ALOHA SOLAR ENERGY FUND II - KALAELOA

TMK (1) 9-1-013:070 and portion of 30-foot-wide
State of Hawai'i, Department of Transportation, Highways (DOT-H)
Division Right-of-Way (ROW) along eastern edge of Coral Sea Road that border
(1) 9-1-013:039, 040, 043, 044, 072, 099, 100 Honouliuli (Kalaeloa), 'Ewa, O'ahu, Hawai'i

Final Environmental Assessment

This environmental document is prepared in accordance with the requirements of Chapter 343, HRS and Hawai'i Administrative Rules, Title 11, Department of Health.

Volume I: Ch. 1 - Appendix A

October 2017

Applicant:

ASEF II
ALOHA SOLAR ENERGY FUND II

905 Kalanianaole Hwy. #21
Kailua, Hawai'i 96734

Prepared by:

GZO

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ALOHA SOLAR ENERGY FUND II - KALAELOA

Honouliuli (Kalaeloa), ʻEwa, Oʻahu, Hawaiʻi

TMK (1) 9-1-013:070 and portion of 30-foot-wide State of Hawaiʻi, Department of Transportation, Highways (DOT-H) Division Right-of-Way (ROW) along eastern edge of Coral Sea Road that border (1) 9-1-013:039, 040, 043, 044, 072, 099, 100

Final Environmental Assessment

Applicant:

Aloha Solar Energy Fund II, LLC
905 Kalanianaole Hwy #21
Kailua, Hawaiʻi 96734

Approving Agency:

Hawaiʻi Community Development Authority
Department of Business, Economic Development & Tourism
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October 2017

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ABBREVIATIONS AND ACRONYMS

AERMOD	Atmospheric Dispersion Modeling System
AC	advisory circular
AD	Airports Division
AIS	Archaeological Inventory Survey
AMSL	above mean sea level
ASEF II	Aloha Solar Energy Fund II LLC
ASHOK	ʻAhahui Siwila o Hawaiʻi o Kapolei Hawaiian Civic Club
ATC	Air Traffic Control
BRAC	Base Realignment & Closure
BWS	City and County of Honolulu Board of Water Supply
CAA	Clean Air Act
CAB	Clean Air Branch
CERCLA	Federal Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CIA	Cultural Impact Assessment
CNPCP	Coastal Nonpoint Pollution Control Program
CR	Coral outcrop
CSP	concentrated solar power
CWA	Clean Water Act
CWB	Department of Health Clean Water Branch
CWCS	Comprehensive Wildlife Conservation Strategy
CWRM	Commission on Water Resource Management
CZARA	Coastal Zone Act Reauthorization Amendments
CZM	Coastal Zone Management
CZMA	Coastal Zone Management Act
CZD	Capture Zone Delineations

CZO	Comprehensive Zoning Code
dB	decibels
dBA	A-weighting sound network
DBEDT	State of Hawai'i Department of Business, Economic Development and Tourism
DEA	Draft Environmental Assessment
DG	distributed generation
DLNR	State of Hawai'i Department of Land and Natural Resources
DOA	State of Hawai'i Department of Agriculture
DOD	Department of Defense
DOH	State of Hawai'i Department of Health
DOT	State of Hawai'i Department of Transportation
DOT-HD	State of Hawai'i Department of Transportation, Highways Division
DPP	City and County of Honolulu, Department of Planning and Permitting
EA	Environmental Assessment
EDP	'Ewa Development Plan
EISPN	environmental impact statement preparation notice
EPA	U.S. Environmental Protection Agency
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Area
FIRM	Flood Insurance Rate Map
FONSI	Finding of No Significant Impact
GPS	global positioning system
HANG	Hawai'i Army National Guard
HAR	Hawai'i Administrative Rules
HCDA	Hawai'i Community Development Authority
HCEI	Hawai'i Clean Energy Initiative
HD	Highways Division
HECO	Hawaiian Electric Company

HEER	Hazard Evaluation and Emergency Response
HPD	Honolulu Police Department
HRS	Hawai‘i Revised Statutes
HTCO	Hawaiian Telecom
IBC	International Building Code
IPCC	Intergovernmental Panel on Climate Change
JRF	John Rodgers Field
KCDD	Kalaeloa Community Development District
KHP	Kalaeloa Heritage Park
KM	kilometers
KMP	Kalaeloa Master Plan
kV	kilovolt
lbs	pounds
LCA	Land Commission Award
LID	Low Impact Development
LUC	Land Use Commission
M	meters
MFPD	Military and Federal Preservation District
MGD	million gallons per day
MSL	mean sea level
MW	Megawatt
NASBP	Naval Air Station Barbers Point
NAAQS	National Ambient Air Quality Standards
NAVFAC	Navy Facilities
NCTAMS	Naval Computer and Telecommunications Area Master Station
NEH	National Engineering Handbook
NFPA	National Fire Protection Association
NFW	no further work

NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollution Discharge Elimination System
OFA	Object Free Area
OHA	Office of Hawaiian Affairs
OIBC	Oʻahu Island Burial Council
OSHA	Occupational Safety and Health Administration
OTWC	Oceanic Time Warner
PER	Preliminary Engineering Report
PI	Pacific Islands
POWER	POWER Engineers, Inc.
PURPA	Public Utility Regulatory Policies Act
PV	photovoltaic
RPS	renewable portfolio standard
RPZ	Runway Protection Zone
ROH	Revised Ordinance for the City and County of Honolulu
ROW	Right-of-Way
SAAQS	State Ambient Air Quality Standards
SCS	Scientific Consultant Services, Inc.
sf	square feet
SGHAT	Solar Glare Hazard Analysis Tool
SHPD	State Historic Preservation Division
SMA	Special Management Area
SWPPP	Stormwater Pollution Prevention Plan
T	tons
TMK	Tax Map Key
TOT	time-of-travel
TSP	technical service provider
U.H.	University of Hawaiʻi

UIC	Underground Injection Control
U.S.	United States
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	United States Geological Survey
USPS	United States Postal Service
w/sm	Watts per Square Meter
WWII	World War II

HAWAIIAN WORD INDEX

ʻa ʻali ʻi	*Dodonea ericarpa*
ahupuaʻa	land division within a moku that typically extends from uplands to the sea
aliʻi	Hawaiian royalty
ʻakoko	*Euphorbia skottsbergii skottsbergii*
ʻawa	*Piper methysticum*
ʻEwa hinahina	*Achyranthes spectabilis*
hoa ʻāina	native tenant
ʻihiʻai	*Oxalis corniculata*
ʻili ʻāina	smaller land divisions next in importance to the ahupuaʻa
ʻilieʻe	*Plumbago zeylanica*
ʻilima	*Sida fallax*
iwi kūpuna	ancestral human remains
kalaʻe	clear or calm
kalo	taro plant
kiawe	*Prosopis pallida* (ironwood)
kō	sugar cane
koa haole	*Leucaena leucocephala* (white leadtree)
kula	plains
kuleana	land holding of a hoa ʻāina
kūpala	*Sicyos pachycarpus*
kupuna	elders
lae	cape or point
lama	*Diospyros ferrea*
limu	seaweed
loa	distance or length
lokoʻea	fishponds

maiʻa	banana plant
maiapilo	*Capparis sandwichiana*
makai	towards the ocean
makaʻāinana	commoners
māmaki	*Pipturus albidus*
maʻo	*Gossypium tomentosum*
mauka	towards the mountains
mōʻīhoʻoponopono o ke aupuni	administrator of the government
moku	island district
moʻoʻāina	narrow strips of land within an ʻili
noni	*Morinda citrifolia*
ʻōhiʻa	*Metrosideros collina*
olonā	*Touchardia latifolia*
ʻopaeʻula	shrimp
pōpolo	*Solanum americanum*
puʻepuʻe	mound based planting method
punalaʻau	conquered land
sandalwood	*Santalum*
ʻuala	sweet potato
wahi pana	celebrated or noted places or locations
wauke	*Broussonetia papyrifera*
wili wili	*Erythina sandwicensis*

1.0 INTRODUCTION

1.0 INTRODUCTION

This ~~Draft~~ Final Environmental Assessment (EA) has been prepared in accordance with the requirements of Hawai'i Revised Statutes (HRS), Chapter 343 (Environmental Impact Statements) and Hawai'i Administrative Rules (HAR), Title 11, Department of Health, Chapter 200 (Environmental Impact Statement Rules).

1.1 PROJECT INFORMATION SUMMARY

Project Name:	Aloha Solar Energy Fund II - Kalaeloa
Applicant:	Aloha Solar Energy Fund II LLC (ASEF II)
Proposed Use:	Construction of a 5 Megawatt (MW) photovoltaic utility installation and construction of an approximate 1.78-mile long 12 kilovolt (kV) interim electrical distribution line to provide renewable energy on O'ahu
Approving Agency:	Hawai'i Community Development Authority (HCDA)
Class of Action:	Use of State lands
Project Location:	Honouliuli (Kalaeloa), 'Ewa, O'ahu, Hawai'i (*Figure 1-1 and 1-2*)
Tax Map Key (TMK):	(1) 9-1-013:070 and portion of 30-foot-wide State of Hawai'i, Department of Transportation, Highways (DOT-H) Division Right-of-Way (ROW) along eastern edge of Coral Sea Road that border (1) 9-1-013:039, 040, 043, 044, 072, 099, 100 (*Figure 1-3*)
Landowner:	HCDA (:070 parcel); DOT-H (ROW)
Project Area:	Approximately 22 acres on a 44.28 parcel for utility installation, a 12 kV switchyard, interior roadway, and buffers Approximately 9,400 linear feet (1.78 miles) for a single 12 kV interim electrical distribution line consisting of 5,600 feet of overhead line on utility poles and 3,800 feet through an underground conduit
State Land Use District:	Urban District (*Figure 1-4*)
Kalaeloa Community Development District:	Transect 2 - Rural/Open Space Zone (Figure 1-5)

HCDA Kalaeloa Master Plan:	Open Space/Recreation (*Figure 1-6*)
County Zoning:	F-1, Federal & Military Preservation District* (*superseded by HCDA Kalaeloa Master Plan)
ʻEwa Development Plan:	Industrial Area (*Figure 1-7*)
Special Management Area (SMA):	Portion of parcel (1) 9-1-013:070 within SMA (*Figure 1-8*)
Flood Zone:	Zone D- Areas with possible but undetermined flood hazards (*Figure 1-9*)
Anticipated Determination:	Finding of No Significant Impact (AFONSI)

1.2 PROJECT SUMMARY DESCRIPTION

Aloha Solar Energy Fund II LLC (ASEF II) is proposing to develop a 5 megawatt (MWac) solar power utility installation to be built on approximately 44.28 acres of lands currently owned and managed by the State of Hawaiʻi, Hawaiʻi Community Development Authority (HCDA) in Kalaeloa, Oahu, Hawaiʻi (TMK (1) 9-1-013:070). Power generated by this facility would be transferred along an approximate 1.78 mile 12 kV interim electrical distribution line that would be routed along the eastern side of Coral Sea Road, eventually connecting to the Hawaiian Electric Company (HECO) grid within its existing right of way. This environmental review only evaluates the utility installation and line and does not include assessing the actual HECO connection. Complete details of the project area and description are provided in Section 2.0 of this EA.

1.3 PURPOSE & NEED OF THE PROPOSED ACTION

The proposed action can be characterized as a renewable electrical energy project. Under Chapter 269-91, HRS, "renewable energy" means energy generated or produced by many natural sources, including the sun. Additionally, "renewable electrical energy" includes electrical energy generated using renewable energy as the source. In Hawaiʻi, the percentage of electrical energy sales that is represented by renewable electrical energy is defined as the renewable portfolio standard (RPS).

With the Hawaiʻi Clean Energy Initiative (HCEI), the State of Hawaiʻi had set a bold vision in 2009 to initially achieve an RPS of 40% by 2030. In 2015, Hawaiʻi furthered its goals through legislative action to become the only state with an RPS goal of 100% by 2045. According to the 2016 State of Hawaiʻi Energy Resources Coordinator's Annual Report, the statewide RPS level in 2015 was 23.4%. The goal towards energy independence and security still has its challenges with more than 80% of Hawaiʻi's energy system-wide coming from petroleum. However, the transformation towards Hawaiʻi's clean energy production capability is being led by supporting the expansion and growth of various contributors to the renewable energy sector.

The purpose of the ASEF II project is to be a contributor of renewable energy in the form of solar electric power to HECO's existing power grid. Anticipated to generate up to 5 MW, the development of the proposed project would help the State in achieving its RPS goal while also improving the environment by reducing greenhouse gas emissions, dependency on foreign imports of fossil fuels and associated price variations, and the environmental risk of spills during the transport and storage of fossil fuel to the State. The ASEF II will also provide a potential benefit as a source of renewable energy to support the power demand needs within the Kalaeloa Community Development District.

1.4 PROJECT TRIGGER AND PROCESS TO CONDUCT STATE ENVIRONMENTAL REVIEW

In accordance with Chapter 343, HRS, this EA is being prepared since the proposed action would require the leased use of State lands on the HCDA parcel as well as the State DOT-H ROW. The content of this EA fulfills the requirements as prescribed under Section11-200-10, HAR. Once completed and filed with the State Office of Environmental Quality and Control on July 8th, 2017, the Draft EA ~~will initially undergo~~ underwent a 30-day public review and comment period. All comments received or postmarked during the 30-day review period ~~shall be provided a response~~ have been responded to by ASEF II as the applicant and are included as a part of Appendix A of this Final EA.

The comments and responses ~~shall be~~ have been incorporated into the Final EA prior to the HCDA as the approving agency making an anticipated negative declaration determination or more commonly known as a "Finding of No Significant Impact" (FONSI) determination. Under Section 11-200-11.2, the HCDA also reserves the right to issue a notice of determination of an environmental impact statement preparation notice (EISPN) if it concludes that the proposed action may have a significant effect. For this project, a FONSI determination by the HCDA and its governing Board is anticipated.

1.5 OTHER PERMITS AND APPROVALS REQUIRED FOR PROJECT IMPLEMENTATION

In addition to the acceptance of the Final EA/FONSI by the HCDA, the following permits and approvals are anticipated:

1.5.1 Special Management Area (SMA) Use Permit, State Office of Planning

The HCDA has planning and zoning jurisdiction over the Kalaeloa Community Development District (KCDD). No development, as defined under HRS 205A-22, is allowed in the SMA in the KCDD unless the Office of State Planning issues an SMA use approval. A small portion of the development parcel lies within the SMA. No permanent project improvements are planned in this area other than possibly a small portion of the perimeter fence. A determination is pending as to whether or not any planned improvements in the immediate designated SMA area which are primarily fencing and landscaping meet the definition of "development" as defined in the applicable portion of the statute. If so, it is possible that a SMA use permit (Minor) may be required.

1.5.2 Kalaeloa Development Permit, HCDA

The HCDA has planning and zoning jurisdiction over the KCDD. Effective October 27, 2012, the KCDD Rules Chapter 215 of the HAR and the Kalaeloa Reserved Housing Rules (Chapter 216, HAR) supersedes the Rules for Health and Safety (Chapter 200, HAR) previously established. Development permit approval by HCDA will be required for this Kalaeloa project.

1.5.3 Construction Runoff Water Quality – National Pollutant Discharge Elimination System (NPDES) Permit

An NPDES Permit is required when grading activities are planned to be in excess of 1.0 acre. Under the Federal Clean Water Act, the US Environmental Protection Agency (EPA) authorizes the State of Hawai'i to assume this regulatory responsibility, which is administered under by the State Department of Health, Clean Water Branch.

1.5.4 Federal Aviation Administration (FAA) Obstruction Analysis/Airport Airspace Analysis

Under Title 14 (Aeronautics and Space), Code of Federal Regulations Part 77 (Safe, Efficient Use, and Preservation of the Navigable Airspace), there are requirements to provide notice to the FAA of certain proposed construction or the alteration of existing structures near existing airports. Form 7460-1 (Notice of Proposed Construction or Alteration) must be submitted to the FAA. The FAA will make a determination and, if applicable, conduct an aeronautical study to determine whether the cumulative impact resulting from the proposed construction or alteration when combined with the effects of other existing or proposed structures would constitute a hazard to air navigation.

