropunctata*), and invasive plant seeds and seedlings that could arrive inadvertently.
- Only weed-free seed mixtures should be used for hydroseeding and hydromulching on the project site. A qualified botanist should inspect the seeded areas a minimum of 60 days after the hydroseed/hydromulch is applied. Any species of plant other than those intended to be in the hydroseed/hydromulch should be removed. In particular, plant species that are not known to occur on Oahu and those that are actively being controlled on the island should be removed.

4.2 Fauna

Maintenance and construction activities at the Project Site are not likely to have an adverse impact on Hawaiian waterbirds. Such activities may displace waterbirds, or temporarily keep them from visiting the ponds at the Project Site. However, these impacts are temporary and alternative habitat for these Hawaiian waterbirds is widely available in neighboring areas in Waiawa (e.g. the Waiawa Unit of the Pearl Harbor National Wildlife Refuge) as well as elsewhere on Oahu.

The Hawaiian stilt and the Hawaiian coot, seen at Pond 1 are state-listed and federally listed as endangered species, and are thus protected under the state and federal Endangered Species Acts (DLNR 2015). Although, other endangered Hawaiian waterbirds species—Hawaiian moorhen (*Gallinula galeata* sandvicensis) and Hawaiian duck (*Anas wyvilliana*)—were not seen at the Project Site, it should be noted that the ponds can provide foraging and loafing habitat for these taxa as well. No nests or nesting behavior was observed. The Hawaiian waterbirds, in particular, the Hawaiian coot and the Hawaiian moorhen, prefer a mosaic of open, shallow waters and floating aquatic vegetation for nesting (DLNR 2015). The ponds at the Project Site are either open water bodies (Ponds 1 and 3) or covered with water hyacinth that limits open water (Pond 2, see Figure 11) and do not appear to provide suitable nesting habitat for these species. However, it is not out of the realm of possibility that these taxa utilize these ponds for nesting. H. T. Harvey & Associates recommends that the WCF consult with the Hawaii Department of Land and Natural Resources (DLNR) and the U.S. Fish and Wildlife Service (USFWS) to evaluate the potential impacts on listed waterbirds from maintenance and construction activities proposed at, or near, the ponds. Also listed below are measures recommended by the USFWS to avoid and minimize impacts to the state and federally endangered Hawaiian waterbirds (USFWS 2020c), and H. T. Harvey & Associates recommends that this Project incorporate these avoidance and minimization measures as applicable.

- In areas where waterbirds are known to be present, post and implement reduced speed limits, and inform project personnel and contractors about the presence of endangered species on-site or nearby.

- If water resources are located within or adjacent to the project site, incorporate the applicable best management practices (BMPs) regarding work in aquatic environments into the project design.
- Have a biological monitor that is familiar with the species' biology conduct Hawaiian waterbird nest surveys where appropriate habitat occurs within the vicinity of the proposed project site prior to project initiation. Repeat surveys again within 3 days of project initiation and after any subsequent delay of work of 3 or more days (during which the birds may attempt to nest).
- If a nest or active brood is found:
    - Contact the Service within 24 hours for further guidance.
    - Establish and maintain a 100-foot buffer around all active nests and/or broods until the chicks/ducklings have fledged. Do not conduct potentially disruptive activities or habitat alteration within this buffer.
    - Have a biological monitor familiar with the species' biology present on the project site during all construction or earth moving activities until the chicks/ducklings fledge to ensure that Hawaiian waterbirds and nests are not adversely impacted.

The Hawaiian goose or nene (*Branta sandvicensis*) and Hawaiian short-eared owl or pueo (*Asio flammeus sandwichensis*) were not seen at the Project Site. However, the open grasslands and agricultural farms at the Project Site provide suitable habitat for both these taxa. Nene are both federally and state-listed as endangered (DLNR 2015). Nene are not known to occur on Oahu but, because a single pair nested at the James Campbell National Wildlife Refuge in Kahuku in 2014 (DLNR 2015), and members of this family group have remained since, raising the rare possibility of nene utilizing suitable habitats on Oahu. The pueo is state listed as endangered on Oahu (DLNR 2015). There have been several sightings of pueo on Oahu including in central Oahu approximately five miles to the north of the Project Site (Pueo Project 2020). If either of these species are seen at the Project site, H. T. Harvey & Associates recommends that the WCF consult with the DLNR to assess potential impacts on nene or pueo from proposed construction or maintenance activities at WCF and accordingly incorporate measures to avoid and minimize impacts. Also listed below are measures recommended by the USFWS to avoid and minimize impacts to the federally endangered nene (USFWS 2020), and H. T. Harvey & Associates recommends that this Project incorporate these avoidance and minimization measures as applicable.

- Do not approach, feed, or disturb nene.
- If nene are observed loafing or foraging within the project area during the breeding season (September through April), halt work and have a biologist familiar with the nesting behavior of nene survey for nests in and around the project area prior to the resumption of any work. Repeat surveys after any subsequent delay of work of 3 or more days (during which the birds may attempt to nest).

- Cease all work immediately and contact the Service for further guidance if a nest is discovered within a radius of 150 feet of proposed work, or a previously undiscovered nest is found within said radius after work begins.
- In areas where nene are known to be present, post and implement reduced speed limits, and inform project personnel and contractors about the presence of endangered species on-site.

Surveys to detect Hawaiian hoary bats were not conducted in support of the planning phase of this Project. However, Hawaiian hoary bats are known to occur on Oahu (Tomich 1986, DLNR 2015) and their presence at the Project Site cannot be ruled out at the time of preparation of this report. If WCF determines that it is necessary to remove large trees for maintenance and construction activities then, H. T. Harvey & Associates recommends that HDOT follow the USFWS guidelines, which recommend that no trees greater than 15 ft tall be trimmed or removed during the bat pupping season from June 1 to September 15 (USFWS 2020).

Section 5.0 References

[DLNR] Hawaii Department of Land and Natural Resources. 2015. Hawaii Wildlife Action Plan. [Online] <https://dlnr.hawaii.gov/wildlife/files/2016/12/HI-SWAP-2015.pdf>. Accessed March 15, 2020.

Imada, I. T. 2019. Hawaiian Naturalized Vascular Plants Checklist. Bishop Museum Technical Report 69. <http://hbs.bishopmuseum.org/publications/pdf/tr69.pdf> Accessed October 15, 2020

Tomich, P. Q. 1986. Mammals in Hawaii. Second edition. Bishop Museum Special Publication 76. Bishop Museum Press, Honolulu, Hawaii.

[Pueo Project] The Pueo Project. 2020 < https://www.pueoproject.com/distribution-map> Accessed October 1, 2020

[USFWS] U.S. Fish and Wildlife Service. 2011. Recovery Plan for Hawaiian Waterbirds, Second Revision. U.S. Fish and Wildlife Service, Portland, Oregon.

[USFWS] U.S. Fish and Wildlife Service. 2020a. National Wetlands Inventory Mapper. Washington, D.C. <https://www.fws.gov/wetlands/data/mapper.html>. Accessed March 15, 2020.

[USFWS] U.S. Fish and Wildlife Service. 2020b. Critical Habitat Portal, Critical Habitat Mapper. Washington, D.C. <http://ecos.fws.gov/crithab/>. Accessed March 15, 2020.

[USFWS] U.S. Fish and Wildlife Service. 2020c. Pacific Islands Fish and Wildlife Office. Animal Avoidance and Minimization Measures. <https://www.fws.gov/pacificislands//articles.cfm?id=149489720> Accessed March 15, 2020.

Wagner, W. L., D. R. Herbst, and S. H. Sohmer. 1999. Manual of the Flowering Plants of Hawaii. Two volumes. Revised edition. University of Hawaii Press and Bishop Museum Press, Honolulu.

APPENDIX I - Cultural Impact Assessment

PRELIMINARY DRAFT REPORT
Cultural Impact Assessment in Support of the Waiawa Correctional Facility (WCF)
Special Use Permit (SUP) and Plan Review Use (PRU) Applications, Waiawa Ahupuaʻa,
ʻEwa District, Island of Oʻahu, Hawaiʻi
TMKs: (1) 9-6-005:011 and 012

By
Nicole I. Vernon, M.A.

Dennis Gosser, M.A.
Principal Investigator

Prepared For:
SSFM International
501 Sumner Street, Suite 620
Honolulu, Hawaii 96817

Prepared By:
Pacific Consulting Services, Inc.
720 Iwilei Road, Suite 424
Honolulu, HI 96817

October 2020

This Page Left Blank Intentionally

MANAGEMENT SUMMARY

Document Title:	Cultural Impact Assessment in Support of Waiawa Correctional Facility (WCF) Special Use Permit (SUP) and Plan Review Use (PRU) Applications, Waiawa Ahupuaʻa, ʻEwa District, Island of Oʻahu, Hawaiʻi
Date/Revised Date:	Preliminary Draft: October 2020
Archaeological Permit #:	SHPD Permit No. 20-29
Project Location:	Waiawa Correctional Facility (WCF), Waiawa Ahupuaʻa, ʻEwa District, Island of Oʻahu, Hawaiʻi
Project TMK:	(1) 9-6-005:011 and 012
Land Owner:	State of Hawaiʻi
Project Proponents:	Department of Public Safety
Project Tasks:	Cultural Impact Assessment
Project Acreage:	180.486 acres
Principal Investigator:	Dennis Gosser, M.A.
Regulatory Oversight:	Chapter 6E-7 and 6E-8, Hawaii Revised Statutes (HRS) and Hawaii Administrative Rules (HAR) Chapter 275
Project Background:	Continued operations at WCF require Plan Review Use (PRU) and Special Use Permit (SUP) approvals.
SIHP #:	50-80-09-02268 (Waiāhole Ditch System); 50-80-09-02272 (Military Structures), and 02273 (historic period road/railway system).
Findings:	Previous land use in WCF property included pineapple and sugarcane cultivation during the historic period, followed by episodes of grading, leveling, and filling associated with military and WCF. These activities most likely destroyed or buried any evidence of both pre- and post-Contact land use.
Human Skeletal Remains:	None identified within the project area.
Recommendations:	It is recommended that the effect determination for this project is "no historic properties affected."

This Page Left Blank Intentionally

TABLE OF CONTENTS

MANAGEMENT SUMMARY i
LIST OF FIGURES iii
LIST OF TABLES iii
INTRODUCTION 1
Project Area Location and Description 1
ENVIRONMENTAL SETTING 1
Topography and Soils 1
Rainfall, Hydrology, and Vegetation 1
HISTORICAL BACKGROUND 6
Moʻōlelo and Wahi Pana 6
Traditional Land Use 7
Historical Land Use 8
Previous Archaeological Research 9
ASSESSMENT OF CULTURAL IMPACTS 15
REFERENCES 17

LIST OF FIGURES

Figure 1. Project Area Shown on USGS 2017 Waipahu Topographical Quadrangle (USGS 2017). 3
Figure 2. Plat Map Showing Project Area in TMK (1) 9-6-005:011 and 012 (Taxation Maps Bureau 1941). 4
Figure 3. Soil Units in the Vicinity of the Project Area (Data source: USDA/NRCS Soil Survey Center 2014). 5
Figure 4. Portion of 1902 Map Showing the Project Area Located within Pineapple Fields (Donn 1902). 10
Figure 6. Portion of 1943 Topographical Map Showing Military Buildings and Waiahole Ditch in the Project Area (USACE 1943). 11
Figure 6. 1952 Aerial Photograph Showing Military Reservation Adjacent to Sugarcane Fields (USGS 1952). 11
Figure 7. Previous Archaeological Investigations Near the Project Area. 12
Figure 8. Location of Site 50-80-09-02270 Feature in the Project Area (Goodman and Nees 1991: Figure 20). 14

LIST OF TABLES

Table 1. Summary of Soil Units in the Area 2 APE (Foote et al. 1972). 2
Table 2. List of Previous Archaeological Studies and Findings Near the Project Area. 13

This Page Left Blank Intentionally

INTRODUCTION

Under contract to SSFM, Pacific Consulting Services, Inc. (PCSI) has prepared this Cultural Impact Assessment (CIA) in support of Waiawa Correctional Facility (WCF) Special Use Permit (SUP) and Plan Review Use (PRU) applications, Waiawa Ahupuaʻa, ʻEwa District, Island of Oʻahu, Hawaiʻi. The project proponent is the Department of Public Safety (DPS). The land owner is the State of Hawaiʻi. The extent of the proposed project is shown in Figure 1. There are no current plans to expand or increase the capacity of WCF within the next five (5) years or foreseeable future.

This CIA has been prepared in compliance with Title13 of the Hawaii Administrative Rules (HAR), Subtitle 13 (State Historic Preservation Division Rules), Chapter 275 (Rules Governing Procedures for Historic Preservation Review for Governmental Projects Covered Under Sections 6E-8, Hawaii Revised Statutes [HRS]).

PROJECT AREA LOCATION AND DESCRIPTION

The WCF is located roughly two kilometers east of the H-2 freeway and nine kilometers north of Pearl Harbor. Pearl City is to the south and Mililani Town is to the west. The total project area measures 73.04 hectares (ha), or 180.486 acres (ac). Tax Map Key (TMK) parcels for the project area are (1) 9-6-005:011 and 012, which are shown in Figure 2; these parcels measure 157.875 acres and 22.611 acres, respectively.

The WCF is located within the State Land Use Agricultural District therefore a SUP is required. It is also within the City's F-1 Military and Federal Preservation zone, which requires an approved PRU. Securing these two (2) entitlements would enable the WCF to be in compliance with applicable State and City land use laws.

ENVIRONMENTAL SETTING

Waiawa Ahupuaʻa is situated on the leeward side of Oʻahu and extends from the Koʻolau mountain range through the coastal plain to the shoreline at Pearl Harbor. It is bordered on the west by Waipiʻo Ahupuaʻa and on the east by Manana Ahupuaʻa. The WCF is situated on Oʻahu's Central Plateau, which extends west from the foot of the Koʻolau mountain range to the Waiʻanae Range. The plateau was created by a series of lava flows from Koʻolau shield volcano.

TOPOGRAPHY AND SOILS

The project area is situated on a moderately sloping to level area approximately 235.0 to 300.0 meters (m) above mean sea level (amsl). Soils underlying the project area, shown in Figure 3, include those of the Helemano, Leilehua, Manana, and Wahiawa series, all of which developed in material derived from basic igneous rock. Descriptions of the soils are provided in Table 1.

RAINFALL, HYDROLOGY, AND VEGETATION

Mean annual rainfall in this portion of Oʻahu measures 1469.4 millimeters (mm) (57.85 in) with most of the rainfall occurring between November and March (Giambelluca et al. 2013). Tributaries of the Waiawa Stream are just outside the project area. The Waiāhole Ditch System, constructed in 1916, runs through Parcel 11.

The project area is in an isolated area. Parcel 011 contains 40 existing buildings and structures and an 8-acre on-site farm facility. Parcel 012 is undeveloped and is heavily vegetated.

Table 1. Summary of Soil Units in the Area 2 APE (Foote et al. 1972).

SERIES	MAP UNIT SYMBOL	SOIL UNIT	PERCENT SLOPE	PROPERTIES
Helemano: well-drained soils on alluvial fans and colluvial slopes on the sides of gulches; developed in alluvium and colluvium derived from basic igneous rock	HLMG	Helemano silty clay	30 to 90	Moderately rapid permeability; medium to very rapid runoff; severe to very severe erosion hazard
Leilehua: well-drained soils on uplands; developed in material weathered from basic igneous rock	LeB	Leileihua silty clay	2 to 6	Moderately rapid permeability; slow runoff; slight erosion hazard
	LeC	Leileihua silty clay	6 to 12	Medium runoff; moderate erosion hazard
Lolekaa: well-drained soils on fans and terraces; developed in old, gravelly colluvium and alluvium	LoB	Lolekaa silty clay	3 to 8	Moderately rapid permeability; slow runoff; slight erosion hazard
Manana: well-drained soils on uplands; developed in material weathered from basic igneous rock	MoB	Manana silty clay loam	2 to 6	Slow runoff; slight erosion hazard
	MoC	Manana silty clay loam	6 to 12	Moderately rapid permeability above the pan and moderate below; medium runoff; moderate erosion hazard
	MpC	Manana silty clay	8 to 15	Depth to the panlike sheet is 30 to 50 inches
Wahiawa: well-drained soils on uplands; developed in residuum and old alluvium derived from basic igneous rock	WaA	Wahiawa silty clay	0 to 3	Moderately rapid permeability; slow runoff; no more than slight erosion hazard
	WaB	Wahiawa silty clay	3 to 8	Slow runoff; slight erosion hazard

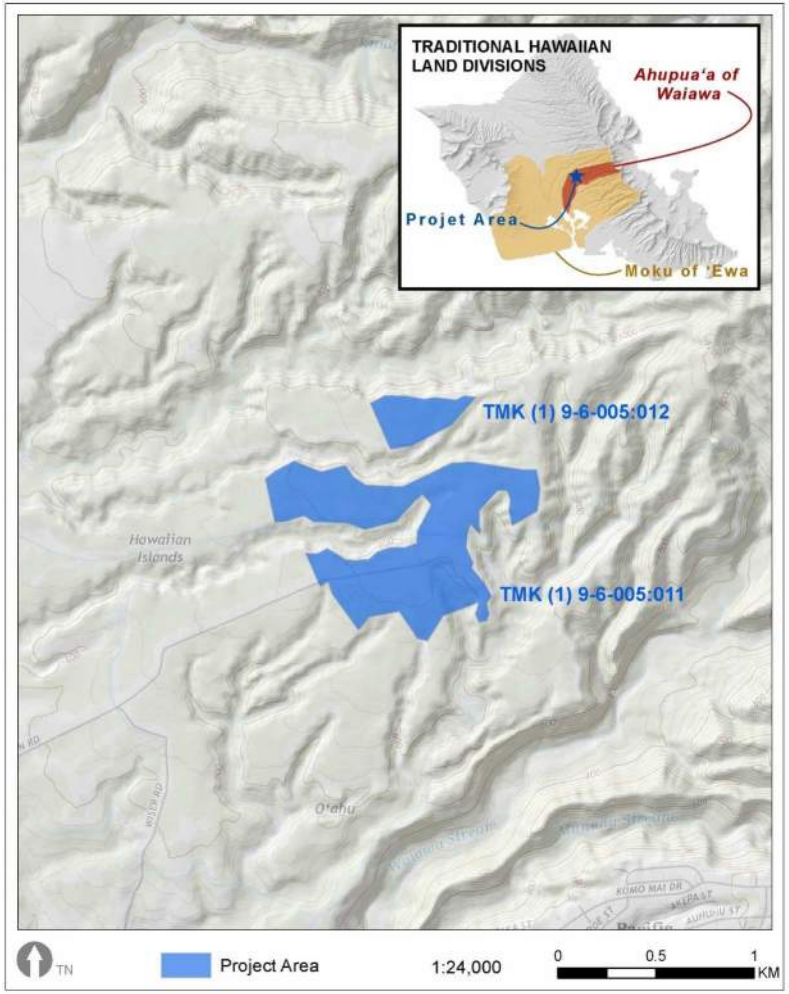


Figure 1. Project Area Shown on USGS 2017 Waipahu Topographical Quadrangle (USGS 2017).

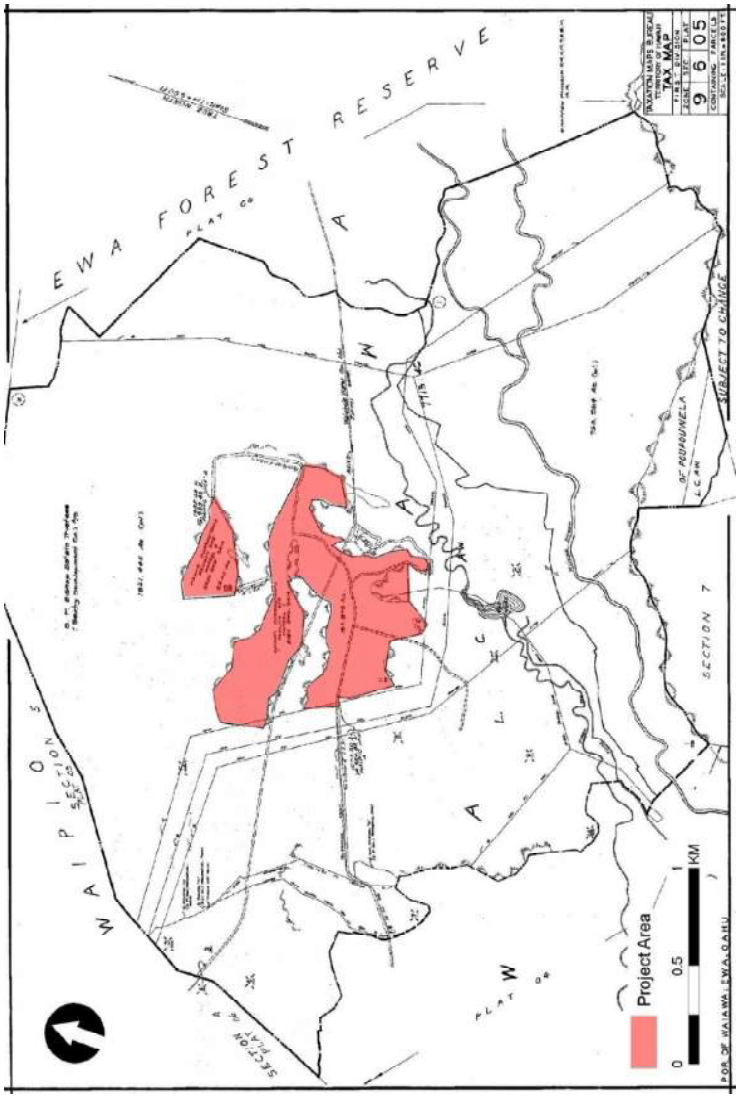


Figure 2. Plat Map Showing Project Area in TMK (1) 9-6-005:011 and 012 (Taxation Maps Bureau 1941).

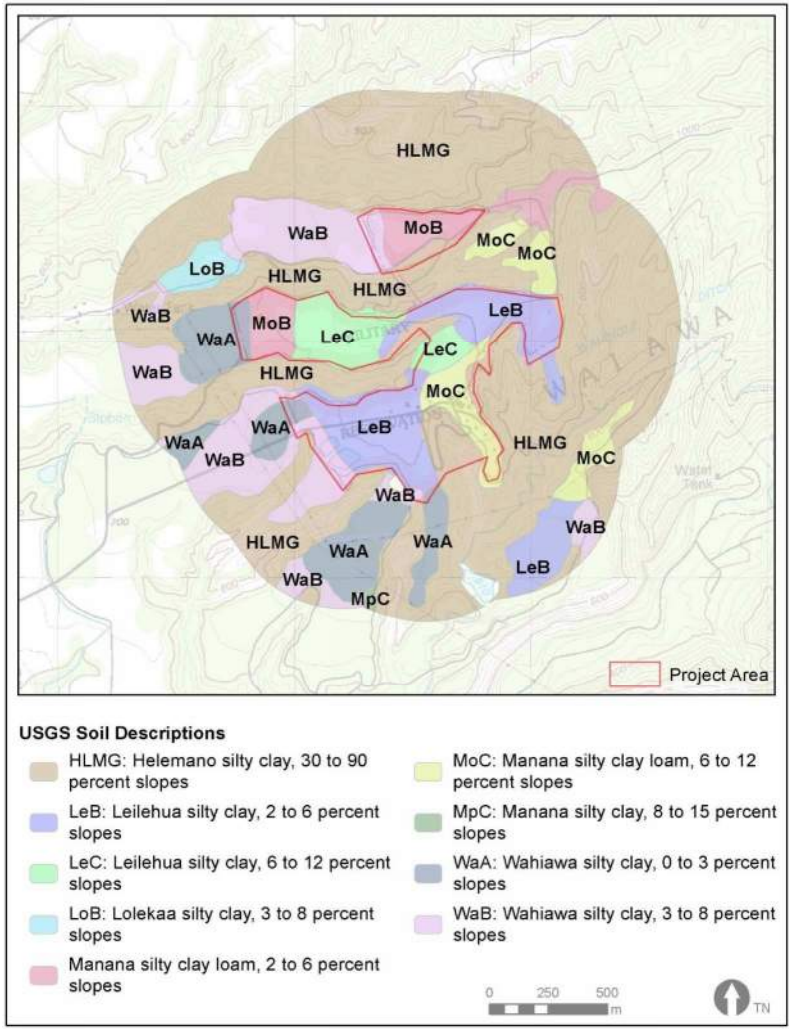


Figure 3. Soil Units in the Vicinity of the Project Area (Data source: USDA/NRCS Soil Survey Center 2014).

HISTORICAL BACKGROUND

Archival background research and literature review examined maps, historical and archival documents, and previous archaeological studies in the vicinity of the project area. Relevant historical maps were georeferenced to determine where traditional Hawaiian or historic features may fall within the project area. The information obtained from these sources was synthesized to present data findings and to evaluate the potential for archaeological and cultural resources in the project area.

MOʻŌLELO AND WAHI PANA

The Hawaiian cultural landscape can be described through significant Hawaiian place names, or *wahi pana*, and *moʻōlelo*. *Moʻōlelo* may be myths, legends, proverbs, and events surrounding well-known individuals in Hawaiian history (Pukui and Elbert 1986:254). The toponym Waiawa has been translated two ways: by Pukui et al. (1974:221) as "Milkfish (*awa*, *Chanos chanos*) Water" and by Andrews (1922:672) as "Bitter Water." The project area is in the *mauka*, or toward the mountains, portion of Waiawa, while many of the legends associated with the *ahupuaʻa* are related to the coastal area. The following section focuses on legends closest to the project area.

According to a traditional account, a unique variety of *ʻawa* (*Piper methysticum*) grew in the uplands of Waiawa:

> When the wondrous maiden [Ke-ao-melemele] arrived at the entrance to the mountain of Konahuanui, all the offerings were in charge of Keanuenue, a *pūkoʻa* or reddish brown pig, a clump of dark *ʻawa* [*pūʻawa pōpolo*] which was not common in these islands. This variety of ʻawa now grows in the upland of Waiawa, down there in ʻEwa. [Manu 1885 in Sterling and Summers 1978:19].

In the story of the dividing of ʻEwa by the gods Kane and Kanaloa, Waiawa is also mentioned as a place where *ʻawa* is grown. "Maihea, a man, resided at Waimalu at a place called Punanalo. He cultivated sweet potatoes, taros and planted *ʻawa*. The place where he planted the *ʻawa* was on a hill in the upland of Waiawa. This is what he did up to the time when the gods came to earth" (Ka Loea Kalaiaina 1899 in Sterling and Summers 1978:6). As the story goes on, Maihea prays for knowledge and *mana* (power) for his family and a whale is sent by the gods. Maihea's son is taken by the whale to Kahiki to study the priesthood. The two gods then visit Maihea and reveal that they are Kane and Kanaloa. The gods travel around the land and ʻEwa is divided.

> On their return after dividing the land, they came to the top of Haupuu (that is the present site of the Kahikuonalani Church at Waiawa), they turned to look at Ewa and when they saw the fish ponds at Waiawa, they said, "May the fish ponds down at Waiawa be as the stars in the sky above. May there be mullets at Kuhia-loko, fine sea weeds at Kuhia-waho, salt at Ninauele, the single fruited coconut at Hapenui, the taro greens at Mokaalika and the water of Kaaimalu, to remove the bitterness of the awa of Kalahikuola." This was the last thing that they did before returning to Maihea's house. They drank awa again that afternoon. They spent the remainder of the day going to Puuloa. The result of this was that Maihea obtained the knowledge of the priesthood, oratory and so on. This was the first time that these arts were practiced here in Hawaii [Ka Loea Kalaiaina 1899 in Sterling and Summers 1978:6].

A chant for the chief Kūaliʻi, an ancient chief of Oʻahu, mentions all twelve *ahupuaʻa* of ʻEwa Moku (Fornander 1917:400–401). Each line of the chant is a play on words and not associated with the actual place name meaning (Hammatt and Shideler 2012:16). The "*awa*-pond" mentioned is the line for Waiawa is referring to the milkfish.

Uliuli ka poi e piha nei—o Honouliuli;	Blue is the poi [pounded taro] which appeases [the hunger] of Honouliuli;
Aeae ka paakai a Kahuaiki—Hoaeoe,	Fine the salt of Kahuaike—Hoaeae;
Pikele ka ia e Waikele-- o Waikele;	Slippery the fish of Waikele—Waikele;
Ka hale pio i Kauamoa—o Waipio;	The arched house at Kauamoa—Waipio;
E kuu kaua i ka loko awa—o Waiawa;	Let us cast the net in the awa-pond—of Waiawa;
Mai hoomanana ia oe—o Manana.	Do not stretch yourself at—Manana.
He kini kahawai,	Many are the ravines,
He lau kamano—o Waimano;	Numerous the sharks, at Waimano;
Ko ia kaua e ke au o Waiau;	We are drawn by the current of Waiau;
Kukui malumalu kaua—Waimalu;	In the kukui grove we are sheltered —in Waimalu;
E ala kaua ua ao-e—o Kalauao;	Let us arise, it is daylight at Kalauao;
E kipi kaua e ai-o Aiea;	Let us enter and dine-at Aiea;
Mai hoohalawa ia oe—o Halawa.	Do not pass by —Halawa.

[Fornander 1917:400–401]

Traditional Land Use

Based on *mo'ōlelo* and early historical accounts, 'Ewa was a densely populated area that offered abundant resources. Traditional Hawaiian settlement would have been concentrated along the coast, which is where pre-Contact sites have been interpreted as permanent habitations and fishing shrines. Marine and estuarine resources existed along the coast, while around today's Pearl Harbor *loko i'a* (traditional Hawaiian fishpond) were present. The irrigated lowlands would have supported *lo'i,* while the lower forest area of the mountain slopes offered other subsistence resources during famine or low rainfall (Handy 1940:80–81, 211; Handy and Handy 1991:469–470). Additionally, the upper valley slopes may have been used for quarrying of basalt to manufacture stone tools (O'Hare et al. 2011:12).

Hawaiian Historian John Papa 'Ī'ī mentioned Waiawa in his writings during the 1800s. 'Ī'ī was born in the neighboring *ahupua'a* of Waipi'o. He wrote of a liquor that was made from ti root at a place called Awa in Waiawa ('Ī'ī 1959:85). He also noted that there were two *'ulu maika* playing fields called Puehulunui and Haupu'u, which were in the south portion of the *ahupua'a*. 'Ī'ī wrote of a trail in 'Ewa that crossed the upper boundary of the *lo'i* and mentions the playing fields. Traveling from Honolulu:

> The trail went down to the stream and up again, then went above the taro patches of Waiau, up to a *maika* field, to Waimano, to Manana, and to Waiawa; then to the stream of Kukehi and up to two other maika fields, Pueohulunui and Haupuu. At Pueohulunui was the place where a trail branched off to go to Waialua and down to Honouliuli and on to Waianae ['Ī'ī 1959:97].

Stone markers along this trail, called Nāpōhaku-luahine, are said to be old women transformed into stones:

> When you leave the bridge of Waiawa, for Honolulu, go up and then down an incline. The hill standing on the seaward side is Nuku-o-ka-manu. The next incline is Waiawa. Go up the ascent till you reach the top and above that, about two chains from the road you will find the stones. The names of these royal stones were Kahoaiai (also the name of an 'ili in Waiawa), Waiawakalea, Piliaumoa, Kahe'ekuluaikamoku, all chiefesses. Their four servants were Nohoana, Kikaeleke, Piliamo'o, Nohoanakalai. These were the guardians of the trail [Ka Loea Kalaiaina 1899 in Sterling and Summers 1978:6].

A *heiau* (temple) was situated on the border or Manana and Waiawa calle Puokiki, the remains of which are still extant. Puoiki Heiau (State Inventory of Historic Places [SIHP] Site 50-80-09-00121) was reported as destroyed by McAllister (1933:105), but was located by Goodman

and Nees (1991) during an archaeological inventory survey. The *heiau* is located on a prominent ridge north of the confluence of Waiawa and Mānana streams, roughly two kilometers south of the project area. Petroglyphs and habitation features are also present.

Historical Land Use

Beginning in 1811, Kamehameha I commenced intensive sandalwood logging on O'ahu. The trade was strictly under the control of the *ali'i* (chiefly class) and harvesting was conducted by the *maka'āinana* (commoners). After a famine in 1821 due partially to the intensive logging, Kamehameha reversed the order to log so that the *maka'āinana* were not overworked to the extent that farming was neglected (Cottrell 2002:10–11). He also instituted conservation measures that spared young trees. Upon Kamehameha's death in 1819, Liholiho (Kamehameha II) opened the sandalwood trade to his *ali'i*, which caused the island to revert to intensive harvesting.

The sandalwood harvesting had negative ecological consequences for the land, which were exacerbated by domesticated animals introduced to the islands. Reverend Serano Bishop spent time as a child in 'Ewa when his family moved from Kailua in 1836. His father, Artemas Bishop, was stationed at 'Ewa Church in Waiawa. He wrote, "My father's cows were the first cattle that had ever run on the Ewa uplands. Waiawa Valley above us lay knee deep with the richest of grass, where our cows rioted" (Bishop 1921:156). He recalled the dramatic changes that occurred in the first half of the nineteenth century:

> Our family made repeated trips to the home of Rev. John S. Emerson at Waialua during those years. There was then no road save a foot path across the generally smooth upland. We forded the streams. Beyond Kipapa gulch the upland was dotted with occasional groves of Koa trees. On the high plains the ti plant abounded, often so high as to intercept the view. No cattle then existed to destroy its succulent foliage. According to the statements of the natives, a forest formerly covered the whole of the then nearly naked plains. It was burned off by the natives in search of sandalwood, which they detected by its odor burning [Bishop 1921:158].

In the nineteenth century, disease and famine impacted the population of the 'Ewa district. The population was recorded at 4,015 people in the 1831–1832 census; four years later the population dropped to 3,423 (Schmitt 1973:9, 36). Regarding a famine that affected Waiawa's neighboring Waipi'o Ahupua'a, 'Ī'ī wrote:

> Here is a wonderful thing about the land of Waipio. After a famine had raged in that land, the removal of new crops from the taro patches and gardens was prohibited until all of the people had gathered and the farmers had joined in thanks to the gods. This prohibition was called kapu 'ohi'a because, while the famine was upon the land, the people had lived on mountain apples ['ohi'a 'ai], ti, yams, and other upland foods. On the morning of Kane an offering of taro greens and other things was made to remove the 'ohi'a prohibition, after which each farmer took of his own crops for the needs of his family ['Ī'ī 1959:77].

Reverend Lowell Smith, who was stationed at 'Ewa Church and preceded Reverend Artemas Bishop, wrote of the devastation caused by disease:

> The people of Ewa are a dying people. I have not been able to obtain an exact count of all the deaths & births since the last general meeting. But my impression is that there have been as many as 8 or 10 deaths to one birth. I have heard of but 4 births on Waiawa during the year, & all of these children are dead. I have attended about 20 funerals on that one land, & 16 of these were adults. [Ewa Station Report 1836 in Hammatt 2010:83]

There were no *kuleana* awards granted in project area. In Waiawa, *kuleana* were granted along Waiawa Stream, which included *pahale* (house lot), *lo'i,* and *kula* (dry agricultural) land. The entire *ahupua'a* of Waiawa, less the *kuleana* land parcels, was Crown Land awarded as LCA

7713, Apana 46 to Victoria Kamāmalu, sister to King Kamehameha IV and V. After her death, the land was passed on to her father, followed by her sister; then Lot Kapuāiwa (Kamehameha V) followed by his half-sister, Ruta Keʻelikōlani; then finally Bernice Pauahi Bishop in 1883. The Bernice Pauahi Bishop Estate was left to Kamehameha Schools, who currently owns a large portion of the *ahupuaʻa* (Hammatt 2010:97).