1.5.5 HECO Interconnection Requirement Study (IRS)

An IRS is a study conducted by HECO on a specific distributed generation (DG) interconnection to determine if mitigation measures to ensure circuit stability are required. DG is a term referring to a small generator, typically 10 MW or smaller, that is sited at or near the load and is attached to the distribution grid. DG can serve as a primary or backup energy source.

1.5.6 HRS 6E, State Historic Preservation Review

Under HRS 6E, before a state or county agency approves any project, it shall advise the State of Hawai'i, Department of Land and Natural Resources, State Historic Preservation Division (SHPD) of the proposed project and afford an opportunity for review and comment to the effect on historic properties, aviation artifacts, or burial sites. For this project, both HCDA and DOT-H must coordinate with SHPD to comply with the historic preservation review process in order to have SHPD's written concurrence prior to project implementation.

1.5.7 Construction and Building Permits

Several construction approvals will be required from the City and County of Honolulu and the State to implement the proposed action. Building and construction permits anticipated to be required include:

- Building Permit (County DPP)
- Grading, Grubbing and Stockpiling Permit (County DPP)
- ~~Trenching Permit (County DPP)~~
- Driveway Connection Permits (County DPP, State DOT)
- Permit to perform work in State ROW (State DOT)
- NPDES Permit (State DOH)

1.6 AGENCIES, ORGANIZATIONS AND INDIVIDUALS CONTACTED DURING THE PRE-CONSULTATION PROCESS

A Pre-Consultation Memo and Participant Letter were initially sent in March 2013 to twenty-three (23) agencies, organizations, or individuals to initiate the state environmental review process. Only four (4) comment letters were received. These letters along with a response are included as *Appendix A.*

A list of agencies, organizations, and individuals that were presented notice of the proposed project or were contacted during the pre-consultation period of the EA is provided in *Section 8.0* of this document.

Additionally, in February 2017, informal consultation through phone calls, emails, and in-person meetings were held with selective agencies, organizations, and individuals to provide an update as to the status of the project. These consultations provided guidance in both the preparation of the EA as well as key archaeological mitigation as part of the 6E HRS review.

A listing of those agencies that were provided a copy of this EA to review and comment is provided in *Section 8.0.*

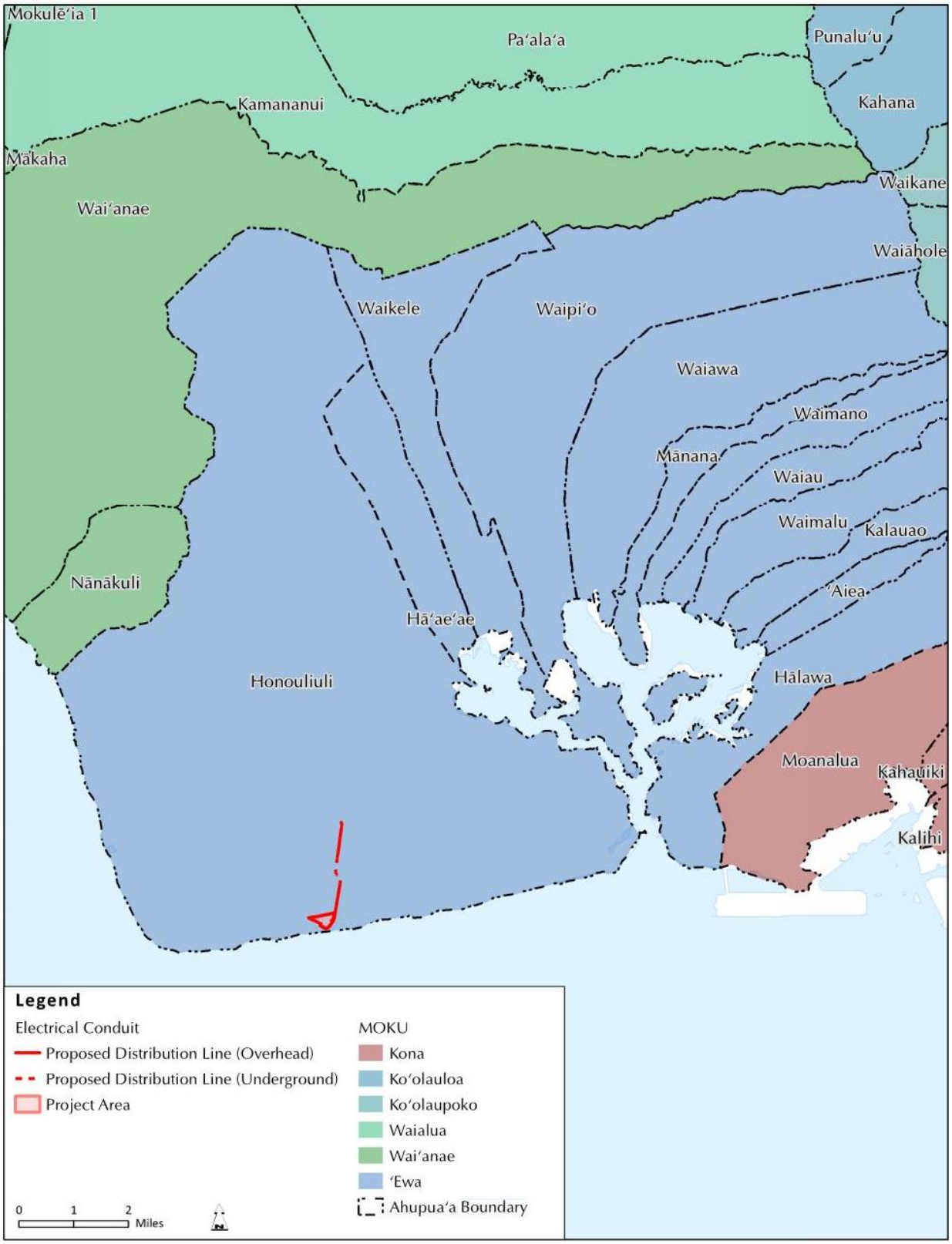


FIGURE 1-1 MOKU & AHUPUAʻA BOUNDARY MAP

FIGURE 1-2 PROJECT LOCATION MAP, ASEF II KALAELOA

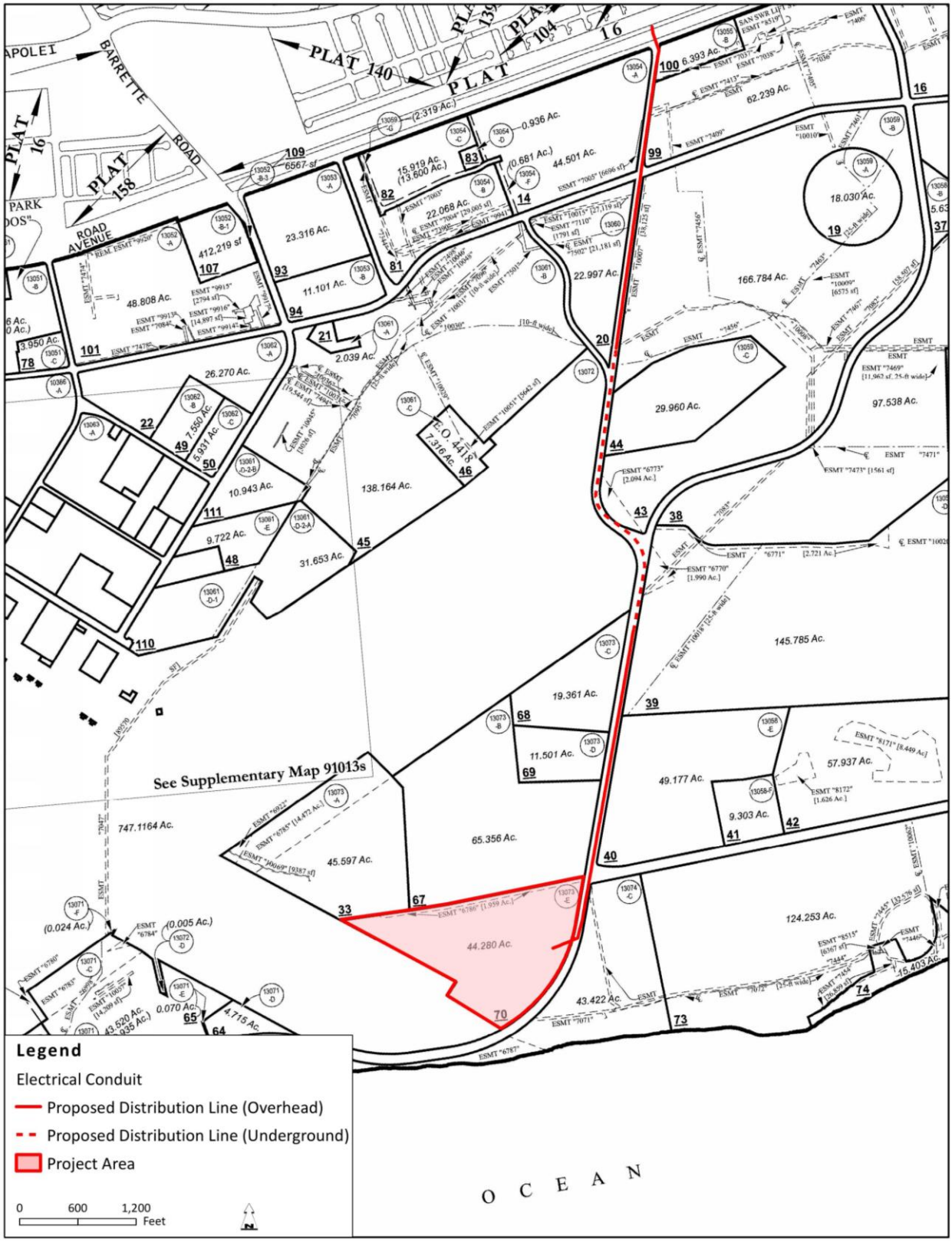


FIGURE 1-3 CITY & COUNTY OF HONOLULU TAX MAP, ZONE 9, SECTION 1, PLAT 013

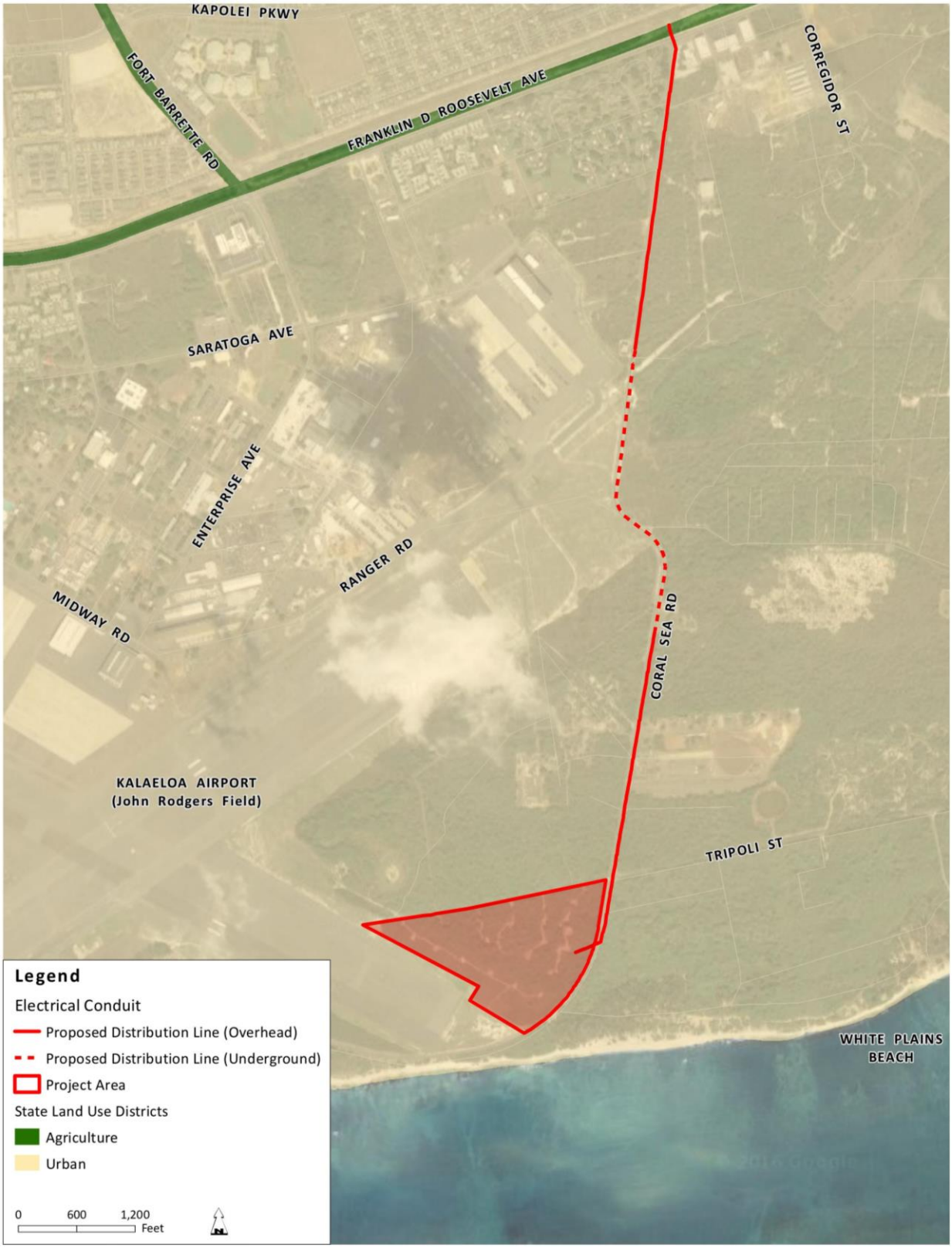


FIGURE 1-4 STATE LAND USE DISTRICT MAP

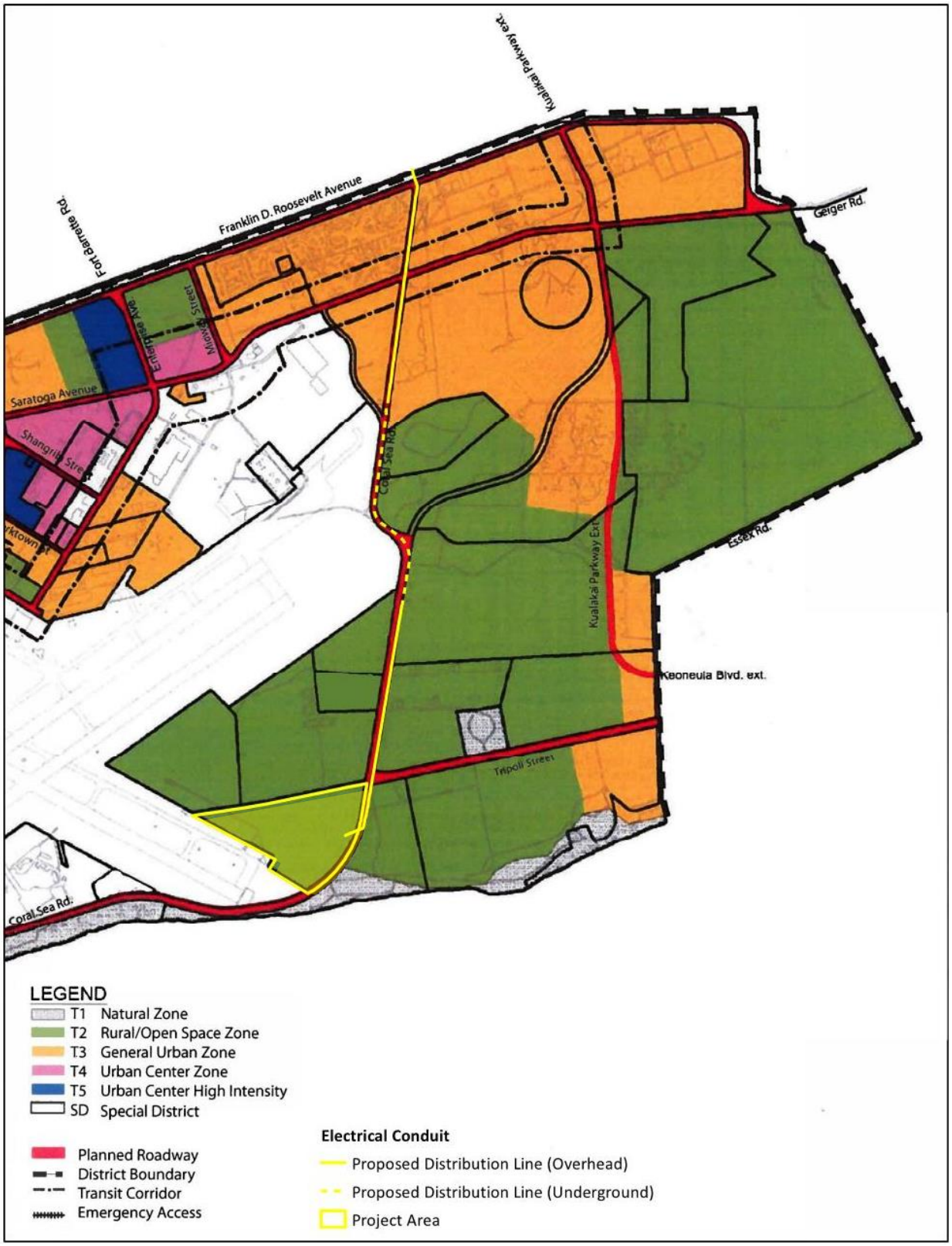


FIGURE 1-5 KALAELOA COMMUNITY DEVELOPMENT DISTRICT REGULATING PLAN (2012)

FIGURE 1-6 HCDA KALAELOA MASTER PLAN (2006)

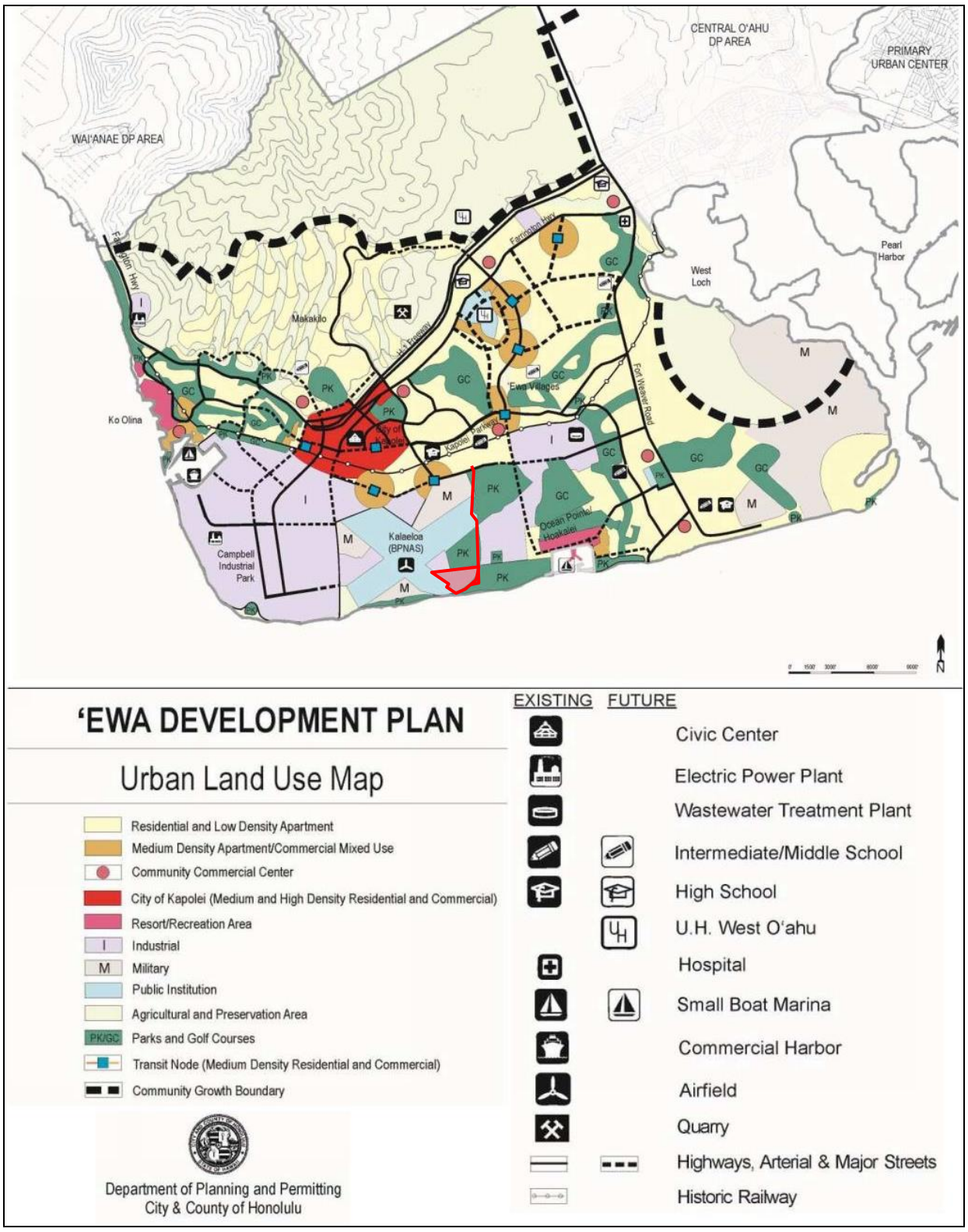


FIGURE 1-7 CITY & COUNTY OF HONOLULU 'EWA DEVELOPMENT PLAN (2013) URBAN LAND USE

FIGURE 1-8 CITY & COUNTY OF HONOLULU SPECIAL MANAGEMENT AREA

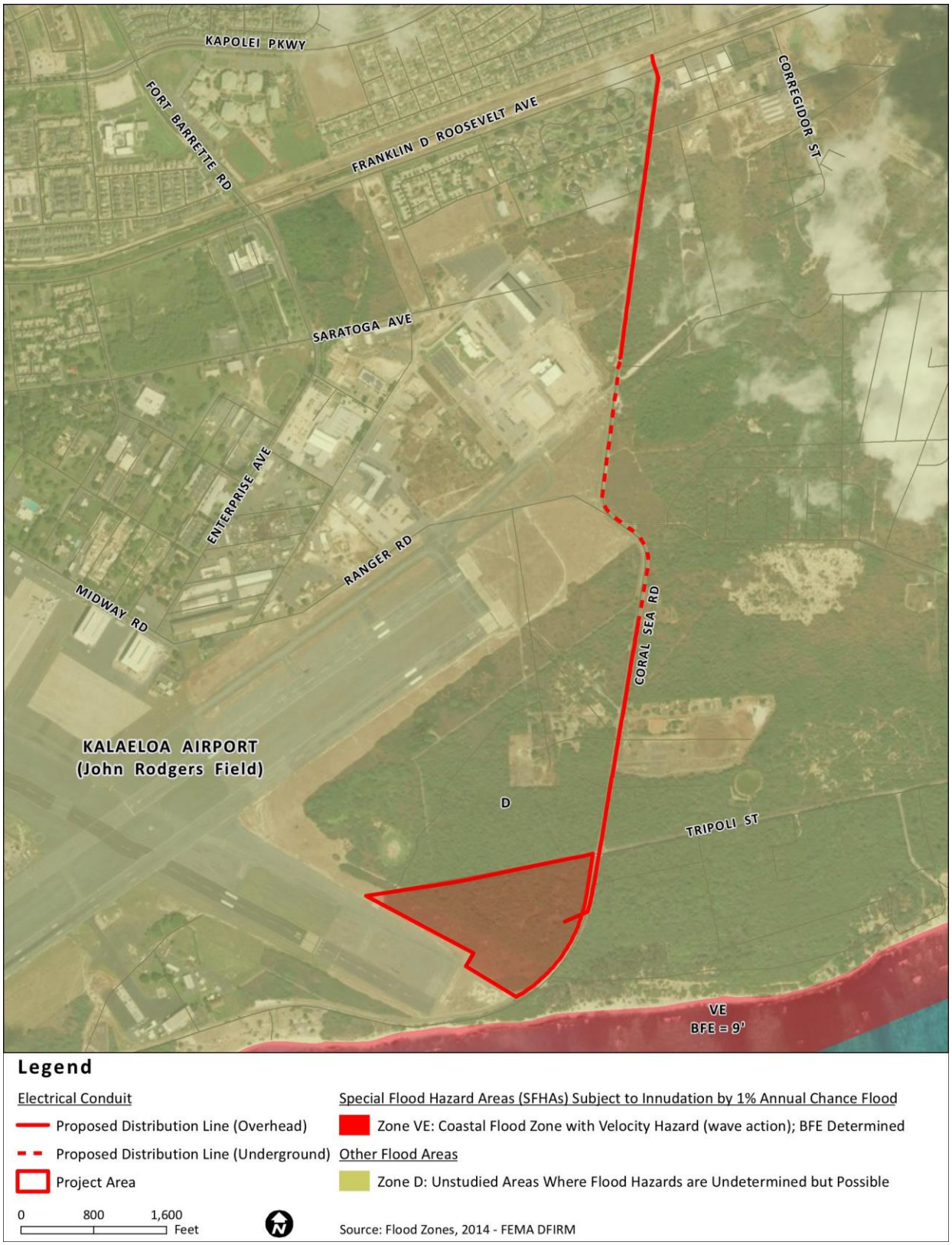


FIGURE 1-9 FEDERAL EMERGENCY MANAGEMENT AGENCY, FLOOD MAP CENTER

2.0 DESCRIPTION OF THE PROPOSED ACTION

2.0 DESCRIPTION OF THE PROPOSED ACTION

2.1 PROJECT DESCRIPTION

Hawai'i is the only state that depends so heavily on petroleum for its energy needs. whereas less than 1% of electricity in the nation is generated using oil. In 2014, Hawai'i relied on oil for 67.9% and on coal for 14.8% of its electricity generation. This dependence on petroleum has led to statewide initiatives to find sustainable energy sources to lessen the economic burden of oil. In 2015, approximately 23.4% of Hawai'i's electricity was generated from renewable sources, where the primary sources were solar PV, wind, and biomass. Renewable resource potential, statewide, is greater than current electricity demand. In 2015, solar PV generation provided 35% of Hawai'i's renewable energy (HSEO, 2016). The ASEF II Kalaeloa Project is a part of 191.2 MW of proposed solar energy projects in the 'Ewa/Kalaeloa area.

The proposed ASEF Kalaeloa project (Project) would be a 5 megawatt (MWac), utility scale, renewable energy solar photovoltaic (PV) system with an approximately 1.78 mile-long 12 kilovolt (kV) interim electrical distribution line that would connect to the main Hawaiian Electric (HECO) grid. Details of each component are briefly summarized below.

The PV system would be built on a parcel (TMK (1) 9-1-013:070) that is currently owned and managed by the Hawai'i Community Development Authority (HCDA). The vacant and undeveloped parcel is comprised of approximately 44.28 acres situated within the traditional moku (district) of 'Ewa in the ahupua'a of Honouliuli. The parcel today is a part of the Kalaeloa Community Development District (KCDD). The proposed project would involve the installation of approximately 23,500, 72-cell PV modules mounted on elevated galvanized steel racks, which will be mounted to posts or piers.

The racking and piers provide support for both the weight of the system and wind uplift; wind uplift resistance usually is the larger of the two forces. The number and type of piers are influenced by site soil conditions which will not be known until a geotechnical survey has been completed. Pending favorable results from a future geotechnical investigation, the piers are normally expected to be driven or screwed directly into the soil to a depth ranging between 6 and 9 feet. Direct driving of piers is preferred methodology as it will minimize time on site as well as ground disturbance. If the soils are not favorable for direct driven piers, it is expected that the piers will be mounted by a method involving drilling holes, placing back the native soil and compacting it, and then driving piers. The PV system is expected to utilize approximately 22 acres of the 44.28 acre site.

The PV modules would be bolted to the racking at a fixed tilt of 10° facing South. Once mounted, the lowest end of the racked modules will be approximately 3 foot above ground level with the highest end not exceeding 7 foot above ground level. Within the PV array, there will be 5 inverter/transformer concrete pads, each containing a 1 MWac Power Electronics inverter and single matching 12 KV transformer. Note that, per standard Industry practice, the final design of the DC side of the system will

be more than 5 MW to account for electrical losses, inefficiencies, and long-term solar module degradation. Subject to final design by a State of Hawai'i-registered engineer, the pads are each expected to be approximately 20 feet by 30 feet. The inverters and transformers are outdoor rated and will require no facility to house them. Electricity in the form of direct current (DC) will flow from the modules through an underground network of DC wiring to the 5 inverters where it will be converted into alternating current electricity. The Project plan will minimize ground disturbance by placing all underground utilities in common trenches to the maximum extent possible.

From each inverter, the AC power will flow into its transformer which will step up the AC voltage to 12kV. From the transformers, power will flow through AC wiring into the Project switchyard. The switchyard will collect the combined power from all 5 inverter/transformer stations and place that power onto the Project distribution line and then into the HECO system. Besides housing the central electrical collection point and switches, the switchyard will also house the control systems required by HECO consisting of HECO SCADA (supervisory control and data acquisition), HECO meter, and Hawaiian Telecom cabinets. All electrical cabinets will be outdoor rated and placed on concrete pads; there will be no buildings required. The Switchyard is anticipated to be a gravel area approximately 75 feet wide by 75 feet deep with National Electric Code-compliant, electrically grounded, chain link fencing and gates. Access to the switchyard will only be available from the array; there will be no direct Coral Sea Road entry.

Access to the parcel would be provided via a single new driveway entry extending off of Coral Sea Road, opposite and near an existing juncture with Eisenhower Road. The gravel driveway would lead to an internal 16 foot wide, gravel maintenance road that would be used periodically for system inspections and upkeep; the road will only be built within the approximate 22 acres to be developed. Native soil lanes between the array racks are expected to be between 5 and 6 feet. The remaining parcel acreage would remain undisturbed. The entire site will be enclosed by a 6 foot chain link fence topped by 3 strands of barbed wire. The fence will comply with applicable KCDD rules and regulations.

The proposed ASEF II project also includes the installation of a 12 kV interim distribution line that would be routed from the new electrical switchyard crossing over to the east side of Coral Sea Road as an overhead line and eventually connecting to the "Kapolei Circuit" at a HECO manhole on the mauka side of Franklin D. Roosevelt Avenue. The proposed12 kV interim distribution line would be installed within an existing State Department of Transportation (DOT), Highways Division (HD) Right-of-Way (ROW) that runs parallel along the eastern side of Coral Sea Road. The ROW extends approximately 30 feet from the edge of Coral Sea Road on the eastern side.

The proposed line corridor would be a combination of an overhead line on poles with a portion that runs underground due to Federal Aviation Administration (FAA) restrictions. The overhead portion of the 12 kV interim line would be approximately 5,600 feet in length with the underground portion approximately 3,800 feet. The underground segment is required due to Federal Aviation Administration (FAA) height restrictions that are in place for an avigation approach for Runway 22L and 22R at the adjacent Kalaeloa Airport (John Rodgers Field). This avigation approach extends over a portion of Coral Sea Road.

2.2 PROJECT LOCATION AND ADJACENT LAND USES

The KCDD lands were once under federal authority while in use and operation as part of the Naval Air Station Barbers Point (NASBP), which was designated for closure by the U.S. Department of Defense Base Realignment and Closure Process in 1993. NASBP was decommissioned in 1999, whereupon the former base lands were conveyed to various Federal, State, and County agencies. In 2002, the HCDA assumed the responsibility for implementing the Kalaeloa Community Redevelopment Plan, which expanded the designation of the KCDD to encompass all land within the former NASBP. Currently, the HCDA is overseeing implementation of the Kalaeloa Master Plan as adopted in 2006.