At the end of the nineteenth century, the *loʻi* in the *makai* portion of Waiawa were converted to rice fields, while *mauka* lands were under cultivation for pineapple and sugar (Tulchin et al. 2009:17; Conde and Best 1973:313–317). A map from 1902, shown in Figure 4, indicates pineapple was being cultivated in the project area. This land is also demarcated as grazing land (outlined in orange on Figure 4). Oʻahu Sugar company subleased a large portion of Waiawa, though the WWF land was under Dole's Hawaiian Pineapple Company. Dole operated a cannery and associated camp in Waiawa (CSH 1997:2).

The sugar industry had vastly expanded throughout the Hawaiian Kingdom and the need for field laborers led to contract labor laws. In 1852, Chinese workers began arriving in the islands on five-year contracts that paid $3 a month plus room and board (Coman 1903:495; Maclennan 1997). Many of these laborers remained in the islands as merchants or rice farmers after their contracts expired (Coman 1903:35; Tulchin et al. 2009:43).

In 1913, the Waiahole Water Company formed and began diverting water from Windward Oʻahu to the Central Plateau. The ditch and tunnel system was completed in 1916, a portion of which passes through the WCF property. This portion is known as the Waiāhole Ditch, which is designated SIHP Site 50-80-09-02268; the ditch can be seen on a historical topographic map in Figure 5. Following the completion of the new irrigation tunnels and ditches, pineapple fields were converted to sugarcane fields (CSH 1997:2).

At the beginning of WWII, the Waiawa Military Reservation was established in Waiawa at the future site of the WCF (see Figure 5). The area was used as a training course for tanks and personnel and for storage of munitions and supplies (Goodman et al. 1991:102). After the war, the training center became a communications center as part of the Army Command and Administrative Network (ACAN), which provided the Army with a global radio communications system. Extant structures are designated SIHP 50-80-09-02272.

The Oahu Sugar Company operated until the 1990s, though fields were gradually encroached on by residential developments. A historical aerial image from 1952 in Figure 6 shows the WCF property adjacent to sugarcane fields.

The State of Hawaiʻi acquired the current WCF property in 1985 from the federal government under a 30-year quitclaim deed. The site was converted into a 120-bed, minimum-security correctional facility.

Previous Archaeological Research

Several archaeological investigations have been conducted in the immediate vicinity of the project area. To date, no human burials have been identified nearby; a majority of the identified historic properties near the WCF are related to historic period agriculture and military use. Previous archaeological investigations and findings are summarized in Table 2. The following section focuses on projects conducted within approximately 500 meters of the project area in order to compare previous findings of land use. Figure 7 presents the locations of previous archaeological studies and select historic properties; additional historic property locations are displayed on Figures 8 and 9. All site numbers follow SIHP Site 50-80-09-.

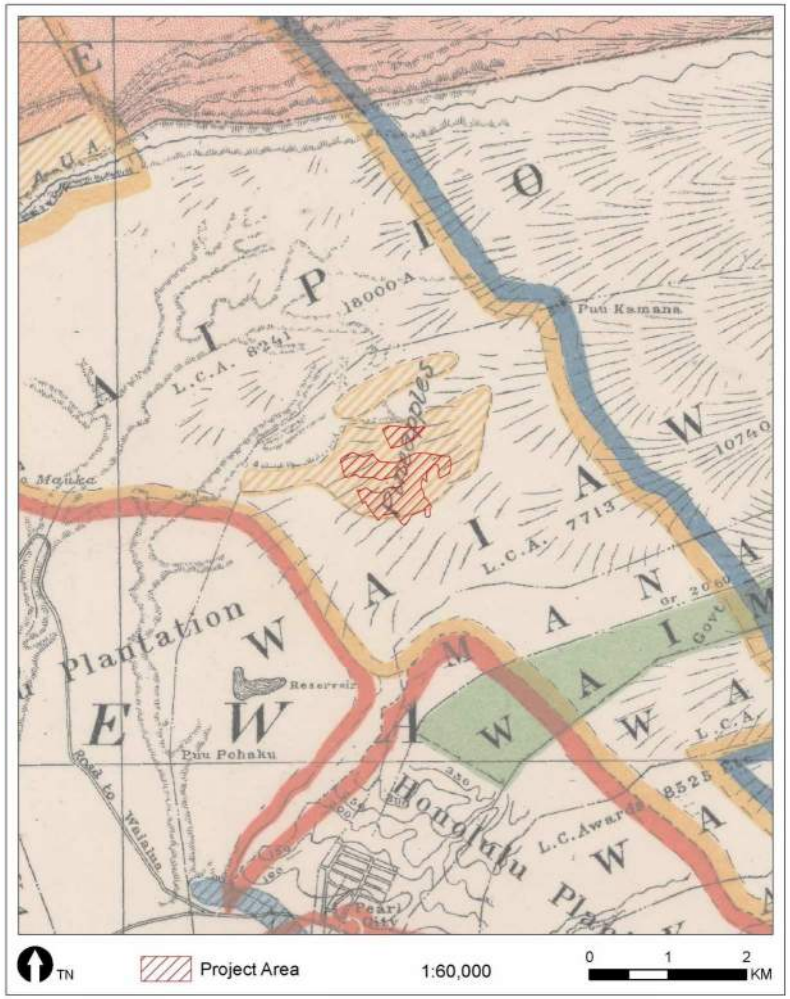


Figure 4. Portion of 1902 Map Showing the Project Area Located within Pineapple Fields (Donn 1902).

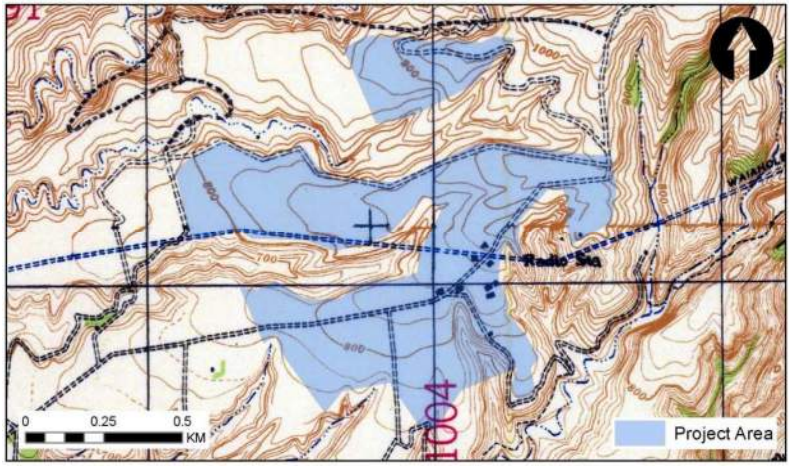


Figure 5. Portion of 1943 Topographical Map Showing Military Buildings and Waiahole Ditch in the Project Area (USACE 1943).

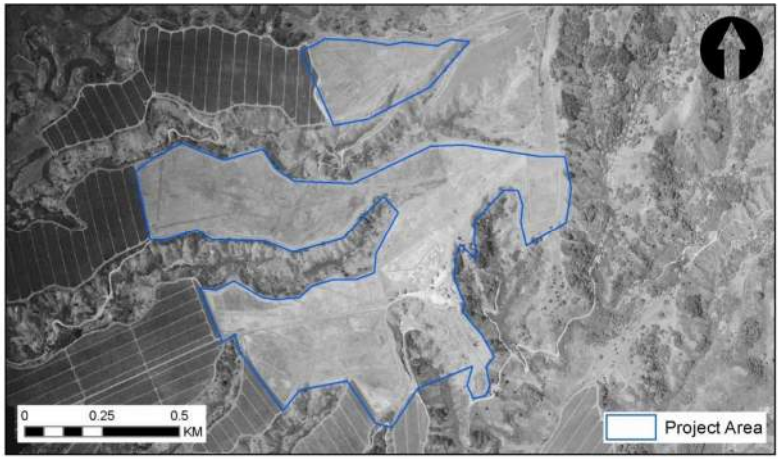


Figure 6. 1952 Aerial Photograph Showing Military Reservation Adjacent to Sugarcane Fields (USGS 1952).

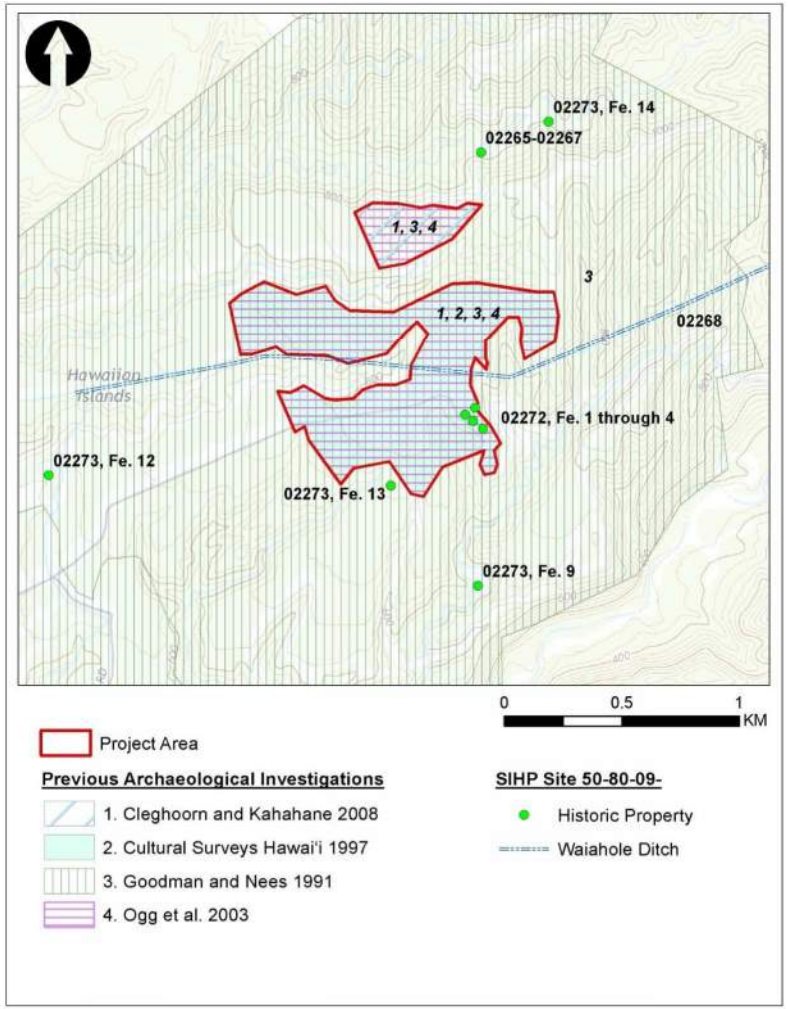


Figure 7. Previous Archaeological Investigations Near the Project Area.

Table 2. List of Previous Archaeological Studies and Findings Near the Project Area.

Reference	TMK (1)	Nature of Study	SIHP* No. 50-80-09-	Site Description
Goodman and Nees 1991	9-4-006:011, 026; 9-6-004:001, 004, 016; 9-6-005:001–009, 013, 014/ 3,600 Acres east of H-2 Fwy	Archaeological Reconnaissance and Inventory Survey	02265	Historic period rock mounds, terraces, fire pit, and retaining wall
			02266	Historic period terraces and alignments
			02267	Historic period terrace
			02268	Waiāhole Ditch
			02270	Road/Railway system
			02272	Military buildings
			02273	Irrigation complex
Cultural Surveys Hawai'i 1997	9-4-006:011/ WCF	Archaeological Assessment	-	No significant findings.
Ogg et al. 2003	9-6-004:024	Archaeological Assessment	02273	Irrigation complex
Cleghorn and Kahahane 2008	9-4-006:012/ WCF	Archaeological Testing and Sampling	-	No significant findings.

*SIHP (Statewide Inventory of Historic Places)

In 1991, an archaeological reconnaissance and inventory survey was conducted on 3,600 acres in Waiawa and Waipi'o Ahupua'a by the Bishop Museum (Goodman and Nees 1991). Seventeen historic properties were identified: Sites 01469 to 01472, and 02261 to 02273. Four pre-Contact sites were identified, which included a rockshelter complex, a mound complex, a trail, and a lithic scatter, all of which are well over 500 meters from the current project area. The remaining 13 sites were associated with historic period plantation and WWII military infrastructure. Six of the sites identified by Goodman and Nees (1991) are in or near the current project area, which are discussed below.

Sites 02265 through 02267 are northeast of Parcel 012. The sites are clustered and include historic period rock mounds, terraces, alignments, a fire pit, and a stream retaining wall.

Site 02268 is Waiāhole Ditch, which was completed in 1916. The ditch traverses Parcel 011 of the project area.

Site 02270 is an irrigation complex comprising 35 features. Of the 35 features, Features 9, 12, and 13 (reservoirs) and Feature14 (well) are near the project area.

Site 02273 is a road/railway system comprising 44 features. A portion of the site map from the archaeological report (Goodman and Nees 1991) is shown in Figure 8. Of these 44 features, Features 10, 13, 15, and 43, all of which are roads, are in the project area.

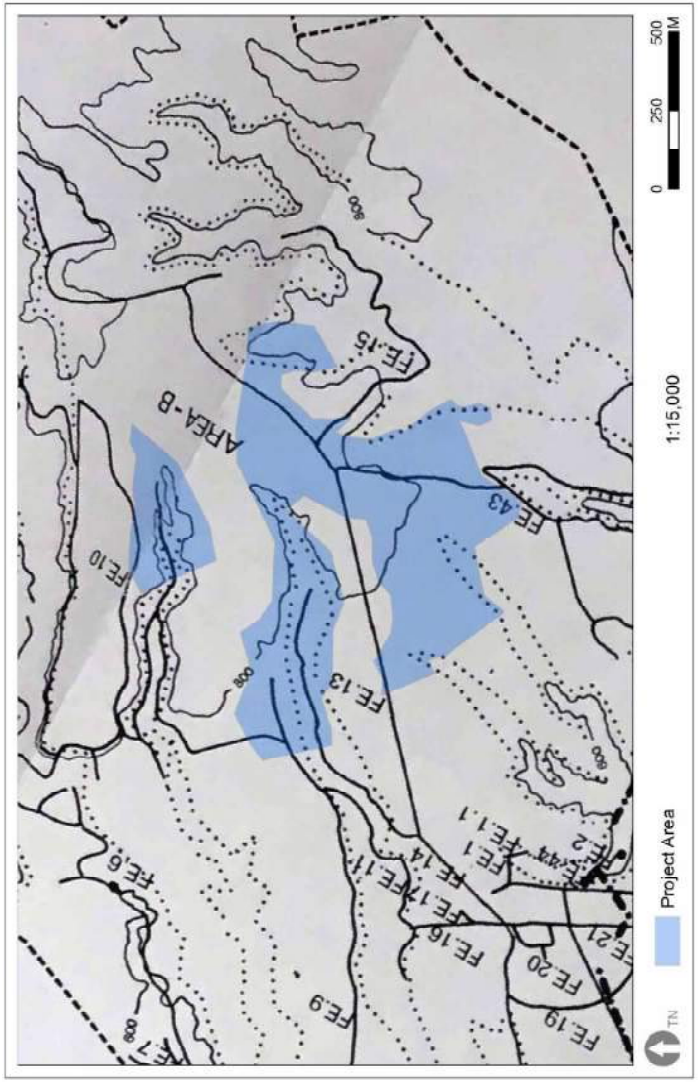


Figure 8. Location of Site 50-80-09-02270 Features in the Project Area (Goodman and Nees 1991: Figure 20).

Subsequent work in the project area has in included archaeological assessment (CSH 1997; Ogg et al. 2003) and archaeological sampling and testing (Cleghorn and Kahahane 2008). No historic properties were identified.

Previous Cultural Impact Assessment

In 2003 a cultural impact assessment was prepared that addressed proposed development of 3,600 acres of Waiawa and Waipiʻo (Bushnell et al. 2003). Hunting was a land use noted in the vicinity of the WCF. The following is a statement form the report that mentions the use of the WCF access road:

> According to several hunters, one of the best ways to access the hunting grounds was from what is now referred to as the Waiawa Prison Road (Figure 9). Prior to the prison, the military had several big antennas there (personal communication w/ R. Santiago, October 15, 2002). Hunters considered this a good access route because it got them as close as possible to the hunting grounds. Another route which was historically used to access hunting grounds in Waiawa was up Waiawa gulch where the present day Pearl City Industrial Park is. One hunter claimed that following the opening of the Waiawa Prison in 1988, access became too difficult in the area and he gave up hunting there. Hunters in their sixties expressed concern over access to hunting areas particularly for the younger generations who cannot experience the freedom the older had in their days. Younger hunters are weary that too much development closer to the upland valleys known as pig habitat may both push the pigs away and open up the area too much [Bushnell et al. 2003].

ASSESSMENT OF CULTURAL IMPACTS

The proposed Waiawa Correctional Facility (WCF) Special Use Permit (SUP) and Plan Review Use (PRU) Applications project is located in Waiawa Ahupuaʻa, ʻEwa District, Island of Oʻahu, Hawaiʻi (TMKs: [1] 9-6-005:011 and 012) (see Figure 1). The project proponent is the DPS and the land owner is the State of Hawaiʻi. The WCF is located within the State Land Use Agricultural District therefore a SUP is required. It is also with in the City's F-1 Military and Federal Preservation zone, which requires an approved PRU. Securing these two entitlements would enable the WCF to be in compliance with applicable State and City land use laws.

Historical, cultural, and archaeological background research was conducted in order to evaluate any potential effect on historic properties, traditional cultural places, or traditional cultural practices in the project area, and to recommend mitigation of any adverse effect, if warranted. This work was carried out in accordance with Hawaii Revised Statutes (HRS) Chapter 6E, and Title 13 of the Hawaii Administrative Rules (HAR), Subtitle 13 (State Historic Preservation Division Rules), Chapter 275 (Rules Governing Procedures for Historic Preservation Review for Governmental Projects Covered Under Sections 6E-7 and 6E-8, HRS). To date, no traditional cultural places or practices or archaeological sites have been identified in the project area.

Background research indicates that the project area was likely used for subsistence resource and raw material gathering during the pre-Contact and early historic periods. Historical land use in the area included pineapple and sugarcane cultivation followed by military use beginning in the mid-20th century. Historic properties in the project area all date to the early and mid-20th century and include SIHP 02268 (Waiāhole Ditch), 02273 (historic period road/railway system), and 02272 (military buildings).

Pineapple and sugarcane cultivation during the historic period, followed by episodes of grading, leveling, and filling associated with military and WCF use most likely destroyed or buried any evidence of both pre- and post-Contact land use. Therefore, it is recommended that the effect determination for this project is "no historic properties affected." No further work (such as archaeological monitoring) is recommended; however, in the event that historic

properties (e.g., human remains) are found during project activities, it is recommended that the contractor stop work immediately, protect the find, and notify the SHPD.

REFERENCES

Andrews, Lorrin
1922 *A Dictionary of the Hawaiian Language*. Revised by Henry H. Parker. Board of Commissioners of Public Archives, Honolulu.

Bishop, Serano E.
1921 "Early Missionary Life in Hawaii." *The Mid-Pacific 20:*155–159.

Bushnell, K. W. David W. Shideler, and Hallett H. Hammatt
2003 *A Cultural Impact Assessment for 3,600 acres in Waiawa and Waipʻo Ahupuaʻa, Oʻahu (TMK 9-4-06:11, 9-6-04:4 and 9-6-5:3).* Cultural Surveys Hawaiʻi, Kailua.

Chinen, Jon
1958 *The Great Māhele: Hawaii's Land Division of 1848*. University of Hawaiʻi Press, Honolulu.

Cleghorn, Paul and Elizabeth L. Kahahane
2008 *Archaeological Assessment of the Proposed Temporary Program Structure at the Waiawa Correctional Facility, Waiawa Ahupuaʻa, ʻEwa District, Oʻahu (TMK [1] 9-4-006:012).* Prepared by Pacific Legacy, Inc., Kailua.

Coman, Katharine
1903 The History of Contract Labor in the Hawaiian Islands. *Publications of the American Economic Association* 4:1–61.

Condé, Jesse C. and Gerald M. Best
1973 *Sugar Trains: Narrow Gauge Rails of Hawaii*. Glenwood Publishers, Felton.

Cottrell, Christopher A.
2002 *Splinters of Sandalwood, Islands of ʻIliahi: Rethinking Deforestation in Hawaiʻi, 1811 1843*. Unpublished Master's Thesis, University of Hawaiʻi, Mānoa.

Cultural Surveys Hawaiʻi (CSH)
1997 *Archaeological Assessment of a portion of the Waiawa Correctional Facility, ʻEwa, Oʻahu, Hawaiʻi (TMK 9-06-05:11).* Letter Report to Mr. Earl Matsukawa dated 24 September 1997. Cultural Surveys Hawaiʻi, Kailua.

Donn, John M.
1902 *Oahu, Hawaiian Islands* [Map]. Archived at University of Hawaiʻi at Mānoa Library. G438.2.02. Digital map available at http://magis.manoa.hawaii.edu/gis/georeferenced/index.html. Accessed 28 March 2019.

Ewa Station Reports
1836 *Ewa Station Reports for 1854*. Microfilm at Hawaiian Mission Children's Museum, Honolulu.

Foote, Donald E., Elmer L. Hill, Sakuichi Nakamura, and Floyd Stephens
1972 *Survey of the Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii.* U.S. Department of Agriculture, U.S. Government Printing Office, Washington D.C.

Fornander, A.
1917 "History of Kualii." In *Fornander Collection of Hawaiian Antiquities and Folklore* Vol. IV, Part II:364–434. Memoirs of the Bernice P. Bishop Museum, Bishop Museum Press, Honolulu.

Giambelluca ,T.W., Q. Chen, A.G. Frazier, J.P. Price, Y-L Chen, P-S Chu, J. Eischeid, and D. Delparte
2013 *The Rainfall Atlas of Hawaiʻi*. http://rainfall.geography.hawaii.edu. Accessed 28 March 2019.

Goodman, Wendy and Richard C Nees
1991 *Archaeological Reconnaissance and Inventory Surveys of 3,600 Acres in Waiawa Ahupuaʻa, ʻEwa, Oʻahu*. Prepared by the Public Archaeology Section, Applied Research Group, Bernice Pauahi Bishop Museum, Honolulu.

Hammatt, Hallett H.
2010 *Archaeological Inventory Survey of Construction Phase I for the Honolulu High-Capacity Transit Corridor Project, Honouliuli, Hōʻaeʻae, Waikele, Waipiʻo, Waiawa, and Manana Ahupuaʻa, ʻEwa District, Island of Oʻahu TMK: [1] 9-1, 9-4, 9-6, 9-7 (Various Plats and Parcels).* Prepared by Cultural Surveys, Hawaii, Inc., Kailua.

Hammatt, Hallett H. and David W. Shideler
2012 *Archaeological Monitoring Plan for the Waiau Area Sewer Rehabilitation/Reconstruction Project, Waiau and Waimalu Ahupuaʻa, ʻEwa District, Oahu Island TMK: 111 9-8-005, 006, 008, 020 and 021.* Prepared by Cultural Surveys, Hawaii, Inc., Kailua.

Handy, E.S. Craighill
1940 "The Hawaiian Planter." *Bishop Museum Bulletin* Volume 1, No. 161. Bernice Pauahi Bishop Museum, Honolulu.

Handy, E.S. Craighill and Elizabeth G. Handy
1991 *Native Planters in Old Hawaii: Their Life, Lore, and Environment*. Bernice Pauahi Bishop Museum, Bulletin 233. Bishop Museum Press, Honolulu.

ʻĪʻī, John Papa
1959 *Fragments of Hawaiian History*. Bernice Pauahi Bishop Museum Special Publication 70, Bishop Museum Press, Honolulu.

Ka Loea Kalaiaina
1899 "Na Wahi Pana o Ewa." *Ka Loea Kalaiaina* June 10, July1, p.7 and July 29, p. 17, Oct. 7.

Maclennan, Carol A.
1997 Hawaiʻi Turns to Sugar: The Rise of Plantation Centers, 1860 – 1880. *The Hawaiian Journal of History* 31:97–125.

Manu, Moses
1885 "The Legend of Keaomelemele". *Kuokoa* Jan. 17, Feb. 7, Mar. 28, Apr. 18, 25, May 9.

McAllister, John G.
1933 *Archaeology of Oahu*. Bishop Museum Press, Honolulu.
2012 *Archaeological Monitoring Plan for the Waiau Area Sewer Rehabilitation/Reconstruction Project, Waiau and Waimalu Ahupuaʻa, ʻEwa District, Oahu Island TMK: 111 9-8-005, 006, 008, 020 and 021.* Prepared by Cultural Surveys, Hawaii, Inc., Kailua.

Pukui, Mary K. and Samuel H. Elbert,
1986 *Hawaiian-English Dictionary*. University of Hawaii Press, Honolulu.

Pukui, Mary Kawena, Samuel H. Elbert, and Esther T. Mookini

1974 *Places Names of Hawaii*. Revised & Expanded Edition. University of Hawaii Press, Honolulu.

Schmitt, Robert C.
1973 *The Missionary Censuses of Hawai'i.* Pacific Anthropological Records No. 20. Bernice Pauahi Bishop Museum, Honolulu.

Sterling, Elspeth, and Catherine C. Summers
1978 *Sites of Oahu*. Bishop Museum Press, Honolulu.

Taxation Maps Bureau
1941 *First Division, Zone 9, Section 6, Plat 05* [Tax Map]. Taxation Maps Bureau, Honolulu.

Tulchin, Jon, Kathryn Whitman, and Hallett H. Hammatt
2009 *Archaeological Inventory Survey for a Trunk Sewer Line Alignment as part of Off-Site Improvements for the Proposed Koa Ridge Makai Community Development, Waipi'o & Waikele Ahupua'a, 'Ewa District, O'ahu TMK: [1] 9-4-002:024, [1] 9-4-005: por. 074, [1] 9-4-006: por.005,[1]9-4-007,011,013,014,015,017,020,026,160,& [1] 9-4-096: 149.* Prepared by Cultural Surveys, Hawaii, Inc., Kailua.

U.S. Army Corps of Engineers (USACE)
1943 *Kaukonahua* [map]. Scale 1:20,000. Available online at https://evols.library.manoa.hawaii.edu/handle/10524/18904. Accessed 10/9/2020.

U.S. Department of Agriculture (USDA)/ Natural Resources Conservation Service (NRCS) Soil Survey Center
2015 *Soil Survey Geographic (SSURGO) database for Island of Hawaii Area, Hawaii* [data layer]. U.S. Department of Agriculture, Natural Resources Conservation Service, Fort Worth.

U.S. Geological Survey (USGS)
1952 *Waiawa* [aerial image]. Date: 19520403. Flight Line No: 022. ID: 2363. http://magis.manoa.hawaii.edu/remotesensing/GeoserverFiles/ShpFiles/Oahu/022/jpegs/2363. Accessed 10/06/2020.
2017 *Waipahu Quadrangle, Hawaii--City and County of Honolulu, Island of Oahu, 7.5 minute series (topographic)* [Map]. U.S. Geological Survey, Reston.

APPENDIX J - Groundwater Hydrology Assessment

Groundwater Hydrology Assessment of the Waiawa Correctional Facility

Prepared for:

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

Prepared by:

Tom Nance Water Resource Engineering
560 N. Nimitz Hwy. - Suite 213
Honolulu, Hawaii 96817

June 2019

Table of Contents

	Page
Introduction	1
Description of the Groundwater Occurrence Beneath and Downgradient of the Waiawa Correctional Facility	1
The U. S. Navy's Waiawa Shaft and its Delineated Zone of Contribution	1
Configuration of the Shaft	1
Vulnerability of the Shaft to Contamination	1
Reason for the Delineation of the Shaft's Zone of Contribution	6
Delineation of the Zone of Contribution	6
Pumping Rate, Qw of 22 MGD	7
Depth of Groundwater Moving to the Shaft of 415 Feet	7
Direction of Groundwater Flow from 25° East of North	7
WCF's Potential Impacts on Groundwater Within and Outside the Zone of Contribution of the Navy's Waiawa Shaft	9
Use of Water from Waiahole Ditch	9
Potential Impact of the Treatment, Storage, and Backwash Disposal of WCF's Drinking Water System	14
Potential Impact of the Generation, Treatment, and Irrigation Reuse of Wastewater Generated at the WCF	14
Potential Impact of Irrigation with Untreated Ditch Water	19
Summary of Findings, Conclusions, and Recommendations	19
References	

List of Figures

No.	Title	Page
1	Location of the Waiawa Correctional Facility in the Waipahu-Waiawa Aquifer System	2
2	Reported Pumpage of Wells in the Waipahu-Waiawa Aquifer System	3
3	Pumpage of BWS Wells in the Waipahu-Waiawa Aquifer System	4
4	Pumpage of the Navy's Waiawa Shaft from January 1986 through November 2018	5
5	Zone of Contribution for the Navy's Waiawa Shaft	8
6	Sugarcane Fields Formerly Irrigated by Oahu Sugar Company's Pump 6 Well Battery	10
7	West Perimeter of the ZOC Crossing the Waiawa Correctional Facility	11
8	WCF Water System Schematic	12
9	Comparison of WCF's Corrected Reported Use with its Authorized Use	13
10	Portion of the Raw Water Pumped to the Memcor Filters that Becomes Filter Backwash	15
11	Monthly Average Wastewater Inflow to the Treatment Plant at the WCF, January 2017 to March 2019	16
12	Comparison of the Influent Flowrate to the R-2 Effluent Pumped for Irrigation	17
13	Comparison of Drinking Water Delivered into the Distribution System and Wastewater Delivered to the Extended Aeration Treatment Plant	18

Introduction

The Hawaii Department of Public Safety has been notified by the Honolulu Department of Planning and Permitting that it must comply with the Plan Review Use (PRU) and State Special Use Permit requirements to bring the Waiawa Correctional Facility (WCF) into compliance. In support of the PRU application, this report provides a groundwater hydrology assessment of the potential effects of the WCF on the Zone of Contribution (ZOC) of the US Navy's Waiawa Shaft. A portion of the WCF site is within the ZOC.

Description of the Groundwater Occurrence Beneath and Downgradient of the Waiawa Correctional Facility

The WCF overlies a portion of the largest and most important groundwater aquifer on the Island of Oahu. It is known as the Waipahu-Waiawa Aquifer System and it encompasses an area of about 60 square miles (Figure 1). Groundwater in this aquifer system occurs as a robust basal lens in contact with saline groundwater beneath it and with seawater offshore. Beneath the WCF site, the top of the basal lens is approximately 20 feet above sea level based on measurements in Well Nos. 2658-004 and -005 which are located just outside the entrance to the WCF.

The State Commission on Water Resource Management (CWRM), the entity with regulatory authority over the development and use of groundwater, has designated the Waipahu-Waiawa Aquifer System as a Groundwater Management Area (GWMA) and has established its sustainable yield at 104 million gallons per day (MGD). Water Use Permits (WUPs) are required to operate wells in the GWMA. Currently, the CWRM has issued 50 WUPs for a total authorized use of 85.465 MGD in the Waipahu-Waiawa Aquifer System. As shown on Figure 2, actual use decreased dramatically with the closing of Oahu Sugar Company in the early 1990s and has averaged about 50 MGD over the last 15 years.

The Aquifer System is a major source for the Honolulu Board of Water Supply (BWS). It has 22 WUPs with a total authorized use of 54.702 MGD. Its pumpage over the last 15 years has been relatively constant and has averaged about 33 MGD (Figure 3). Use of the Navy's Waiawa Shaft, which has an authorized use of 14.977 MGD, has averaged 13.7 MGD over the last 15 years (Figure 4).

The U.S. Navy's Waiawa Shaft and its Delineated Zone of Contribution

Configuration of the Shaft. The U.S. Navy's Waiawa Shaft, also identified as State Well No. 2558-010, was completed in 1951. It consists of a 30° inclined shaft from ground level down to a pump room, an unlined pump sump excavated to 20 feet below sea level, and a 1700-foot long infiltration tunnel which runs directly to the north.

Vulnerability of the Shaft to Contamination. As an infiltration tunnel, the Shaft's particular vulnerability to contamination was dramatically illustrated by the trends of the salinity of its pumped water in response to irrigation of sugarcane fields nominally upgradient of the Shaft (from Oki et al, 1990):

- Water pumped from Oahu Sugar Company's (OSCO) Pump 6, a battery of 14 wells manifolded together (State Nos. 2459-001 to -014), had been irrigating fields inland of Waiawa Shaft for about 50 years prior to completion of the Shaft in 1951.