The proposed utility installation would be constructed on a primarily undeveloped parcel with overgrown natural vegetation, which is void of intact modern structures. However, the 44-acre parcel does include twenty-three (23) documented historic sites comprised of 146 features that are inclusive of traditional Native Hawaiian cultural sites as well as historic military remnants. Most of the parcel is currently covered in a thicket of dense kiawe and is comprised of primarily lowland non-native grassland with some limited native species of vines, shrubs, and groundcover vegetation. Details of the environmental setting and impacts are discussed in section 3.0 of this EA.

The parcel is bordered by an unimproved and overgrown section of Tripoli Street which runs along the northern edge boundary. The adjacent parcel on the immediate mauka side of this section of Tripoli Street is also HCDA-owned land. This area is currently leased to the Kalaeloa Heritage and Legacy Foundation who in partnership with HCDA have established this adjacent parcel to be the home of the 77-acre Kalaeloa Heritage Park, an area dedicated to the stewardship and preservation of Native Hawaiian cultural sites.

The southwest portion of the parcel boundary is approximately 640 feet east and adjacent to a restricted section of Runway 29 at Kalaeloa Airport, which is managed by the DOT, Airports Division (AD). The Kalaeloa Airport is a general aviation reliever airport to the Honolulu International Airport. Pursuant to the Hawai'i Airports and Flying Safety Guide 2007-2008 published by the State DOT AD, Runway 11 is used for departures and Runway 29 for arrivals. Taxiway "C" runs parallel with the northwest edge of the parcel. The Kalaeloa Airport and an adjoining land area are also utilized by the United States Coast Guard (USCG) as a primary aviation Search and Rescue facility. The USCG site at Kalaeloa accommodates maintenance facilities for C-130 transport aircraft and HH-65 helicopters.

Kalaeloa Airport is also used as an emergency response and military preparedness/activation site by the Hawai'i Army National Guard (HANG). The 29th Separate Infantry Brigade is the largest HANG unit, of which this area includes its Headquarters and Headquarters Company, the 229th Military Intelligence Company, and the 29th Support Battalion. The HANG also has a presence as the 297th Air Traffic Control Squadron operates the air traffic control tower.

The makai side of Coral Sea Road just opposite of the proposed utility installation has been identified as the future site of the Kalaeloa Regional Park with existing recreational beachfront campgrounds currently accessible to the east.

The proposed 12 kV interim line would extend from the new electrical switchyard located in the proposed utility installation area. From the switchyard, the line would run overhead on utility poles secured by guide-wires. The line would extend from the parcel and cross over to the east side of Coral Sea Road ROW. Lands adjacent to the Coral Sea Road ROW are either owned by various landowners including the Department of Hawaiian Home Lands, and the Hunt Development Group, or are lands pending conveyance to City and County of Honolulu, Department of Parks and Recreation. The line would cross over Roosevelt Avenue which is also managed by DOT-HD eventually connecting to a HECO line.

The ASEF II project will be situated on vacant lands classified by the State Land Use Commission (LUC) as State Land Use Urban District (*Figure 1-5*). Under HAR 15-215 (Kalaeloa Community Development District Rules), which were made effective in October 2012, the area is identified under the regulating plan (dated September 2012) as part of Transect Zone 2 rural/open space (*Figure 1-6*). This zone is to consist of primarily open space, parks, and limited agricultural use. Cultural, archaeological, and environmental uses and sites shall be located within this zone. Additionally, pursuant to the KCDD rules, solar farms are a permitted use in the Transect Zone 2.

2.3 DESCRIPTION OF PROPOSED PROJECT

Below is a description of the proposed project's main components including discussion on new facilities and structures, utilities and infrastructure, roadway and circulation, and drainage.

2.3.1 PV Array and Transfer Switchyard

The conceptual plan for the Kalaeloa PV installation project includes an array of 23,500 PV modules aligned in a tilted, fixed racking system. The racking would be mounted piers or posts, assembled in rows, and anchored by means to be determined for the soil conditions present. A new switchyard (approximate 96 x 96 feet) would be located in the east corner of the parcel, where the energy from the PV modules and inverters would be consolidated, controlled, and transferred to the overhead 12 kV interim distribution line (*Figure 2-1*). Power generated by this facility would be transferred along an approximate 1.78 mile 12 kV interim electrical distribution line that would be routed along the eastern side of Coral Sea Road, eventually connecting to the Hawaiian Electric Company (HECO) grid within its existing right of way (*Figure 2-2, 2-3, and 2-4*).

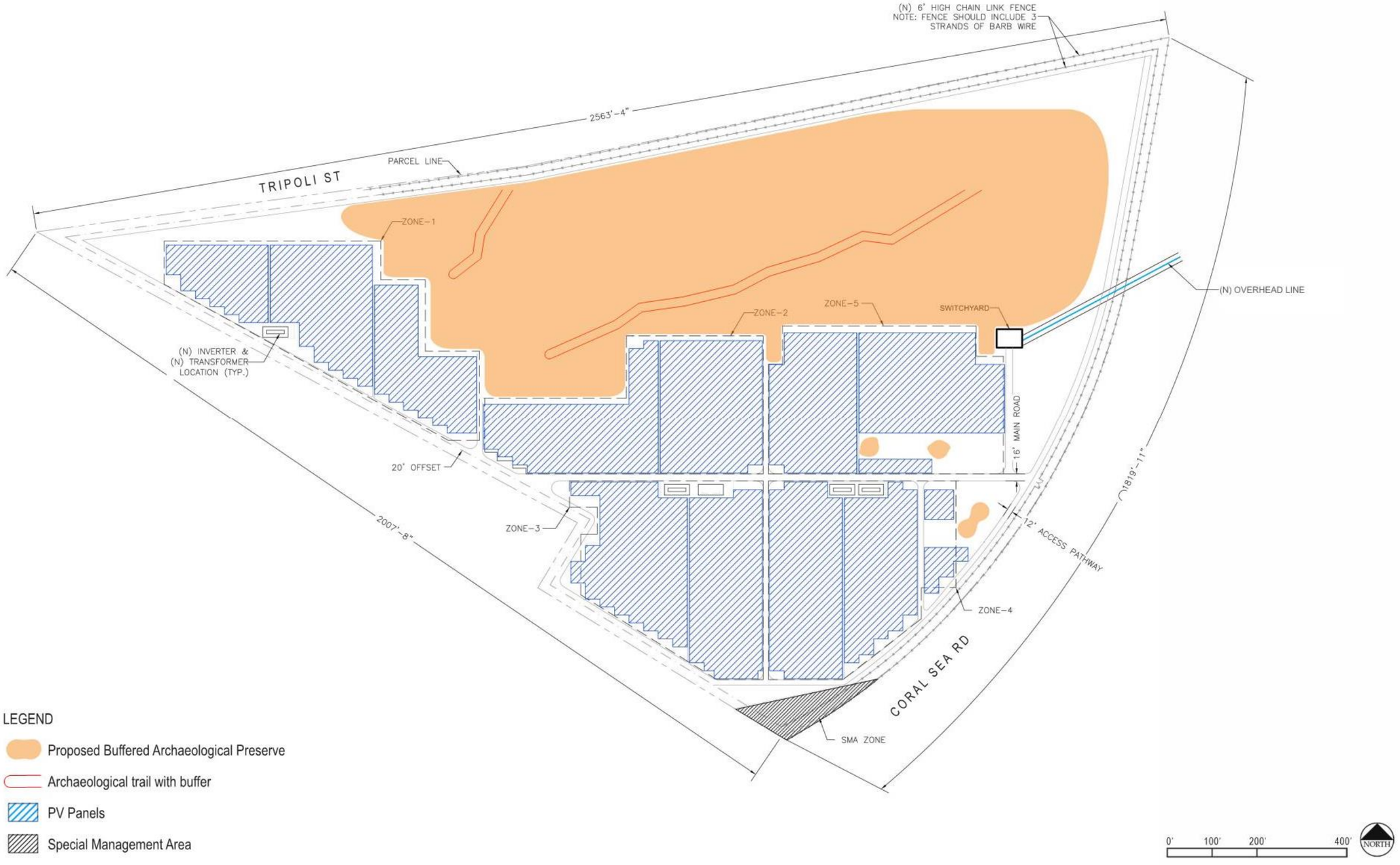


FIGURE 2-1 CONCEPTUAL SITE PLAN LAYOUT FOR PROPOSED 5MW PHOTOVOLTAIC UTILITY INSTALLATION WITH ARCHAEOLOGICAL PRESERVE

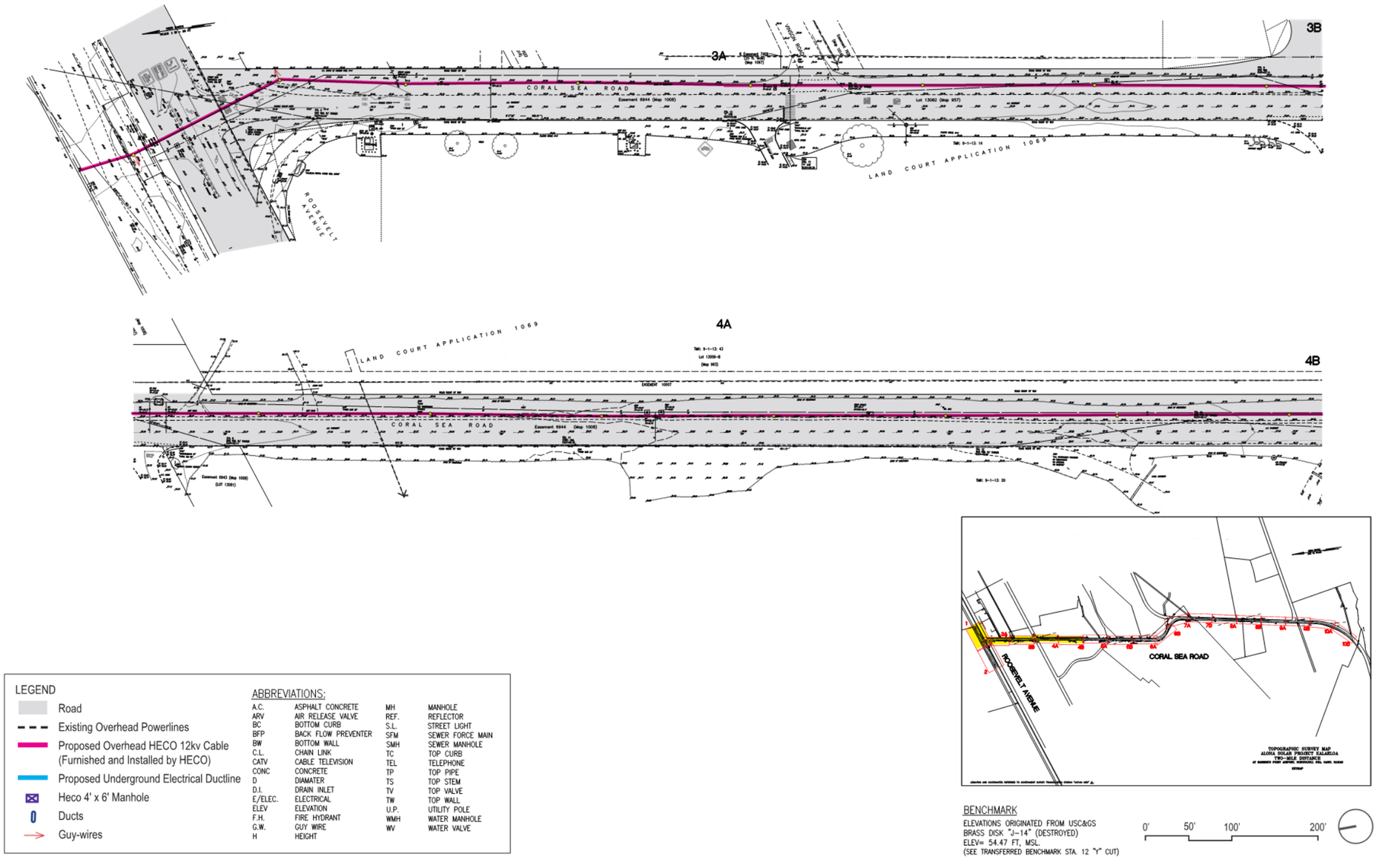


FIGURE 2-2 PROPOSED 12 KV INTERIM ELECTRICAL DISTRIBUTION LINE ROUTE PLAN (PART 1)

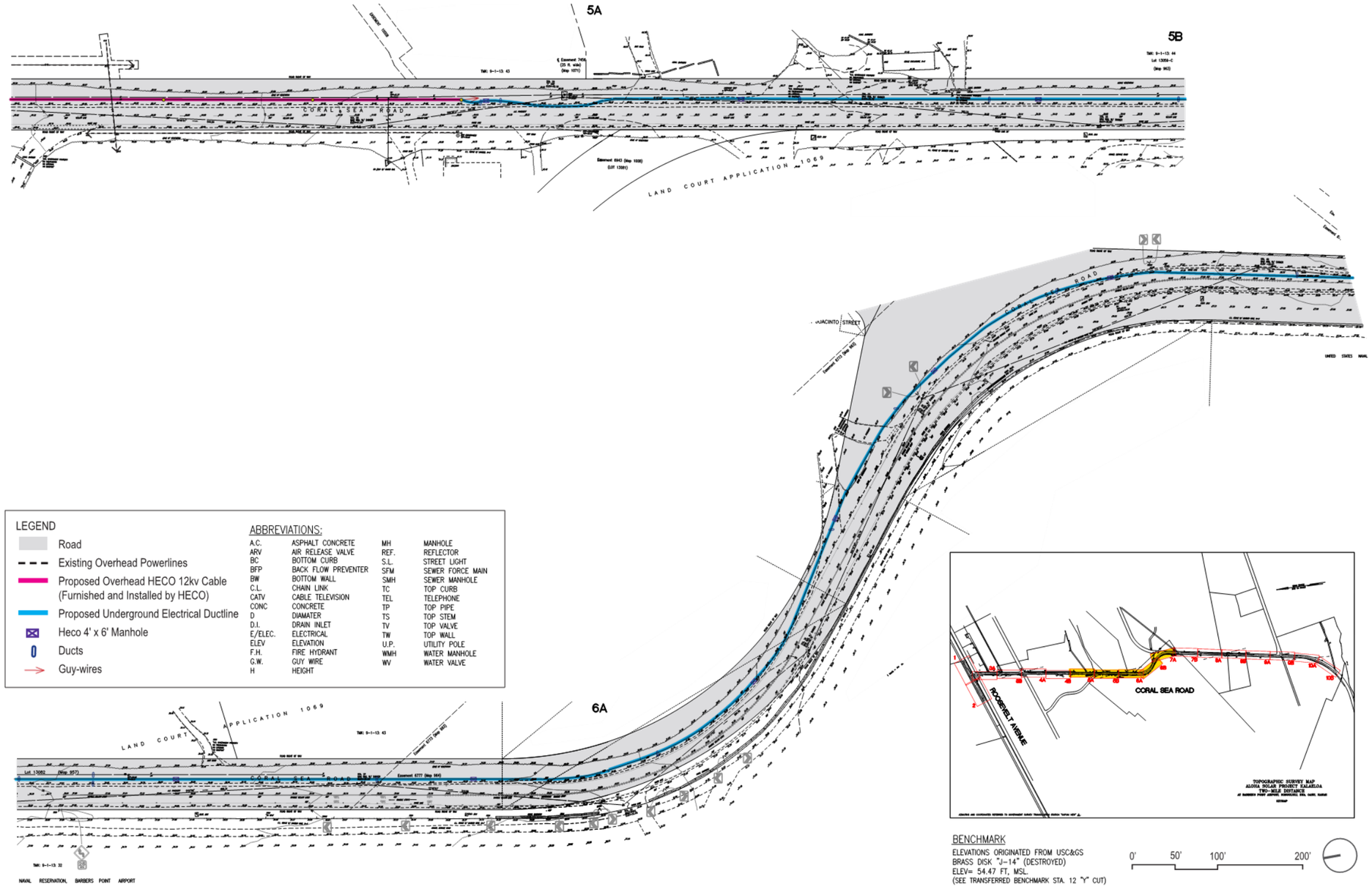


FIGURE 2-3 PROPOSED 12 KV INTERIM ELECTRICAL DISTRIBUTION LINE ROUTE PLAN (PART 2)

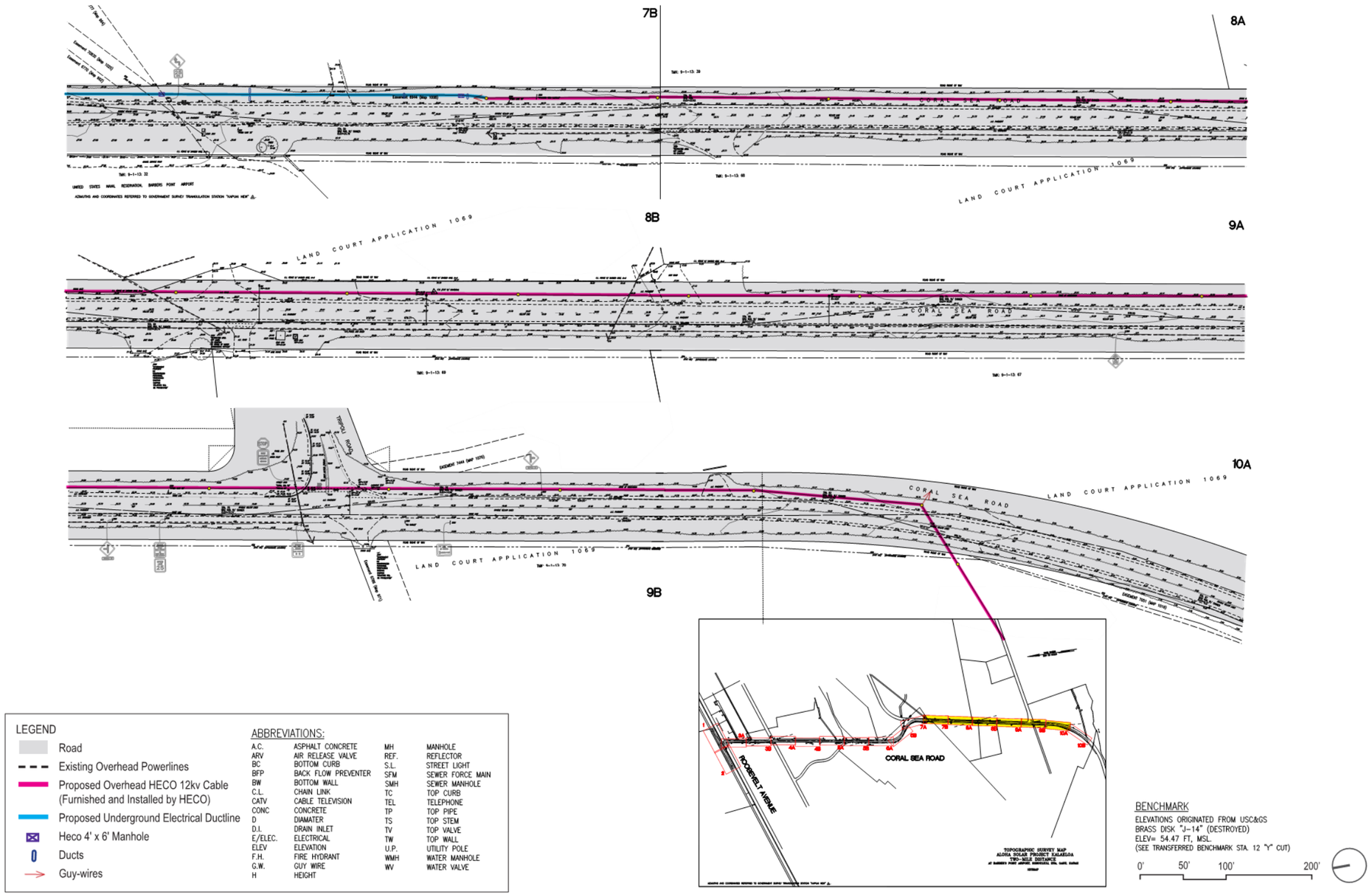


FIGURE 2-4 PROPOSED 12 KV INTERIM ELECTRICAL DISTRIBUTION LINE ROUTE PLAN (PART 3)

2.3.2 Roadway and Circulation

A new entry would extend off Coral Sea Road near the portion of the parcel located across from Eisenhower Road. An unpaved gravel driveway would circulate through the site to allow access to the modules and inverters for maintenance purposes.

An entrance off Coral Sea Road provides the most direct path into the proposed project area and minimizes site disturbance, both during construction and operations. Utilization of the portion of Tripoli Road on the northern edge of HCDA's parcel would require ASEF II to build an access road through that portion of the parcel with the heaviest concentration of archaeological sites. In addition, this segment of Tripoli Road has become significantly overgrown and hardly exists. Finally, from a review of the real estate documentation provided to date, it appears the Navy retained a small easement in this area and any such work would require Navy approval. For all the reasons mentioned above, an entrance off Coral Sea Road to the best solution for site access.

2.4 PROJECT UTILITIES AND INFRASTRUCTURE

Overall existing conditions, impacts, and mitigation measures on utilities and infrastructure are discussed in greater detail in *Section 3.0* of this document.

The existing parcel has no water, electric services, sewer connections, or solid waste collection services. A Preliminary Engineering Report (PER) was prepared by G70 and is provided as *Appendix B*. The following section describes the physical characteristics of the site utilities with the development of the project.

2.4.1 Water

The existing water supply system on the former NASBP was constructed mostly during the World War II era. A 12-inch water line runs along the eastern side of Coral Sea Road that is part of the Navy Facilities (NAVFAC) operations. There are no existing water or fire water services onsite and water service is not required or proposed for this project.

2.4.2 Wastewater

An existing wastewater force main line runs along the west edge of Coral Sea Road. Wastewater service is not required or proposed for this project.

2.4.3 Drainage System

There is no existing subsurface drainage system on the parcel. The project area site generally slopes toward the south corner of the property with elevation drops between the north edge of the property and southernmost corner of the project site ranging from 6 to 12 feet.

Impervious area is limited to equipment pads, cross-sectional areas of the foundation posts (two foundation posts per rack), and cross-sectional areas of utility poles. Grading will be limited to the items below.

- Placement of crushed rock for raised gravel driveways/aisles
- Local leveling for equipment pads, switchyard, and photovoltaic panel racks
- Placement of non-combustible bases (e.g., potentially gravel) within the solar farm and surrounding area to meet fire code requirements

The general drainage pattern will not be altered. Stormwater will continue to sheet flow southward through the site and proposed stormwater discharge from the project site will not exceed existing discharge rates. The City and State DOT will be consulted to ensure compliance with stormwater regulations.

2.4.4 Solid Waste Disposal

The ASEF II project will primarily be an unmanned facility requiring periodic maintenance and inspection. During those periods, any solid waste generated on-site will be appropriately disposed of at the City and County of Honolulu, Department of Environmental Services, 'Ewa Convenience Center for Refuse and Recycling located about 2 miles from the project area.

2.4.5 Power and Telecommunications

Existing NAVFAC electrical utilities including overhead lines and poles that run parallel to Coral Sea Road along the west side are still in operation. Other existing solar energy projects in the area include EE Waianae Solar, Hawaii FIT Forty, LLC, Hawaii FIT Two, Kalaeloa Renewable Energy Park, Kalaeloa Solar Power II, Kapolei Sustainable Energy Park, and the Waianae PV-2 Solar Farm. These projects have a combined capacity of approximately 39.77 MW (HSEO, 2017).

Completion of the ASEF II project will require the provision of a term, non-exclusive utility easement to route the interim 12 kV line and associated communications service line from the east side of the CSR ROW over the road itself and into the HCDA 44-acre parcel. A Grant of Easement would consist of rights to place overhead lines and poles into the subject HCDA property as well as HECO owned electrical equipment and Hawaiian Telcom (HTCO) communications equipment on site. It is anticipated that this Grant of Easement would reserve for HECO full use of the easement including the right to perform maintenance on its equipment; HECO's easement will account for any HTCO requirements. Access into the subject HCDA property would be provided as a condition of easement rights but does not include an exclusive right of access. Limitations to the terms of the easement will be negotiated between HECO as the utility provider, HCDA as the landowner, and ASEF II as the potential lessee. Terms of the easement rights would be potentially limited to the years of projected operation of the project. The ASEF II project will also include an easement for the interim 12 kV electrical line and associated communications service through Campbell Estates land north of the intersection of Coral Sea Road and Roosevelt Road to the HECO connection point.

2.5 CONSTRUCTION CHARACTERISTICS

The proposed project will require some vegetation clearing, grubbing, minor grading, general construction, and landscaping.

2.5.1 Landscape Management

Minor clearing, grubbing and grading will be needed on the project sites to level the existing land for placement of the PV modules and associated infrastructure and equipment. Most of the existing landscaping surrounding the project areas, which consist of overgrown vegetation, will remain in place. A natural vegetation buffer will be retained at the site along the northeast perimeter. Screening and fencing will be used along the frontage facing Coral Sea Road and will comply with landscaping requirements of the KCDD.

2.5.2 Excavations

The site is nearly flat and minimum grading will be necessary. Any excavation material as a result leveling and grading activity will be used within the site.

2.5.3 General Construction

The construction of the project will include general grading and grubbing activities, formation and placement of several small concrete foundations, installation of modules with electrical wiring and equipment, and general work associated with typical construction activities.

Development impacts will be addressed by the application and implementation of low-impact development standards and practices. Construction work will be performed in accordance with the Federal, State, and City approved design standards. Given its remote location, impacts by general construction activity will be minimal. Given the proximity to Kalaeloa Airport and the Kalaeloa Heritage Park, construction activity hours will be restricted as applicable under noise regulations per HAR 11-46. Typical construction vehicles will be used on the jobsite for the development of the project. A permit from DOT Highways will be obtained for transport of oversize equipment and overweight loads.

The project will comply with NPDES permit requirements for construction activity. A NPDES permit for discharge of stormwater associated with construction activities will be obtained for the site. The requirements of the approved NPDES permit and erosion control plan will be adhered to during construction as appropriate. Construction, grading and drainage plans for the project will be submitted to appropriate agencies, such as DOT-HD, for review and approval.

2.6 SUMMARY OF PROJECTED COSTS

Total costs for the project are estimated at $27 million. The costs will be met through private financing, no public funds will be used for this project.

3.0 DESCRIPTION OF THE ENVIRONMENTAL SETTING, POTENTIAL IMPACTS AND MITIGATION MEASURES

3.0 DESCRIPTION OF THE ENVIRONMENTAL SETTING, POTENTIAL IMPACTS AND MITIGATION MEASURES

This section describes the existing environmental setting and identifies possible impacts of the proposed project. Strategies to mitigate those potential impacts are also identified.

3.1 TOPOGRAPHY

Existing Conditions

The ASEF II site is undeveloped and overgrown with brush, tall grass, and weeds. Access to the site is primarily from the north through a driveway near the intersection of Coral Sea Road and Tripoli Street. There are no existing structures other than archaeological sites and features and remnants of military platforms no longer in use. The project site consists of 44.28 acres all located south of Tripoli Street. Along the eastern boundary, Coral Sea Road extends from north to southwest while the Kalaeloa Airport, John Rodgers Field (JRF) and the airfield fence line is located adjacent to the project site to the west. The project site is relatively flat, but slopes gently south toward the ocean, ranging from approximately 16 feet MSL to approximately 4 feet MSL (*Figure 1-2*). The distribution line portion of the project follows the topography alongside Coral Sea Road.

Anticipated Impacts and Mitigation Measures

Some minor excavation and grading will be required during the construction process to provide driveways/drive aisles and meet fire code requirements for a non-combustible base and fire breaks. Storm water quality and water quantity control will be implemented to comply with City and State grading and drainage standards. Construction Best Management Practices will be implemented pursuant to the required grading permit and NPDES permit conditions to mitigate any potential impacts of soil erosion and fugitive dust resulting from grading operations. No significant impacts on topography are anticipated.

3.2 SOILS AND GEOLOGIC CONDITIONS

Existing Conditions

The project area is on a portion of the ʻEwa Plain which was formed as the lava flow from two ancient volcanoes merged. The coastal areas of the ʻEwa Plain consist of sediments from the erosion of volcanic activity and the remains of coral growth. The ʻEwa Coastal Plain comprises an area of approximately 28 square miles and is composed of an exposed emergent reef. The caprock has sequences of relatively flat Pleistocene marine sedimentary deposits and terrestrial alluvium deposits. The marine sedimentary deposits consist of calcareous silts, sands and gravels and reef limestone layers. The terrestrial alluvium deposits consist of silts and clays derived from upslope volcanic material (UH, 1983).

The project site and a large part of the surrounding area consists of soil classified as Coral Outcrop (Cr) (*Figure 3-1*). This soil type contains coral and cemented calcareous sand. Coral reefs were formed in shallow ocean water at a previous time when ocean levels were higher. Coral outcrops can be found exposed at the ocean shore, on the coastal plains, and at the foot of the uplands. 80 to 90 percent of the coral outcrop is made from coral reef. The remaining 10 to 20 percent consists of a thin layer of red soil in cracks, crevices, and depressions within the coral outcrop. Vegetation on this type of soil varies but typically consists of introduced species of kiawe, koa haole, and fingergrass. Permeability is rapid and the hydrologic soil group is Type "A".

The majority of the distribution line route is across Coral Outcrop soil with a small portion crossing mixed Fill Land closer to Franklin D. Roosevelt Avenue.

Anticipated Impacts and Mitigation Measures

The solar farm will be a low-impact development located on undeveloped lands. General drainage patterns will not be modified as part of this project and there are no anticipated impacts as a result of grading operations. No significant adverse environmental impacts to soils are anticipated to occur as a result of the project. Minor impacts to topography will occur as a result of site clearing and grading in preparation for mounting solar equipment and minor excavation related to utility lines for the distribution line portion of the project along Coral Sea Road.