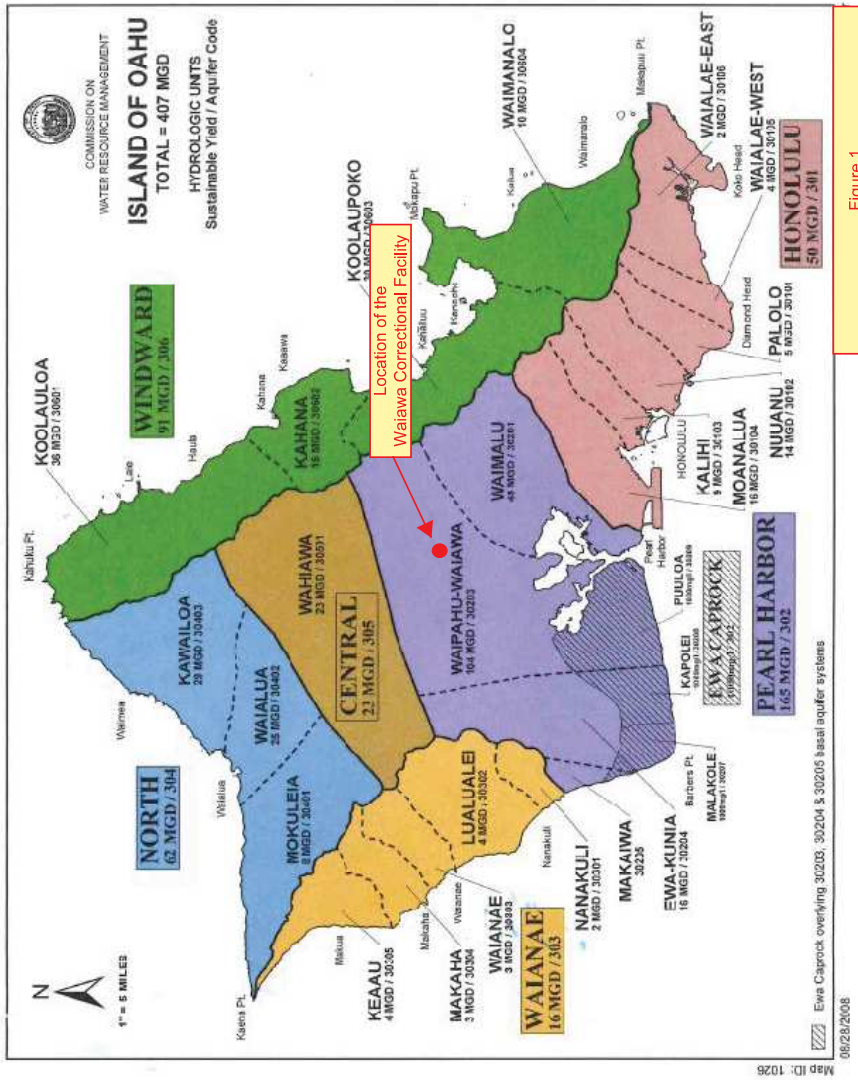


Figure 1
Location of the Waiawa Correctional Facility in the Waipahu-Waiawa Aquifer System

Figure 2. Reported Pumpage of Wells in the Waipahu-Waiawa Aquifer System

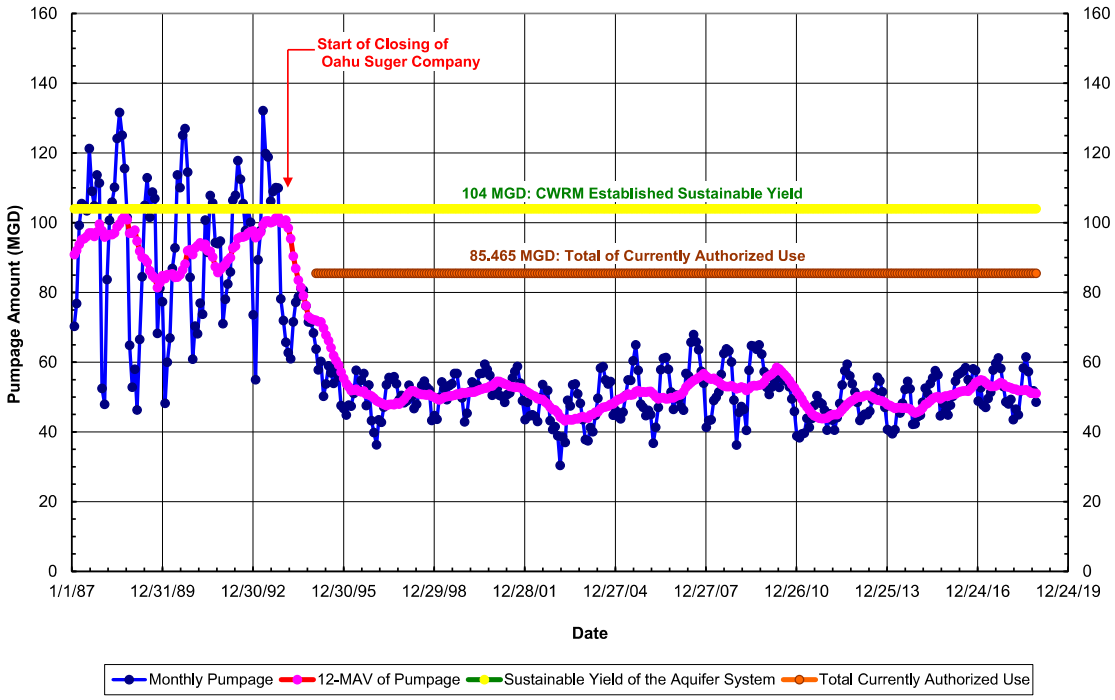


Figure 3. Pumpage of BWS Wells in the Waipahu-Waiawa Aquifer System

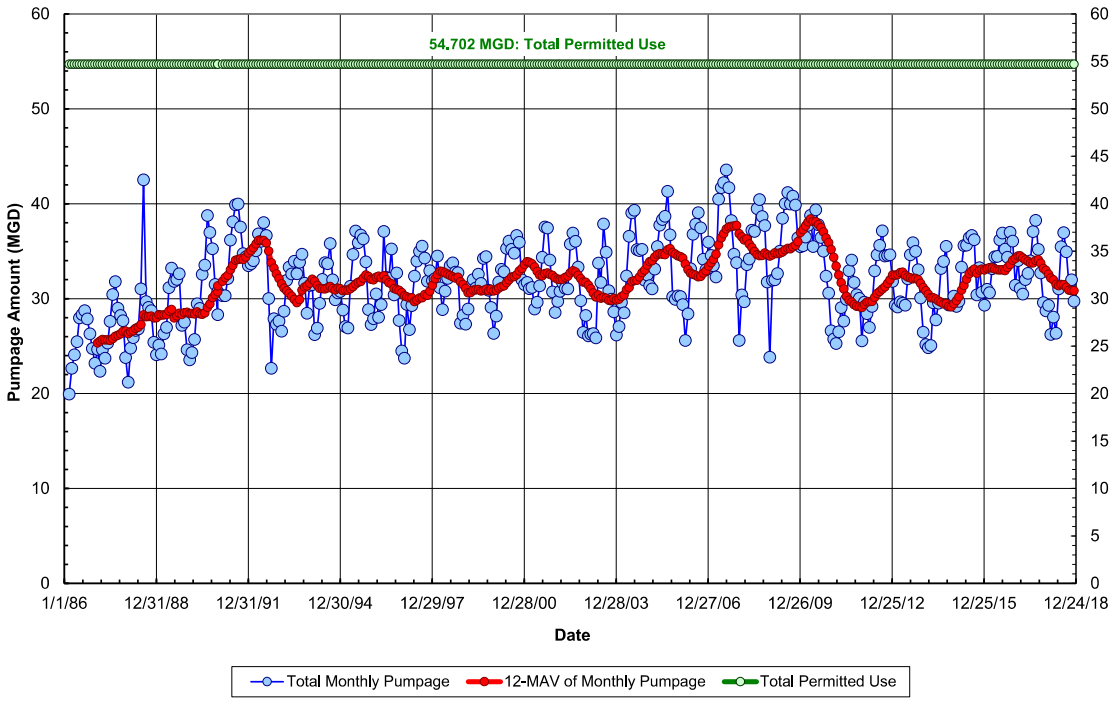
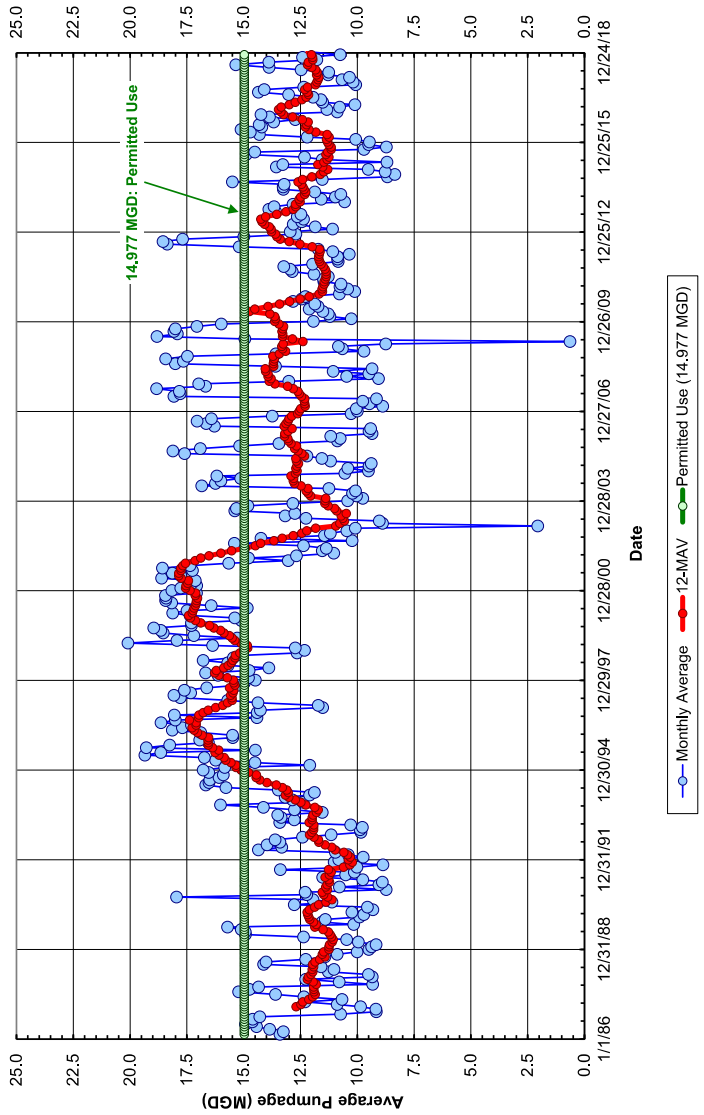


Figure 4. Pumpage of the Navy's Waiawa Shaft from January 1986 through November 2018



- Over that 50-year period, chlorides of the Pump 6 wells were generally in the range of 200 to 400 milligrams per liter (MG/L).
- Up until the mid-1960s, chlorides of the water pumped from the Shaft were generally in the range of 70 to 100 MG/L.
- As the basal lens tapped by the Pump 6 well battery, the Waiawa Shaft, and other wells began to shrink in response to increased pumping in the 1960s, chlorides in the very deep Pump 6 wells (to depths between 540 and 700 feet below sea level) increased to in excess of 1000 MG/L.
- From the mid-1960s to the end of the 1970s, chlorides in the Waiawa Shaft Steadily increased, reaching 280 MG/L at the end of 1978.
- OSCO ended its use of Pump 6 in 1983 when the sugarcane fields being irrigated with its water were abandoned.
- Since 1983, chlorides of the Shaft decreased to 40 to 50 MG/L, a lower level than when the Shaft was initially put into service.

Reason for the Delineation of the Shaft's Zone of Contribution. In 1987, Gentry-Pacific Ltd. petitioned the State Land Use Commission (LUC) to reclassify 1395 acres of land in Waiawa from Agriculture to Urban. Most of this land was former Oahu Sugar Company (OSCO) fields located around and upgradient of the Navy's Waiawa Shaft. Gentry's intent was to develop a master planned residential community. Based on the salinity history of the Shaft in response to OSCO's irrigation with water from Pump 6 and on the subsequent finding of DBCP and TCP in the Shaft's water that was attributed to pineapple cultivation, concern was raised by the Department of Health (DOH), the State Office of Planning, and the U.S. Navy regarding potential contamination of the Shaft's water by the proposed Gentry project.

In granting Gentry's request for the redesignation of the land from Agriculture to Urban, the LUC included a condition that a study funded by the U.S. Navy be conducted regarding the potential for groundwater contamination resulting from the land's urbanization. The study was to be completed prior to any development or construction on the Gentry site. That Navy-funded study was undertaken by the UH Water Resources Research Center in 1987 and its results were published in 1990 (Oki et al, 1990).

Another condition imposed by the LUC was for DOH to define the area of the Gentry project site which does not contribute to the Zone of Contribution (ZOC) of water which is pumped by the Shaft. To do this, DOH formed an Ad Hoc Committee of technical experts from the U.S. Geologic Survey, University of Hawaii, BWS, State Department of Land and Natural Resources, and the Safe Drinking Water Branch (SDWB) of DOH. The methods and results of this work were presented in Safe Drinking Water Branch (1990) and are described in the section following.

Delineation of the Zone of Contribution. The three equations used by the Ad Hoc Committee to construct the Shaft's parabolic-shaped ZOC were as follows:

(1) Downstream Stagnation Point, r:

$$r = \frac{Qw \times 5280}{2\pi \left(b/41h\right) Q/L}$$

(2) Maximum Width of the ZOC, W:

$$W = 2\pi r$$

(3) Perimeter of the ZOC

$$\frac{Y}{X} \equiv \pm \tan\left[\frac{2\pi \times Q/L \times b \times y}{41h \times Qw}\right]$$

where the argument of the tangent is in Radians

Parameter definitions and values used in these equations were as follows:

- b = depth of the groundwater flow moving to the Shaft in feet, taken to be 415 feet based on a mixing cell model;
- h = freshwater head at the Shaft, taken to be 18 feet;
- Qw = pumping rate in MGD, taken to be 22 MGD; and
- Q/L = Groundwater flowrate in the aquifer in MGD/mile, taken to be 47 MGD/1.5 miles based on Hufen et al, 1980

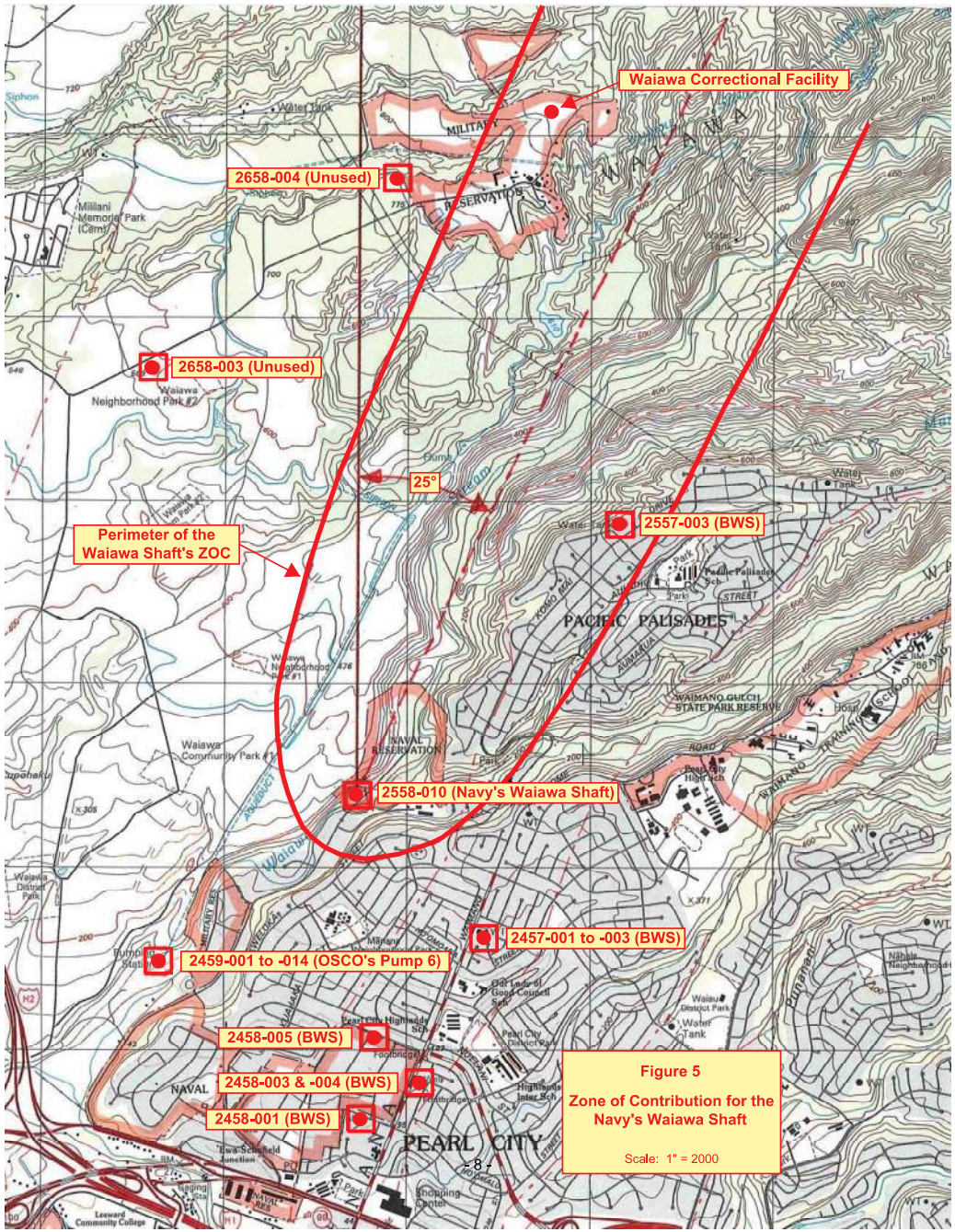
The foregoing equations and parameter values allow the calculation of the parabolic-shaped ZOC, but not its orientation to the direction of groundwater flow. Based on a USGS groundwater flow model that was then being developed; this direction was taken to be from 25 degrees east of north. Figure 5 depicts the resulting perimeter of the ZOC. Also shown are BWS wells in the vicinity, the location of the no longer used OSCO Pump 6 well battery, and two of the four wells developed for the Gentry Waiawa project that remain unused. The west perimeter of the ZOC bisects the hyacinth lagoon at the makai end of the WCF. New development within the ZOC is not prohibited, but it is subject to approval by DOH.

It is instructive to examine the sensitivity of the parameter values used in creating the shape and orientation of the ZOC. The three most critical parameter values are as follows:

- Pumping Rate, Qw, of 22 MGD. The Ad Hoc Committee's report used 22 MGD for the value of Qw based on 18 MGD as the well's "preserved" use, an additional 2 MGD for "emergencies", and another 10 percent for "tolerance". In fact, the Shaft's authorized use has always been 14.977 MGD (not 18 MGD) and the 12-month moving average of pumpage, the Qw value that should be used in the equations, has never exceeded 18 MGD. An earlier, September 2019 version of the Committee report used 18 MGD for the value of Qw. With 22 MGD, the width of the ZOC at the makai end of the WCF site is 5960 feet. At 18 MGD as the value for Qw, the width would be 1000 feet narrower at 4960 feet.

- Depth of Groundwater Moving to the Shaft of 415 Feet. No details of the mixing model used to estimate the depth of flow were given in the Committee report. As a skimming-type well, a shallower depth for the value of b in the equations is quite plausible. If 315 rather than 415 feet was used for this depth, the width of the ZOC at the makai end of the WCF site would be almost 2000 feet wider at 7640 feet for Qw = 22 MGD, encompassing almost all of the WCF. If both the lower pumping rate (Qw = 18 MGD) and the lesser depth of flow (b = 315 feet) were used, the ZOC at the makai end of the WCF would be 6380 feet, moving the west side of the ZOC to bisect the smaller lagoon adjacent to the hyacinth lagoon.

- Direction of Groundwater Flow from 25° East of North. The actual direction of groundwater flow is very sensitive to the anisotropy in lava flows and the amount of inflow from the Wahiawa (high



level) Aquifer System into the mauka end of the Waipahu-Waiawa Aquifer System. Groundwater contours based on measured water level suggest a more north to south flow direction rather than the direction used by the Ad Hoc Committee. Flow direction based on these contours would put the entire WCF in the ZOC. It is also of interest to note that less than 20 percent of the OSCO fields identified as having been irrigated by Pump 6 water, which had caused a sharp increase in Waiawa Shaft salinity in the 1970s, are within the ZOC. The remaining 80 percent of the irrigated fields are to the west of the ZOC (Figure 6 based on Eyre, 1983).

The ZOC as specified in the Ad Hoc Committee report is correctly shown on Figures 5 and 7, the latter taken from Wilson Okamoto & Associates, Inc. (1997) which clearly and correctly shows various onsite uses in the WCF with respect to the ZOC boundary. However, the 2017 Due Diligence Report (HHF Planners, 2017) shows an alternative interpretation which puts the ZOC boundary about 950 feet further to the east and at an angle of about 30° east of north (Concept Site Plans on pages A-3 and A-4 in the Due Diligence Report). This interpretation would move a large portion of the WCF outside of the ZOC. However, no basis for the alternative interpretation is given and it is definitely not correct.

WCF's Potential Impacts on Groundwater Within and Outside the Zone of Contribution of the Navy's Waiawa Shaft

Use of Water from Waiahole Ditch. All of the water used for potable consumption and irrigation at the WCF comes from the Waiahole Ditch which is now owned and operated by the State's Agribusiness Development Corporation (ADC). The CWRM regulates use of Waiahole Ditch water as its own Aquifer System. It has issued 14 WUPs for withdrawals from the Ditch totaling 12.241 MGD for various agricultural and other uses on the leeward side of the Koolau mountain. ADC reports water use for all 14 of these WUPs on a monthly basis to the CWRM, including the use by the WCF.

The WCF's permitted use is 0.150 MGD (equivalent to 150,000 gallons per day [GPD]) based on WUP No. 630 issued on December 28, 2001. The Ditch daylights upstream of the WCF at Adit 8, passes beneath the WCF in a tunnel, and daylights again downstream of the WCF. At this downstream point, water is pumped up to the WCF for potable use after treatment by a Memcor filtration plant and for agricultural irrigation, the latter using the Ditch water without treatment. The schematic on Figure 8 illustrates the water system from its point of withdrawal on Waiahole Ditch to its delivery into the WCF distribution system, with the locations of three flow meters highlighted in red and yellow: (1) on the inflow pumped through the Memcor filter units; (2) on the line delivering the filtered and chlorinated water to the 0.5 million gallon (MG) storage tank; and (3) on the line delivering water from the storage tank into WCF's distribution system.

ADC reports WCF's monthly water use as the amount measured by the Raw Water Flow Meter at the treatment plant. Using data provided for that meter by Pural Water Specialty Co., Inc. and incorporating corrections for obvious meter errors, Figure 9 illustrates this reported use in comparison to WCF's authorized use of 150,000 GPD. The reported use averaged about 60,000 GPD over this period. The problem is that the actual withdrawal from Waiahole Ditch is not measured and the location of the Raw Water Flow Meter does not measure the following amounts of water actually withdrawn for WCF from the Ditch:

- Losses enroute from the point of diversion on the Ditch to the 2,400 Gallon Raw Water Tank near the Memcor treatment plant;

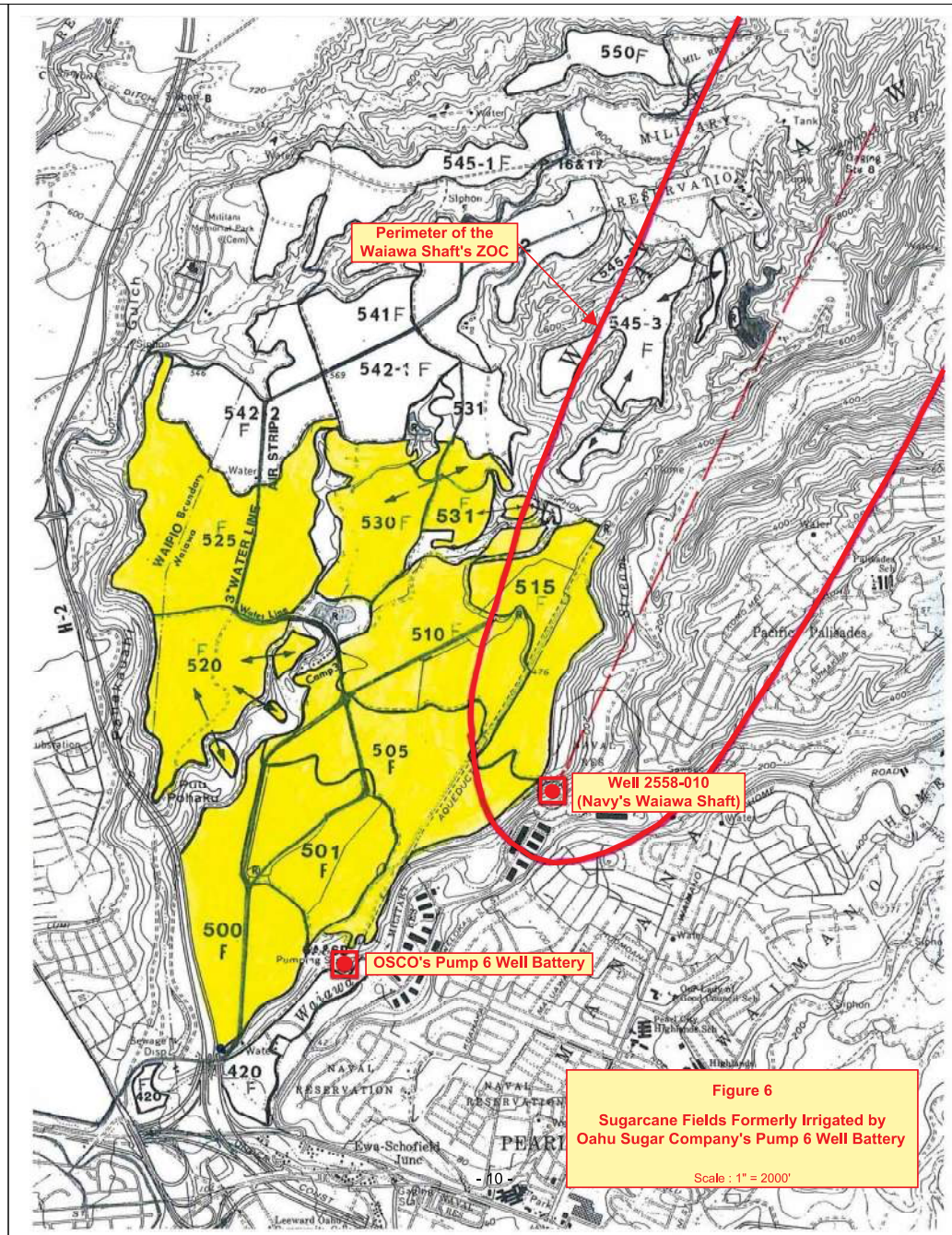


Figure 6

Sugarcane Fields Formerly Irrigated by Oahu Sugar Company's Pump 6 Well Battery

Scale : 1" = 2000'

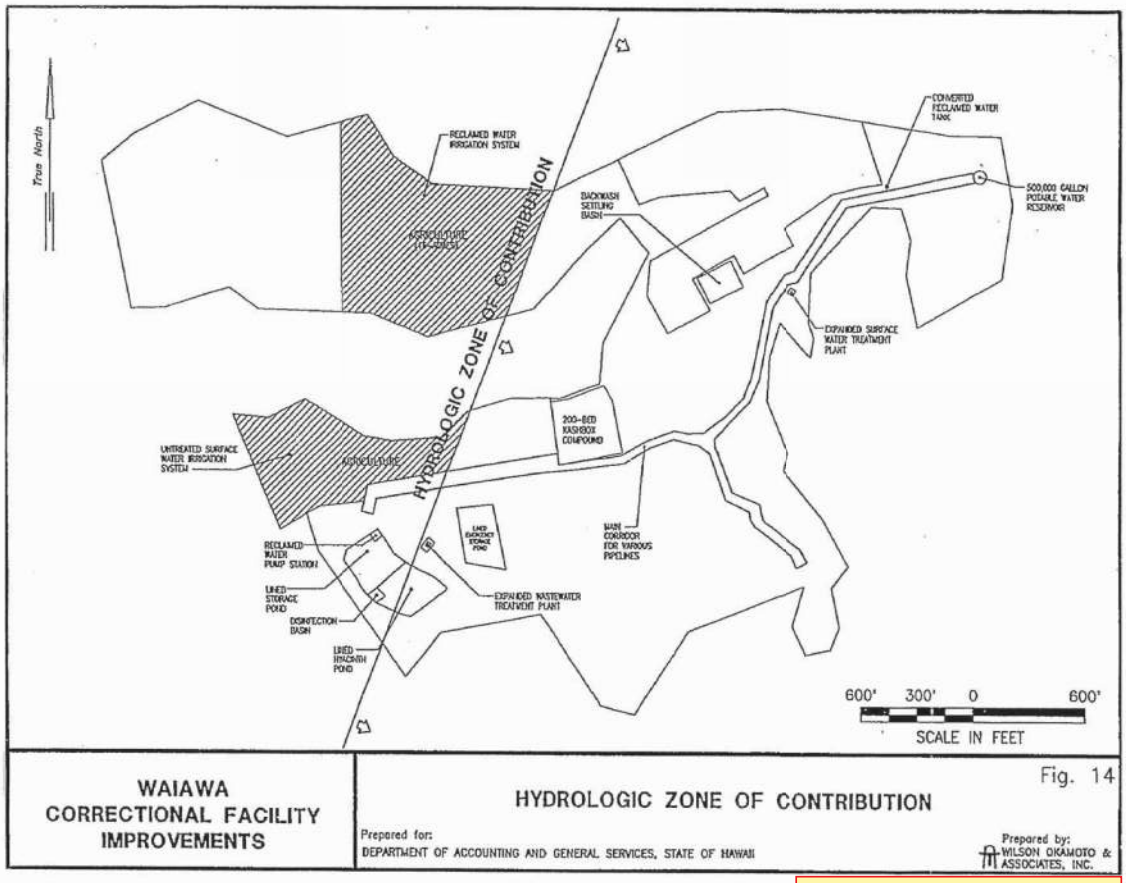


Figure 7

West Perimeter of the ZOC Crossing the Waiawa Correctional Facility

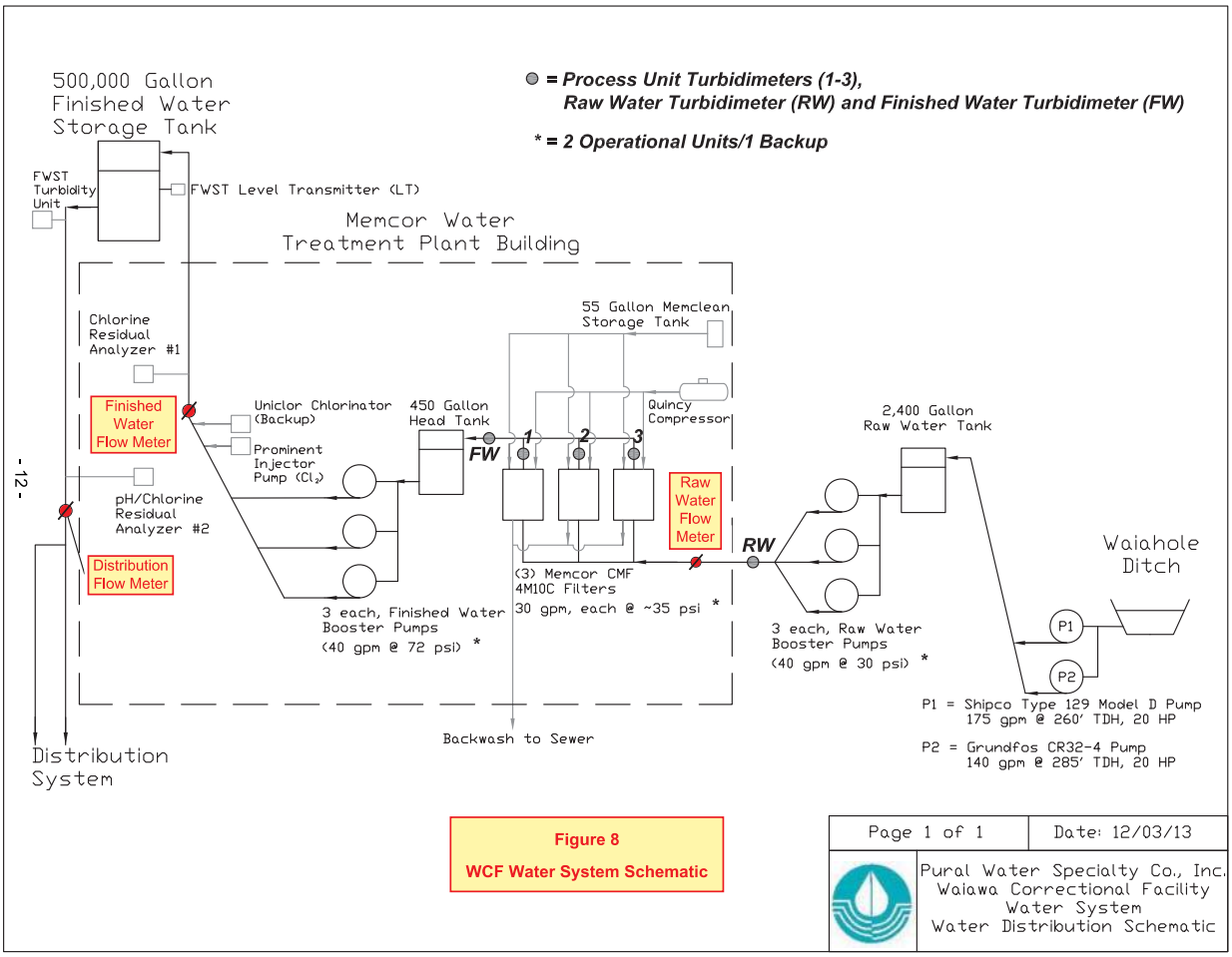
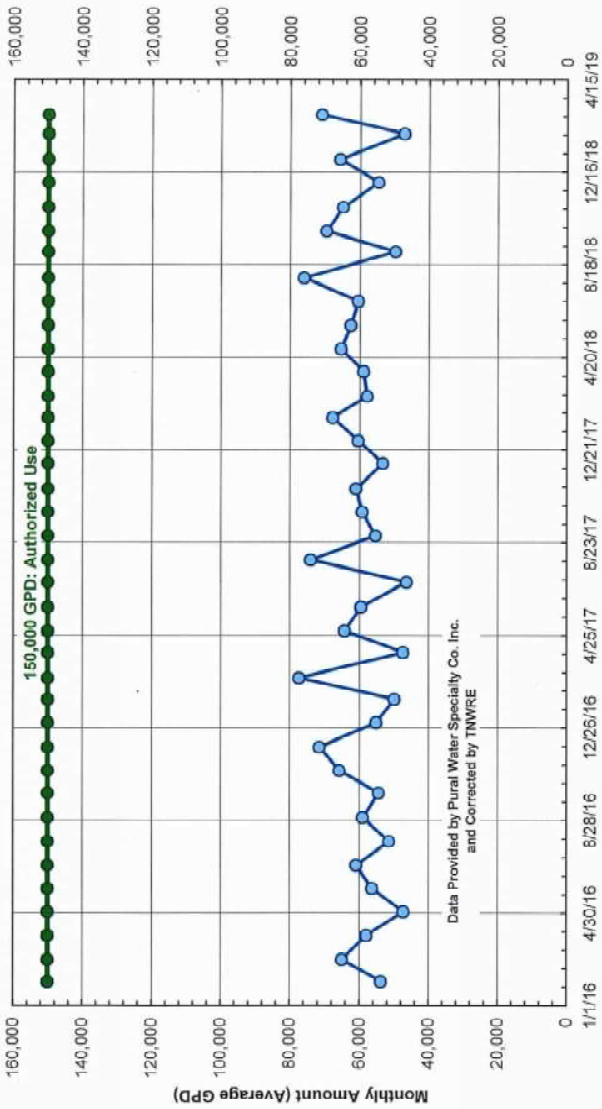


Figure 8

WCF Water System Schematic

Figure 9. Comparison of WCF's Corrected Reported Use with its Authorized Use



- Overflows from the Raw Water Tank which occur because the tank is too small for pump capacities and system supply requirements; and
- Use of untreated Ditch water for irrigation on the 10-acre site identified on Figure 7 and outside of the ZOC, by far the largest component of unmetered use or loss.

The connection for irrigation use is not shown on Figure 8. It consists of gravity flow from the 2400-gallon Raw Water Tank into an adjacent and buried 96,000-gallon concrete storage tank. Delivery for irrigation use is by gravity from the buried tank. There is no way to accurately approximate the unmeasured amounts identified in the bullet points above, but it is likely that the actual withdrawal from the Ditch is about 100,000 GPD, still below WCF's 150,000 GPD permitted use.