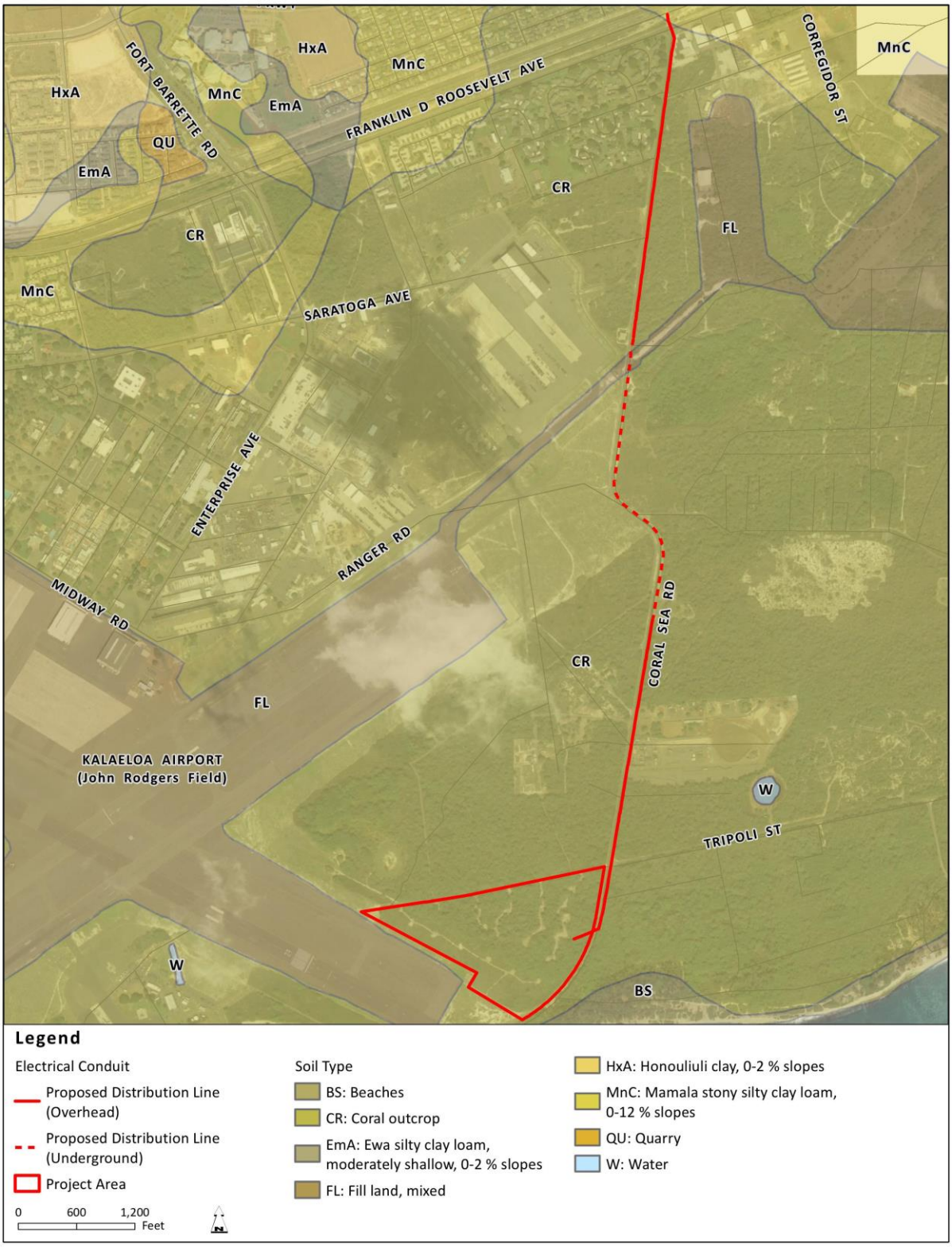


FIGURE 3-1 TOPOGRAPHY AND SOILS

3.3 CLIMATE

Existing Conditions

The climate at the project site is typical of the climate that characterizes most of the State of Hawai'i. It is relatively mild with constant temperatures throughout the year, moderate humidity, persistent northeasterly trade winds, and infrequent severe rainstorms. Visibility surrounding the site is typically clear.

The project site has an annual average temperature ranging from 70 to 85 degrees Fahrenheit (°F). Winds are predominantly from the northeast and range between 8 to 18 miles per hour. The mean rainfall for the area is 18 inches, with most occurring seasonally over the winter months (Wunderground, 2016). According to the US Environmental Protection Agency (EPA) website, temperatures are projected to rise by 1.5°F to 3.5°F by mid-century in Hawai'i and the Central North Pacific, due to climate change.

Anticipated Impacts and Mitigation Measures

The ASEF II project will have no negative effect on climate conditions, and therefore, no mitigation measures are recommended. The project will result in long-term reductions in greenhouse gas emissions by the use of renewable means of electricity generation.

3.4 NATURAL HAZARDS

Existing Conditions

The entire ASEF II project site is within flood Zone D, defined as: "Areas in which flood hazards are undetermined, but possible" (*Figure 1-10*). The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) panel number for this area is 15003C0316G. The site is located approximately 300 feet from the nearest coastal area. The site is located over 250 feet outside of the 100-year flood plain. However, the project area is located entirely within the Tsunami Evacuation Zone. Climate change is causing sea levels to rise across the country. The risk associated with sea level rise varies based upon the rate of sea level rise relative to land elevation and could amplify near-term vulnerability to storm surge and increases long-term flood and inundation risk.

The entire island of O'ahu is subject to geologic hazards, especially earthquakes. Per the 2006 International Building Code (IBC) Seismic Design Map (Figure 1613.5(10)), the project area could experience seismic activity between .50 and .60 of the earth's gravitational acceleration (g-force). This represents the upper limits of probable force experienced by the region during a probable seismic event. This location is at risk from earthquake damage, especially to poorly designed and/or built structures.

Anticipated Impacts and Mitigation Measures

Because the project area does not include existing flowing water courses, stream flooding is not anticipated. However, coastal inundation is possible during severe weather or tsunami events. To prevent ponding or localized flooding resulting from storm run-off, soils should be evaluated for permeability and, if necessary, drainage infrastructure at the site should be constructed to meet

applicable standards. All construction for the project will conform to relevant building codes to mitigate the risk of wind, flooding and seismic damage as appropriate to IBC design requirements. Operational and maintenance plans for the site will address proper evacuation and emergency response procedures.

The project is located over 300 feet from the nearest shoreline, risks due to sea level rise are minimal. However, the project will be designed according to all applicable State and County standards, which are being updated to take into account the potential effects of climate change.

3.5 FLORA AND FAUNA

A botanical survey of the parcel site was conducted for the ASEF II parcel site by AECOS in June, 2013. AECOS also conducted a botanical survey for the distribution line path line of work on February 17, 2017. The findings of theses assessments are included as *Appendix C*.

3.5.1 Flora

Existing Conditions

A botanical survey of the ASEF II parcel was undertaken on June 6, 2013 by AECOS. The survey consisted of walking the site and identifying all plants encountered within the property. The proposed transmission line route was subsequently surveyed on February 17, 2017. Both sides of Coral Sea Road were surveyed for a distance of approximately 10 m (33 ft.) off the side of the pavement. This survey started at the intersection of Eisenhower Road and Coral Sea Road and extended to the Oʻahu Railway & Land Co. tracks north of the intersection of Coral Sea Road and Roosevelt Avenue.

The vegetation for both the parcel and line segments can be divided into three distinct types: 1) kiawe (Prosopis pallida) forest, 2) mixed grassland and shrubland, and 3) ruderal (highly disturbed) areas along roads and road verges. The kiawe forest covers most of the site. A mixed understory of grasses and shrubs is present with ruderal plants established in previously cleared areas. However, most of the forested land has not been disturbed by recent activity.

In 2013, the survey of plants on the ASEF II site yielded 64 species of flowering plants. Of this number, four (6%) are native species and two (3%) are early Polynesian introductions. The addition to Table 1 of plants observed along the transmission line route in 2017 resulted in a total plant list of 96 species. While representing a considerable increase in species numbers over the number observed in 2013, this result is not unusual considering much of the transmission line route is a ruderal environment and extends north into more recently developed land. This second survey added no new native species and only one Polynesian introduction, ʻihiʻai (*Oxalis corniculata*), a common yard weed.

The two indigenous species, ʻilieʻe (*Plumbago zeylanica*) and ʻilima (*Sida fallax*), are common species on Oʻahu in dry and mesic environments. ʻilima is especially abundant in places along Coral Sea Road. The endemic native recorded is kūpala (*Sicyos pachycarpus*), an annual climbing vine that can be very common in the ʻEwa District at certain times of the year.

The early Polynesian introduced plants are noni (*Morinda citrifolia*) and pōpolo (*Solanum americanum*). Pōpolo is a herbaceous plant as common as the three natives and, like kūpala, an annual herb in dry, leeward environments, disappearing with the dry season. Noni is a small a small tree valued by some for its fruits with purported medicinal properties and common in the wild. Both plants are utilized for cultural practices in traditional medicine. The remaining 89 species (93%) recorded in our survey are all non-natives species introduced to the islands after 1778 and some have since naturalized growing either naturally in the wild or planted as ornamentals.

The only other plant of interest or concern is the rubber vine (*Cryptostegia* cf. *grandifolia*). This vine is rampant within the *kiawe* forest on the eastern half of the property. The plant is considered an invasive pest in Hawai'i.

Anticipated Impacts and Mitigation Measures

Although the project site is overwhelmingly dominated by non-native *kiawe* trees and buffel grass, the potential exists for several listed plant species known from generally similar environments in the Campbell Industrial Park / 'Ewa Beach / 'Ewa Plain area. Notable from this region are an *'akoko* (*Euphorbia skottsbergii skottsbergii*) and *'Ewa hinahina* (*Achyranthes spectabilis*). Not listed as threatened or endangered, but generally rare on O'ahu, are *maiapilo* (*Capparis sandwichiana*) and *ma'o* (*Gossypium tomentosum*), endemic plants from the coastal lowlands. Any one of these species could occur on the property given the distribution of the species in 'Ewa as known at the present time. Critical habitat units for *'akoko* and *A. splendens* have been designated recently in the vicinity by U.S. Fish and Wildlife Service. Thus, the botanical surveys focused on locating any of these rare native species if present. However, none were found by the survey. For those plants that have cultural value and importance, it is recommended that an appropriate cultural group or nursery be provided access to the site prior to construction to either gather seeds, clipping, or roots for purposes of cultural use or prorogation for future plantings for other Kalaeloa ecosystem restoration projects.

3.5.2 Fauna

Existing Conditions

Point counts for birds at the project site were conducted on the morning of June 6, 2013 and along the proposed transmission line route on the morning of February 17, 2017. A total of 390 individual birds in 16 species representing nine separate families, were recorded during station counts in 2013. Additionally, one species, the Manuokū, or White Tern (Gygis alba), was recorded as an incidental observation flying over the southwestern corner of the site while searching between point counts. The Manuokū is an indigenous, breeding seabird species. The other 16 species recorded are all alien to the Hawaiian Islands.

A total of 315 individual birds of 21 species, representing 14 separate families were recorded during point counts along Coral Sea Road. Of the 21 avian species recorded, the Kōlea, or Pacific Golden-Plover (Pluvialis fulva) is an indigenous migratory species. The remaining 20 species detected are alien to the Hawaiian Islands.

Avian diversity and densities were in keeping with the nature of the habitats present on the site, the location within the ʻEwa Plain, and results of several other recent faunal surveys conducted in similar habitats in the general vicinity. Avian diversity and densities recorded along the transmission corridor were in keeping with the highly-disturbed environments present.

The Manuokū is a species listed as threatened under State of Hawaiʻi endangered species statutes. This species is not listed as either endangered or threatened under the federal Endangered Species Act (ESA). The species population is concentrated on the leeward side of the Island, with greatest numbers found in Waikīkī and parts of downtown Honolulu.

Several protected, nocturnal-flying seabird species potentially overfly the site on occasion and in low numbers on a seasonal basis.

One terrestrial mammalian species was detected during the course of the site survey: an Indian mongoose (*Herpestes auropunctatus*) was seen crossing the extension of Tripoli Road along the northern edge of the parcel. Four small Indian mongooses were seen within the transmission line survey area. Additionally, scat and tracks of this species was observed at multiple locations along roads and trails within the site.

Five other terrestrial mammalian species were detected along the transmission line corridor. Dogs (*Canis familiaris*) were heard barking from outside of the survey area. Additionally, dog scat was encountered in several locations within the survey corridor. One cat (*Felis catus*) was seen crossing Coral Sea Road. Four domestic cattle (*Bos Taurus*), eight goats (*Capra hircus*), and 10 sheep (*Ovis areis*) were seen within a fenced paddock on the east side of Coral Sea Road.

The findings of the mammalian survey are consistent with the results of several recent faunal surveys conducted in similar habitats on the ʻEwa Plain. Although no rodents were detected during the course of this survey, it is likely that the four established alien species found on Oʻahu (all introduced and deleterious to native ecosystems) use various resources found within the general project area on a seasonal basis.

The Hawaiian hoary bat was not detected during the course of our survey. Given the paucity of documented records of this species from the ʻEwa Plain, the chance that this species utilizes resources on the subject property is extremely low. Additionally, the only tall trees on the site are kiawe, a species not usually identified as a bat roosting tree due to its scant leaf cover and arched branching pattern.

Anticipated Impacts and Mitigation Measures

There are no known nesting colonies of any protected seabird species on or within close proximity of the project site. None of the avian species detected during the course of these two surveys are listed under either the federal Endangered Species Act of 1973, as amended, or the State of Hawaiʻi's endangered species statute Hawaiʻi Revised Statutes (HRS) 195D.

The principal potential impact that construction of the project and the operation of the PV facility poses to protected seabirds is the increased threat that birds will be downed after becoming disoriented by lighting associated with the project, during the seabird nesting season. The two ways that outdoor lighting could pose a threat to these nocturnally-flying seabirds is: 1) during construction, if it is deemed expedient or necessary to conduct night-time construction activities; or, 2) following build-out, streetlights or security and safety lighting is used within the facility. The impacts on seabirds will be mitigated by properly shielding any outdoor lighting used.

The principal potential impact that construction of the project poses to bats is during clearing and grubbing phases of construction as vegetation is removed. The removal of vegetation within the project site might temporarily displace individual bats, which may be using the vegetation for roosting. As mentioned above, because the existing site vegetation is of a type not normally utilized as bat habitat and because bats use multiple roosts within their home territories, the potential for disturbance from the removal of vegetation is likely to be minimal. During the pupping season, females carrying pups may be less able to rapidly vacate a roost site when vegetation is being cleared. Additionally, adult female bats sometimes leave their pups in the roost tree while they forage. Very small pups may be unable to flee a tree that is being felled. Potential adverse effects from such disturbance could normally be avoided or minimized by not clearing woody vegetation taller than 15 ft (4.6 m) between June 1 and September 15, the period in which bats are potentially at risk from vegetation clearing. With that said, the tall trees on the site are all kiawe, a species not usually identified as a bat roosting tree. Therefore, any risk from clearing activity on this species is highly unlikely at the project site.

The endangered Blackburn's hawk moth (*Manduca blackburni*) is not known to be found on Oʻahu. On Maui and Hawaiʻi islands, this species can be found feeding in the larval phase on various plants in the Family Solanaceae, most particularly tree tobacco (*Nicotiana glauca*). A single tree tobacco plant was observed on the transmission line survey. This plant was growing out of a central post hole for a gate into a paved area on the east side of the road. The plant, which was about 4 ft tall showed no signs of larval feeding on leaves.

No mammalian species currently protected or proposed for protection under either the federal or State of Hawaiʻi endangered species programs was detected during the course of this survey, nor were any expected.

No federally delineated Critical Habitat incorporates any part of the project site or transmission line route. The nearest critical habitat is Lowland Dry - Unit 11, at its closest point 1900 ft (575 m) to the northeast of the site. Three other units (Lowland Dry-Unit 09 and Unit 10, and Coastal - Unit 15) have been designated in Kalaeloa, but these are at distances over 1 mi to the west. There is no equivalent statute under state law.

3.6 AIR QUALITY

Existing Conditions

As required by the Clean Air Act (last amended in 1990), the U.S. EPA established the National Ambient Air Quality Standards (NAAQS) to protect public health and welfare and prevent the significant deterioration of air quality. These standards cover seven major air pollutants: carbon monoxide (CO), nitrogen oxides (NO_X), ozone (O3), particulate matter smaller than 10 microns (PM_{10}), particulate matter smaller than 2.5 microns ($PM_{2.5}$), sulfur oxides (SO_X), and lead. The State DOH, Clean Air Branch (CAB) has also established State Ambient Air Quality Standards (SAAQS) for six of these air pollutants to regulate air quality statewide. The SAAQS for carbon monoxide and nitrogen dioxide are more stringent than NAAQS (DOH, 2010). Hawai'i also has a stringent standard for hydrogen sulfide, which is a common odorous pollutant associated with wastewater treatment facilities.

The DOH, CAB regularly samples ambient air quality at monitoring stations throughout the State and annually publishes this information. On O'ahu, there are nine monitoring stations. The closest station to the project site is the Kapolei monitoring station, which is located at 2052 Lauwiliwili Street, in Kapolei Business Park, north of Campbell Industrial Park. The Kapolei monitoring station currently monitors for the volume of SO_2, CO, NO_2, PM_{10}, $PM_{2.5}$, and speciation.

In general, air quality in the State of Hawai'i continues to be one of the best in the Nation, and criteria pollutant levels remain well below NAAQS and SAAQS. According to the *Annual Summary 2010 Hawai'i Air Quality Data,* air quality monitoring data complied by the DOH indicates that the established air quality standards for all monitored parameters are consistently met throughout the State and on the Island of O'ahu (excluding exceedances for fireworks and volcano emissions).

Air quality at the project site is positively influenced by tradewinds that regularly blow from a northeasterly direction moving generated air pollutants on land to the southwest out to the open ocean. No regularly occurring odors are present at the site. Problems with poor air quality and elevated pollutant levels generally occur when tradewinds diminish or give way to southerly and southwesterly winds (known as Kona wind conditions). It is under stable conditions that the greatest potential for air pollutant buildup from ground level sources exists.

There are no noticeable odors on the project site. Off-site odors are minimal, with potential for occasional exhaust or fuel odors from aircraft operations.

Anticipated Impacts and Mitigation Measures

There will be two types of short-term air quality impacts that will result from the proposed construction project at both sites: 1) fugitive dust generation dust from vehicle movement and soil excavation and 2) on-site/off-site emissions from moving construction equipment and commuting construction workers.

State of Hawai'i Air Pollution Control regulations prohibit visible emissions of fugitive dust from construction activities at the property line. A dust control program will be implemented to control dust from construction activities. Fugitive dust emission will be controlled through the mitigation measures such as watering active work areas, using wind screens, keeping adjacent paved roads clean, covering open-bodied trucks and limiting the area to be disturbed at any given time.

Construction-related impacts to air quality will be temporary over the short term. With the implementation of a dust control plan for control of fugitive dust emissions during the construction phase, no significant long-term impacts to air quality are anticipated.

Daily operations at the project site will not result in outputs that will affect air quality. Odors are not expected to result from the project. No impacts to air quality are anticipated in association with project operations and no mitigation measures are required.

After construction is complete, the project is expected to contribute positively to air quality on O'ahu by reducing the amount of fossil fuels used to generate electricity.

3.7 NOISE

Existing Conditions

Title 11, Chapter 46, of the HAR 11-46 defines maximum permissible sound levels which are intended to protect, control, and abate noise pollution from stationary sources and construction, industrial, and agricultural equipment. As detailed below, maximum permissible sound levels in various zoning districts are set for excessive noise sources during the day (7am to 10 pm) and night (10pm to 7am) at the property line where the activity occurs.

- Class A - Residential, conservation, preservation, public space, open space, or similar type zones – 55 decibel (dBA) (day) and 45 dBA (night)
- Class B - Multi-family dwellings, apartment, business, commercial, hotel, resort, or similar type zones – 60 dBA (day) and 50 dBA (night)
- Class C - Agriculture, country, industrial, or similar type zones – 70 dBA (day) and 70 dBA (night)

The predominant source of noise near the site is aircraft performing takeoff and landing operations at the nearby operational airfield. Otherwise, the project site and surrounding area is relatively quiet.

Anticipated Impacts and Mitigation Measures

The ASEF II project is not likely result in significant increases in ambient noise levels on the site. Temporary noise may be generated during the construction period, including the distribution line work along Coral Sea Road. Construction activities will comply with State noise control regulations, no work is anticipated to be done during weekends or late nights. Dominant noise sources during construction will be earth moving equipment. Noise levels associated with construction equipment typically range

from 80 to 95 dBA at 50 ft from the source. While significant impacts to neighboring areas are not anticipated, mitigation measures will be implemented to minimize construction noise impacts, if necessary, to ongoing activities at the adjacent Kalaeloa Heritage Park. Measures include limiting work to daytime hours and reducing truck/equipment idling when not in use.

3.8 UTILITIES AND INFRASTRUCTURE

The G70 Civil Engineering Group prepared a Preliminary Engineering Report (April 2017) for the proposed project which is provided as *Appendix B* in this report.

3.8.1 Water System

Existing Conditions

There is an existing U.S. Navy owned water main, which varies between 12 and 18-inches that runs along Coral Sea Road. Based on prior Environmental Assessments in the area, the water system dates back to the World War II era and is in poor condition. There is no domestic water service to the offsite and onsite project areas.

There is no existing fire protection within the onsite project area. An existing fire hydrant was observed approximately 1,250-feet away from the onsite project area along Coral Sea Road, but was not assessed for flow or pressure data. In compliance with the fire code, fire protection at the site is provided through site layout strategy and does not require installation of fire hydrants.

Probable Impacts and Mitigation Measures

Water service is not required nor proposed for this project. The PV system proposed is generally non-flammable. Any electrical short would result in localized damage to PV system components only. Vegetation within the system footprint will be removed and/or suppressed by maintenance crews. Fire protection will be accomplished onsite by providing a 10-foot clear space around the solar arrays and placement of non-combustible base within the solar farm and surrounding area. The Honolulu Fire Department will be consulted to ensure compliance with applicable fire life safety requirements.

3.8.2 Wastewater

Existing Conditions

No wastewater treatment and/or disposal facilities exist on the project site. There will be no wastewater generated and no wastewater service required at the project site. No wastewater is currently being generated from the site since the area consists of unused, vacant lands. An existing 18-inch sewer force main along Coral Sea Road conveys wastewater from Kalaeloa Airport to the City treatment plant two (2) miles northeast of the project site. The system is owned by the U.S. Navy and operated under license by the City Department of Environmental Services and is not intended to serve development in the general area.

The project area is located makai of the Underground Injection Control (UIC) line and within the BWS No-Pass Zone. There are no cesspools or septic tanks recorded with the Department of Health.

Probable Impacts and Mitigation Measures

Wastewater service is not required or proposed within this phase of work. No direct or indirect discharges of pollutants will occur to State or Federal waters from the operational activities at the project sites. A wastewater permit will not be necessary, portable toilets will be utilized during construction. Operations are mainly unmanned off-site monitoring with limited on-site periodic maintenance requirements. No on-site bathroom will be provided for operations.

3.8.3 Storm Drainage

Existing Conditions

The project area site generally slopes toward the south corner of the property with elevation drops between the north edge of the property and southernmost corner of the project site ranging from 6 to 12 feet. Within the offsite project area, stormwater discharges to each side of the crowned roadway and onto the adjacent vegetated ground. There were no visible signs of erosion or subsurface stormwater system observed.

Anticipated Impacts and Mitigation Measures

Increased impervious area will be limited to equipment pads and cross sectional areas of the foundation posts (two foundation posts per rack). Grading will be limited to the following items:

- Placement of crushed rock for raised gravel driveways/aisles
- Local leveling for equipment pads, switchyard, and photovoltaic racks
- Placement of non-combustible base (e.g., potentially gravel) within the solar farm and surrounding area to meet fire code requirements.

The general drainage pattern will not be altered. Stormwater will continue to sheet flow southward through the site and proposed stormwater discharge from the project site will not exceed existing discharge rates.

Work performed after August 2017 will be subject to the updated Department of Planning and Permitting Rules Relating to Storm Drainage Standards which requires implementation of Low Impact Development (LID). The revised standard does not provide specific requirements associated with solar farms. The City will be consulted to ensure compliance with stormwater regulations. If required, retention of stormwater may be implemented through the use of infiltration facilities (e.g., trenches, etc.).

The project will comply with and obtain a National Pollutant Discharge Elimination System (NPDES) permit prior to the start of construction activity. The requirements of the approved NPDES permit and

erosion control plan will be adhered to during construction. Construction, grading and drainage plans for the project will also be submitted to the appropriate AHJ for review and approval.

As such, there are no anticipated impacts from proposed grading and drainage improvements.

3.9 HAZARDOUS WASTE

Existing Conditions

Hazardous waste is defined as having a chemical composition or containing other properties that make it capable of causing illness, death, or some other harm to humans and other life forms when mismanaged or released into the environment (EPA, 2005).

No hazardous waste materials are currently used on the existing project site.

Anticipated Impacts and Mitigation Measures

Photovoltaic modules do not require hazardous materials for daily operations, and they not do they generate hazardous by products as a result of operations.

Construction of the project will not involve hazardous waste since there are no existing structures located on the project site that will need to be removed. Some hazardous materials are used in the course of construction such as fuels and lubricants. NPDES storm water pollution control discharge permits will be required for the construction of the project. The NPDES permit is discussed as mitigation in Section 3.8.3, Storm Drainage.

Adverse impacts relating to the hazardous waste are not anticipated as a result of the proposed project.

3.10 ELECTRICAL AND COMMUNICATIONS

Existing Conditions

The existing site is undeveloped. There are no existing electrical or telecommunication utility connections on the parcel. Existing Naval Facilities Engineering Command (NAVFAC) electrical utilities include overhead electrical lines and poles that run parallel to Coral Sea Road, on the west side of the street, consisting of overhead and underground 4.16kV and 11.5kV power distribution lines.

Anticipated Impacts and Mitigation Measures

The proposed action can be characterized as a renewable electrical energy project. Under Chapter 269-91, HRS, "renewable energy" means energy generated or produced by many natural sources, including the sun. Additionally, "renewable electrical energy" includes electrical energy generated using renewable energy as the source. The purpose of the ASEF II project is to be a contributor of renewable energy in the form of solar electric power to HECO's existing power grid. Anticipated to generate a total of five (5) MW alternating current, the development of the proposed project would help the State to reduce greenhouse gas emissions, dependency on foreign imports of fossil fuels and associated price variations,

and the environmental risk of spills during the transport and storage of fossil fuel to the State. The site will only contain telecommunication utilities (wiring or fiber or both) as required by the operator and HECO for plant monitoring and control.

Power generated by this facility would be transferred along an approximate 1.67 mile 12 kilovolt (kV) interim electrical distribution line that would be routed along the eastern side of Coral Sea Road, eventually connecting to the Hawaiian Electric Company (HECO) grid.

3.11 TRAFFIC AND ROADWAYS

Existing Conditions

The onsite project area is bounded by Coral Sea Road on the east and the remains of Tripoli Street to the north. The intersection of Coral Sea Road and Tripoli Street is located at the northeastern corner of the project site. Access to the site will be from Coral Sea Road. The offsite project area is along a portion of Coral Sea Road that extends from Roosevelt Avenue to the onsite project area. Coral Sea Road is an unsignalized, two-lane, asphalt roadway that is owned and maintained by the State Department of Transportation (DOT). Following HCDA's Master Plan improvements that bring the road to current City and County standards in the future (>20 years), the City plans to take over ownership and maintenance.

Existing traffic in the project vicinity is light, as the surrounding areas are largely undeveloped. The Kalaeloa Community Development District Thoroughfare Plan calls for the portion of Coral Sea Road south of Tripoli Street to become a two-lane street with bicycle lanes (44 foot right of way), and the portion of Coral Sea Road north of Tripoli Street to become a two-lane avenue with a median/turn lane and bicycle lanes (80 foot right of way).

Access into the project area is either off Coral Sea Road off of the remains of Tripoli Street at the northern border of the site. The latter is now an overgrown 16-foot wide, dirt/asphalt driveway that also provides access to an adjacent, landlocked parcel. There are no existing access restrictions along the property frontage with Coral Sea Road.

Existing Bus Service

The City and County of Honolulu provides bus service to the Kapolei area. Bus Route 415 runs closest to the project site, along Lexington Street and Enterprise Street, just north of the runway at Barbers Point.

Anticipated Impacts and Mitigation Measures

Project construction will have a minimal and temporarily effect on traffic on Coral Sea Road. At worst, a lane closure may be required during construction of the 12 kV interim line. Temporary obstruction to local traffic may occur during periods where construction trucks are transporting goods and personnel to the site. However, existing roads are anticipated to have adequate capacity for construction-related traffic.

During operations, access to the onsite project area will be through a new approximately 16-foot wide, raised gravel driveway that connects to Coral Sea Road near its intersection with Eisenhower Road. Within the array, approximately 16-foot wide, raised gravel access aisles will be constructed to provide for maintenance access to the solar system. The aisles are intended for light use by operation and maintenance provisions only. There are no anticipated impacts resulting from the proposed access improvements. Facilities maintenance and repair will require occasional vehicle trips to the site, which would likely be no more than one service vehicle per trip. Operation of the proposed project is anticipated to generate less than five total trips during the AM and PM peak hours of traffic, and no significant long term impacts to traffic operations on roadways near the project site are anticipated.

Existing bus service will not be affected by the project. The project will not generate any significant increases or decreases in the existing ridership. While no significant impacts to traffic and roadways are anticipated, the following measures will be made to ensure continued traffic flow:

1. Construction materials and equipment will be transferred to and from the project site during off-peak traffic hours (8:30 AM to 3:30 PM) when feasible.

2. The project will notify the area Neighborhood Board and area residents, businesses, and agencies to the extent possible to keep them apprised of details of the project and impacts the project may have on the local street area network.

3.12 PARKING

Existing Conditions

There are no existing parking stalls located on the undeveloped project site.

Probable Impacts and Mitigation Measures

The project will not add any parking stalls as a part of construction. The facility will be unmanned except during infrequent maintenance and repair operations. An interior gravel roadway for service vehicle access to the modules will be provided off Coral Sea Road; this roadway will be utilized by maintenance vehicles for parking. No adverse traffic impacts are anticipated in association with the proposed project, and no mitigation measures are proposed.

3.13 SOCIO-ECONOMIC CHARACTERISTICS

Existing Conditions

The project site is located in Kalaeloa in the City of Kapolei and the community of ʻEwa. The site is immediately surrounded by other industrial lands and undeveloped, particularly within the Kalaeloa Airport at Barbers Point. The nearest urban area with residential, commercial, and supporting services is located north and northeast of KCCD. Although most of Kalaeloa remains undeveloped, there is a community that consists of diverse uses. Kalaeloa offers the potential to create a dynamic and vibrant community, while creating jobs and promoting an environment that can be integrated with mass transit

and is located close to schools, beaches, recreational areas, and cultural and natural resources. This area is planned as part of the City of Kapolei and the ʻEwa Development Plan, providing a new urban center and residential development areas to support a second city on the island of O'ahu.

Anticipated Impacts and Mitigation Measures

The Kalaeloa solar project will create both short-term and longer-term economic benefits by providing a critical service that will contribute to the general welfare of the community-at-large. Development of the project is not expected to result in negative impacts to socioeconomic conditions. The project will create additional employment opportunities during the construction period.

In the long term, the solar project will help to promote new venues for Hawaiʻi's renewable energy production. Hawaiʻi is the most petroleum-dependent state in the United States, deriving nearly 90% of its primary energy resources from oil. This dependency on fossil fuels is significantly higher than the national average and prices are almost 250% higher. The project will promote the use of vacant lands to move towards achieving the State's Clean Energy Initiative, which establishes targets for both the State and local utilities' development and use of renewable energy (100% of energy needs with clean energy by 2045 – State of Hawaiʻi, Department of Business, Economic Development and Tourism (DBEDT)).

The project is expected to cost approximately $27 million, which will provide positive economic benefits to the State and City and County of Honolulu. No public funds will be used for this project. No specific socio-economic mitigation actions are recommended.

3.14 LAND USE CONSTRAINTS

3.14.1 Preservation of Navigable Airspace

Existing Conditions

According to Title 14 Code of Federal Regulations (CFR) Part 77 Safe, Efficient Use and Preservation of Navigable Airspace, navigable airspace cannot be obstructed. To ensure the safety and efficiency of airport operations, the design of airports and surrounding facilities are regulated by the Federal Aviation Administration (FAA). The FAA provides airport design guidelines in their Advisory Circular (AC) 150/5300-13, Airport Design. According to FAA AC 150/5300-13, there are a series of zones in which development is restricted. Applicable zones are listed below.

Object Free Area (OFA) – Area must remain free of objects except necessary air navigation apparatus.

Runway Protection Zone (RPZ) - The RPZ is trapezoidal in shape and is located in the area extended from both ends of an active runway. The objective for this area is to protect people and property on the ground, however, some uses are permitted if they are outside of the OFA.

The siting of the proposed solar facilities in relationship to airport facilities is an important consideration in the planning process. The project site is located adjacent to the existing airport Runway 29 at John Rogers Field. Runway 29 is used infrequently, primarily for approach. Although the runway is not

heavily used, Kalaeloa airport is active and serves as the alternate for Honolulu International Airport. Land uses adjacent to active runways are subject to FAA guidelines. FAA's AC 150/5300-13 details the required dimensions for the RPZ as shown in Table 3-1. Figures 3-2 and 3-3 show a plan view and cross section of the restricted area from the AC.