Potential Impact of the Treatment, Storage, and Backwash Disposal of WCF's Drinking Water System. The WCF's drinking water system is regulated by the SDWB of DOH as Public Water System No. 348. Operation of the system is done by Pural Water Specialty Co., Inc. under contract to WCF. As shown previously on Figure 8, the Ditch water is pumped through one or more of the three Memcor filtration units, is chlorinated, and is then pumped up to the 0.5 million gallon (MG) bolted steel tank located at the mauka end of the WCF site. Backwash of the Memcor filtration units occurs automatically at timed intervals and/or in response to back pressure on the filter units. The backwash water flows by gravity to an unlined "silting basin" that is now quite overgrown and has standing water in an area of about 0.15 acres (disposal of the backwash is shown incorrectly on Figure 8 as being delivered into the "sewer system"). Locations of the treatment plant, 0.5 MG storage tank, and silting basin are shown on Figure 7. All, including the unlined silting basin, are within the ZOC. The amount of the filter backwash can be approximated as the difference between the Raw Water and Finished Water flow meters. These amounts are shown on Figure 10 and averaged about 17,000 GPD over this period, amounting to about 28 percent of the water sent into the Memcor filters. Disposal of the backwash in this manner was previously approved by DOH and its potential impact on the groundwater beneath the WCF at depth is deemed to be inconsequential. The quantity is small, contains no chemicals of concern, and is subject to substantial natural filtration through the silt bottom of the basin and the soil below the basin.

Potential Impact of the Generation, Treatment, and Irrigation Reuse of Wastewater Generated at the WCF. Wastewater generated at the WCF is delivered to an extended aeration treatment plant in the southwest corner of the WCF site. From there it flows by gravity into a lined, hyacinth-filled lagoon for nutrient removal. "Polished" water from the hyacinth lagoon is then chlorinated in a contact chamber and then flows into the adjacent smaller lagoon. Water in this lagoon is classified as R-2 quality treated effluent. Its disposal is by drip irrigation of the vegetation in the 16-acre area outside of the ZOC shown on Figure 7. As a matter of completeness, it should be noted that there is an unlined, emergency overflow spillway on the mauka side of the extended aeration treatment plant.

The wastewater system, including disposal of the R-2 effluent by irrigation, is operated under contract by Aqua Engineers. On Figure 11, monthly average wastewater inflow rates as measured by the weir at the extended aeration plant are plotted against the plant's stated 56,100 GPD rated capacity. Average wastewater inflow over this period was 53,300 GPD. Figure 12 is a plot of the R-2 effluent pumped for drip irrigation on the 16-acre designated area shown on Figure 7. The R-2 amounts are measured on the discharge pipeline of the two pumps at the finished water lagoon. For the months shown on Figure 12 for which the amount of R-2 pumped for irrigation are available, the R-2 volume averaged 34,500 GPD, amounting to about 65 percent of the influent wastewater to the extended aeration treatment plant. The difference reflects the amount of evapotranspiration from the hyacinth lagoon, evaporation from the open water surface of the R-2 lagoon, possible leakage loss from the lined lagoons, and potential flow meter inaccuracy. As shown on Figure 13, meter inaccuracy is a very real possibility.

Figure 10. Portion of the Raw Water Pumped to the Memcor Filters that Becomes Filter Backwash

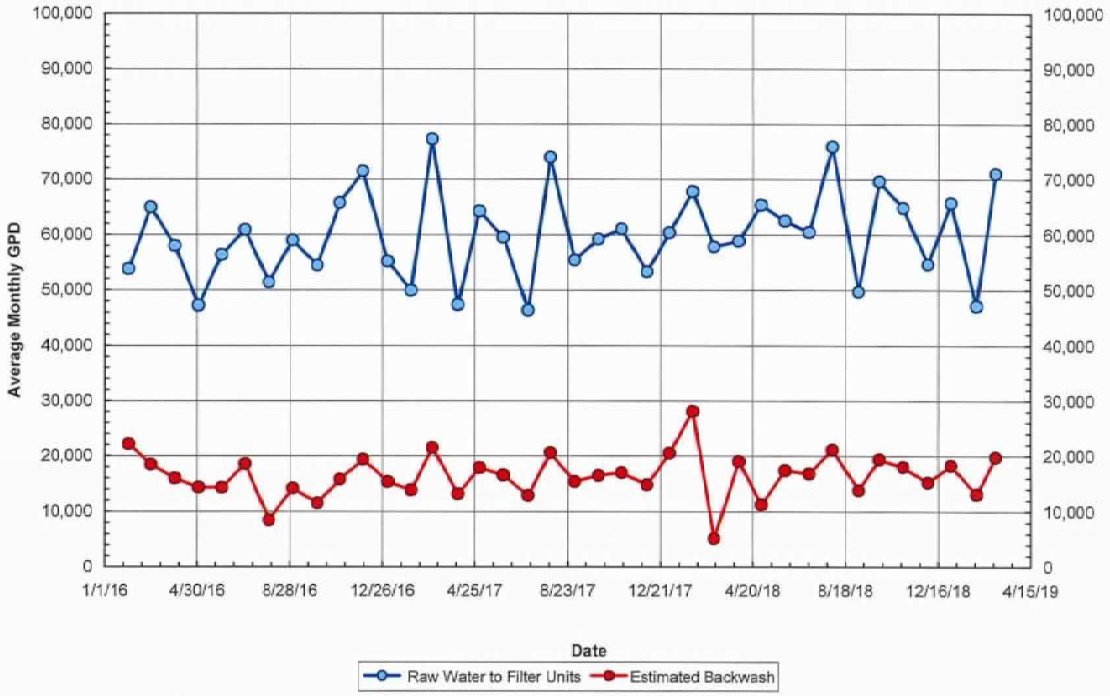


Figure 11. Monthly Average Wastewater Inflow to the Treatment Plant at the WCF, Janaury 2017 to March 2019

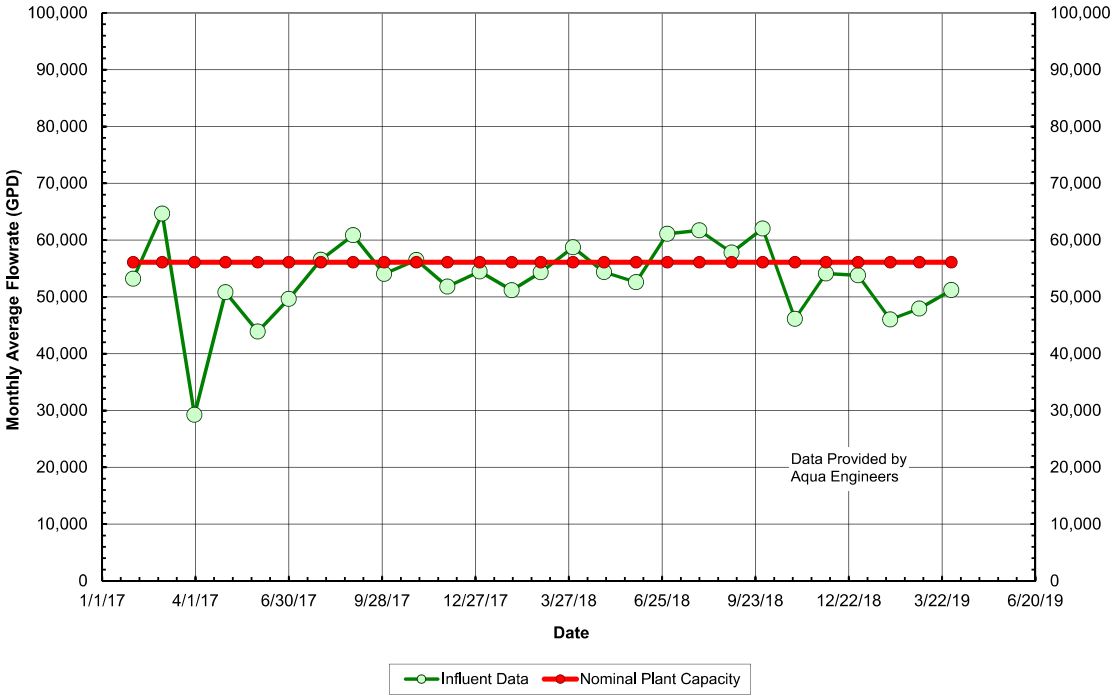


Figure 12. Comparison of the Influent Flowrate to the R-2 Effluent Pumped for Irrigation

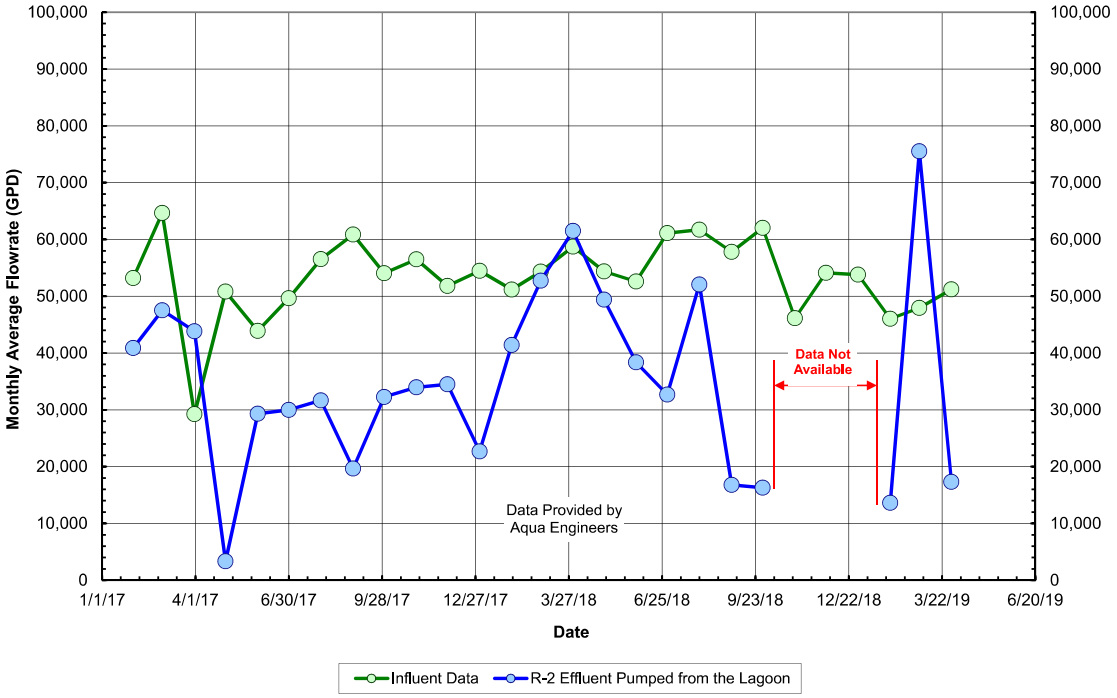
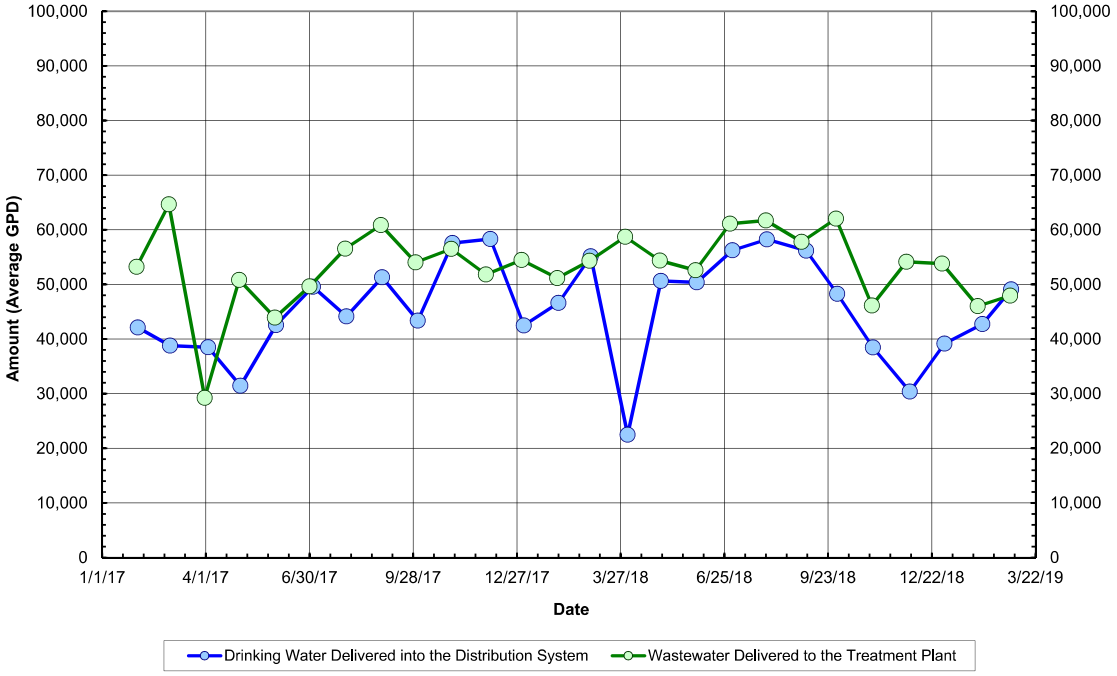


Figure 13. Comparison of Drinking Water Delivered into the Distribution System and Wastewater Delivered to the Extended Aeration Treatment Plant



The measured amount of wastewater into the extended aeration treatment plant is consistently shown to be greater than the amount of drinking water delivered into the distribution system. Over this 26-month period, the metered average drinking water amount was 45,500 GPD. In comparison, the metered average wastewater flow was 17 percent higher at 53,400 GPD. It is unlikely that infiltration into the sewer lines accounts for this difference.

Application of the R-2 effluent using drip irrigation on the 16-acre area identified on Figure 7 must be in accord with DOH's Reuse Guidelines and have the prior approval of DOH. By letter of May 18, 1998 from Lawrence Miike, Director of the DOH, to Keith Kaneshiro, State Director of Public Safety, the WCF was authorized to operate its wastewater facility and irrigation reuse of the R-2 treated effluent outside the Waiawa Shaft's ZOC. On a quarterly basis thereafter until 2005, the SDWB of DOH sampled the Waiawa Shaft and three other BWS wells in the vicinity (Waipio Heights I, II, and III) for nitrate, nitrite, and TDS to track water quality changes that might be attributable to activities at the WCF, including its irrigation reuse of the R-2 effluent. By letter of February 11, 2005, from William Wong, Chief of the SDWB, to Harold Yee, Chief of the Wastewater Branch, the SDWB indicated that it would no longer conduct the quarterly sampling. The reason given was that "…. no notable change has occurred." Based on the data collected, it is reasonable to conclude that the impact of the irrigation reuse of the R-2 effluent is inconsequential.

Potential Impact of Irrigation with Untreated Ditch Water. A portion of the 10-acre area outside of the ZOC identified on Figure 7 is irrigated with untreated Waiahole Ditch water. Delivery of the water is by gravity from a buried 96,000-gallon storage tank. As stated previously, this use is not metered. However, it is likely to be in the range of 20,000 to 30,000 GPD. A portion of this, perhaps on the order of 10 to 15 percent, may pass below the root zone of the irrigated crops and ultimately reach the groundwater below. The quantity is small and considered to be of inconsequential impact to the quality of groundwater in the aquifer.

Summary of Findings, Conclusions, and Recommendations

1. The ZOC of the Waiawa Shaft is correctly shown on Figures 5 and 7 of this report.

2. Activities within the ZOC which have a potential to impact the underlying groundwater are percolation from the unlined silty basin on the drinking water system and possible leakage of treated wastewater from the system's two lined lagoons. Their potential impact on the underlying groundwater are considered to be insignificant.

3. All irrigation is taking place outside of the ZOC. It consists of drip irrigation of R-2 treated wastewater on a 16-acre area and irrigation using untreated Waiahole Ditch water on a separate 10-acre area. Their potential impacts on the underlying groundwater are also considered to be insignificant.

4. The draw of water from Waiahole Ditch is incorrectly being reported as the amount measured by the Raw Water Flow Meter at the Memcor filtration plant. This fails to include irrigation with untreated Ditch water, overflows of the 2400-gallon Raw Water Tank, and other losses. A flow meter should be installed on the discharge line of the pumps that draw water from the Ditch. It would be useful if a meter was also installed on the pipeline from the Raw Water Tank to the buried irrigation tank to document the irrigation use.

5. The 2400-gallon Raw Water Tank is too small for its intended function. It should be replaced with a tank appropriately sized for the manner and rate of pumping from Waiahole Ditch.

6. Inflow to the extended aeration wastewater treatment plant is measured with a weir. It appears to be overestimating the actual rate of inflow. Calibration to check or adjust its accuracy should be undertaken.

References

Eyre, P. R. 1983. The Effects of Pumpage, Irrigation Return, and Regional Groundwater Flow on the Water Quality at Waiawa Water Tunnel, Oahu, Hawaii. U. S. Geological survey Water Resources Investigations Report 83-4097.

HHF Planners. 2017. Waiawa Correctional Facility (WCF) Due Diligence Report. Consultant Report Prepared for Austin Tsutsumi & Associates, Inc., Plan Review and Special Use Permit, DAGS Job No. 16-27-5683.

Hufen, T. H., P. Eyre, and W. McConachie. 1980. Underground residence Times and Chemical Quality of Basal Groundwater in Pearl Harbor and Honolulu Aquifers, Oahu, Hawaii. Technical Report 129, Water Resources Research Center, University of Hawaii.

Oki, D. S., R. N. Miyahira, R. E. Green, T. W. Giambelluca, L. S. Lau, J. F. Mink, R. C. Schneider, and D. N. Little. 1990. Assessment of the Potential for Groundwater Contamination Due to Proposed Urban Development in the Vicinity of the U. S. Navy Waiawa Shaft, Pearl Harbor, Hawaii. Report Prepared by the University of Hawaii Water Resource Research Center for the Pacific Division Naval Facilities Engineering Command

Safe Drinking Water Branch. Revised December 1990. Delineation of the Hydrologic Zone of Contribution for the U. S. Navy Waiawa Shaft. Manuscript Report prepared by the SDWB of the Department of Health for the Office of State Planning.

Safe Drinking Water Branch. 2015. Sanitary Survey of the Waiawa Correctional Facility Water System (PWS 348). Manuscript report prepared by Staff of the Safe Drinking Water Branch of the State Department of Health.

Wastewater Branch. 2016. Reuse Guidelines. Volume I. Recycled Water Facilities and Volume II. Recycled Water Projects. Manuscript report prepared by the Wastewater Branch of the State Department of Health (Replaces May 2002 Version).

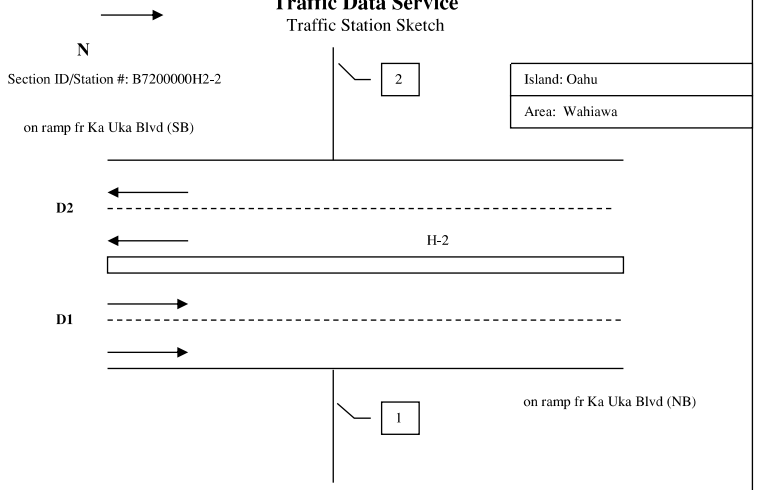
Wilson Okamoto & Associates, Inc. 1997. Final Environmental Assessment and Findings of No Significant Impact (FONSI), Waiawa Correctional Facility Improvements, Waiawa, Ewa, Oahu, Hawaii. Final EA & FONSI prepared for the Department of Accounting and General Services and the Department of Public Safety.

APPENDIX K - 24-hr Traffic Counts

APPENDIX
HDOT 24-Hour Traffic Counts

Traffic Data Service

Traffic Station Sketch



Meter #	File Name	GPS
1. wave	D0202003_B7200000H2-2	21.42709, -157.9959
2. wave	D0202004_B7200000H2-2	21.42709, -157.9959

Station Description: H-2: on ramp fr Ka Uka Blvd (SB) to on ramp fr Ka Uka Blvd (NB)			
Survey Beginning Date/Time: 2/2/2016 @ 0000		Survey Ending Date/Time: 2/3/2016 @ 2400	
Survey Method:		Data Type:	Volume
Survey Crew:	LM		Wavetronix
Sketch Updated:		By:	SR
Remarks:	36		

FACILITY NAME	JURI	FUNC CLASS	AREA TYPE	ROUTE NO.	ROUTE MILE
H-2		11		H-2	

D1= Direction to End	D1: on ramp fr Ka Uka Blvd (NB) / Wilikina Drive
D2= Direction to Begin	D2: on ramp fr Ka Uka Blvd (SB) / Waiawa Interchange

Run Date: 2017/08/08

Hawaii Department of Transportation
Highways Division **Highways Planning Survey Section**
2016 Program Count - Summary

Site ID: B7200000H2-2 **Town:** Oahu **DIR 1:** +MP **DIR 2:**-MP **Final AADT:** 83500
Functional Class: URBAN:PRINCIPAL ARTERIAL - INTERSTATE **Count Type:** VEHICLE TYPE **Counter Type:** Sensor **Route No:** H-2
Location: H-2 Fwy - onramp fr Ka Uka Blvd (SB) to onramp fr Ka Uka Blvd (NB)

TIME-AM	DIR 1	DIR 2	TOTAL	TIME-AM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL
DATE : 02/02/2016															
12:00-12:15	132	44	176	06:00-06:15	381	1029	1410	12:00-12:15	536	487	1023	06:00-06:15	788	645	1433
12:15-12:30	89	49	138	06:15-06:30	384	1116	1500	12:15-12:30	509	502	1011	06:15-06:30	794	537	1331
12:30-12:45	101	40	141	06:30-06:45	385	1204	1589	12:30-12:45	528	513	1041	06:30-06:45	758	509	1267
12:45-01:00	74	47	121	06:45-07:00	406	1112	1518	12:45-01:00	584	509	1093	06:45-07:00	706	422	1128
01:00-01:15	73	34	107	07:00-07:15	421	1042	1463	01:00-01:15	530	506	1036	07:00-07:15	700	449	1149
01:15-01:30	52	22	74	07:15-07:30	450	966	1416	01:15-01:30	522	516	1038	07:15-07:30	624	437	1061
01:30-01:45	54	21	75	07:30-07:45	524	967	1491	01:30-01:45	597	541	1138	07:30-07:45	531	348	879
01:45-02:00	33	29	62	07:45-08:00	493	837	1330	01:45-02:00	578	508	1086	07:45-08:00	542	369	911
02:00-02:15	27	21	48	08:00-08:15	545	826	1371	02:00-02:15	668	491	1159	08:00-08:15	500	277	777
02:15-02:30	43	30	73	08:15-08:30	499	884	1383	02:15-02:30	634	488	1122	08:15-08:30	415	274	689
02:30-02:45	44	34	78	08:30-08:45	515	922	1437	02:30-02:45	668	616	1284	08:30-08:45	319	230	549
02:45-03:00	33	36	69	08:45-09:00	529	770	1299	02:45-03:00	726	561	1287	08:45-09:00	403	241	644
03:00-03:15	30	47	77	09:00-09:15	464	649	1113	03:00-03:15	839	609	1448	09:00-09:15	411	255	666
03:15-03:30	26	65	91	09:15-09:30	462	639	1101	03:15-03:30	832	646	1478	09:15-09:30	384	275	659
03:30-03:45	29	73	102	09:30-09:45	441	682	1123	03:30-03:45	871	658	1529	09:30-09:45	338	249	587
03:45-04:00	45	104	149	09:45-10:00	440	674	1114	03:45-04:00	882	737	1619	09:45-10:00	357	211	568
04:00-04:15	57	124	181	10:00-10:15	447	595	1042	04:00-04:15	878	733	1611	10:00-10:15	332	184	516
04:15-04:30	44	184	228	10:15-10:30	393	592	985	04:15-04:30	826	779	1605	10:15-10:30	284	177	461
04:30-04:45	50	283	333	10:30-10:45	415	471	886	04:30-04:45	861	734	1595	10:30-10:45	228	141	369
04:45-05:00	135	367	502	10:45-11:00	454	629	1083	04:45-05:00	830	707	1537	10:45-11:00	221	114	335
05:00-05:15	162	495	657	11:00-11:15	589	514	1103	05:00-05:15	892	677	1569	11:00-11:15	203	90	293
05:15-05:30	197	674	871	11:15-11:30	484	490	974	05:15-05:30	822	742	1564	11:15-11:30	148	101	249
05:30-05:45	315	806	1121	11:30-11:45	541	475	1016	05:30-05:45	843	743	1586	11:30-11:45	158	87	245
05:45-06:00	402	974	1376	11:45-12:00	493	524	1017	05:45-06:00	837	669	1506	11:45-12:00	133	83	216

AM COMMUTER PERIOD (05:00-09:00)	DIR 1	DIR 2	
TWO DIRECTIONAL PEAK			
AM - PEAK HR TIME	06:15 AM to 07:15 AM		
AM - PEAK HR VOLUME	1596	4474	6070
AM - K FACTOR (%)			7.09
AM - D (%)	26.29	73.71	100.00
DIRECTIONAL PEAK			
AM - PEAK HR TIME	08:00 AM to 09:00 AM	06:15 AM to 07:15 AM	
AM - PEAK HR VOLUME	2088	4474	

PM COMMUTER PERIOD (15:00-19:00)	DIR 1	DIR 2	
TWO DIRECTIONAL PEAK			
PM - PEAK HR TIME	03:45 PM to 04:45 PM		
PM - PEAK HR VOLUME	3447	2983	6430
PM - K FACTOR (%)			7.52
PM - D (%)	53.61	46.39	100.00
DIRECTIONAL PEAK			
PM - PEAK HR TIME	03:15 PM to 04:15 PM	03:45 PM to 04:45 PM	
PM - PEAK HR VOLUME	3463	2983	

AM PERIOD (00:00-12:00)			
TWO DIRECTIONAL PEAK			
AM - PEAK HR TIME	06:15 AM to 07:15 AM		
AM - PEAK HR VOLUME	1596	4474	6070
AM - K FACTOR (%)			7.09
AM - D (%)	26.29	73.71	100.00

PM PERIOD (12:00-24:00)			
TWO DIRECTIONAL PEAK			
PM - PEAK HR TIME	03:45 PM to 04:45 PM		
PM - PEAK HR VOLUME	3447	2983	6430
PM - K FACTOR (%)			7.52
PM - D (%)	53.61	46.39	100.00

NON-COMMUTER PERIOD (09:00-15:00)			
TWO DIRECTIONAL PEAK			
PEAK HR TIME	02:00 PM to 03:00 PM		
PEAK HR VOLUME	2696	2156	4852
DIRECTIONAL PEAK			
PEAK HR TIME	02:00 PM to 03:00 PM	09:00 AM to 10:00 AM	
PEAK HR VOLUME	2696	2644	

6-HR, 12-HR, 24-HR PERIODS	DIR 1	DIR 2	Total
AM 6-HR PERIOD (06:00-12:00)	11,155	18,609	29,764
AM 12-HR PERIOD (00:00-12:00)	13,402	23,212	36,614
PM 6-HR PERIOD (12:00-18:00)	17,293	14,672	31,965
PM 12-HR PERIOD (12:00-24:00)	27,570	21,377	48,947
24 HOUR PERIOD	40,972	44,589	85,561
D (%)	47.89	52.11	100.00

Run Date: 2017/08/08

Hawaii Department of Transportation
Highways Division **Highways Planning Survey Section**
2016 Program Count - Summary

Site ID: B7200000H2-2 **Town:** Oahu **DIR 1:** +MP **DIR 2:**-MP **Final AADT:** 83500
Functional Class: URBAN:PRINCIPAL ARTERIAL - INTERSTATE **Count Type:** VEHICLE TYPE **Counter Type:** Sensor **Route No:** H-2
Location: H-2 Fwy - onramp fr Ka Uka Blvd (SB) to onramp fr Ka Uka Blvd (NB)

TIME-AM	DIR 1	DIR 2	TOTAL	TIME-AM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL
DATE : 02/03/2016															
12:00-12:15	141	52	193	06:00-06:15	413	998	1411	12:00-12:15	519	494	1013	06:00-06:15	731	592	1323
12:15-12:30	106	60	166	06:15-06:30	374	1110	1484	12:15-12:30	544	548	1092	06:15-06:30	808	536	1344
12:30-12:45	107	46	153	06:30-06:45	378	1212	1590	12:30-12:45	603	496	1099	06:30-06:45	795	512	1307
12:45-01:00	90	54	144	06:45-07:00	440	1082	1522	12:45-01:00	571	545	1116	06:45-07:00	780	432	1212
01:00-01:15	75	36	111	07:00-07:15	476	1046	1522	01:00-01:15	578	561	1139	07:00-07:15	820	432	1252
01:15-01:30	59	33	92	07:15-07:30	511	1012	1523	01:15-01:30	541	535	1076	07:15-07:30	641	410	1051
01:30-01:45	62	47	109	07:30-07:45	508	943	1451	01:30-01:45	517	570	1087	07:30-07:45	592	421	1013
01:45-02:00	46	26	72	07:45-08:00	519	862	1381	01:45-02:00	587	558	1145	07:45-08:00	497	344	841
02:00-02:15	50	33	83	08:00-08:15	468	846	1314	02:00-02:15	603	562	1165	08:00-08:15	478	342	820
02:15-02:30	50	35	85	08:15-08:30	489	860	1349	02:15-02:30	648	572	1220	08:15-08:30	435	306	741
02:30-02:45	41	31	72	08:30-08:45	474	893	1367	02:30-02:45	728	574	1302	08:30-08:45	368	326	694
02:45-03:00	28	52	80	08:45-09:00	501	769	1270	02:45-03:00	693	596	1289	08:45-09:00	401	240	641
03:00-03:15	35	43	78	09:00-09:15	434	659	1093	03:00-03:15	798	575	1373	09:00-09:15	410	235	645
03:15-03:30	32	57	89	09:15-09:30	433	626	1059	03:15-03:30	814	598	1412	09:15-09:30	397	287	684
03:30-03:45	33	81	114	09:30-09:45	446	710	1156	03:30-03:45	911	652	1563	09:30-09:45	417	264	681
03:45-04:00	43	126	169	09:45-10:00	487	713	1200	03:45-04:00	888	729	1617	09:45-10:00	360	251	611
04:00-04:15	39	134	173	10:00-10:15	416	556	972	04:00-04:15	883	647	1530	10:00-10:15	304	192	496
04:15-04:30	58	205	263	10:15-10:30	412	576	988	04:15-04:30	880	704	1584	10:15-10:30	261	205	466
04:30-04:45	65	259	324	10:30-10:45	493	518	1011	04:30-04:45	908	765	1673	10:30-10:45	255	146	401
04:45-05:00	123	362	485	10:45-11:00	456	554	1010	04:45-05:00	915	730	1645	10:45-11:00	235	103	338
05:00-05:15	166	475	641	11:00-11:15	493	525	1018	05:00-05:15	867	706	1573	11:00-11:15	191	95	286
05:15-05:30	231	689	920	11:15-11:30	550	520	1070	05:15-05:30	784	725	1509	11:15-11:30	169	107	276
05:30-05:45	341	830	1171	11:30-11:45	539	505	1044	05:30-05:45	722	717	1439	11:30-11:45	187	77	264
05:45-06:00	424	964	1388	11:45-12:00	535	527	1062	05:45-06:00	762	637	1399	11:45-12:00	135	96	231

AM COMMUTER PERIOD (05:00-09:00)	DIR 1	DIR 2	
TWO DIRECTIONAL PEAK			
AM - PEAK HR TIME	06:30 AM to 07:30 AM		
AM - PEAK HR VOLUME	1805	4352	6157
AM - K FACTOR (%)			7.10
AM - D (%)	29.32	70.68	100.00
DIRECTIONAL PEAK			
AM - PEAK HR TIME	07:00 AM to 08:00 AM	06:15 AM to 07:15 AM	
AM - PEAK HR VOLUME	2014	4450	

PM COMMUTER PERIOD (15:00-19:00)	DIR 1	DIR 2	
TWO DIRECTIONAL PEAK			
PM - PEAK HR TIME	04:15 PM to 05:15 PM		
PM - PEAK HR VOLUME	3570	2905	6475
PM - K FACTOR (%)			7.47
PM - D (%)	55.14	44.86	100.00
DIRECTIONAL PEAK			
PM - PEAK HR TIME	04:00 PM to 05:00 PM	04:30 PM to 05:30 PM	
PM - PEAK HR VOLUME	3586	2926	

AM PERIOD (00:00-12:00)			
TWO DIRECTIONAL PEAK			
AM - PEAK HR TIME	06:30 AM to 07:30 AM		
AM - PEAK HR VOLUME	1805	4352	6157
AM - K FACTOR (%)			7.10
AM - D (%)	29.32	70.68	100.00

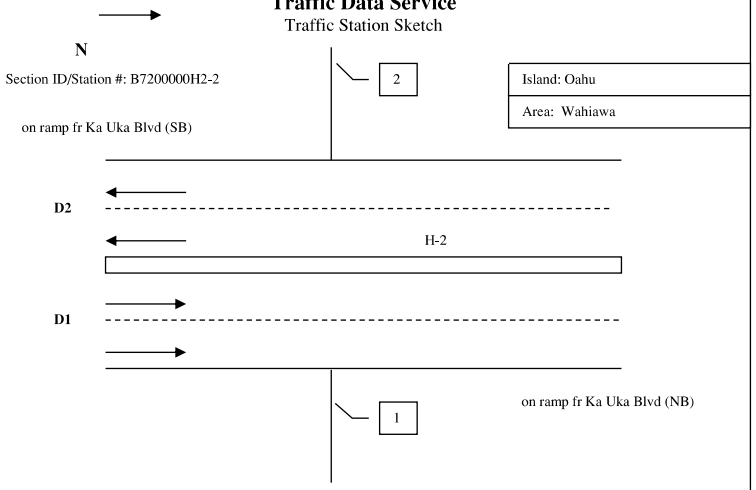
PM PERIOD (12:00-24:00)			
TWO DIRECTIONAL PEAK			
PM - PEAK HR TIME	04:15 PM to 05:15 PM		
PM - PEAK HR VOLUME	3570	2905	6475
PM - K FACTOR (%)			7.47
PM - D (%)	55.14	44.86	100.00

NON-COMMUTER PERIOD (09:00-15:00)			
TWO DIRECTIONAL PEAK			
PEAK HR TIME	02:00 PM to 03:00 PM		
PEAK HR VOLUME	2672	2304	4976
DIRECTIONAL PEAK			
PEAK HR TIME	02:00 PM to 03:00 PM	09:00 AM to 10:00 AM	
PEAK HR VOLUME	2672	2708	

6-HR, 12-HR, 24-HR PERIODS	DIR 1	DIR 2	Total
AM 6-HR PERIOD (06:00-12:00)	11,245	18,622	29,867
AM 12-HR PERIOD (00:00-12:00)	13,690	23,352	37,042
PM 6-HR PERIOD (12:00-18:00)	17,264	14,796	32,060
PM 12-HR PERIOD (12:00-24:00)	27,931	21,747	49,678
24 HOUR PERIOD	41,621	45,099	86,720
D (%)	47.99	52.01	100.00

Traffic Data Service

Traffic Station Sketch



Meter #	File Name	GPS
1. wave	D1213003_B7200000H2-2	21.42709, -157.9959
2. wave	D1213004_B7200000H2-2	21.42709, -157.9959

Station Description: H-2: on ramp fr Ka Uka Blvd (SB) to on ramp fr Ka Uka Blvd (NB)			
Survey Beginning Date/Time: 12/13/2016 @ 0000		Survey Ending Date/Time: 12/14/2016 @ 2400	
Survey Method:		Data Type:	Volume
Survey Crew:	LM		Wavetronix
Sketch Updated:		By:	SR
Remarks:	36		

FACILITY NAME	JURI	FUNC CLASS	AREA TYPE	ROUTE NO.	ROUTE MILE
H-2		11		H-2	

D1= Direction to End	D1: on ramp fr Ka Uka Blvd (NB) / Wilikina Drive
D2= Direction to Begin	D2: on ramp fr Ka Uka Blvd (SB) / Waiawa Interchange

Run Date: 2017/08/08

Hawaii Department of Transportation
Highways Division **Highways Planning Survey Section**
2016 Program Count - Summary

Site ID: B7200000H2-2 **Town:** Oahu **DIR 1:** +MP **DIR 2:**-MP **Final AADT:** 83500
Functional Class: URBAN:PRINCIPAL ARTERIAL - INTERSTATE **Count Type:** VEHICLE TYPE **Counter Type:** Sensor **Route No:** H-2
Location: H-2 Fwy - onramp fr Ka Uka Blvd (SB) to onramp fr Ka Uka Blvd (NB)

TIME-AM	DIR 1	DIR 2	TOTAL	TIME-AM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL
DATE : 12/13/2016															
12:00-12:15	116	67	183	06:00-06:15	421	1036	1457	12:00-12:15	553	509	1062	06:00-06:15	832	629	1461
12:15-12:30	103	53	156	06:15-06:30	411	1107	1518	12:15-12:30	574	485	1059	06:15-06:30	836	579	1415
12:30-12:45	89	56	145	06:30-06:45	428	1217	1645	12:30-12:45	581	525	1106	06:30-06:45	775	544	1319
12:45-01:00	77	44	121	06:45-07:00	489	1085	1574	12:45-01:00	620	498	1118	06:45-07:00	786	525	1311
01:00-01:15	75	38	113	07:00-07:15	493	1063	1556	01:00-01:15	601	505	1106	07:00-07:15	858	468	1326
01:15-01:30	53	43	96	07:15-07:30	481	929	1410	01:15-01:30	583	529	1112	07:15-07:30	638	448	1086
01:30-01:45	55	39	94	07:30-07:45	521	895	1416	01:30-01:45	624	542	1166	07:30-07:45	590	431	1021
01:45-02:00	47	27	74	07:45-08:00	514	797	1311	01:45-02:00	710	533	1243	07:45-08:00	564	366	930
02:00-02:15	43	32	75	08:00-08:15	503	830	1333	02:00-02:15	630	536	1166	08:00-08:15	514	317	831
02:15-02:30	38	32	70	08:15-08:30	501	933	1434	02:15-02:30	631	543	1174	08:15-08:30	461	269	730
02:30-02:45	42	40	82	08:30-08:45	513	837	1350	02:30-02:45	765	579	1344	08:30-08:45	395	288	683
02:45-03:00	40	41	81	08:45-09:00	511	791	1302	02:45-03:00	701	655	1356	08:45-09:00	438	238	676
03:00-03:15	39	47	86	09:00-09:15	470	667	1137	03:00-03:15	876	600	1476	09:00-09:15	412	246	658
03:15-03:30	38	71	109	09:15-09:30	504	569	1073	03:15-03:30	825	677	1502	09:15-09:30	439	251	690
03:30-03:45	34	75	109	09:30-09:45	487	690	1177	03:30-03:45	899	697	1596	09:30-09:45	397	211	608
03:45-04:00	89	130	219	09:45-10:00	518	665	1183	03:45-04:00	940	752	1692	09:45-10:00	403	194	597
04:00-04:15	42	127	169	10:00-10:15	487	623	1110	04:00-04:15	947	828	1775	10:00-10:15	354	204	558
04:15-04:30	64	184	248	10:15-10:30	362	641	1003	04:15-04:30	881	793	1674	10:15-10:30	334	158	492
04:30-04:45	77	287	364	10:30-10:45	327	648	975	04:30-04:45	782	857	1639	10:30-10:45	293	144	437
04:45-05:00	130	346	476	10:45-11:00	473	558	1031	04:45-05:00	786	722	1508	10:45-11:00	256	105	361
05:00-05:15	217	431	648	11:00-11:15	477	519	996	05:00-05:15	741	738	1479	11:00-11:15	202	103	305
05:15-05:30	253	746	999	11:15-11:30	598	532	1130	05:15-05:30	847	767	1614	11:15-11:30	188	108	296
05:30-05:45	412	847	1259	11:30-11:45	608	529	1137	05:30-05:45	741	739	1480	11:30-11:45	244	76	320
05:45-06:00	464	952	1416	11:45-12:00	566	524	1090	05:45-06:00	659	635	1294	11:45-12:00	226	71	297

AM COMMUTER PERIOD (05:00-09:00)	DIR 1	DIR 2	
TWO DIRECTIONAL PEAK			
AM - PEAK HR TIME	06:15 AM to 07:15 AM		
AM - PEAK HR VOLUME	1821	4472	6293
AM - K FACTOR (%)			7.08
AM - D (%)	28.94	71.06	100.00
DIRECTIONAL PEAK			
AM - PEAK HR TIME	07:30 AM to 08:30 AM	06:15 AM to 07:15 AM	
AM - PEAK HR VOLUME	2039	4472	

PM COMMUTER PERIOD (15:00-19:00)	DIR 1	DIR 2	
TWO DIRECTIONAL PEAK			
PM - PEAK HR TIME	03:45 PM to 04:45 PM		
PM - PEAK HR VOLUME	3550	3230	6780
PM - K FACTOR (%)			7.63
PM - D (%)	52.36	47.64	100.00
DIRECTIONAL PEAK			
PM - PEAK HR TIME	03:30 PM to 04:30 PM	03:45 PM to 04:45 PM	
PM - PEAK HR VOLUME	3667	3230	

AM PERIOD (00:00-12:00)			
TWO DIRECTIONAL PEAK			
AM - PEAK HR TIME	06:15 AM to 07:15 AM		
AM - PEAK HR VOLUME	1821	4472	6293
AM - K FACTOR (%)			7.08
AM - D (%)	28.94	71.06	100.00

PM PERIOD (12:00-24:00)			
TWO DIRECTIONAL PEAK			
PM - PEAK HR TIME	03:45 PM to 04:45 PM		
PM - PEAK HR VOLUME	3550	3230	6780
PM - K FACTOR (%)			7.63
PM - D (%)	52.36	47.64	100.00

NON-COMMUTER PERIOD (09:00-15:00)			
TWO DIRECTIONAL PEAK			
PEAK HR TIME	02:00 PM to 03:00 PM		
PEAK HR VOLUME	2727	2313	5040
DIRECTIONAL PEAK			
PEAK HR TIME	01:45 PM to 02:45 PM	09:30 AM to 10:30 AM	
PEAK HR VOLUME	2736	2619	

6-HR, 12-HR, 24-HR PERIODS	DIR 1	DIR 2	Total
AM 6-HR PERIOD (06:00-12:00)	11,663	18,685	30,348
AM 12-HR PERIOD (00:00-12:00)	14,300	23,440	37,740
PM 6-HR PERIOD (12:00-18:00)	17,497	15,244	32,741
PM 12-HR PERIOD (12:00-24:00)	28,932	22,217	51,149
24 HOUR PERIOD	43,232	45,657	88,889
D (%)	48.64	51.36	100.00

Run Date: 2017/08/08

Hawaii Department of Transportation
Highways Division **Highways Planning Survey Section**
2016 Program Count - Summary

Site ID: B7200000H2-2 **Town:** Oahu **DIR 1:** +MP **DIR 2:**-MP **Final AADT:** 83500
Functional Class: URBAN:PRINCIPAL ARTERIAL - INTERSTATE **Count Type:** VEHICLE TYPE **Counter Type:** Sensor **Route No:** H-2
Location: H-2 Fwy - onramp fr Ka Uka Blvd (SB) to onramp fr Ka Uka Blvd (NB)

TIME-AM	DIR 1	DIR 2	TOTAL	TIME-AM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL
DATE : 12/14/2016															
12:00-12:15	168	63	231	06:00-06:15	441	962	1403	12:00-12:15	532	529	1061	06:00-06:15	838	623	1461
12:15-12:30	144	66	210	06:15-06:30	363	1148	1511	12:15-12:30	607	541	1148	06:15-06:30	765	605	1370
12:30-12:45	111	45	156	06:30-06:45	362	1165	1527	12:30-12:45	664	601	1265	06:30-06:45	676	601	1277
12:45-01:00	85	51	136	06:45-07:00	417	1020	1437	12:45-01:00	662	578	1240	06:45-07:00	652	552	1204
01:00-01:15	78	37	115	07:00-07:15	444	1033	1477	01:00-01:15	619	539	1158	07:00-07:15	615	538	1153
01:15-01:30	61	49	110	07:15-07:30	480	926	1406	01:15-01:30	598	615	1213	07:15-07:30	623	524	1147
01:30-01:45	58	42	100	07:30-07:45	522	903	1425	01:30-01:45	671	614	1285	07:30-07:45	607	514	1121
01:45-02:00	45	30	75	07:45-08:00	536	871	1407	01:45-02:00	680	626	1306	07:45-08:00	579	432	1011
02:00-02:15	62	44	106	08:00-08:15	535	824	1359	02:00-02:15	722	597	1319	08:00-08:15	526	369	895
02:15-02:30	49	41	90	08:15-08:30	456	897	1353	02:15-02:30	744	638	1382	08:15-08:30	560	376	936
02:30-02:45	44	31	75	08:30-08:45	517	854	1371	02:30-02:45	803	638	1441	08:30-08:45	505	381	886
02:45-03:00	42	37	79	08:45-09:00	498	728	1226	02:45-03:00	856	708	1564	08:45-09:00	446	372	818
03:00-03:15	31	56	87	09:00-09:15	507	628	1135	03:00-03:15	817	713	1530	09:00-09:15	479	353	832
03:15-03:30	31	66	97	09:15-09:30	488	647	1135	03:15-03:30	872	783	1655	09:15-09:30	467	310	777
03:30-03:45	49	87	136	09:30-09:45	480	695	1175	03:30-03:45	960	766	1726	09:30-09:45	488	332	820
03:45-04:00	50	104	154	09:45-10:00	496	745	1241	03:45-04:00	874	744	1618	09:45-10:00	477	306	783
04:00-04:15	58	128	186	10:00-10:15	476	738	1214	04:00-04:15	969	798	1767	10:00-10:15	416	246	662
04:15-04:30	62	176	238	10:15-10:30	443	638	1081	04:15-04:30	992	713	1705	10:15-10:30	450	263	713
04:30-04:45	72	246	318	10:30-10:45	491	652	1143	04:30-04:45	901	765	1666	10:30-10:45	449	206	655
04:45-05:00	152	365	517	10:45-11:00	562	577	1139	04:45-05:00	986	717	1703	10:45-11:00	401	198	599
05:00-05:15	223	464	687	11:00-11:15	478	609	1087	05:00-05:15	962	686	1648	11:00-11:15	313	187	500
05:15-05:30	297	634	931	11:15-11:30	532	612	1144	05:15-05:30	905	673	1578	11:15-11:30	285	127	412
05:30-05:45	464	749	1213	11:30-11:45	538	573	1111	05:30-05:45	795	730	1525	11:30-11:45	271	149	420
05:45-06:00	516	918	1434	11:45-12:00	535	535	1070	05:45-06:00	893	675	1568	11:45-12:00	222	142	364

AM COMMUTER PERIOD (05:00-09:00)	DIR 1	DIR 2	
TWO DIRECTIONAL PEAK			
AM - PEAK HR TIME	06:15 AM to 07:15 AM		
AM - PEAK HR VOLUME	1586	4366	5952
AM - K FACTOR (%)			6.34
AM - D (%)	26.65	73.35	100.00
DIRECTIONAL PEAK			
AM - PEAK HR TIME	07:15 AM to 08:15 AM	06:15 AM to 07:15 AM	
AM - PEAK HR VOLUME	2073	4366	

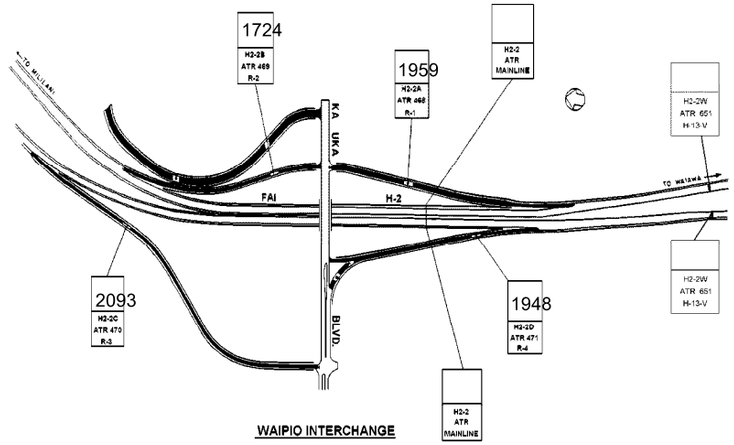
PM COMMUTER PERIOD (15:00-19:00)	DIR 1	DIR 2	
TWO DIRECTIONAL PEAK			
PM - PEAK HR TIME	04:00 PM to 05:00 PM		
PM - PEAK HR VOLUME	3848	2993	6841
PM - K FACTOR (%)			7.28
PM - D (%)	56.25	43.75	100.00
DIRECTIONAL PEAK			
PM - PEAK HR TIME	04:00 PM to 05:00 PM	03:15 PM to 04:15 PM	
PM - PEAK HR VOLUME	3848	3091	

AM PERIOD (00:00-12:00)			
TWO DIRECTIONAL PEAK			
AM - PEAK HR TIME	06:15 AM to 07:15 AM		
AM - PEAK HR VOLUME	1586	4366	5952
AM - K FACTOR (%)			6.34
AM - D (%)	26.65	73.35	100.00

PM PERIOD (12:00-24:00)			
TWO DIRECTIONAL PEAK			
PM - PEAK HR TIME	04:00 PM to 05:00 PM		
PM - PEAK HR VOLUME	3848	2993	6841
PM - K FACTOR (%)			7.28
PM - D (%)	56.25	43.75	100.00

NON-COMMUTER PERIOD (09:00-15:00)			
TWO DIRECTIONAL PEAK			
PEAK HR TIME	02:00 PM to 03:00 PM		
PEAK HR VOLUME	3125	2581	5706
DIRECTIONAL PEAK			
PEAK HR TIME	02:00 PM to 03:00 PM	09:15 AM to 10:15 AM	
PEAK HR VOLUME	3125	2825	

6-HR, 12-HR, 24-HR PERIODS	DIR 1	DIR 2	Total
AM 6-HR PERIOD (06:00-12:00)	11,597	18,980	30,577
AM 12-HR PERIOD (00:00-12:00)	14,549	23,509	38,058
PM 6-HR PERIOD (12:00-18:00)	19,084	15,987	35,071
PM 12-HR PERIOD (12:00-24:00)	31,194	24,693	55,887
24 HOUR PERIOD	45,743	48,202	93,945
D (%)	48.69	51.31	100.00



WAIPIO INTERCHANGE

Station Description:	Waipio Interchange				
Survey Date:	Beg:	End:			
Survey Method:	Loop/Hose	Data Type:			
Survey Crew:		M.P.			
Sketch Updated:	Date:	By:	SLD-98		
Remarks:					
ATR	FREEWAY	AUX	DESCRIPTION	RTE	RTE
#	STA #	STA #		#	MILE
	H2-2		Mainline		2.46
468	H2-2A	R-1	OFF RAMP, H-2 NB TO KA UKA BLVD	H-2	2.16
471	H2-2D	R-4	ON RAMP, KA UKA BLVD TO H-2 SB	H-2	2.21
469	H2-2B	R-2	ON RAMP, KA UKA BLVD TO H-2 NB	H-2	2.70
470	H2-2C	R-3	OFF RAMP, H-2 SB TO KA UKA BLVD	H-2	2.86
651	H2-2W	H-13-V	H-2 FREEWAY BETWEEN WAIPIO I.C. AND	H-2	1.59
			WAIAWA I.C.		

Run Date: 2017/08/02

Hawaii Department of Transportation
Highways Division **Highways Planning Survey Section**
2016 Program Count - Summary

Site ID: B720000H2-2B **Town:** Oahu **DIR 1:** +MP **DIR 2:** None **Final AADT:** 5800
Functional Class: URBAN:PRINCIPAL ARTERIAL - INTERSTATE **Count Type:** VOLUME **Counter Type:** Sensor **Route No:** H-2_NB_2AA
Location: ON RAMP, H-2 NB from Ka Uka Blvd, Waipio IC R-2

TIME-AM	DIR 1	DIR 2	TOTAL	TIME-AM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL
DATE : 10/05/2016															
12:00-12:15	3	0	3	06:00-06:15	55	0	55	12:00-12:15	83	0	83	06:00-06:15	135	0	135
12:15-12:30	3	0	3	06:15-06:30	49	0	49	12:15-12:30	99	0	99	06:15-06:30	135	0	135
12:30-12:45	5	0	5	06:30-06:45	69	0	69	12:30-12:45	86	0	86	06:30-06:45	160	0	160
12:45-01:00	5	0	5	06:45-07:00	65	0	65	12:45-01:00	96	0	96	06:45-07:00	100	0	100
01:00-01:15	4	0	4	07:00-07:15	79	0	79	01:00-01:15	92	0	92	07:00-07:15	125	0	125
01:15-01:30	6	0	6	07:15-07:30	92	0	92	01:15-01:30	97	0	97	07:15-07:30	135	0	135
01:30-01:45	1	0	1	07:30-07:45	88	0	88	01:30-01:45	130	0	130	07:30-07:45	108	0	108
01:45-02:00	1	0	1	07:45-08:00	86	0	86	01:45-02:00	87	0	87	07:45-08:00	78	0	78
02:00-02:15	3	0	3	08:00-08:15	69	0	69	02:00-02:15	108	0	108	08:00-08:15	90	0	90
02:15-02:30	2	0	2	08:15-08:30	68	0	68	02:15-02:30	117	0	117	08:15-08:30	70	0	70
02:30-02:45	1	0	1	08:30-08:45	69	0	69	02:30-02:45	102	0	102	08:30-08:45	73	0	73
02:45-03:00	3	0	3	08:45-09:00	80	0	80	02:45-03:00	109	0	109	08:45-09:00	55	0	55
03:00-03:15	1	0	1	09:00-09:15	62	0	62	03:00-03:15	104	0	104	09:00-09:15	36	0	36
03:15-03:30	2	0	2	09:15-09:30	47	0	47	03:15-03:30	103	0	103	09:15-09:30	42	0	42
03:30-03:45	3	0	3	09:30-09:45	62	0	62	03:30-03:45	113	0	113	09:30-09:45	30	0	30
03:45-04:00	1	0	1	09:45-10:00	58	0	58	03:45-04:00	129	0	129	09:45-10:00	25	0	25
04:00-04:15	4	0	4	10:00-10:15	44	0	44	04:00-04:15	100	0	100	10:00-10:15	20	0	20
04:15-04:30	3	0	3	10:15-10:30	60	0	60	04:15-04:30	132	0	132	10:15-10:30	20	0	20
04:30-04:45	6	0	6	10:30-10:45	80	0	80	04:30-04:45	129	0	129	10:30-10:45	18	0	18
04:45-05:00	14	0	14	10:45-11:00	88	0	88	04:45-05:00	105	0	105	10:45-11:00	8	0	8
05:00-05:15	19	0	19	11:00-11:15	71	0	71	05:00-05:15	134	0	134	11:00-11:15	14	0	14
05:15-05:30	32	0	32	11:15-11:30	85	0	85	05:15-05:30	141	0	141	11:15-11:30	7	0	7
05:30-05:45	42	0	42	11:30-11:45	95	0	95	05:30-05:45	124	0	124	11:30-11:45	4	0	4
05:45-06:00	55	0	55	11:45-12:00	99	0	99	05:45-06:00	133	0	133	11:45-12:00	6	0	6

AM COMMUTER PERIOD (05:00-09:00)	DIR 1	DIR 2	PM COMMUTER PERIOD (15:00-19:00)	DIR 1	DIR 2
TWO DIRECTIONAL PEAK			TWO DIRECTIONAL PEAK		
AM - PEAK HR TIME	07:00 AM to 08:00 AM		PM - PEAK HR TIME	05:45 PM to 06:45 PM	
AM - PEAK HR VOLUME	345		PM - PEAK HR VOLUME	563	
AM - K FACTOR (%)			PM - K FACTOR (%)		-
AM - D (%)			PM - D (%)		
DIRECTIONAL PEAK			DIRECTIONAL PEAK		
AM - PEAK HR TIME	07:00 AM to 08:00 AM		PM - PEAK HR TIME	05:45 PM to 06:45 PM	
AM - PEAK HR VOLUME	345		PM - PEAK HR VOLUME	563	

AM PERIOD (00:00-12:00)		PM PERIOD (12:00-24:00)		
TWO DIRECTIONAL PEAK		TWO DIRECTIONAL PEAK		
AM - PEAK HR TIME	11:00 AM to 12:00 PM	PM - PEAK HR TIME	05:45 PM to 06:45 PM	
AM - PEAK HR VOLUME	350	PM - PEAK HR VOLUME	563	
AM - K FACTOR (%)		PM - K FACTOR (%)		-
AM - D (%)		PM - D (%)		

NON-COMMUTER PERIOD (09:00-15:00)		6-HR, 12-HR, 24-HR PERIODS	DIR 1	DIR 2	Total
TWO DIRECTIONAL PEAK		AM 6-HR PERIOD (06:00-12:00)	1,720		
PEAK HR TIME	01:30 PM to 02:30 PM	AM 12-HR PERIOD (00:00-12:00)	1,939		
PEAK HR VOLUME	442	PM 6-HR PERIOD (12:00-18:00)	2,653		
DIRECTIONAL PEAK		PM 12-HR PERIOD (12:00-24:00)	4,147		
PEAK HR TIME	01:30 PM to 02:30 PM	24 HOUR PERIOD	6,086		
PEAK HR VOLUME	442	D (%)			

Run Date: 2017/08/02

Hawaii Department of Transportation
Highways Division **Highways Planning Survey Section**
2016 Program Count - Summary

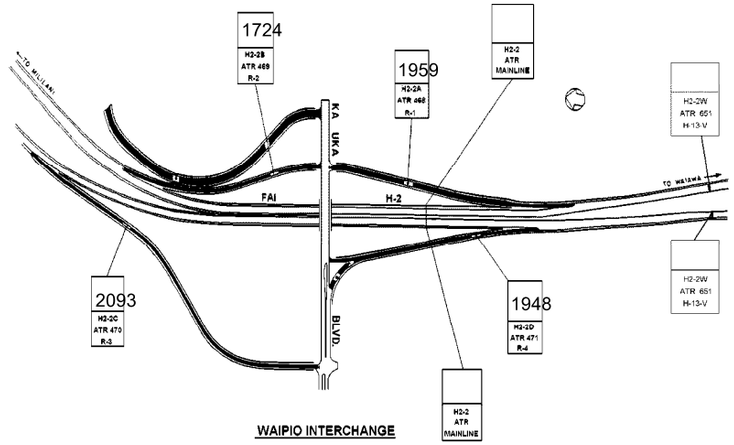
Site ID: B720000H2-2B **Town:** Oahu **DIR 1:** +MP **DIR 2:** None **Final AADT:** 5800
Functional Class: URBAN:PRINCIPAL ARTERIAL - INTERSTATE **Count Type:** VOLUME **Counter Type:** Sensor **Route No:** H-2_NB_2AA
Location: ON RAMP, H-2 NB from Ka Uka Blvd, Waipio IC R-2

TIME-AM	DIR 1	DIR 2	TOTAL	TIME-AM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL
DATE : 10/06/2016															
12:00-12:15	9	0	9	06:00-06:15	49	0	49	12:00-12:15	104	0	104	06:00-06:15	114	0	114
12:15-12:30	4	0	4	06:15-06:30	58	0	58	12:15-12:30	122	0	122	06:15-06:30	133	0	133
12:30-12:45	4	0	4	06:30-06:45	65	0	65	12:30-12:45	113	0	113	06:30-06:45	121	0	121
12:45-01:00	2	0	2	06:45-07:00	64	0	64	12:45-01:00	126	0	126	06:45-07:00	141	0	141
01:00-01:15	4	0	4	07:00-07:15	70	0	70	01:00-01:15	99	0	99	07:00-07:15	140	0	140
01:15-01:30	4	0	4	07:15-07:30	84	0	84	01:15-01:30	91	0	91	07:15-07:30	125	0	125
01:30-01:45	2	0	2	07:30-07:45	95	0	95	01:30-01:45	107	0	107	07:30-07:45	103	0	103
01:45-02:00	4	0	4	07:45-08:00	86	0	86	01:45-02:00	95	0	95	07:45-08:00	97	0	97
02:00-02:15	0	0	0	08:00-08:15	60	0	60	02:00-02:15	110	0	110	08:00-08:15	93	0	93
02:15-02:30	1	0	1	08:15-08:30	64	0	64	02:15-02:30	107	0	107	08:15-08:30	79	0	79
02:30-02:45	2	0	2	08:30-08:45	58	0	58	02:30-02:45	96	0	96	08:30-08:45	97	0	97
02:45-03:00	3	0	3	08:45-09:00	57	0	57	02:45-03:00	94	0	94	08:45-09:00	59	0	59
03:00-03:15	2	0	2	09:00-09:15	54	0	54	03:00-03:15	110	0	110	09:00-09:15	69	0	69
03:15-03:30	1	0	1	09:15-09:30	50	0	50	03:15-03:30	120	0	120	09:15-09:30	53	0	53
03:30-03:45	2	0	2	09:30-09:45	51	0	51	03:30-03:45	125	0	125	09:30-09:45	34	0	34
03:45-04:00	2	0	2	09:45-10:00	48	0	48	03:45-04:00	123	0	123	09:45-10:00	16	0	16
04:00-04:15	7	0	7	10:00-10:15	57	0	57	04:00-04:15	123	0	123	10:00-10:15	30	0	30
04:15-04:30	4	0	4	10:15-10:30	62	0	62	04:15-04:30	122	0	122	10:15-10:30	21	0	21
04:30-04:45	11	0	11	10:30-10:45	77	0	77	04:30-04:45	127	0	127	10:30-10:45	19	0	19
04:45-05:00	9	0	9	10:45-11:00	78	0	78	04:45-05:00	140	0	140	10:45-11:00	11	0	11
05:00-05:15	22	0	22	11:00-11:15	122	0	122	05:00-05:15	136	0	136	11:00-11:15	5	0	5
05:15-05:30	34	0	34	11:15-11:30	91	0	91	05:15-05:30	141	0	141	11:15-11:30	10	0	10
05:30-05:45	39	0	39	11:30-11:45	93	0	93	05:30-05:45	128	0	128	11:30-11:45	8	0	8
05:45-06:00	51	0	51	11:45-12:00	105	0	105	05:45-06:00	145	0	145	11:45-12:00	5	0	5

AM COMMUTER PERIOD (05:00-09:00)	DIR 1	DIR 2	PM COMMUTER PERIOD (15:00-19:00)	DIR 1	DIR 2
TWO DIRECTIONAL PEAK			TWO DIRECTIONAL PEAK		
AM - PEAK HR TIME	07:00 AM to 08:00 AM		PM - PEAK HR TIME	05:00 PM to 06:00 PM	
AM - PEAK HR VOLUME	335		PM - PEAK HR VOLUME	550	
AM - K FACTOR (%)			PM - K FACTOR (%)		-
AM - D (%)			PM - D (%)		
DIRECTIONAL PEAK			DIRECTIONAL PEAK		
AM - PEAK HR TIME	07:00 AM to 08:00 AM		PM - PEAK HR TIME	05:00 PM to 06:00 PM	
AM - PEAK HR VOLUME	335		PM - PEAK HR VOLUME	550	

AM PERIOD (00:00-12:00)		PM PERIOD (12:00-24:00)		
TWO DIRECTIONAL PEAK		TWO DIRECTIONAL PEAK		
AM - PEAK HR TIME	11:00 AM to 12:00 PM	PM - PEAK HR TIME	05:00 PM to 06:00 PM	
AM - PEAK HR VOLUME	411	PM - PEAK HR VOLUME	550	
AM - K FACTOR (%)		PM - K FACTOR (%)		-
AM - D (%)		PM - D (%)		

NON-COMMUTER PERIOD (09:00-15:00)		6-HR, 12-HR, 24-HR PERIODS	DIR 1	DIR 2	Total
TWO DIRECTIONAL PEAK		AM 6-HR PERIOD (06:00-12:00)	1,698		
PEAK HR TIME	12:00 PM to 01:00 PM	AM 12-HR PERIOD (00:00-12:00)	1,921		
PEAK HR VOLUME	465	PM 6-HR PERIOD (12:00-18:00)	2,804		
DIRECTIONAL PEAK		PM 12-HR PERIOD (12:00-24:00)	4,387		
PEAK HR TIME	12:00 PM to 01:00 PM	24 HOUR PERIOD	6,308		
PEAK HR VOLUME	465	D (%)			



WAIPIO INTERCHANGE

Station Description:	Waipio Interchange				
Survey Date:	Beg:	End:			
Survey Method:	Loop/Hose	Data Type:			
Survey Crew:		M.P.			
Sketch Updated:	Date:	By:	SLD-98		
Remarks:					
ATR	FREEWAY	AUX	DESCRIPTION	RTE	RTE
#	STA #	STA #		#	MILE
	H2-2		Mainline		2.46
468	H2-2A	R-1	OFF RAMP, H-2 NB TO KA UKA BLVD	H-2	2.16
471	H2-2D	R-4	ON RAMP, KA UKA BLVD TO H-2 SB	H-2	2.21
469	H2-2B	R-2	ON RAMP, KA UKA BLVD TO H-2 NB	H-2	2.70
470	H2-2C	R-3	OFF RAMP, H-2 SB TO KA UKA BLVD	H-2	2.86
651	H2-2W	H-13-V	H-2 FREEWAY BETWEEN WAIPIO I.C. AND	H-2	1.59
			WAIAWA I.C.		

Run Date: 2017/08/02

Hawaii Department of Transportation
Highways Division **Highways Planning Survey Section**
2016 Program Count - Summary

Site ID: B720000H2-2C **Town:** Oahu **DIR 1:** -MP **DIR 2:**None **Final AADT:** 5900
Functional Class: URBAN:PRINCIPAL ARTERIAL - INTERSTATE **Count Type:** VOLUME **Counter Type:** Sensor **Route No:** H-2_SB_2
Location: OFF RAMP, H-2 SB to Ka Uka Blvd, Waipio IC R-3

TIME-AM	DIR 1	DIR 2	TOTAL	TIME-AM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL
DATE : 10/05/2016															
12:00-12:15	1	0	1	06:00-06:15	77	0	77	12:00-12:15	90	0	90	06:00-06:15	112	0	112
12:15-12:30	4	0	4	06:15-06:30	78	0	78	12:15-12:30	100	0	100	06:15-06:30	107	0	107
12:30-12:45	5	0	5	06:30-06:45	73	0	73	12:30-12:45	81	0	81	06:30-06:45	78	0	78
12:45-01:00	5	0	5	06:45-07:00	88	0	88	12:45-01:00	90	0	90	06:45-07:00	96	0	96
01:00-01:15	3	0	3	07:00-07:15	155	0	155	01:00-01:15	100	0	100	07:00-07:15	79	0	79
01:15-01:30	2	0	2	07:15-07:30	226	0	226	01:15-01:30	65	0	65	07:15-07:30	71	0	71
01:30-01:45	1	0	1	07:30-07:45	224	0	224	01:30-01:45	79	0	79	07:30-07:45	50	0	50
01:45-02:00	3	0	3	07:45-08:00	215	0	215	01:45-02:00	84	0	84	07:45-08:00	47	0	47
02:00-02:15	2	0	2	08:00-08:15	195	0	195	02:00-02:15	78	0	78	08:00-08:15	37	0	37
02:15-02:30	3	0	3	08:15-08:30	116	0	116	02:15-02:30	85	0	85	08:15-08:30	35	0	35
02:30-02:45	0	0	0	08:30-08:45	89	0	89	02:30-02:45	84	0	84	08:30-08:45	27	0	27
02:45-03:00	3	0	3	08:45-09:00	87	0	87	02:45-03:00	98	0	98	08:45-09:00	20	0	20
03:00-03:15	2	0	2	09:00-09:15	102	0	102	03:00-03:15	107	0	107	09:00-09:15	36	0	36
03:15-03:30	6	0	6	09:15-09:30	78	0	78	03:15-03:30	132	0	132	09:15-09:30	29	0	29
03:30-03:45	8	0	8	09:30-09:45	84	0	84	03:30-03:45	129	0	129	09:30-09:45	22	0	22
03:45-04:00	3	0	3	09:45-10:00	107	0	107	03:45-04:00	138	0	138	09:45-10:00	17	0	17
04:00-04:15	8	0	8	10:00-10:15	107	0	107	04:00-04:15	139	0	139	10:00-10:15	13	0	13
04:15-04:30	14	0	14	10:15-10:30	90	0	90	04:15-04:30	132	0	132	10:15-10:30	16	0	16
04:30-04:45	13	0	13	10:30-10:45	101	0	101	04:30-04:45	122	0	122	10:30-10:45	6	0	6
04:45-05:00	32	0	32	10:45-11:00	111	0	111	04:45-05:00	153	0	153	10:45-11:00	7	0	7
05:00-05:15	36	0	36	11:00-11:15	73	0	73	05:00-05:15	126	0	126	11:00-11:15	6	0	6
05:15-05:30	35	0	35	11:15-11:30	86	0	86	05:15-05:30	127	0	127	11:15-11:30	7	0	7
05:30-05:45	53	0	53	11:30-11:45	67	0	67	05:30-05:45	103	0	103	11:30-11:45	3	0	3
05:45-06:00	55	0	55	11:45-12:00	96	0	96	05:45-06:00	145	0	145	11:45-12:00	10	0	10

AM COMMUTER PERIOD (05:00-09:00)	DIR 1	DIR 2	PM COMMUTER PERIOD (15:00-19:00)	DIR 1	DIR 2
TWO DIRECTIONAL PEAK			TWO DIRECTIONAL PEAK		
AM - PEAK HR TIME	07:15 AM to 08:15 AM		PM - PEAK HR TIME	04:00 PM to 05:00 PM	
AM - PEAK HR VOLUME	860		PM - PEAK HR VOLUME	546	
AM - K FACTOR (%)			PM - K FACTOR (%)		-
AM - D (%)			PM - D (%)		
DIRECTIONAL PEAK			DIRECTIONAL PEAK		
AM - PEAK HR TIME	07:15 AM to 08:15 AM		PM - PEAK HR TIME	04:00 PM to 05:00 PM	
AM - PEAK HR VOLUME	860		PM - PEAK HR VOLUME	546	

AM PERIOD (00:00-12:00)		PM PERIOD (12:00-24:00)		
TWO DIRECTIONAL PEAK		TWO DIRECTIONAL PEAK		
AM - PEAK HR TIME	07:15 AM to 08:15 AM	PM - PEAK HR TIME	04:00 PM to 05:00 PM	
AM - PEAK HR VOLUME	860	PM - PEAK HR VOLUME	546	
AM - K FACTOR (%)		PM - K FACTOR (%)		-
AM - D (%)		PM - D (%)		

NON-COMMUTER PERIOD (09:00-15:00)		6-HR, 12-HR, 24-HR PERIODS	DIR 1	DIR 2	Total
TWO DIRECTIONAL PEAK		AM 6-HR PERIOD (06:00-12:00)	2,725		
PEAK HR TIME	10:00 AM to 11:00 AM	AM 12-HR PERIOD (00:00-12:00)	3,022		
PEAK HR VOLUME	409	PM 6-HR PERIOD (12:00-18:00)	2,587		
DIRECTIONAL PEAK		PM 12-HR PERIOD (12:00-24:00)	3,518		
PEAK HR TIME	10:00 AM to 11:00 AM	24 HOUR PERIOD	6,540		
PEAK HR VOLUME	409	D (%)			

Run Date: 2017/08/02

Hawaii Department of Transportation
Highways Division **Highways Planning Survey Section**
2016 Program Count - Summary

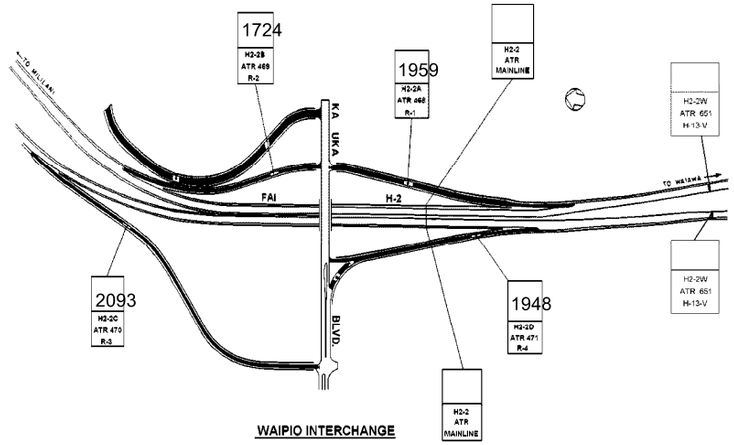
Site ID: B720000H2-2C **Town:** Oahu **DIR 1:** -MP **DIR 2:**None **Final AADT:** 5900
Functional Class: URBAN:PRINCIPAL ARTERIAL - INTERSTATE **Count Type:** VOLUME **Counter Type:** Sensor **Route No:** H-2_SB_2
Location: OFF RAMP, H-2 SB to Ka Uka Blvd, Waipio IC R-3

TIME-AM	DIR 1	DIR 2	TOTAL	TIME-AM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL
DATE : 10/06/2016															
12:00-12:15	4	0	4	06:00-06:15	63	0	63	12:00-12:15	98	0	98	06:00-06:15	95	0	95
12:15-12:30	5	0	5	06:15-06:30	78	0	78	12:15-12:30	84	0	84	06:15-06:30	113	0	113
12:30-12:45	5	0	5	06:30-06:45	71	0	71	12:30-12:45	83	0	83	06:30-06:45	107	0	107
12:45-01:00	6	0	6	06:45-07:00	77	0	77	12:45-01:00	93	0	93	06:45-07:00	122	0	122
01:00-01:15	0	0	0	07:00-07:15	82	0	82	01:00-01:15	104	0	104	07:00-07:15	101	0	101
01:15-01:30	1	0	1	07:15-07:30	94	0	94	01:15-01:30	92	0	92	07:15-07:30	69	0	69
01:30-01:45	2	0	2	07:30-07:45	100	0	100	01:30-01:45	99	0	99	07:30-07:45	62	0	62
01:45-02:00	2	0	2	07:45-08:00	121	0	121	01:45-02:00	96	0	96	07:45-08:00	64	0	64
02:00-02:15	0	0	0	08:00-08:15	121	0	121	02:00-02:15	86	0	86	08:00-08:15	48	0	48
02:15-02:30	0	0	0	08:15-08:30	102	0	102	02:15-02:30	85	0	85	08:15-08:30	29	0	29
02:30-02:45	2	0	2	08:30-08:45	70	0	70	02:30-02:45	86	0	86	08:30-08:45	28	0	28
02:45-03:00	4	0	4	08:45-09:00	81	0	81	02:45-03:00	102	0	102	08:45-09:00	27	0	27
03:00-03:15	4	0	4	09:00-09:15	73	0	73	03:00-03:15	105	0	105	09:00-09:15	18	0	18
03:15-03:30	3	0	3	09:15-09:30	87	0	87	03:15-03:30	93	0	93	09:15-09:30	19	0	19
03:30-03:45	5	0	5	09:30-09:45	93	0	93	03:30-03:45	123	0	123	09:30-09:45	21	0	21
03:45-04:00	7	0	7	09:45-10:00	113	0	113	03:45-04:00	140	0	140	09:45-10:00	16	0	16
04:00-04:15	10	0	10	10:00-10:15	107	0	107	04:00-04:15	139	0	139	10:00-10:15	9	0	9
04:15-04:30	14	0	14	10:15-10:30	98	0	98	04:15-04:30	139	0	139	10:15-10:30	9	0	9
04:30-04:45	12	0	12	10:30-10:45	116	0	116	04:30-04:45	130	0	130	10:30-10:45	7	0	7
04:45-05:00	35	0	35	10:45-11:00	95	0	95	04:45-05:00	125	0	125	10:45-11:00	10	0	10
05:00-05:15	33	0	33	11:00-11:15	88	0	88	05:00-05:15	147	0	147	11:00-11:15	7	0	7
05:15-05:30	37	0	37	11:15-11:30	92	0	92	05:15-05:30	126	0	126	11:15-11:30	8	0	8
05:30-05:45	56	0	56	11:30-11:45	82	0	82	05:30-05:45	121	0	121	11:30-11:45	3	0	3
05:45-06:00	66	0	66	11:45-12:00	94	0	94	05:45-06:00	126	0	126	11:45-12:00	7	0	7

AM COMMUTER PERIOD (05:00-09:00)	DIR 1	DIR 2	PM COMMUTER PERIOD (15:00-19:00)	DIR 1	DIR 2
TWO DIRECTIONAL PEAK			TWO DIRECTIONAL PEAK		
AM - PEAK HR TIME	07:30 AM to 08:30 AM		PM - PEAK HR TIME	03:45 PM to 04:45 PM	
AM - PEAK HR VOLUME	444		PM - PEAK HR VOLUME	548	
AM - K FACTOR (%)			PM - K FACTOR (%)		-
AM - D (%)			PM - D (%)		
DIRECTIONAL PEAK			DIRECTIONAL PEAK		
AM - PEAK HR TIME	07:30 AM to 08:30 AM		PM - PEAK HR TIME	03:45 PM to 04:45 PM	
AM - PEAK HR VOLUME	444		PM - PEAK HR VOLUME	548	

AM PERIOD (00:00-12:00)		PM PERIOD (12:00-24:00)		
TWO DIRECTIONAL PEAK		TWO DIRECTIONAL PEAK		
AM - PEAK HR TIME	07:30 AM to 08:30 AM	PM - PEAK HR TIME	03:45 PM to 04:45 PM	
AM - PEAK HR VOLUME	444	PM - PEAK HR VOLUME	548	
AM - K FACTOR (%)		PM - K FACTOR (%)		-
AM - D (%)		PM - D (%)		

NON-COMMUTER PERIOD (09:00-15:00)		6-HR, 12-HR, 24-HR PERIODS	DIR 1	DIR 2	Total
TWO DIRECTIONAL PEAK		AM 6-HR PERIOD (06:00-12:00)	2,198		
PEAK HR TIME	09:45 AM to 10:45 AM	AM 12-HR PERIOD (00:00-12:00)	2,511		
PEAK HR VOLUME	434	PM 6-HR PERIOD (12:00-18:00)	2,622		
DIRECTIONAL PEAK		PM 12-HR PERIOD (12:00-24:00)	3,621		
PEAK HR TIME	09:45 AM to 10:45 AM	24 HOUR PERIOD	6,132		
PEAK HR VOLUME	434	D (%)			



WAIPIO INTERCHANGE

Station Description:	Waipio Interchange				
Survey Date:	Beg:	End:			
Survey Method:	Loop/Hose	Data Type:			
Survey Crew:		M.P.			
Sketch Updated:	Date:	By:	SLD-98		
Remarks:					
ATR	FREEWAY	AUX	DESCRIPTION	RTE	RTE
#	STA #	STA #		#	MILE
	H2-2		Mainline		2.46
468	H2-2A	R-1	OFF RAMP, H-2 NB TO KA UKA BLVD	H-2	2.16
471	H2-2D	R-4	ON RAMP, KA UKA BLVD TO H-2 SB	H-2	2.21
469	H2-2B	R-2	ON RAMP, KA UKA BLVD TO H-2 NB	H-2	2.70
470	H2-2C	R-3	OFF RAMP, H-2 SB TO KA UKA BLVD	H-2	2.86
651	H2-2W	H-13-V	H-2 FREEWAY BETWEEN WAIPIO I.C. AND	H-2	1.59
			WAIAWA I.C.		

Run Date: 2017/08/02

Hawaii Department of Transportation
Highways Division **Highways Planning Survey Section**
2016 Program Count - Summary

Site ID: B720000H2-2D **Town:** Oahu **DIR 1:** -MP **DIR 2:** None **Final AADT:** 9200
Functional Class: URBAN:PRINCIPAL ARTERIAL - INTERSTATE **Count Type:** VOLUME **Counter Type:** Sensor **Route No:** H-2_SB_2AA
Location: ON RAMP, H-2 SB from Ka Uka Blvd, Waipio IC R-4

TIME-AM	DIR 1	DIR 2	TOTAL	TIME-AM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL
DATE : 10/05/2016															
12:00-12:15	6	0	6	06:00-06:15	234	0	234	12:00-12:15	160	0	160	06:00-06:15	141	0	141
12:15-12:30	6	0	6	06:15-06:30	301	0	301	12:15-12:30	162	0	162	06:15-06:30	138	0	138
12:30-12:45	12	0	12	06:30-06:45	249	0	249	12:30-12:45	186	0	186	06:30-06:45	107	0	107
12:45-01:00	4	0	4	06:45-07:00	178	0	178	12:45-01:00	185	0	185	06:45-07:00	104	0	104
01:00-01:15	12	0	12	07:00-07:15	151	0	151	01:00-01:15	160	0	160	07:00-07:15	86	0	86
01:15-01:30	5	0	5	07:15-07:30	147	0	147	01:15-01:30	191	0	191	07:15-07:30	76	0	76
01:30-01:45	5	0	5	07:30-07:45	166	0	166	01:30-01:45	148	0	148	07:30-07:45	92	0	92
01:45-02:00	7	0	7	07:45-08:00	143	0	143	01:45-02:00	160	0	160	07:45-08:00	65	0	65
02:00-02:15	6	0	6	08:00-08:15	159	0	159	02:00-02:15	164	0	164	08:00-08:15	79	0	79
02:15-02:30	7	0	7	08:15-08:30	174	0	174	02:15-02:30	157	0	157	08:15-08:30	82	0	82
02:30-02:45	8	0	8	08:30-08:45	152	0	152	02:30-02:45	159	0	159	08:30-08:45	77	0	77
02:45-03:00	5	0	5	08:45-09:00	181	0	181	02:45-03:00	134	0	134	08:45-09:00	59	0	59
03:00-03:15	14	0	14	09:00-09:15	145	0	145	03:00-03:15	145	0	145	09:00-09:15	46	0	46
03:15-03:30	15	0	15	09:15-09:30	157	0	157	03:15-03:30	162	0	162	09:15-09:30	48	0	48
03:30-03:45	18	0	18	09:30-09:45	165	0	165	03:30-03:45	169	0	169	09:30-09:45	32	0	32
03:45-04:00	14	0	14	09:45-10:00	156	0	156	03:45-04:00	154	0	154	09:45-10:00	35	0	35
04:00-04:15	29	0	29	10:00-10:15	151	0	151	04:00-04:15	155	0	155	10:00-10:15	29	0	29
04:15-04:30	41	0	41	10:15-10:30	153	0	153	04:15-04:30	154	0	154	10:15-10:30	22	0	22
04:30-04:45	58	0	58	10:30-10:45	176	0	176	04:30-04:45	187	0	187	10:30-10:45	25	0	25
04:45-05:00	64	0	64	10:45-11:00	176	0	176	04:45-05:00	166	0	166	10:45-11:00	18	0	18
05:00-05:15	119	0	119	11:00-11:15	174	0	174	05:00-05:15	180	0	180	11:00-11:15	14	0	14
05:15-05:30	139	0	139	11:15-11:30	185	0	185	05:15-05:30	181	0	181	11:15-11:30	8	0	8
05:30-05:45	173	0	173	11:30-11:45	171	0	171	05:30-05:45	122	0	122	11:30-11:45	6	0	6
05:45-06:00	206	0	206	11:45-12:00	171	0	171	05:45-06:00	134	0	134	11:45-12:00	6	0	6

AM COMMUTER PERIOD (05:00-09:00)	DIR 1	DIR 2	PM COMMUTER PERIOD (15:00-19:00)	DIR 1	DIR 2
TWO DIRECTIONAL PEAK			TWO DIRECTIONAL PEAK		
AM - PEAK HR TIME	05:45 AM to 06:45 AM		PM - PEAK HR TIME	04:30 PM to 05:30 PM	
AM - PEAK HR VOLUME	990		PM - PEAK HR VOLUME	714	
AM - K FACTOR (%)			PM - K FACTOR (%)		-
AM - D (%)			PM - D (%)		
DIRECTIONAL PEAK			DIRECTIONAL PEAK		
AM - PEAK HR TIME	05:45 AM to 06:45 AM		PM - PEAK HR TIME	04:30 PM to 05:30 PM	
AM - PEAK HR VOLUME	990		PM - PEAK HR VOLUME	714	

AM PERIOD (00:00-12:00)		PM PERIOD (12:00-24:00)		
TWO DIRECTIONAL PEAK		TWO DIRECTIONAL PEAK		
AM - PEAK HR TIME	05:45 AM to 06:45 AM	PM - PEAK HR TIME	12:30 PM to 01:30 PM	
AM - PEAK HR VOLUME	990	PM - PEAK HR VOLUME	722	
AM - K FACTOR (%)		PM - K FACTOR (%)		-
AM - D (%)		PM - D (%)		

NON-COMMUTER PERIOD (09:00-15:00)		6-HR, 12-HR, 24-HR PERIODS	DIR 1	DIR 2	Total
TWO DIRECTIONAL PEAK		AM 6-HR PERIOD (06:00-12:00)	4,215		
PEAK HR TIME	12:30 PM to 01:30 PM	AM 12-HR PERIOD (00:00-12:00)	5,188		
PEAK HR VOLUME	722	PM 6-HR PERIOD (12:00-18:00)	3,875		
DIRECTIONAL PEAK		PM 12-HR PERIOD (12:00-24:00)	5,270		
PEAK HR TIME	12:30 PM to 01:30 PM	24 HOUR PERIOD	10,458		
PEAK HR VOLUME	722	D (%)			

Run Date: 2017/08/02

Hawaii Department of Transportation
Highways Division **Highways Planning Survey Section**
2016 Program Count - Summary

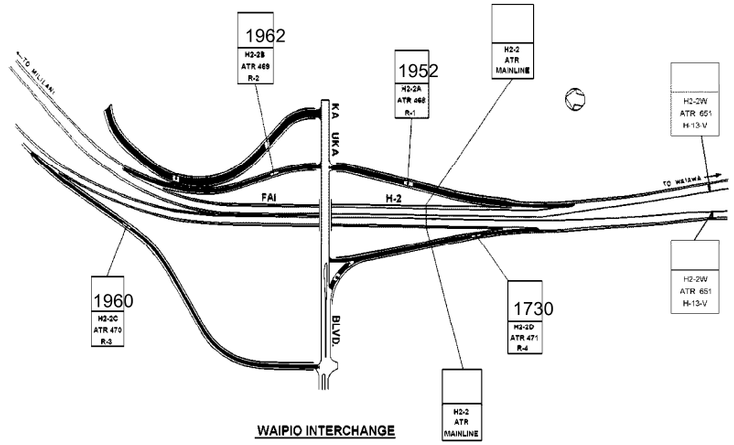
Site ID: B720000H2-2D **Town:** Oahu **DIR 1:** -MP **DIR 2:** None **Final AADT:** 9200
Functional Class: URBAN:PRINCIPAL ARTERIAL - INTERSTATE **Count Type:** VOLUME **Counter Type:** Sensor **Route No:** H-2_SB_2AA
Location: ON RAMP, H-2 SB from Ka Uka Blvd, Waipio IC R-4

TIME-AM	DIR 1	DIR 2	TOTAL	TIME-AM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL
DATE : 10/06/2016															
12:00-12:15	11	0	11	06:00-06:15	225	0	225	12:00-12:15	157	0	157	06:00-06:15	125	0	125
12:15-12:30	3	0	3	06:15-06:30	269	0	269	12:15-12:30	124	0	124	06:15-06:30	110	0	110
12:30-12:45	9	0	9	06:30-06:45	222	0	222	12:30-12:45	152	0	152	06:30-06:45	97	0	97
12:45-01:00	7	0	7	06:45-07:00	199	0	199	12:45-01:00	111	0	111	06:45-07:00	85	0	85
01:00-01:15	8	0	8	07:00-07:15	173	0	173	01:00-01:15	125	0	125	07:00-07:15	91	0	91
01:15-01:30	2	0	2	07:15-07:30	169	0	169	01:15-01:30	146	0	146	07:15-07:30	81	0	81
01:30-01:45	3	0	3	07:30-07:45	152	0	152	01:30-01:45	133	0	133	07:30-07:45	93	0	93
01:45-02:00	6	0	6	07:45-08:00	145	0	145	01:45-02:00	139	0	139	07:45-08:00	77	0	77
02:00-02:15	2	0	2	08:00-08:15	166	0	166	02:00-02:15	132	0	132	08:00-08:15	70	0	70
02:15-02:30	10	0	10	08:15-08:30	173	0	173	02:15-02:30	130	0	130	08:15-08:30	75	0	75
02:30-02:45	5	0	5	08:30-08:45	159	0	159	02:30-02:45	107	0	107	08:30-08:45	65	0	65
02:45-03:00	7	0	7	08:45-09:00	139	0	139	02:45-03:00	126	0	126	08:45-09:00	60	0	60
03:00-03:15	11	0	11	09:00-09:15	141	0	141	03:00-03:15	143	0	143	09:00-09:15	49	0	49
03:15-03:30	17	0	17	09:15-09:30	157	0	157	03:15-03:30	121	0	121	09:15-09:30	37	0	37
03:30-03:45	13	0	13	09:30-09:45	133	0	133	03:30-03:45	140	0	140	09:30-09:45	34	0	34
03:45-04:00	19	0	19	09:45-10:00	133	0	133	03:45-04:00	133	0	133	09:45-10:00	13	0	13
04:00-04:15	27	0	27	10:00-10:15	117	0	117	04:00-04:15	132	0	132	10:00-10:15	22	0	22
04:15-04:30	48	0	48	10:15-10:30	137	0	137	04:15-04:30	122	0	122	10:15-10:30	19	0	19
04:30-04:45	54	0	54	10:30-10:45	112	0	112	04:30-04:45	154	0	154	10:30-10:45	20	0	20
04:45-05:00	58	0	58	10:45-11:00	157	0	157	04:45-05:00	149	0	149	10:45-11:00	12	0	12
05:00-05:15	116	0	116	11:00-11:15	159	0	159	05:00-05:15	134	0	134	11:00-11:15	9	0	9
05:15-05:30	152	0	152	11:15-11:30	161	0	161	05:15-05:30	139	0	139	11:15-11:30	5	0	5
05:30-05:45	161	0	161	11:30-11:45	145	0	145	05:30-05:45	133	0	133	11:30-11:45	5	0	5
05:45-06:00	202	0	202	11:45-12:00	124	0	124	05:45-06:00	104	0	104	11:45-12:00	5	0	5

AM COMMUTER PERIOD (05:00-09:00)	DIR 1	DIR 2	PM COMMUTER PERIOD (15:00-19:00)	DIR 1	DIR 2
TWO DIRECTIONAL PEAK			TWO DIRECTIONAL PEAK		
AM - PEAK HR TIME	05:45 AM to 06:45 AM		PM - PEAK HR TIME	04:30 PM to 05:30 PM	
AM - PEAK HR VOLUME	918		PM - PEAK HR VOLUME	576	
AM - K FACTOR (%)			PM - K FACTOR (%)		-
AM - D (%)			PM - D (%)		
DIRECTIONAL PEAK			DIRECTIONAL PEAK		
AM - PEAK HR TIME	05:45 AM to 06:45 AM		PM - PEAK HR TIME	04:30 PM to 05:30 PM	
AM - PEAK HR VOLUME	918		PM - PEAK HR VOLUME	576	

AM PERIOD (00:00-12:00)		PM PERIOD (12:00-24:00)		
TWO DIRECTIONAL PEAK		TWO DIRECTIONAL PEAK		
AM - PEAK HR TIME	05:45 AM to 06:45 AM	PM - PEAK HR TIME	04:30 PM to 05:30 PM	
AM - PEAK HR VOLUME	918	PM - PEAK HR VOLUME	576	
AM - K FACTOR (%)		PM - K FACTOR (%)		-
AM - D (%)		PM - D (%)		

NON-COMMUTER PERIOD (09:00-15:00)		6-HR, 12-HR, 24-HR PERIODS	DIR 1	DIR 2	Total
TWO DIRECTIONAL PEAK		AM 6-HR PERIOD (06:00-12:00)	3,867		
PEAK HR TIME	10:45 AM to 11:45 AM	AM 12-HR PERIOD (00:00-12:00)	4,818		
PEAK HR VOLUME	622	PM 6-HR PERIOD (12:00-18:00)	3,186		
DIRECTIONAL PEAK		PM 12-HR PERIOD (12:00-24:00)	4,445		
PEAK HR TIME	10:45 AM to 11:45 AM	24 HOUR PERIOD	9,263		
PEAK HR VOLUME	622	D (%)			



WAIPIO INTERCHANGE

Station Description:	Waipio Interchange				
Survey Date:	Beg:	End:			
Survey Method:	Loop/Hose	Data Type:			
Survey Crew:		M.P.			
Sketch Updated:	Date:	By:	SLD-98		
Remarks:					
ATR	FREEWAY	AUX	DESCRIPTION	RTE	RTE
#	STA #	STA #		#	MILE
	H2-2		Mainline		2.46
468	H2-2A	R-1	OFF RAMP, H-2 NB TO KA UKA BLVD	H-2	2.16
471	H2-2D	R-4	ON RAMP, KA UKA BLVD TO H-2 SB	H-2	2.21
469	H2-2B	R-2	ON RAMP, KA UKA BLVD TO H-2 NB	H-2	2.70
470	H2-2C	R-3	OFF RAMP, H-2 SB TO KA UKA BLVD	H-2	2.86
651	H2-2W	H-13-V	H-2 FREEWAY BETWEEN WAIPIO I.C. AND	H-2	1.59
			WAIAWA I.C.		

Run Date: 2016/05/25

Hawaii Department of Transportation
Highways Division **Highways Planning Survey Section**
2015 Program Count - Summary

Site ID: B720000H2-2A **Town:** Oahu **DIR 1:** +MP **DIR 2:** None **Final AADT:** 11800
Functional Class: OTHER **Count Type:** CLASS **Counter Type:** Tube **Route No:** H-2_NB_2
Location: OFF RAMP, H-2 NB to Ka Uka Blvd, Waipio IC R-1

TIME-AM	DIR 1	DIR 2	TOTAL	TIME-AM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL
DATE : 02/10/2015															
12:00-12:15	17	0	17	06:00-06:15	43	0	43	12:00-12:15	190	0	190	06:00-06:15	307	0	307
12:15-12:30	7	0	7	06:15-06:30	79	0	79	12:15-12:30	188	0	188	06:15-06:30	314	0	314
12:30-12:45	11	0	11	06:30-06:45	82	0	82	12:30-12:45	194	0	194	06:30-06:45	274	0	274
12:45-01:00	6	0	6	06:45-07:00	80	0	80	12:45-01:00	211	0	211	06:45-07:00	244	0	244
01:00-01:15	9	0	9	07:00-07:15	92	0	92	01:00-01:15	199	0	199	07:00-07:15	218	0	218
01:15-01:30	9	0	9	07:15-07:30	104	0	104	01:15-01:30	231	0	231	07:15-07:30	240	0	240
01:30-01:45	2	0	2	07:30-07:45	104	0	104	01:30-01:45	220	0	220	07:30-07:45	199	0	199
01:45-02:00	11	0	11	07:45-08:00	140	0	140	01:45-02:00	236	0	236	07:45-08:00	170	0	170
02:00-02:15	6	0	6	08:00-08:15	149	0	149	02:00-02:15	250	0	250	08:00-08:15	129	0	129
02:15-02:30	5	0	5	08:15-08:30	152	0	152	02:15-02:30	282	0	282	08:15-08:30	91	0	91
02:30-02:45	6	0	6	08:30-08:45	116	0	116	02:30-02:45	255	0	255	08:30-08:45	85	0	85
02:45-03:00	2	0	2	08:45-09:00	150	0	150	02:45-03:00	273	0	273	08:45-09:00	67	0	67
03:00-03:15	8	0	8	09:00-09:15	129	0	129	03:00-03:15	274	0	274	09:00-09:15	49	0	49
03:15-03:30	4	0	4	09:15-09:30	147	0	147	03:15-03:30	295	0	295	09:15-09:30	57	0	57
03:30-03:45	11	0	11	09:30-09:45	159	0	159	03:30-03:45	274	0	274	09:30-09:45	42	0	42
03:45-04:00	25	0	25	09:45-10:00	164	0	164	03:45-04:00	326	0	326	09:45-10:00	38	0	38
04:00-04:15	26	0	26	10:00-10:15	199	0	199	04:00-04:15	285	0	285	10:00-10:15	23	0	23
04:15-04:30	29	0	29	10:15-10:30	173	0	173	04:15-04:30	261	0	261	10:15-10:30	32	0	32
04:30-04:45	25	0	25	10:30-10:45	191	0	191	04:30-04:45	288	0	288	10:30-10:45	25	0	25
04:45-05:00	40	0	40	10:45-11:00	173	0	173	04:45-05:00	295	0	295	10:45-11:00	23	0	23
05:00-05:15	50	0	50	11:00-11:15	192	0	192	05:00-05:15	293	0	293	11:00-11:15	12	0	12
05:15-05:30	64	0	64	11:15-11:30	197	0	197	05:15-05:30	265	0	265	11:15-11:30	22	0	22
05:30-05:45	49	0	49	11:30-11:45	205	0	205	05:30-05:45	329	0	329	11:30-11:45	22	0	22
05:45-06:00	57	0	57	11:45-12:00	193	0	193	05:45-06:00	309	0	309	11:45-12:00	19	0	19

AM COMMUTER PERIOD (05:00-09:00)	DIR 1	DIR 2	PM COMMUTER PERIOD (15:00-19:00)	DIR 1	DIR 2
TWO DIRECTIONAL PEAK			TWO DIRECTIONAL PEAK		
AM - PEAK HR TIME	08:00 AM to 09:00 AM		PM - PEAK HR TIME	05:30 PM to 06:30 PM	
AM - PEAK HR VOLUME	567		PM - PEAK HR VOLUME	1259	
AM - K FACTOR (%)			PM - K FACTOR (%)		-
AM - D (%)			PM - D (%)		
DIRECTIONAL PEAK			DIRECTIONAL PEAK		
AM - PEAK HR TIME	08:00 AM to 09:00 AM		PM - PEAK HR TIME	05:30 PM to 06:30 PM	
AM - PEAK HR VOLUME	567		PM - PEAK HR VOLUME	1259	

AM PERIOD (00:00-12:00)		PM PERIOD (12:00-24:00)		
TWO DIRECTIONAL PEAK		TWO DIRECTIONAL PEAK		
AM - PEAK HR TIME	11:00 AM to 12:00 PM	PM - PEAK HR TIME	05:30 PM to 06:30 PM	
AM - PEAK HR VOLUME	787	PM - PEAK HR VOLUME	1259	
AM - K FACTOR (%)		PM - K FACTOR (%)		-
AM - D (%)		PM - D (%)		

NON-COMMUTER PERIOD (09:00-15:00)		6-HR, 12-HR, 24-HR PERIODS	DIR 1	DIR 2	Total
TWO DIRECTIONAL PEAK		AM 6-HR PERIOD (06:00-12:00)	3,413		
PEAK HR TIME	02:00 PM to 03:00 PM	AM 12-HR PERIOD (00:00-12:00)	3,892		
PEAK HR VOLUME	1060	PM 6-HR PERIOD (12:00-18:00)	6,223		
DIRECTIONAL PEAK		PM 12-HR PERIOD (12:00-24:00)	8,925		
PEAK HR TIME	02:00 PM to 03:00 PM	24 HOUR PERIOD	12,817		
PEAK HR VOLUME	1060	D (%)			

Run Date: 2016/05/25

Hawaii Department of Transportation
Highways Division **Highways Planning Survey Section**
2015 Program Count - Summary

Site ID: B720000H2-2A **Town:** Oahu **DIR 1:** +MP **DIR 2:** None **Final AADT:** 11800
Functional Class: OTHER **Count Type:** CLASS **Counter Type:** Tube **Route No:** H-2_NB_2
Location: OFF RAMP, H-2 NB to Ka Uka Blvd, Waipio IC R-1

TIME-AM	DIR 1	DIR 2	TOTAL	TIME-AM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL
DATE : 02/11/2015															
12:00-12:15	19	0	19	06:00-06:15	63	0	63	12:00-12:15	226	0	226	06:00-06:15	246	0	246
12:15-12:30	8	0	8	06:15-06:30	69	0	69	12:15-12:30	241	0	241	06:15-06:30	237	0	237
12:30-12:45	9	0	9	06:30-06:45	69	0	69	12:30-12:45	245	0	245	06:30-06:45	211	0	211
12:45-01:00	9	0	9	06:45-07:00	74	0	74	12:45-01:00	262	0	262	06:45-07:00	227	0	227
01:00-01:15	9	0	9	07:00-07:15	99	0	99	01:00-01:15	227	0	227	07:00-07:15	223	0	223
01:15-01:30	8	0	8	07:15-07:30	93	0	93	01:15-01:30	190	0	190	07:15-07:30	220	0	220
01:30-01:45	7	0	7	07:30-07:45	135	0	135	01:30-01:45	229	0	229	07:30-07:45	177	0	177
01:45-02:00	13	0	13	07:45-08:00	150	0	150	01:45-02:00	223	0	223	07:45-08:00	155	0	155
02:00-02:15	3	0	3	08:00-08:15	124	0	124	02:00-02:15	241	0	241	08:00-08:15	98	0	98
02:15-02:30	5	0	5	08:15-08:30	120	0	120	02:15-02:30	261	0	261	08:15-08:30	90	0	90
02:30-02:45	7	0	7	08:30-08:45	111	0	111	02:30-02:45	237	0	237	08:30-08:45	83	0	83
02:45-03:00	8	0	8	08:45-09:00	133	0	133	02:45-03:00	275	0	275	08:45-09:00	64	0	64
03:00-03:15	5	0	5	09:00-09:15	148	0	148	03:00-03:15	286	0	286	09:00-09:15	59	0	59
03:15-03:30	7	0	7	09:15-09:30	137	0	137	03:15-03:30	283	0	283	09:15-09:30	50	0	50
03:30-03:45	7	0	7	09:30-09:45	128	0	128	03:30-03:45	292	0	292	09:30-09:45	41	0	41
03:45-04:00	23	0	23	09:45-10:00	135	0	135	03:45-04:00	285	0	285	09:45-10:00	33	0	33
04:00-04:15	20	0	20	10:00-10:15	164	0	164	04:00-04:15	260	0	260	10:00-10:15	35	0	35
04:15-04:30	23	0	23	10:15-10:30	156	0	156	04:15-04:30	294	0	294	10:15-10:30	24	0	24
04:30-04:45	19	0	19	10:30-10:45	155	0	155	04:30-04:45	255	0	255	10:30-10:45	18	0	18
04:45-05:00	41	0	41	10:45-11:00	188	0	188	04:45-05:00	251	0	251	10:45-11:00	17	0	17
05:00-05:15	35	0	35	11:00-11:15	189	0	189	05:00-05:15	276	0	276	11:00-11:15	22	0	22
05:15-05:30	64	0	64	11:15-11:30	156	0	156	05:15-05:30	259	0	259	11:15-11:30	14	0	14
05:30-05:45	58	0	58	11:30-11:45	172	0	172	05:30-05:45	284	0	284	11:30-11:45	12	0	12
05:45-06:00	65	0	65	11:45-12:00	214	0	214	05:45-06:00	276	0	276	11:45-12:00	14	0	14

AM COMMUTER PERIOD (05:00-09:00)	DIR 1	DIR 2	PM COMMUTER PERIOD (15:00-19:00)	DIR 1	DIR 2
TWO DIRECTIONAL PEAK			TWO DIRECTIONAL PEAK		
AM - PEAK HR TIME	07:30 AM to 08:30 AM		PM - PEAK HR TIME	03:00 PM to 04:00 PM	
AM - PEAK HR VOLUME	529		PM - PEAK HR VOLUME	1146	
AM - K FACTOR (%)			PM - K FACTOR (%)		-
AM - D (%)			PM - D (%)		
DIRECTIONAL PEAK			DIRECTIONAL PEAK		
AM - PEAK HR TIME	07:30 AM to 08:30 AM		PM - PEAK HR TIME	03:00 PM to 04:00 PM	
AM - PEAK HR VOLUME	529		PM - PEAK HR VOLUME	1146	

AM PERIOD (00:00-12:00)		PM PERIOD (12:00-24:00)		
TWO DIRECTIONAL PEAK		TWO DIRECTIONAL PEAK		
AM - PEAK HR TIME	11:00 AM to 12:00 PM	PM - PEAK HR TIME	03:00 PM to 04:00 PM	
AM - PEAK HR VOLUME	731	PM - PEAK HR VOLUME	1146	
AM - K FACTOR (%)		PM - K FACTOR (%)		-
AM - D (%)		PM - D (%)		

NON-COMMUTER PERIOD (09:00-15:00)		6-HR, 12-HR, 24-HR PERIODS	DIR 1	DIR 2	Total
TWO DIRECTIONAL PEAK		AM 6-HR PERIOD (06:00-12:00)	3,182		
PEAK HR TIME	02:00 PM to 03:00 PM	AM 12-HR PERIOD (00:00-12:00)	3,654		
PEAK HR VOLUME	1014	PM 6-HR PERIOD (12:00-18:00)	6,158		
DIRECTIONAL PEAK		PM 12-HR PERIOD (12:00-24:00)	8,528		
PEAK HR TIME	02:00 PM to 03:00 PM	24 HOUR PERIOD	12,182		
PEAK HR VOLUME	1014	D (%)			

Run Date: 2016/05/25

Hawaii Department of Transportation
Highways Division
Highways Planning Survey Section

Vehicle Classification Data Summary
2015

Site ID: B720000H2-2A **Route No:** H-2_NB_2 **Date From:** 2015/02/10 0:00
Town: Oahu **Direction:** +MP **Date To:** 2015/02/11 23:45
Location: OFF RAMP, H-2 NB to Ka Uka Blvd, Waipio IC R-1

Functional Classification: 99 OTHER

REPORT TOTALS - 48 HOURS RECORDED

	VOLUME	%	NUMBER OF AXLES
Cycles	57	0.23%	115
PC	21916	87.67%	43832
2A-4T	2233	8.93%	4466
LIGHT VEHICLE TOTALS	24207	96.83%	48413
HEAVY VEHICLES			
Bus	78	0.31%	195
SINGLE UNIT TRUCK			
2A-6T	327	1.31%	654
3A-SU	80	0.32%	240
4A-SU	0	0.00%	0
SINGLE-TRAILER TRUCKS			
4A-ST	93	0.37%	372
5A-ST	195	0.78%	975
6A-ST	14	0.06%	84
MULTI-TRAILER TRUCKS			
5A-MT	4	0.02%	20
6A-MT	0	0.00%	0
7A-MT	1	0.00%	7
HEAVY VEHICLE TOTALS	792	3.17%	2547
CLASSIFIED VEHICLES TOTALS	24999 (A)	100.00%	50960 (B)
UNCLASSIFIED VEHICLES TOTALS	0	0.00%	

AXLE CORRECTION FACTOR (A/C) = 0.981

ROADTUBE EQUIVALENT(B/2) = 25480 (C)

PEAK HOUR VOLUME : 1196 2015/02/10 17:00	PEAK HOUR TRUCK VOLUME	% TOTAL PEAK HOUR VOLUME	24 HOUR TRUCK VOLUME	AADT	% OF AADT	HPMS K-FACTOR (PEAK/AADT) (ITEM 66)
SINGLE UNIT TRUCKS (TYPE 4-7)	13	(65A-1) 1.09%	242	11800	(65A-2) 2.05%	10.14%
COMBINATION (TYPE 8-13)	7	(65B-1) 0.59%	153		(65B-2) 1.30%	10.14%

APPENDIX L - Neighborhood Board Mtg Mins

PEARL CITY NEIGHBORHOOD BOARD NO. 21

NEIGHBORHOOD COMMISSION 925 DILLINGHAM BOULEVARD, SUITE 160 HONOLULU, HAWAII, 96817
PHONE (808) 768-3710 FAX (808) 768-3711 INTERNET http://www.honolulu.gov/nco

REGULAR MEETING MINUTES
TUESDAY, AUGUST 27, 2019
WAIAU DISTRICT PARK

CALL TO ORDER – Chair Larry Veray called the meeting to order at 7:05 p.m. **A quorum was established with 10 members present.** Note – This 11-member Board requires six (6) members to establish a quorum and to take official Board action.

Board Members Present – Charmaine Doran, Elayne Funakoshi, Guy Inouye, Kekuni Agard, Kelsey Poaha, Larry Veray, Mitsuko Hayakawa, Patti Rabacal (arrived at 7:06 p.m.), Tad Tsuruma, Lorna May Pacheco, and Tony Velasco.

Board Members Absent – None.

Guests – Firefighter Valenti and James Apana (Honolulu Fire Department); Sergeant Inamine and Lieutenant Okagawa (Honolulu Police Department); Phil Acosta (ALEA Bridge); Manny Valbuena (Mayor Kirk Caldwell's Representative); Councilmember Brandon Elefante and Tricia Riopelle (Councilmember Elefante's Office); Linda Chu-Takayama (Governor Ige's Representative); Casey Abe (State Department of Transportation); Senator Clarence Nishihara; Robert Sato (Senator Breene Harimoto's Representative); Representative Gregg Takayama; Nestor Garcia (Congressman Ed Case's Representative); Arlen Ledward (Board of Water Supply); Victor Flint (U.S. Navy); Johnny Reid (Honolulu Authority on Rapid Transit); Jason Tayros (Nan, INC); Danny Rosario (Road and Highway Builders); Jared Chang and Carah Kadota (SSF International); Nicola Park (Clearway Energy Group LLC); Sharen Truex-Nakashima (U.S. Census Bureau); Albert Fukushima, Stanley Hanakawa, Myrtle Nyuha, Nancy Settsu, Drake Settsu, and Kalani Fronda; (Residents); Jackson Coley (Neighborhood Commission Office).

PUBLIC SAFETY REPORTS
Honolulu Fire Department (HFD) – Firefighter Valenti reported the following:

- July 2019 Statistics – There were 3 structure fires, 2 wildland/brush fires, 4 nuisance fires, and 8 activated alarms (no fire). There were 132 medical emergencies, 7 motor vehicle crash/collisions, 1 mountain rescue, and 1 hazardous materials incident.
- Safety Tip – Senior Citizens – The following safety tips were provided:
  - Always call 911 first for any emergency.
  - Have a list of medications and your medical history ready.
  - Know where your advanced directives are.
  - Ensure there is adequate room for first responders to reach you.
  - Ensure your address is clearly marked and easy to see.

Honolulu Police Department (HPD) – Sergeant Inamine reported the following:

- July 2019 Statistics – There were 7 motor vehicle thefts, 16 burglaries, 45 thefts, and 9 unauthorized entries into motor vehicles (UEMV). Total calls for service were 5,833.
- Safety Tip – Pedestrian Safety – Pedestrians should always walk on sidewalks or the left side of the road if there are no sidewalks.

Questions, comments, and concerns followed: Staffing – Hayakawa inquired if HPD is understaffed. Sergeant Inamine responded that there are vacancies throughout the HPD for various positions. Funakoshi, referring to a recruit handout, reminded that police officers that we all make mistakes, especially when issuing tickets.

Rabacal arrived at 7:06 p.m. 11 members present.

BOARD BUSINESS
Establishment of Board Committees – Chair Veray provided a list of proposed Committees and requested a Board motion to approve the following Committee list:

- Legislative and Capital Improvements Committee
- Development, Planning and Zoning

- Traffic and Transportation Committee
- Health, Education and Welfare Committee
- Community Relations and Electronic Media Public Outreach Committee
- Recognition of Achievers Committee
- Parks and Recreation Committee
- Public Safety Committee
- Senior Citizen Care Committee
- Transit Oriented Development

Agard moved and Poaha seconded the Motion to accept the list of Committees provided by Chair Veray as submitted.

Discussion followed:

1. Opposition – Funakoshi voiced opposition to the proposed list and recommended some committees be combined together. Funakoshi voiced concerns regarding inactivity with previous committees.
2. Activity – Chair Veray encouraged Committees to increase activity and recommended retaining the proposed number of committees.

Funakoshi moved to Amend by incorporating into Community Relations the Recognition of Achievers and Senior Citizen Care committees and separating the Electronic Media Outreach and Community Relations committees. The Amendment was not seconded. Discussion returned to the Main Motion.

The Main Motion WAS ADOPTED by UNANIMOUS VOTE, 11-0-0; (AYE: Doran, Funakoshi, Inouye, Agard, Poaha, Veray, Pacheco, Hayakawa, Rabacal, Tsuruma, and Velasco**; NAY:** None**; ABSTAIN:** None**).**

Board Chair Assignment of Committee Chair – Chair Veray provided a list of proposed Committee Chairs and requested approval for the following list:

- Legislative and Capital Improvements Committee Chair – Doran.
- Development, Planning and Zoning Chair – Inouye.
- Traffic and Transportation Committee Chair – Veray.
- Health, Education and Welfare Committee Chair – Hayakawa.
- Community Relations and Electronic Media Public Outreach Committee Chair – Agard.
- Recognition of Achievers Committee Chair – Velasco.
- Parks and Recreation Committee Chair – Velasco.
- Public Safety Committee Chair – Funakoshi.
- Senior Citizen Care Committee Chair – Poaha.
- Transit Oriented Development Chair – Veray.

Chair Veray appointed the above Committee Chairs by UNANIMOUS CONSENT, 11-0-0; (AYE: Doran, Funakoshi, Inouye, Agard, Poaha, Veray, Pacheco, Hayakawa, Rabacal, Tsuruma, and Velasco**; NAY:** None**; ABSTAIN:** None**).**

Board Member Proposed Resolution – Calling for an Audit of Honolulu Police Department Resources and Diversion of Resources to Mauna Kea – Agard voiced concerns regarding HPD sending officers to Big Island for the Thirty Meter Telescope (TMT) project despite Chief Ballard stating the HPD is understaffed. Agard provided a draft resolution asking for a full accounting of how much money was spent and why money was spent to send HPD officers to Big Island when Oahu taxpayers fund HPD.

Agard moved and Pacheco seconded the Motion for the Pearl City Neighborhood Board No. 21 to adopt the Resolution Calling for an Audit of Honolulu Police Department Resources and Diversion of Resources to Mauna Kea.

Discussion followed:

1. Support – Hayakawa voiced support for the resolution and voiced concerns regarding HPD sending personnel to Big Island.
2. Resolution Wording – Hayakawa voiced concerns regarding the section of the Resolution stating "Therefore be it further resolved, that the Pearl City neighborhood board opposes further diversion of finite City and County resources" on the grounds that there may be situations where Big Island requires assistance.

Hayakawa moved and Poaha seconded the Amendment to replace the aforementioned section with "Therefore be it further resolved that The Pearl City Neighborhood Board No. 21 opposes further diversion of City and County resources from the Honolulu neighborhoods to the TMT project." The Amendment WAS NOT ADOPTED LACKING QUORUM VOTE, 3-6-2; (AYE: Veray, Hayakawa, and Poaha**; NAY:** Agard, Velasco, Pacheco, Inouye, Doran, and Tsuruma**; ABSTAIN:** Rabacal and Funakoshi**).**

Chair Veray passed the gavel to Vice Chair Hayakawa at 7:26 p.m.

Veray moved and Funakoshi seconded the Amendment to strike out "demands" and replace with "requests" in the Resolution's second to last paragraph. The Amendment WAS ADOPTED by MAJORITY VOTE, 10-1-0; (AYE: Doran, Funakoshi, Inouye, Poaha, Veray, Pacheco, Hayakawa, Rabacal, Tsuruma, and Velasco**; NAY:** Agard**; ABSTAIN:** None**).**

Vice Chair Hayakawa returned the gavel to Chair Veray at 7:28 p.m.

Rabacal moved and Doran seconded the Amendment to strike out the section "Therefore be it further resolved, that the Pearl City neighborhood board opposes further diversion of finite City and County resources from our Honolulu neighborhoods to Hawaii Island." The Amendment WAS ADOPTED by MAJORITY VOTE, 7-3-1; (AYE: Doran, Funakoshi, Poaha, Hayakawa, Rabacal, Tsuruma, and Velasco**; NAY:** Agard, Pacheco, and Veray**; ABSTAIN:** Inouye**).**

The Main Motion WAS ADOPTED WITH AMENDMENTS by MAJORITY VOTE, 10-0-1; (AYE: Agard, Doran, Inouye, Poaha, Veray, Pacheco, Hayakawa, Rabacal, Tsuruma, and Velasco**; NAY:** None**; ABSTAIN:** Funakoshi**).**

Board Member Proposed Website – Agard proposed making a website and using social media to promote the Board, inform residents of events, and post the reports circulated at Board meetings. Agard clarified that Board member's personal information will not be posted and agreed to operate the website and social media pages.

Agard moved and Doran seconded the Motion to accept Agard's proposal to build a website for the Pearl City Neighborhood Board No. 21 and support social media.

Discussion followed:
1. Information – Funakoshi inquired what type of information will be posted online and Chair Veray clarified that Board member's personal information will not be posted.
2. Honolulu Star Advertiser – Funakoshi voiced concerns regarding the Honolulu Star Advertiser's Neighborhood Board calendar not displaying Board Business. Funakoshi reported contacting the Advertiser and requesting that they include Board Business in their Neighborhood Board calendar.

The Motion WAS ADOPTED by UNANIMOUS VOTE, 11-0-0; (AYE: Doran, Funakoshi, Inouye, Agard, Poaha, Veray, Pacheco, Hayakawa, Rabacal, Tsuruma, and Velasco**; NAY:** None**; ABSTAIN:** None**).**

Board Member Proposed Newsletter – Doran proposed producing one (1) electronic newsletter at the end of the fiscal year and volunteered to create the newsletter.

Doran moved and Agard seconded the Motion to approve the creation of the newsletter and refer the newsletter to the Community Outreach Committee.

Discussion followed:
1. Quantity – Agard inquired if multiple newsletters could be produced per year. Doran responded that more could be produced and the item will be referred to the Community Outreach Committee for action.
2. Method of Distribution – Hayakawa inquired and Doran clarified that the newsletter will be electronically distributed. Agard suggested making a physical newsletter if it is desired and budget permits.

The Motion WAS ADOPTED by UNANIMOUS VOTE, 11-0-0; (AYE: Doran, Funakoshi, Inouye, Agard, Poaha, Veray, Pacheco, Hayakawa, Rabacal, Tsuruma, and Velasco**; NAY:** None**; ABSTAIN:** None**).**

Resident Albert Fukushima recommended clarifying that the newsletter will be electronic. Resident Fukushima stated the Board previously changed from using a newsletter to using Olelo as it provided information to the community faster.

Hearing no objections Chair Veray moved Agenda Item 6. Residents'/Community Concerns to be the next item of business.

RESIDENTS'/COMMUNITY CONCERNS

Sign – Resident Stanley Hanakawa voiced concerns regarding the City failing to install an approved "no parking from here to corner" sign. Resident Hanakawa inquired when the sign will be installed. Chair Veray recommended consulting with Councilmember Elefante and agreed to assist with addressing the issue. Resident Hanakawa voiced concerns regarding vehicles parking close to an intersection. Funakoshi stated there is one (1) crew for sign installation across the island of Oahu which makes sing installations difficult.

ALEA Bridge – Phil Acosta, ALEA Bridge Executive Director, reported that ALEA Bridge is a nonprofit homeless services provider for central Oahu, the North Shore, and areas between Kapolei and Aiea. Acosta requested permission to provide a full presentation at a future Board meeting and provided contact information at 379-2532 or info@aleabridge.org.

GOVERNMENT REPRESENTATIVES MONTHLY REPORTS

CITY OFFICIALS

Mayor Kirk Caldwell's Representative – Manuel Valbuena, Department of Budget and Fiscal Services (BFS) Deputy Director, reported the following:

- Downed Sign – Regarding previous concerns, the Department of Facility Maintenance (DFM) reported the downed pedestrian sign at the intersection of Noelani Street and Hoolaulea Street was replaced on Sunday, July 28, 2019.
- Kuala Street – Regarding previous concerns, the DFM inspected the work performed on the Kuala Street sidewalk on Friday, July 19, 2019 and it has been completed.
- Pearl City Welcome Sign – Regarding previous concerns, the DFM removed a tea leaf branch from the Pearl City E Komo Mai sign on Thursday, July 25, 2019. The Pearl City Lions adopted the sign area and normally performs maintenance of the area including shrub maintenance and litter pickup.
- Waimano Home Road Striping – Regarding previous concerns, the DFM reported that the Department of Design and Construction (DDC) is restriping Waimano Home Road as part of Rehabilitation of Localized Streets Phase 19C.
- Hooheke Street Trees – Regarding previous concerns, The Department of Parks and Recreations (DPR) on Thursday, July 24, 2019, a Department of Urban Forestry (DUF) supervisor inspected the planting strip fronting 1629 and 1645 Hooheke Street in Pearl City. The DUF supervisor determined that the trees are adequately maintained. The tree canopies are high and no branches appear to pose an immediate public safety concern. Maintenance is not required at this time. Funakoshi said it is not a maintenance concern and voiced safety concerns.
- Water Patch – Regarding previous concerns, Board of Water Supply (BWS) supervisor investigated the complaint about a road patch at the intersection of Hookanike Street and Hooheke Street on Tuesday, August 6, 2019. The BWS found the patch in good condition and that the addition of asphalt may create a hazardous condition. The BWS paving contractor has been notified and repairs are scheduled to be completed within the next two (2) weeks.
- Employment Contracts – Regarding previous inquiries, the Department of Human Resources (DHR) reported that the Police Chief is appointed/removed by the Honolulu Police Commission and their term is five (5) years, currently from November 1, 2017 to October 31, 2022. The Medical Examiner is appointed by the Mayor and is removed only for cause after being given a written statement of the charges and a hearing before the Council. The current Medical Examiner started working on November 18, 2013 and their appointment was confirmed by the City Council on January 29, 2014. Both salaries are set by the Salary Commission.

Questions, comments, and concerns followed:
1. Hooheke Street Sidewalk – Funakoshi reminded the mayor's representative that two sidewalks on Hooheke Street still has not been repaired, voiced concerns regarding paving of the Hooheke Street sidewalk.
2. Lehua and Kamehameha Crosswalk – Tsuruma stated that the crosswalk marking at the intersection of Lehua Avenue and Kamehameha Highway appears halfway done and inquired if it could be inspected.
3. Reports – Agard requested that reports be submitted to him to be posted on the new Board website. Deputy Director Valbuena responded that reports are sometimes received right before a meeting so placing them online prior to meetings is not feasible. Agard responded that he could post reports after meetings.

Councilmember Brandon Elefante – Councilmember Elefante circulated a newsletter and reported the following:

- Transit Oriented Development (TOD) Meeting – A TOD meeting is scheduled for Wednesday, September 18, 2019 at 6:30 p.m. at Lehua Elementary School.
- Handicap Placard Pictures – Councilmember Elefante reported that requests to include pictures on handicap placards is a State issue.
- Hoomalu Street – Funakoshi requested traffic calming devices on Hoomalu Street. Have referred to appropriate agencies'
- Community Policing Team (CPT) – CPT can be reached at 723-8805.
- Herbicides – Council Resolution 17-284 opposes the use of synthetic herbicides and advocates for non-toxic weed controls. The DFM is finalizing a pilot project related to this issue.

Questions, comments, and concerns followed: Open Market – Funakoshi requested that a flasher be installed for the Waiau District Park's open market to improve pedestrian safety.

STATE OFFICIALS

Governor David Ige's Representative – Linda Chu-Takayama, Chief of Staff, circulated a handout and reported the following:

- Highlights – Articles regarding sustainability, affordable housing, and renewable energy were highlighted.
- Washington Place – Information regarding Washington Place tours was provided.

State Department of Transportation (HDOT) – Casey Abe, HDOT Highways Division, circulated a handout and reported the following:

- Handicap Placards – The State does not allow pictures on handicap placards due to privacy laws.
- Roundup on Highways – HDOT takes a conservative approach to using Roundup and other weed killers on State Highways. HDOT follows all Department of Health (DOH) guidelines when using such substances.
- Pearl Harbor Bike Path – The Pearl Harbor Bike Path from Halawa to Waipahu is under City jurisdiction due to an easement from the Federal Government expiring in 2037. Maintenance is under City jurisdiction.
- H-1 Shoulder Work – H-1 shoulder work heading east is 92 percent complete and expected to conclude by the end of 2019.

Questions, comments, and concerns followed:

1. Reflectors – Chair Veray voiced safety concerns regarding lane reflectors missing on the H-1 heading East through Aiea.
2. Wide Tires – Chair Veray voiced concerns regarding vehicles with wide tires sending rocks aerial when driving and creating unsafe conditions for other drivers.
3. Lane Width – Funakoshi voiced concerns regarding lane's being too narrow to safely drive through Aiea and recommended increasing lane widths. Abe responded that lanes are standardized to 11 feet to encourage driving slower and increase lane quantity.
4. Pearl City Sign – Inouye inquired about the jurisdiction of the areas around the Pearl City sign and where City jurisdiction ends and State jurisdiction begins.
5. Road Funding – Funakoshi voiced concerns regarding the State providing insufficient funding for roadwork and recommended increasing road funding.
6. Hoomalu and Moanalua – Pacheco voiced concerns regarding extraneous wait times for motorists making left hand turns at the intersection of Hoomalu Street and Moanalua Road. Pacheco requested that a left hand turning light be installed to improve traffic flow. Chair Veray recommended referring the issue to the Transportation Committee.

Senator Clarence Nishihara – Senator Nishihara circulated a handout and reported the following:

- Agriculture Conference – Senator Nishihara attended the State Agriculture Rural Leaders conference in Calgary where agriculture leaders from the U.S. and Canada discussed issues confronting agriculture.
- Department of Public Safety (DPS) Briefing – Various Committees and official organizations hosted a joint DPS informational briefing on Maui.
- Hemp – Senator Nishihara and other elected officials recently toured a hemp processing facility. Some hemp processors have faced issues selling crops due to excessive THC levels.

Questions, comments, and concerns followed: Gratitude – Funakoshi expressed gratitude for the Senate Ways and Means Committee's and Senator Nishihara's activity during non-session period.

Senator Breene Harimoto – Robert Sato reported that Senator Harimoto's Office is currently researching bills for the upcoming legislative session and recommended that residents with bill suggestions contact the office at 586-6230 or senharimoto@capitol.hawaii.gov.

Representative Gregg Takayama – Representative Takayama reported the following: Albizia Tree – Concerns have been voiced regarding an albizia tree which could block the road or damage the bridge when traveling towards Palisades on Komo Mai Drive. The land is owned by the State Department of Land and Natural Resources (DLNR) who will have a contractor to remove the tree in September 2019.

Representative Roy Takumi – No representative was present; no report was given.

Representative Sam Kong – No representative was present; no report was given.

CONGRESSIONAL OFFICIALS

U.S. Congressman Ed Case – Nestor Garcia, Congressman Case's Office, circulated a handout and reported the following:

- Congressman Case Reports to Hawaii – Congressman Case's monthly "Congressman Case Reports to Hawaii" show is aired on Olelo channel 49 every third Sunday at 6:00 p.m. and again the following Tuesday at 10:00 a.m. Shows are also available online at www.youtube.com/RepEdCase.
- Congressman on Island – Congressman Case is currently on Oahu to attend various meetings and events.
- Tour Aircraft – Congressman Case has been working with Neighborhood Boards to introduce Federal legislation to enforce commercial tour aircraft laws.
- Town Hall Meetings – A Town Hall meeting is scheduled for Thursday, October 3 at 6:30 p.m. at the Pearlridge Elementary School Cafeteria. An electronic Town Hall meeting is scheduled for Sunday, October 6, 2019, registration is required.

Questions, comments, and concerns followed:

1. TMT – Funakoshi expressed gratitude for Congressman Case taking a stance on the TMT issue.
2. Amazon Forest Fires – Funakoshi voiced concerns regarding the Amazon Forest fires and inquired if Congressman Case could monitor the situation.

Chair Veray passed the gavel to Vice Chair Hayakawa at 8:22 p.m.

CITY AND STATE SERVICES

Board of Water Supply (BWS) – Arlen Ledward, BWS, circulated a handout and reported the following:

- Main Break Report – There were three (3) main breaks during the month of July 2019.
- Summer Water Conservation/Weather-Based Irrigation Controller – The BWS encourages residents to avoid wasting water during hotter months by purchasing an EPA-labeled Weather-Based Irrigation Controller. The controller adjusts watering schedules based on local weather conditions and can allow people to conserve up to 7,600 gallons of water per year. Rebate information is available online at www.boardofwatersupply.com/rebates.
- Water Emergency Preparedness – Disasters, power outages, and other events can affect BWS' ability to provide water. Residents are encouraged to maintain an emergency preparedness kit containing at least one (1) gallon of water per person per day for at least 14 days. Stay tuned to media reports during emergencies to receive water information bulletins. Additional information is available online at www.boardofwatersupply.com/emergencypreparedness.

Questions, comments, and concerns followed:

1. Children's House – Inouye voiced concerns regarding the repair work for a main break near the Children's House on Komo Mai Drive. Ledward agreed to investigate the issue.
2. Freshwater – Funakoshi voiced concerns regarding wells containing very little freshwater and encouraged water conservation.
3. Rain Barrels – Funakoshi inquired and Ledward responded that conservation rain barrels can be purchased online or through select retailers.
4. Funakoshi was frightened when one morning, when she flushed the toilet, it exploded several times. Later found out that there was a water line problem down the street.

Pearl City Public Library – No representative was present; no report was given.

MILITARY OFFICIALS
Navy Facility – Victor Flint reported the following:

- Oyster Restoration – A project is underway to re-introduce native oysters to Pearl Harbor in order to improve water clarity and quality. The Project will be highlighted in Hawaiian Airline's Hana Hou magazine.
- LA Rams – The LA Rams will be practicing at Pearl Harbor. A preseason game was held on Saturday, August 17, 2019.
- Red Hill – The Environmental Protection Agency (EPA) posted a Destructive Testing Result Report online regarding the metal liners of the Red Hill fuel tanks. The Navy has submitted a report requesting the DOH allow Navy to operate the Red Hill facility, the DOH has temporarily permitting Red Hill until they render a decision on the Navy's permanent application.
- Hurricane Season – The Navy is conducting hurricane and disaster drills.
- Drydock 1 – Wednesday, August 21, 2019 was the centennial celebration of Drydock 1 at Pearl Harbor. The Navy is going through protocols to rededicate Drydock 1.
- Restoration – The Navy is looking for volunteers to assist with various cleanups and restoration projects.
- WW2 Commemoration – The 75th end of WW2 commemoration is scheduled for Thursday, August 29, 2019 to Saturday, September 7, 2019.
- Pearl Harbor Tours – Free boat tours of Pearl Harbor are available. The next tour is scheduled for Sunday, September 15, 2019.

Vice Chair Hayakawa returned the gavel to Chair Veray at 8:30 p.m.

Hayakawa departed the meeting at 8:30 p.m. 10 member present.

Questions, comments, and concerns followed: Museum – Funakoshi stated that the Pacific Aviation Museum has been renamed the Pearl Harbor Aviation Museum.

Manana Community Association Update – No report.

PRESENTATIONS
Honolulu Authority for Rapid Transportation (HART) Public Outreach Update – Johnny Reid, HART, Jason Tayros, Nan Inc., and Daniel Rosario, Road and Highway Builders, circulated handouts and reported the following:

- Limited Opening – HART and DTS are planning for a limited interim passenger service by fall 2020.
- Work Update – The Core Systems are 62 percent complete and includes the train cars, the automated communication and control systems, and the maintenance and storage facility.
- Train Cars – Each four (4) car train has 188 seats with priority seating for senior and disabled persons. Maximum capacity for each train is 800 passengers. Trains are air-conditioned, have security cameras, emergency call boxes, and other amenities. The automated driverless rail cars passed their fire tests in July 2019, all rail cars are fitted with stainless steel and fire-retardant floor materials.
- Rate Commission – The City Charter setup a Rate Commission to review and make recommendations on rates for rail service. A Rate Commission meeting is scheduled for Tuesday, September 17, 2019 at 2:30 p.m. at Mission Memorial hearing room.
- Pillar Cracks – Tension in areas where the column is not in line with the drive-way may experience superficial cracks. These cracks are superficial and columns are designed for the cracks, they do not indicate structure failure and there is no repair procedure required.
- Contaminated Groundwater – The potentially contaminated groundwater at the airport was pumped for treatment and then discharged into the sanitary sewer system. Water was found to be below DOH environmental action levels. Soil in the area was also tested and below action levels.
- Additional Information – For more information, visit the HART website at www.honolulutransit.org, call the project hotline at 566-2299, or email a question to info@honolulutransit.org.
- Waterline – Nan Inc. will begin waterline work at the Pearl Highlands Station on Monday, September 2, 2019. Work will take at least two (2) weeks to complete.
- Paving – Paving is underway from Kaonohi Street to McGrew Point. Road widening work is on hiatus for one (1) week.

Questions, comments, and concerns followed:

1. Paving – Funakoshi inquired if the paving to McGrew Point will be completed by the end of 2019. Rosario responded that they should reach McGrew Point by October 2019. Funakoshi inquired about digging alongside H-1 traveling west. Rosario responded that they are adding a third traffic lane. Funakoshi inquired if the eastbound lane can be repaved while the westbound lanes are being worked on. Rosario responded it would cost more money if they did.
2. Power Consumption – Agard inquired about community concerns with trains potentially affecting the local power grid. Reid responded that he lacked information and agreed to investigate.
3. Waterline – Resident Fukushima inquired about the waterline work. Reid responded that the westbound right-hand turn at Kuala Street will be restricted, however the eastbound left-hand turn will be unaffected.
4. Bus-Rail Integration – Resident Fukushima inquired about the bus-rail integration system and requested that DTS Deputy Director Nouchi attend a Board meeting to provide information. Reid responded that DTS is working on a preliminary bus-rail integration plan and more information will be provided when available.
5. Forum – Inouye inquired if an open forum will be held to discuss the soft-opening and other items.

Waiawa Correctional Facility Plan Review and Special Use Permit – Jared Chang, SSF International, circulated a handout and reported the following:

- Permits – Waiawa Correctional Facility is applying for two (2) discretionary permits near the end of 2019 and are requesting Board support for the applications. The permits are a Plan Review Use Permit with the City and a Special Use Permit with the State. A five (5) year master plan is required with the City application. Both permits are required for operations and are being applied for retroactively.
- Facility – The original facility was constructed in the 1950s and became a correctional facility in 1989. The facility is roughly 150 acres and houses 300 minimum security inmates who are close to completing their sentences. Inmates participate in various programs at the facility prior to release. There are no changes planned for the facility with the permits.

Questions, comments, and concerns followed:

1. Support – Funakoshi voiced support for the facility and its programs, specifically its agriculture program. Resident Myrtle Nyuha voiced approval and support for the facility and its programs.
2. Security – Pacheco inquired and Chang confirmed that the Waiawa Correctional Facility is minimum security. Pacheco inquired if this may change due to the lack of space at other facilities. Chang responded that there are no plans to change operations in any way within the next five (5) years.
3. Timetable – Resident Fukushima inquired about the five (5) year master plan's timetable and requested that this report be brought before the Board to provide additional information.
4. Tour – Chair Veray advocated for setting up a tour of the facility for Board members.

Upcoming Solar Projects – Nicola Park, Clearway Energy Group LLC, circulated handouts and reported the following:

- New Projects – There are two (2) solar projects, the Mililani 1 Solar project and the Waiawa Solar project. A town hall for the projects was conducted in November 2018 and other nearby Neighborhood Boards are also being contacted. Construction will begin in late 2020. Projects are on private land and the presentation is provided voluntarily.
- Clearway Energy – Clearway Energy is a San Francisco based clean energy company. They operate the Kawailoa Solar, Waipio Solar, and Mililani 2 solar projects.
- Mililani Solar 1 – This project is located in the Mililani Agricultural Park and occupies 144 acres to produce 39 megawatts. The site is accessed by Meheula Parkway off Lanikuhana Avenue.
- Waiawa Solar – This project is located east of the H-2 near Waipio and occupies 200 acres to produce 36 megawatts. The site is accessed by Waiawa Prison Road. The project location is leased to Clearway by Kamehameha Schools.
- Contact Information – Comments for the projects can be sent to their respective emails at MililaniSolar@clearwayenergy.com or WaiawaSolar@clearwayenergy.com.

Questions, comments, and concerns followed:

1. Waiawa Solar Access – Tsuruma inquired and Park responded that a traffic study was conducted to use Waiawa Prison Road for the 12 month construction phase and Clearway is working with the Correctional Facility. Funakoshi inquired and Park responded that the project is roughly one (1) mile from the facility. Funakoshi requested a detailed map of the location where the project will be.
2. Recycling Materials – Agard inquired about recycling the projects' equipment once they have concluded. Park responded that there are comprehensive decommissioning and recycling plans for the projects, however the projects will be in effect for 35 years. Pacheco inquired where recycling will be done and Park responded she was unsure, however manufacturers usually reclaim equipment. Pacheco voiced concerns regarding projects not removing equipment once completed throughout Oahu. Park responded that there is a salvage value which incentivizes recycling the equipment.

3. Glint and Glare – Tsuruma inquired about aircraft being blinded by solar panel glare. Park responded that a glint and glare analysis was conducted which takes the airports within seven (7) miles into account.
4. Deadline – Resident Fukushima inquired about the deadline to provide permit information to the Department of Planning and Permitting (DPP) and requested additional information. Agard clarified that the developer is not required to present to the Board and continued interaction is at their grace.

Census 2020 Presentation – Sharen Truex-Nakashima, U.S. Census Bureau, circulated a handout, provided a presentation, and reported the following:

- 2020 Census – The 2020 Census begins on April 1, 2020. It is the Bureau's mission to count everyone once at their residence on April 1, 2020. The Census is mandated by the U.S. Constitution and participation is required.
- Self-Response – The 2020 Census will allow residents to respond via the internet. Mail reporting will still be available.
- Federal Funding – The Census is used to properly allocate Federal funding between the States. The State could lose funding if residents do not participate. Funds are used for school lunch and other programs.
- Security – Answers are protected by Title 13 and participating is safe and secure. Census personnel will always wear identification badges and will not ask for social security numbers or similar information.
- Job Opportunities – Job opportunities are available with the 2020 Census. More information is available online at https://www.census.gov/programs-surveys/decennial-census/2020-census.html.
- Committee – The Census 2020 has a Complete Count Committee where members can represent their communities. Residents are encouraged to volunteer.

Questions, comments, and concerns followed:

1. Complete Count Committees – Agard noted the importance of the Complete Count Committees.
2. Job Opportunities – Funakoshi inquired about contact information for the job opportunities. Truex-Nakashima responded that persons can contact the Los Angeles office at 213-314-6500 and information is available online. Funakoshi inquired about wages and Truex-Nakashima responded that wages very, however they are above minimum wage.

REPORTS

Treasurer's Report – Rabacal reported a remaining balance of $321.33.

Regular Board Meeting Minutes Approval – Tuesday, May 28, 2019 – Chair Veray reported that the May 2019 minutes were deferred. Funakoshi stated that the May minutes approval was deferred in July so she wanted to make her corrections to the May minutes, but some members voiced that the minutes were corrected in the July minutes.

Inouye departed the meeting at 9:35 p.m. Nine (9) member present.

Funakoshi moved to defer adoption of the May 2019 minutes. The Motion was not seconded.

Doran moved and Poaha seconded the Motion to adopt the May 2019 minutes as drafted.

Discussion followed: Opposition – Funakoshi voiced opposition to adopting the May 2019 minutes and stated the minutes contained errors. Funakoshi voiced concerns regarding her corrections not being heard.

The Motion WAS ADOPTED by MAJORITY VOTE, 8-1-0; (AYE: Doran, Agard, Poaha, Veray, Pacheco, Rabacal, Tsuruma, and Velasco**; NAY:** Funakoshi**; ABSTAIN:** None**).**

Regular Board Meeting Minutes Approval – Tuesday, July 23, 2019 – Tsuruma proposed correcting the July 2019 minutes by striking out all instances of "Rosario" and replacing with "Wong" on Page 7; Cracked Pillars.

Agard called the question, and Doran seconded the Motion to adopt the July 2019 minutes as edited. The Motion WAS ADOPTED by MAJORITY VOTE, 9-0-0; (AYE: Doran, Agard, Funakoshi, Poaha, Veray, Pacheco, Rabacal, Tsuruma, and Velasco**; NAY:** None**; ABSTAIN:** None**).**

BOARD MEMBER ATTENDANCE AT OTHER MEETINGS

Tsuruma – Tsuruma circulated a handout and reported attending the Oahu Metropolitan Planning Organization (OMPO) Community Advisory Committee (CAC) meeting on Wednesday, August 21, 2019 Information was

provided regarding the:

- Oahu Transportation Plan (ORTP) 2045 Vision Goals
- Overall Work Program (OWP) Fiscal Year 2021 Early Input
- Update Public Participation Plan and Related Mid-Year CAC Survey

Funakoshi – Funakoshi reported attending the following:

- Tuesday, August 6, 2019 – Funakoshi met the chief of the Pearl City police station at the Waiau Elementary School program.
- Friday, August 9, 2019 – Hongwanji Bon Dance.
- Tuesday, August 13, 2019 – Neighborhood Security Meeting.

ANNOUNCEMENTS

The next regular meeting for the Pearl City Neighborhood Board No. 21 is scheduled for Tuesday, September 24, 2019 at 7:00 p.m. at Waiau District Park. Pearl City Neighborhood Board No. 21 meetings are broadcast on Focus Channel 49 on the 2nd Saturday at 6:00 p.m. and 1st and 3rd Friday at 1:00 p.m. Meetings can be viewed online at- http-//olelo.granicus.com/ViewPublisher.php?view_id=30.

ADJOURNMENT – The meeting adjourned at 9:45 p.m.

Submitted by: Jackson Coley, Public Relations
Reviewed by: Harry Cho, Public Relations
Final Review by: Larry Veray, Board Chair

MILILANI/ WAIPIO/ MELEMANU NEIGHBORHOOD BOARD NO. 25

c/o NEIGHBORHOOD COMMISSION • 925 DILINGHAM BOULEVARD SUITE 160• HONOLULU, HAWAII, 96813
PHONE (808) 768-3710 • FAX (808) 768-3711 • INTERNET: http://www.honolulu.gov

DRAFT- REGULAR MEETING MINUTES
WEDNESDAY, OCTOBER 23, 2019
MILILANI WAENA ELEMENTARY SCHOOL

CALL TO ORDER – Chair Dick Poirier called the meeting to order at 7:36 p.m., with a quorum of **18 members present.** Note: This 23-member Board requires 12 members to establish quorum and to take official Board action. Chair Poirier led the Pledge of Allegiance and asked Board members to introduce themselves.

Members Present: Danielle Bass (arrived at 8:22 p.m.), Pauline Arellano, Elise Carmody, Michael Dau, Ann Freed, Sabrina Gustafson (arrived at 7:47 p.m.), Kurumi Kaapana, Trish La Chica, Darsha Lee, Marilyn Lee, Karen Loomis, Bernie Marcos Jr., Joy Marshall, Trevor Nagamine, Rodney Park, Dick Poirier, Marion Poirier, Carole Siegel, Mary Smart, Emil Svrcina, and Sharon Williams.

Members Absent: Leslie Among, Rojo Herrera, and Carole Siegel.

Guests: Keith Kawaoka (Governor David Ige's Representative); Tracy Kubota (Mayor Kirk Caldwell's Representative); Councilmember Ron Menor; Corinne Gallardo Mata (Councilmember Ron Menor's Office); Senator Michelle Kidani; Representative Ryan Yamane; Representative Lauren Cheape Matsumoto; TJ Jan (Representative Matsumoto's Office); Representative Val Okimoto; Captain Primo Bailon (Honolulu Fire Department); Sergeant Gary Masiglat (Honolulu Police Department); Lieutenant Ryan DeBooy (United States Army); Robert Chun (Board of Water Supply); Phil Acosta (ALEA Bridge); Bryan T. Chepliq (Wahiawa General Hospital); Carah Kadota and Jared Chang (SSFM International); Alex Ballou, Ethan Ballou, and Joseph Tsuruda (B.S.A.); Chanelle Camero, David "Duke" Kahanu Jr., and Rose Marie May (Residents and Guests); Jordan Jenkins (Integrated Multimedia Consultants); and Janelle Nomura (Neighborhood Commission Office). **Note: name was not included if not legible or on the guest attendance sheet.**

APPROVAL OF MINUTES

The Mililani/Waipio/Melemanu Neighborhood Board No. 25 adopted the Wednesday, September 25, 2019 Regular Meeting Minutes by UNANIMOUS CONSENT; 18-0-0 (AYE: Arellano, Carmody, Dau, Freed, Kaapana, La Chica, D. Lee, M. Lee, Loomis, Marcos Jr., Marshall, Nagamine, Park, D. Poirier, M. Poirier, Smart, Svrcina, and Williams**; NAY:** None**; ABSTAIN:** None**).**

COMMUNITY FORUM

Honolulu Fire Department (HFD) – Captain Primo Bailon reported the following:

- September 2019 Statistics: There was 1 structure fire, 2 wildland/brush fires, 6 activated alarms (no fire); 51 medical emergencies, and 4 motor vehicle crashes/collisions.
- Fire Safety Tip: Captain Bailon provided safety tips for Halloween safety.

Honolulu Police Department (HPD) – Sergeant Gary Masiglat reported the following:

- September 2019 Statistics: Sergeant Masiglat announced that statistics can be viewed online at www.honolulupd.org.
- Safety Tip: Sergeant Masiglat provided handouts regarding pedestrian and driver safety tips.

Military 25th Infantry Division: Lieutenant Ryan DeBooy reported the following:

- Tropic Lightning Week: Tropic Lightning Week celebrates the 25th Infantry Division's birthday. Festivities will start with a run on the morning of Monday, October 28, 2019.
- Follow-Up Concern: The issue has been addressed regarding the excessive rubbish at the intersection of Woodland and Kamehameha Highway.
- Unexploded Ordinance: There are two (2) clean-up programs that addresses unexploded ordinances. The Formerly Used Defense Sites (FUDS) program which is administered by the U.S. Army Corps of Engineers and the Military Munitions Defense Program (MMRP) which is administered by the U.S. Army Garrison of Hawaii. Both of these programs are currently in effect.

Board of Water Supply (BWS) – Robert Chun provided handouts and reported the following:

- Main Break Report: There were no main breaks in September 2019.
- Imagine a Day Without Water – Wednesday, October 23, 2019: The Board of Water Supply (BWS), City and County of Honolulu's Department of Environmental Services (ENV), Facility Maintenance (DFM) and Office of Climate Change, Sustainability and Resiliency (CCSR) are working together to encourage Oahu residents to Imagine A Day Without Water on Wednesday, October 23, 2019. This one (1) day national observance aims to educate people about the importance of water in their lives and to raise awareness about the need to invest in water infrastructure. Join us on Wednesday, October 23, 2019 from 11:00 a.m. to 1:00 p.m. at Tamarind Park or Kapolei Hale. Participants can also enter our social media photo contest by posting a picture that illustrates a Day Without Water. Prizes will be available. For more information about the event and photo contest, please visit the BWS' website at www.boardofwatersupply.com/oahuwater or pick up a flyer before you leave this evening.
- Board of Water Supply Facilities Tour Program: The BWS offers public education programs to help the community understand and learn about our water resources. One (1) of our outreach programs include "group tours" of the Halawa Xeriscape Garden (60 persons maximum) and Waihe'e Tunnel (30 persons maximum). The Halawa Xeriscape Garden is located in Halawa Valley's Central Park Industrial Area and promotes outdoor water conservation. The Waihe'e Tunnel Tour will awaken your senses with a walk inside the 1,500-foot dike tunnel that provides water to Windward Oahu. Theses tours are scheduled to start on Sunday, December 15, 2019 and are available by appointment only. Please register by calling 808-748-5041 or email tours@hbws.org. Provided tonight is a handout containing information about the BWS Facilities Tour Program.

Questions, comments, and concerns followed: Tours: Marcos Jr. asked a question regarding how tours are scheduled. Chun responded that he will follow up with the BWS Communications Office.

ALEA Bridge – No representative was present; no report was given.

Other Community Concerns – No concerns.

Gustafson arrived at 7:47 p.m.; 19 members present.

Award Certificates – Senator Michelle Kidani and Chair Poirier presented David "Duke" Kahanu Jr., retired from the Honolulu Fire Department, with a certificate of recognition that thanked him for his service to the Central Oahu community.

PUBLIC FORUM

Update on Happenings at Wahiawa General Hospital – Bryan T. Chepliq, Wahiawa General Hospital, reported the following:

- Statement: Chepliq read a statement from Brian Cunningham, Chief Executive Officer of Wahiawa General Hospital.
- Request for Proposal: Chepliq explained the State of Hawaii Request for Proposal (RFP) process.
- Finding Ohana: Wahiawa General Hospital was featured in the Netflix production called "*Finding Ohana*."
- Breast Cancer Awareness Month: October is Breast Cancer Awareness Month. Chepliq commented that Wahiawa General Hospital has the facility/equipment for mammograms.

Questions, comments, and concerns followed:

1. Funding: M. Poirier noted that the State appropriated $350,000 to Wahiawa General Hospital and asked if Wahiawa General Hospital received the funding yet. Chepliq responded that the money was awarded to Wahiawa General Hospital but it takes a while. They treat the funding as more of a reimbursement.
2. Thank You: Marshall expressed appreciation towards Wahiawa General Hospital as she used to live Wahiawa and used the library to study during her time at nursing school.
3. Partnership: Marcos Jr. asked and Chepliq responded how Wahiawa General Hospital's partnership with both ALEA Bridge and the State Department of Health (DOH) works.
4. Wahiawa Health: M. Lee asked and Chepliq responded that Wahiawa General Hospital and Wahiawa Health, which is federally funded, need each other and they have ironed out some of the difficulties that arose in the past.
5. Location: Freed commented that she is glad that Wahiawa General Hospital is located in Wahiawa and not at Koa Ridge as it is in the best location to also serve the North Shore communities.

Preparation of the Plan Review Use and Special Use Permits for the Waiawa Correctional Facility – Carah Kadota, SSFM International, Inc., distributed handouts and reported the following:

- Overview: The Department of Accounting and General Services (DAGS) and the Department of Public Safety (DPS) had been notified by the Department of Planning and Permitting (DPP) that the Waiawa Correctional Facility (WCF) requires a Plan Review Use and Special Use Permit to bring the facility into compliance with State and County land use laws. Since the WCF is a long-standing facility, these permits would be considered after-the-fact permits.
- Plan Review Use Permit: A Plan Review Use Permit is required for permanent public or private uses of an institutional nature, such as: hospitals, prisons, airports, colleges and universities, trade or convention centers, and certain golf courses. The purpose of this project is to meet all of the permits' requirements so that the WCF is in compliance. In general, this includes documenting the WCF's existing and proposed conditions and uses, and impacts to the surrounding land uses. There are currently no plans to expand the facility or to perform any major upgrades in the near future.
- Special Use Permit: A Special Use Permit is required for uses within the State agricultural and rural districts that are not permissible uses classified for those districts.

Questions, comments, and concerns followed:

1. BWS Master Plan: Dau noted that he believes this falls under the BWS master plan.
2. Changes: Smart asked and Kadota responded that there will be no structural changes. They are just trying to be compliant with the land use laws.

Bass arrived at 8:22 p.m.; 20 members present.

REPORTS OF PUBLIC OFFICALS

Governor David Ige's Representative – Keith Kawaoka, Department of Health (DOH) Director, distributed the Capitol Connection October 2019 edition, announced that it is flu season, and reported an update/recommendations on e-cigarettes and vaping for the public.

Questions, comments, and concerns followed:

1. Clean Air Branch: Dau asked for clarification of the DOH Clean Air Branch and expressed concern that Castle and Cooke is moving red dirt without a permit.
2. Tall Pine Trees: Gustafson raised concerns of the tall pine trees near Mililani Uka Elementary School on the back pathway. The trees may be rotting and the City says it is not in their jurisdiction.
3. Vaping Bill: M. Lee asked for clarification on the vaping bill and Director Kawaoka responded that Governor Ige vetoed that bill.
4. Vaping Bill (continued): La Chica commented that the bill was Senate Bill (SB) 1405 and noted that this should not be classified as an epidemic. Instead it should be designated as an outbreak. La Chica stated that she would like to see Governor Ige take action on this issue at the State Legislature.
5. Agricultural Land: Freed referred to the October 2019 Capitol Connection and commented that the State needs to stop giving agricultural land to residential developers.
6. TMT: Svrcina asked for Governor Ige's strategy for TMT/Mauna Kea. Director Kawaoka responded that he believes Governor Ige is still pursuing TMT but does not know more than that.

Mayor Kirk Caldwell's Representative – Tracy Kubota, Department of Enterprise Services (DES) Deputy Director, reported the following:

- TheBus Route 501: The Department of Transportation Services (DTS) responded that they are aware of the overcrowding on Route 501 and is currently examining options to address the issue. In the meantime, a high floor 40-foot bus with greater passenger capacity was assigned to the trip departing Mililani Transit Center at 7:00 a.m., and DTS is monitoring its effect on the overcrowding situation.
- TheBus Service: While DTS supports enhanced transit access to destinations around Mililani, at this time, the constraints of a limited budget precludes extending bus service to Recreation Center II and Hanalani School based on the service needs and allocation of resources for the entire bus system. DTS will include this request in its on-going review of existing TheBus service and bus-rail integration planning.
- Ridesharing Service: DTS responded that the Oahu Vanpool Incentive Program has grown significantly within the past year. Commute with Enterprise (contractor) is currently operating 48 vanpool vehicles compared to 14 vehicles the same time last year. Commute with Enterprise anticipates that their marketing campaign of print and radio advertising through the Star Advertiser, Midweek, and ESPN 1420AM, as well

as reaching out to corporate stakeholders and attending community outreach events, will continue to help expand the program.

- Land Exchange Concern: The Honolulu Authority for Rapid Transit (HART) responded that they believe this question is in reference to the contemplated "exchange" of the Department of Hawaiian Home Lands (DHHL) owned land referred to as the "Ewa Drum Site" and the City-owned land referred to as "Varona Village." To clarify, both properties are currently zoned as agricultural; Varona Village is county zoned AG-1 and Ewa Drume Site is county zoned AG-2. The exchange is still being negotiated and the parties are intent to enter into a fair and equitable deal for all involved. A portion of Varona Village is currently being used as access and parking for the Ka Makana Alii development. The City is currently using the Ewa Drum Site pursuant to a license from DHHL for the Honolulu Rail Transit Project (HRTP) Operations Center. Due to its prior use by the Navy, the Ewa Drum Site had significant contamination which the City capped, graded, and leveled for its current use. Preparation of the Ewa Drum Site for residential use would likely have required extensive and very costly environmental remediation.

Questions, comments, and concerns followed:

1. Ridesharing Service: Smart asked how much money is being spent on the Oahu Vanpool Incentive Program and its advertising.
2. Venue Change Concern: Marcos Jr. asked why a proper venue change notification was not sent out for the Storm Water Stakeholder Group meeting. The venue changed from Honolulu Hale to the Neal S. Blaisdell Center. He was very frustrated with the coordinators/hired facilitators as the second meeting was a critical one to miss and will now have to attend a make-up session to catch up. Marcos Jr. noted that he cannot read any minutes and spent three (3) hours on the bus to and from Mililani to attend the meeting with no posted signs of venue change.
3. Previous Concern: Chair Poirier raised a previous concern and requested to trim the overgrown trees (causing a wind block) at the Mililani Waena Park tennis courts.
4. Previous Concern: Chair Poirier raised a previous concern and requested to remove the graffiti/red paint at the Mililani Waena Park tennis courts.

Councilmember Ron Menor – Councilmember Menor distributed a handout regarding the requirements for REAL ID's and highlighted a newsletter.

Questions, comments, and concerns followed:

1. Bees Concern: Regarding the bees concern on Kipapa Drive near the entrance to the athletic field, M. Lee noted that the "bees in the area" sign is still there. Councilmember Menor responded that he submitted the concern for a response and will check on it first thing in the morning.
2. TheBus Route 504: Regarding the funding incorporated into the Budget for next year for Route 504, Nagamine asked if there can also be funding to extend service of Route 501. Councilmember Menor responded that he will follow up with DTS.

Senator Michelle Kidani – Senator Kidani distributed and highlighted a newsletter.

Representative Ryan Yamane – Representative Yamane distributed and highlighted a newsletter.

Questions, comments, and concerns followed: Perpetual Easement: Dau asked and Representative Yamane responded the Department of Land and Natural Resources (DLNR) protects the perpetual easements like Kipapa Ditch.

Representative Lauren Cheape Matsumoto – Representative Matsumoto distributed a newsletter.

Representative Val Okimoto – Representative Okimoto distributed and highlighted a newsletter.

Questions, comments, and concerns followed: Constituent Concern: Kaapana raised a constituent concern that the Mililani YMCA Trunk & Treat Event and the Mililani Town Association (MTA) Halloween Fun Fair take place on the same day and at the same time. Representative Okimoto responded that she will take the concern offline.

COMMITTEE AND OTHER REPORTS

Treasurer's Report – Marcos Jr. reported a remaining balance of $362.08 for October 2019.

Questions, comments, and concerns followed:

1. Annual Facility/Video Contract: Marcos Jr. commented that the annual facility contract costs $2,172.96 and the annual video contract costs $2,400.00. Both costs are subtracted from the budget at the beginning of the fiscal year.
2. Physical Mailouts: Kaapana expressed concern that she receives two (2) or three (3) physical mailouts every month and that could be contributing to the high cost of the budget.
3. Electronic Mailout: Freed expressed concern that she is still receiving a physical mailout every month even though she previously signed up for the electronic mailout. Freed encouraged everyone to go electronic/paperless and save trees.

Military/Emergency Management/Climate Change – Bass reported that Arbor Day is on Saturday, November 2, 2019.

Hearing no objections, Chair Poirier allowed Vice Chair M. Lee to make an announcement.

Vice Chair – Vice Chair M. Lee distributed handouts and announced that the Mililani Lions Club will be holding their 34th Annual Mililani Holiday Parade on Saturday, December 7, 2019.

Chair – Chair Poirier reported that the Board will be awarding Mililani High School Principal Fred Murphy with a certificate of recognition in the near future.

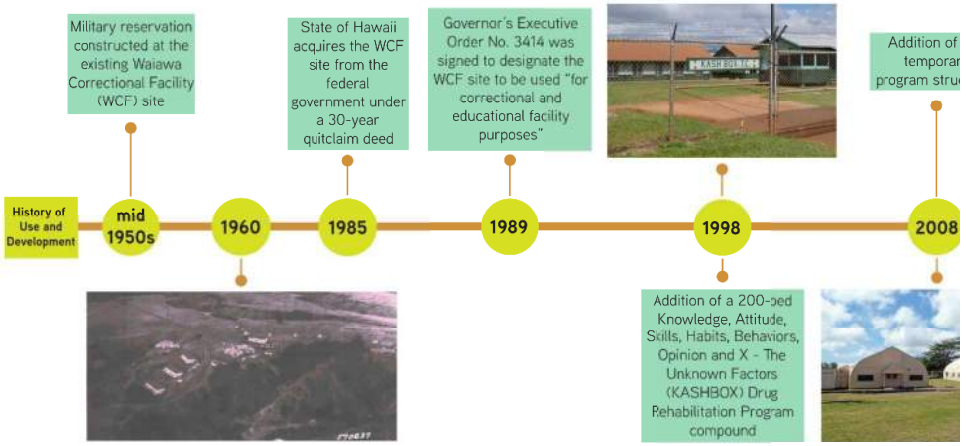
ANNOUCEMENTS – The next Mililani/Waipio/Melemanu Neighborhood Board No. 25 will be on Wednesday, November 27, 2019.

'Olelo Broadcasting: The videotaping of Board meetings are scheduled to be shown on 'Olelo Focus 49 every second Thursday at 9:00 a.m. and every first and third Saturday at 9:00 a.m.

ADJOURNMENT – The meeting adjourned at 9:26 p.m.

Submitted by: Janelle Nomura, Neighborhood Assistant
Reviewed by: Naomi Hanohano, Neighborhood Assistant
Final Review by: Richard 'Dick' Poirier, Chair

Waiawa Correctional Facility
Plan Review Use and Special Use Permit



The Department of Accounting and General Services (DAGS) and the Department of Public Safety (PSD) had been notified by the Department of Planning and Permitting (DPP) that the Waiawa Correctional Facility (WCF) requires a Plan Review Use and Special Use Permit to bring the facility into compliance with State and County land use laws. Since the WCF is a long-standing facility, these permits would be considered after-the-fact permits.

The purpose of this project is to meet all of the the WCF is in compliance. In general, this inclu existing and proposed conditions and uses, and uses. There are currently no plans to expand th upgrades in the near future.

When is a Plan Review Use Permit (PRU) Required?

A PRU is required for permanent public or private uses of an institutional nature, such as: hospitals, prisons, airports, colleges and universities, trade or convention centers, and certain golf courses

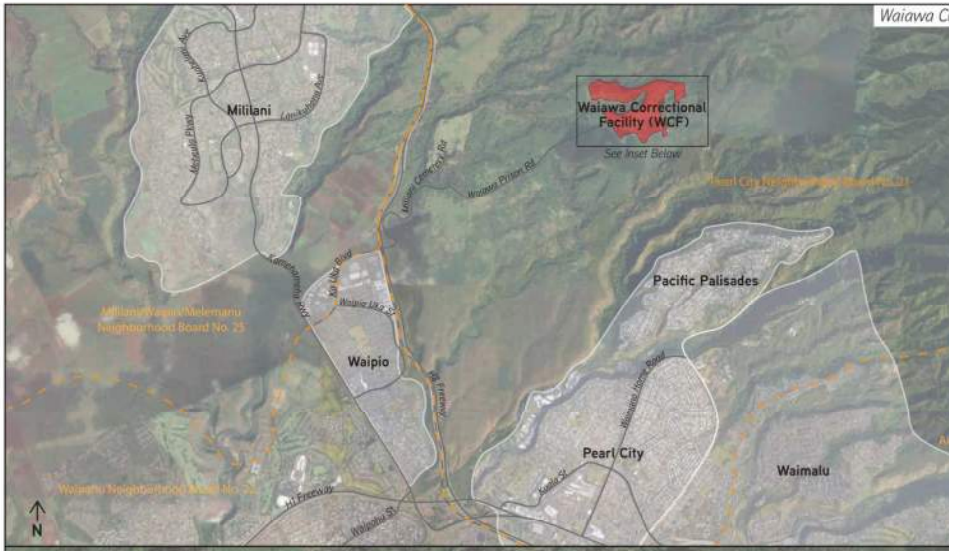
When is a Special Use Permit (SUP) Requir

A SUP is required for uses within the State ag that are not permissible uses classified for the

For more information:

Department of Public Safety
Toni Schwartz, Public Information Officer
Email: toni.e.schwartz@hawaii.gov
Phone: 808-587-1358

Department of Accounting and General Servi
Lance Maja, Project Manager
Email: lance.y.maja@hawaii.gov
Phone: 808-586-0483


Waiawa C
Mililani
Waiawa Correctional Facility (WCF)
See Inset Below
Waiawa Prison Rd
Pacific Palisades
Mililani/Waipio/Melemanu Neighborhood Board No. 25
Waipio
Pearl City
Waimalu
Waiawa Neighborhood Board No. 22
H1 Freeway
Waiaiea St
N

WCF Propert
Tax Map Key
157.875 acres
Landowner: S
Waiawa Prison Rd
N

APPENDIX M - Pre-Assessment Consultation

DAVID Y. IGE
GOVERNOR

JADE T. BUTAY
DIRECTOR

Deputy Director
LYNN A.S. ARAKI-REGAN
DEREK J. CHOW
ROSS M. HIGASHI
EDWIN H. SNIFFEN

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

IN REPLY REFER TO:
HWY-2762
HWY-PS 2.4136

October 29, 2020

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

Dear Ms. Kadota:

Subject: Pre-Assessment Consultation for Draft Environmental Assessment
Waiawa Correctional Facility
Honolulu, Oahu, Hawaii
Tax Map Key No.: (1) 9-6-005: 011 and 012

Thank you for the letter dated October 1, 2020 and the opportunity to review the above referenced project for the preparation of an upcoming Draft Environmental Assessment (DEA) required by Chapter 343, Hawaii Revised Statutes for the use of State land and State funds. The DEA will be in conjunction with an upcoming State Special Use Permit and County Plan Review Use Permit Applications.

The applications will be an after-the-fact filing and therefore, no construction nor expansions are planned. However, the purpose of a new DEA will allow the agency to reassess potential and recent improvements and land use modifications since the filing of a Final Environmental Assessment back in 1998.

The 180-acre site consists of 40 existing buildings, which includes 5 inmate housing, 2 visitor centers, educational building, dining hall, medical facility, chapel, administrative buildings and an 8-acre farm. There are also three reservoirs for wastewater treatment and storage.

The existing access for the site is a few miles off the Interstate H-2 Freeway (Veterans Memorial Freeway) via Waiawa Prison Road and Mililani Cemetery Road; both are County roadways.

The Hawaii Department of Transportation has the following comments:

1. A Transportation Assessment or Traffic Impact Analysis Report should be prepared by a traffic engineer licensed in the State of Hawaii and should be included in the DEA.

1.1 The study should evaluate any local impacts to the State Highway and nearby State facilities attributed by the project.

2.2 The study should include trip generations related to the operation, such as daily visitors and the transporting of inmates.

If you have any questions, please contact Jeyan Thirugnanam, Systems Planning Engineer, Highways Division, Planning Branch at (808) 587-6336 or by email at jeyan.thirugnanam@hawaii.gov. Please reference file review number PS 2020-154.

Sincerely,

JADE T. BUTAY
Director of Transportation

OFFICE OF PLANNING
STATE OF HAWAII

DAVID Y. IGE
GOVERNOR

MARY ALICE EVANS
DIRECTOR
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/

DTS 202010222249HE

November 5, 2020

Ms. Carah Kadota
Project Planner
SSFM International, Inc.
501 Sumner Street, Suite 620
Honolulu, Hawaii 96817

Dear Ms. Kadota:

Subject: Pre-Assessment Consultation for a Draft Environmental Assessment, Waiawa Correctional Facility, Special Use and Plan Review Use Permits TMK: (1) 9-6-005: 011 and 012

Thank you for the opportunity to provide comments on the early-consultation request for the preparation of a Draft Environmental Assessment (Draft EA) on the Waiawa Correctional Facility (WCF), Special Use Permit and Plan Review Use Permit evaluation. The pre-consultation review material was sent to our office by letter dated October 1, 2020.

It is our understanding that a Draft EA is being prepared to address the requirements of the SUP application's Hawaii Revised Statutes (HRS) Chapter 343 requirements. The Draft EA will reassess the facility and any improvements or modifications made since 1998, and to update the land uses that were listed in the Final Environmental Assessment (Final EA) accepted in 1998. The review material further discloses that the State Department of Public Safety (PSD) does not have any current plans to expand the existing correctional facility.

The Office of Planning (OP) has reviewed the EA and has the following comments to offer:

1. Special Use Permit Requirements
The WCF is situated within the State Agricultural District on two parcels that total approximately 180 acres. The lands are primarily rated "B" and "C" by the Land Study Bureau. The State facility is surrounded by agricultural lands owned by Kamehameha Schools-Bishop Estate. An 8-acre farm is part of the facility and the farming work program available to inmates produces 2,000 to 3,000 pounds of fruits, vegetables, and herbs per week that is used in the facility's kitchen. Excess produce is shared with other State correctional facilities on Oahu.

Since the Special Use Permit is for an area greater than 15 acres, approval by both the City and County of Honolulu Planning Commission (PC) and the State Land Use Commission (LUC) is required. At the LUC hearing no new evidence can be introduced and the decision must be based on the County record. Consequently, the Draft EA should provide sufficient basis for the PC and the LUC to determine whether the WCF is an "unusual and reasonable" use permitted within the State Agricultural District. Hawaii Administrative Rules, §15-15-95 (c) provides five guidelines for making this determination:
"(1) The use shall not be contrary to the objectives sought to be accomplished by chapters 205 and 205A, HRS, and the rules of the commission;
(2) The proposed use would not adversely affect surrounding property;
(3) The proposed use would not unreasonably burden public agencies to provide roads and streets, sewers, water drainage and school improvements, and police and fire protection;
(4) Unusual conditions, trends, and needs have arisen since the district boundaries and rules were established; and
(5) The land upon which the proposed use is sought is unsuited for the uses permitted within the district."

2. The Hawaii State Planning Act
The Hawaii Revised Statutes (HRS) Chapter 226, serves as a guide for long-term development for the State. It provides 1) goals, objectives, and policies; 2) the allocation of resources through planning coordination and implementation efforts; and 3) priority guidelines for the State. It will benefit evaluation process for the needed permits if the Draft EA contains a discussion on the provisions of Hawaii Revised Statutes (HRS) Chapter 226, as they pertain to any changes or modifications made to the WCF since it was last evaluated in 1998.

3. Hawaii Coastal Zone Management (CZM) Program
The 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).

Pursuant to HRS § 205A-4, in implementing the objectives of the CZM program, agencies shall consider ecological, cultural, historic, esthetic, recreational, scenic, open space values, coastal hazards, and economic development. As this project is proposed by PSD (a State Agency), the Draft EA should include analysis on the WCF's consistency with the objectives and supporting policies of the Hawaii CZM Program, HRS § 205A-2, as amended. Compliance with HRS § 205A-2 is an important component for satisfying the requirements of HRS Chapter 343.

4. Stormwater Runoff, Erosion, and Water Resources
Pursuant to Hawaii Administrative Rules (HAR) § 11-200.1-18(d)(7) – identification and analysis of impacts and alternatives considered; to ensure that nearshore marine resources of Oahu remain protected, the negative effects of stormwater inundation and sediment loading emanating from the WCF on the downslope coastal areas and nearby surface water resources should be evaluated. Changes that have been made to the WCF since 1998 should be a strong focus of this examination.

Issues that may be evaluated include, but are not limited to, project site characteristics in relation to flood and erosion prone areas, potential vulnerability of these water resources, the shoreline, and examining permeable versus nonpermeable surfaces in the area to determine how they affect the volume and velocity of stormwater runoff. Pursuant to HAR § 11-200.1-18(d)(8), developing mitigation measures for the protection for the coastal ecosystem and water resources should be evaluated.

If you have any questions regarding this comment letter, please contact Aaron Setogawa of our Land Use Division at (808) 587-2883 or Joshua Hekekia of our CZM Program at (808) 587-2845.

Sincerely,

Mary Alice Evans

Mary Alice Evans
Director

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

November 10, 2020

Ms. Carah Kadota
Project Planner
SSFM International
501 Sumner Street, Suite 620
Honolulu, Hawaii 96817

Dear Ms. Kadota:

Subject: Preassessment Consultation for Draft Environmental Assessment
Waiawa Correctional Facility Special Use Permit and Plan Review Use Permit
94-560 Kamehameha Highway
Honolulu, Hawaii 96789
Tax Map Key: 9-6-005: 011 and 012

In response to your letter dated October 1, 2020, regarding the abovementioned subject, the Honolulu Fire Department (HFD) reviewed the material provided and 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 m) 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.)

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,

JASON SAMALA
Assistant Chief

JS/RZ:bh

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.honoluludpp.org • CITY WEB SITE: www.honolulu.gov

KIRK CALDWELL
MAYOR

EUGENE H. TAKAHASHI
DEPUTY DIRECTOR

SSFM
INTERNATIONAL, INC.
RECEIVED
NOV 18 2020
CAK
FILE

November 13, 2020

2020/ELOG-1966(FK)

Ms. Carah Kadota
Project Planner
SSFM International, Inc.
501 Sumner Street, Suite 620
Honolulu, Hawaii 96817

Dear Ms. Kadota:

SUBJECT: Waiawa Correctional Facility (WCF) Special Use Permit (SUP) and Plan Review Use (PRU) Permits
Tax Map Keys 9-6-005: 011 and 012
Waiawa, Oahu, Hawaii
Pre-Assessment Consultation for a Draft Environmental Assessment (EA)

This is in response to your request for comments dated October 1, 2020, for a new Draft EA being prepared to reassess the facility and any improvements or modifications made since the last EA for the WCF, prepared in 1998. The new Draft EA will also satisfy the SUP application's Hawaii Revised Statutes Chapter 343 requirements.

The State of Hawaii, Department of Accounting and General Services, on behalf of the State Department of Public Safety (PSD), intends to apply for SUP and PRU approvals for use of the WCF.

The Department of Planning and Permitting offers the following comments:

1. Describe how the WCF is consistent with the 2002 Central Oahu Sustainable Communities Plan (SCP).

2. One of the planning principles of the Central Oahu SCP states, "Correctional facilities should generally be located on lands planned for industrial and agricultural use. If such a facility is proposed for lands not planned for industrial or agricultural use, a City review and approval process which provides public review, complete project analysis, and City Council approval should be used." The Draft EA should address how the project complies with this planning principle.

3. Please describe the project's integration into the overall State-wide correctional facilities master plan and how the PSD's long-range plans and programs, if any, would retain the WCF as a minimum security correctional facility.

4. The site is within the F-1 Military and Federal Preservation District. The lot is owned by the State, and F-1 lands removed from federal jurisdiction are subject to the development standards of the P-2 General Preservation District, where the height limit is 25 feet. The Draft EA should discuss how the project complies with the P-2 development standards, and what standards will need to be modified.

5. The applicant must submit separate applications for the SUP and the PRU. Due to different processing timeframes and decision-making jurisdictions, the PRU application should not be submitted until after the SUP Decision and Order has been issued by the State Land Use Commission.

6. The Draft EA should describe all existing and proposed outdoor lighting. All outdoor lighting should have an appropriate color correlated temperature to mitigate impacts to wildlife. We note that the location is remote and wildlife may be adversely affected if outdoor lighting is not environmentally sensitive. To protect the area's wildlife and the night sky, outdoor lighting should be fully shielded unless only used during emergencies.

7. The SUP application should include an updated study of the area's avifauna and a description of the potential impacts and any mitigation measures. Section 2.6 of the 1998 EA states that the project may result in some loss of natural habitat. The Draft EA should consider this issue, as well as the possibility of restoring or increasing natural habitat in coordination with the State Department of Land and Natural Resources (DLNR).

8. Page 1-28 of the 1998 EA discusses the planting of pine trees and California grass. The Draft EA should consider and give preference to native plants in all landscaping.

9. The Draft EA should discuss the use of green infrastructure features throughout the site, including a rain catchment system as well as the use of renewable energy sources including, but not limited to, solar panels.

10. The Draft EA should include a full and complete description and account of:

    - All buildings and structures on-site and their purpose and use;
    - All above-ground storage tanks, water storage basins, i.e., lagoons and reservoirs, wells, ditches, and tunnels;
    - Ownership of access roads and evidence of permission to access the WCF over these roads;
    - The agricultural production and the support systems necessary to sustain agricultural operations;
    - How many on-site personnel are full-time or part-time staff and include staff and inmate projections for the five-year master plan; and
    - The educational and skill-training programs offered to the population at WCF.

11. The Draft EA should include the findings of an architectural Reconnaissance Level Survey and an archeological inventory survey. The response from the State Historic Preservation Division of the DLNR should also be included.

Should you have any questions, please contact Franz Kraintz, of our staff, at (808) 768-8046.

Very truly yours,

Kathy K. Sokugawa
Acting Director

KKS:ah