TABLE 3-1 RUNWAY PROTECTION ZONE DIMENSIONS

Airport Service	Length (L)	Inner Width (W1)	Outer Width (W2)
Small Aircraft	1,000 ft.	250 ft.	450 ft.
Approach Categories A and B	1,000 ft.	500 ft.	700 ft.
Approach Categories C and D	1,700 ft.	500 ft.	1,010 ft.

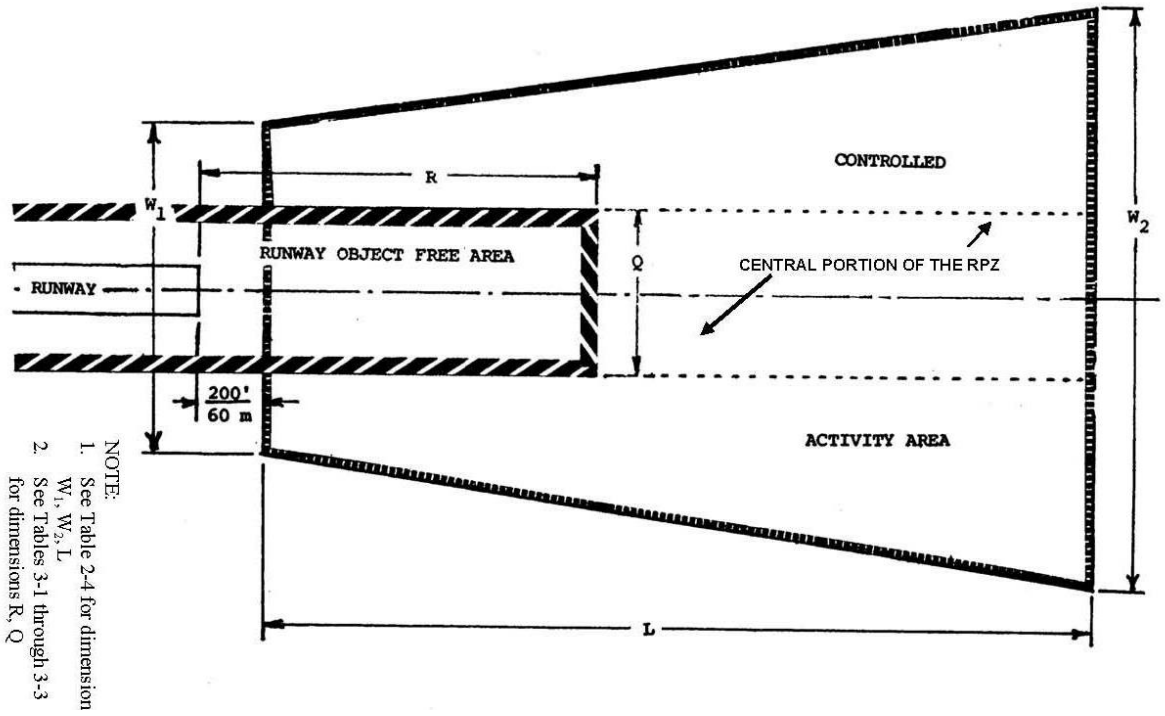


FIGURE 3-2 PLAN VIEW OF RUNWAY PROTECTION ZONE

Source: FAA Airport Design Advisory Circular 150/5300-13, September 1989.

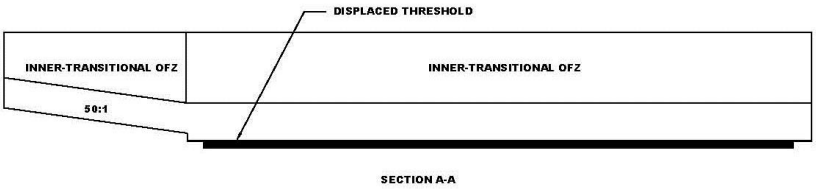


FIGURE 3-3 CROSS SECTION OF OBSTACLE FREE ZONE

Source: FAA Airport Design Advisory Circular 150/5300-13, September 1989.

Figure 3-4 shows the proposed project site in relationship to Kalaeloa Airport approach runway 29, and its anticipated RPZ. The project is located completely outside of the Runway Protection Zone. The existing chain link fencing on the property line is approximately 7 feet tall and will comply with applicable KCDD rules and regulations. The nearby elements of the proposed solar facilities will not exceed existing fencing heights.

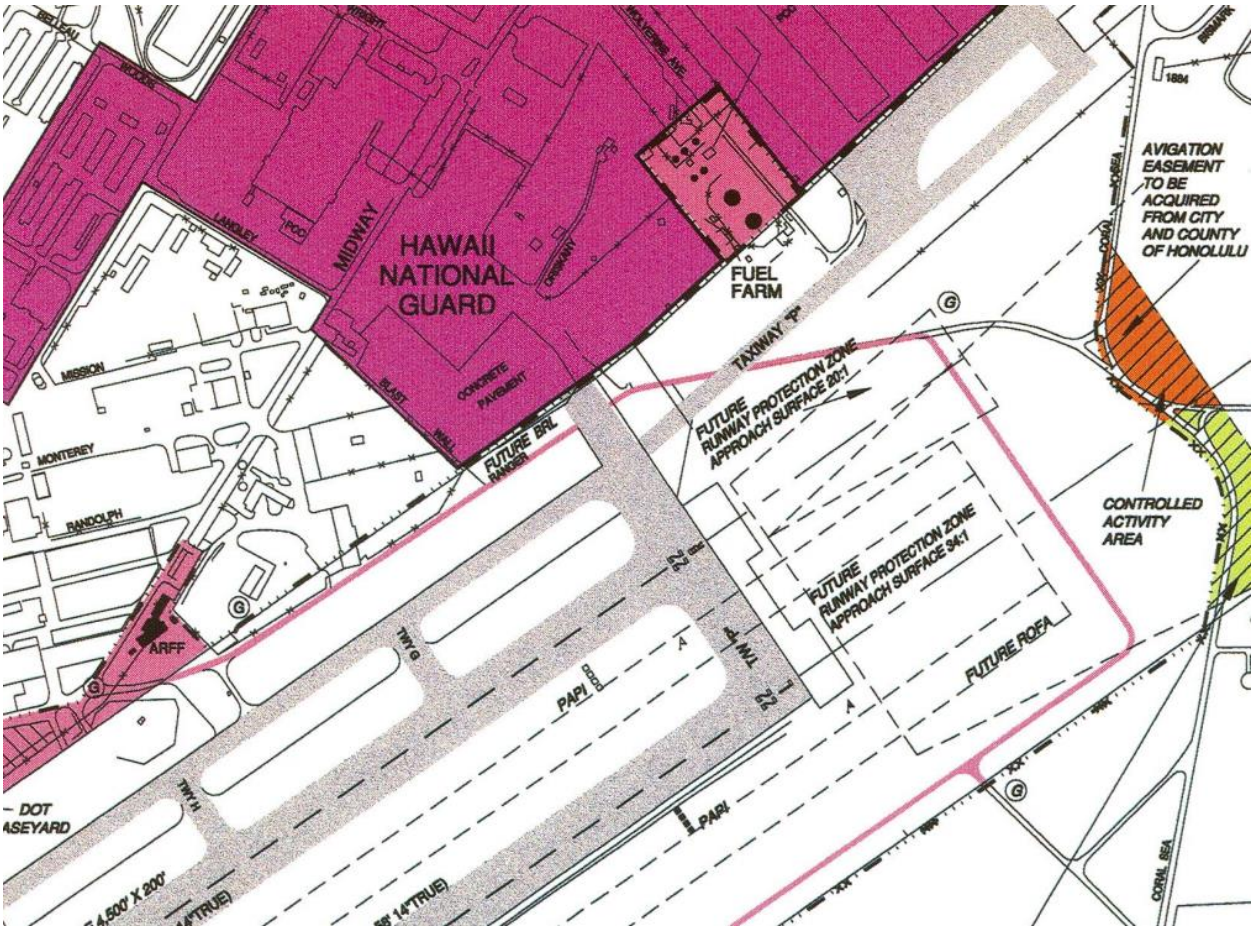


Figure 3-4A RPZ Near Project - Kalaeloa Airport Masterplan (1998)

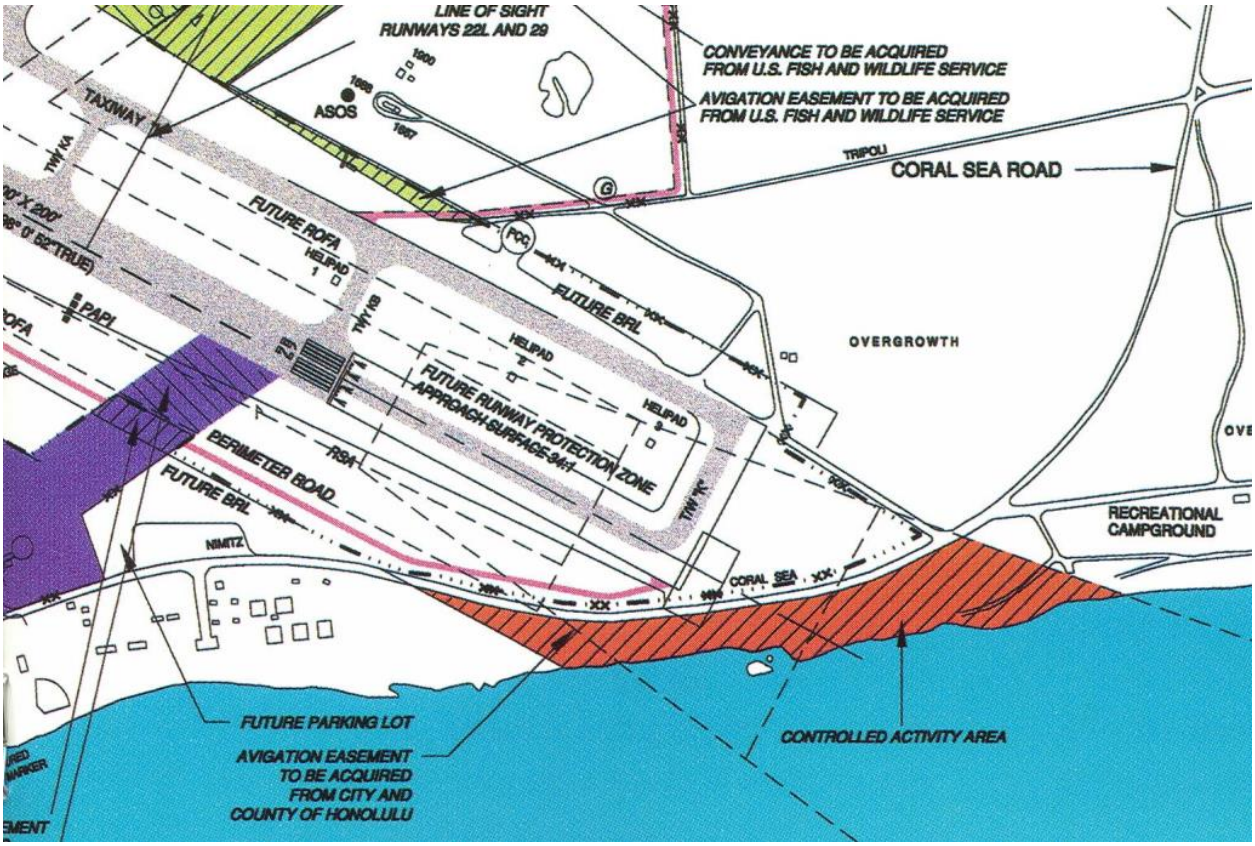


Figure 3-4B RPZ Near Project - Kalaeloa Airport Masterplan (1998)

The project will be required to submit Form 7460 Notice of Proposed Construction to the FAA to ensure that project plans do not interfere with airport regulations and safety zones.

A heliport is located in the grassy area east of Runway 29, between the runway and the taxi lane. FAA governs development in the vicinity of heliport facilities through the standards set in FAA AC 150/5390-2B Heliport Design. Heliport protection zones are diagrammatically show in Figure 3-5. The proposed project is located approximately 280 feet from the Final Approach and Takeoff Area (FATO) zone. At a 2:1 transitional surface ratio for navigable airspace from the FATO, the project will not exceed allowed height within the navigable airspace.

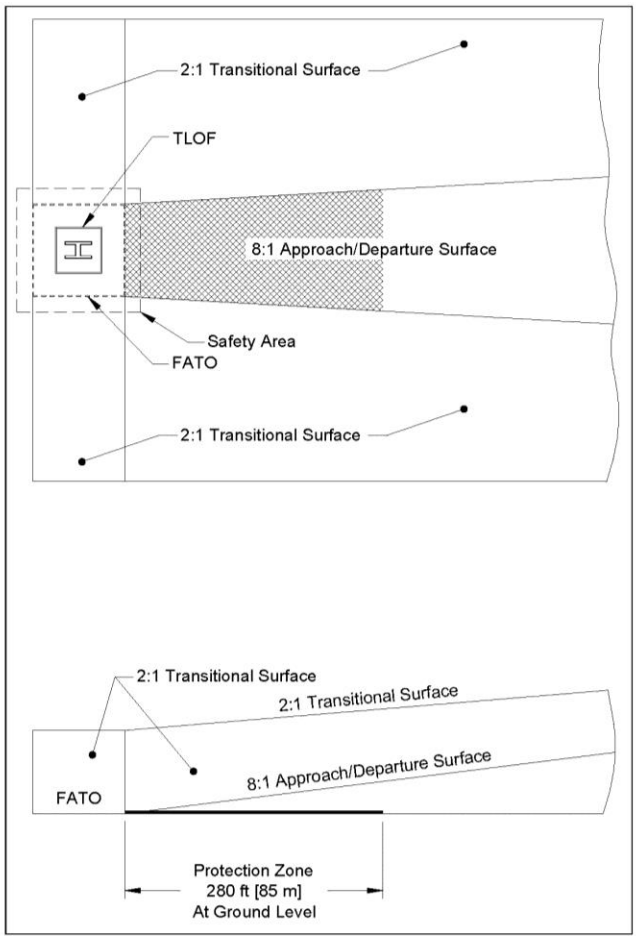


FIGURE 3-5 HELIPORT PROTECTION ZONE

Source: FAA Advisory Circular 150/5390-2B

Anticipated Impacts and Mitigation Measures

The FAA does not condone the location of solar facilities within the RPZ. All solar facilities and utility poles will be sited outside of the OFA and RPZ. FAA will be consulted regarding the proposed solar construction. In June 2017, a FAA Form 7460-1 (2-12) Notice of Proposed Construction or Alteration along with supporting attachments was submitted for each of the proposed structures to ~~them~~ FAA for their review to ensure that the project does not physically interfere with protected airspace around the airport, interfere with radar, or create a potential glare hazard. ~~No significant impacts to airport operations are anticipated.~~ The FAA Southwest Regional Office issued a Determination of No Hazard to Air Navigation in August 2017 for all proposed structures identified in submitted project plans.

Building height restrictions within aviation easement requirements were fully considered. The project will place portions of the distribution line underground on Coral Sea Road as required to meet FAA requirements. No buildings or utility poles are proposed in any aviation easements. In addition, flight navigation operations, such as runway approach and/or flight paths, will not be impacted by the project.

No impacts to the heliport approach/departure and transitional surfaces are anticipated.

3.14.2 Glint and Glare

The Federal Aviation Administration (FAA) has expressed concern regarding glare resulting from photovoltaic systems potentially causing distractions to pilots or air traffic control tower personnel. For this reason, the FAA has asked solar developers to perform a glare analysis to evaluate and document potential occurrences of glare. POWER Engineers, Inc. (POWER) has prepared this Glare Study for the ASEF II PV Project (Project). The Project is located in Kalaeloa, Oʻahu, Hawaiʻi, adjacent to the Kalaeloa Airport. The proposed Project will utilize fixed panel photovoltaic solar technology to produce up to 5.0 megawatts (MW) of electricity. The Glare Study was prepared for Kalaeloa Airport officials and the FAA. Specifically, this study does the following:

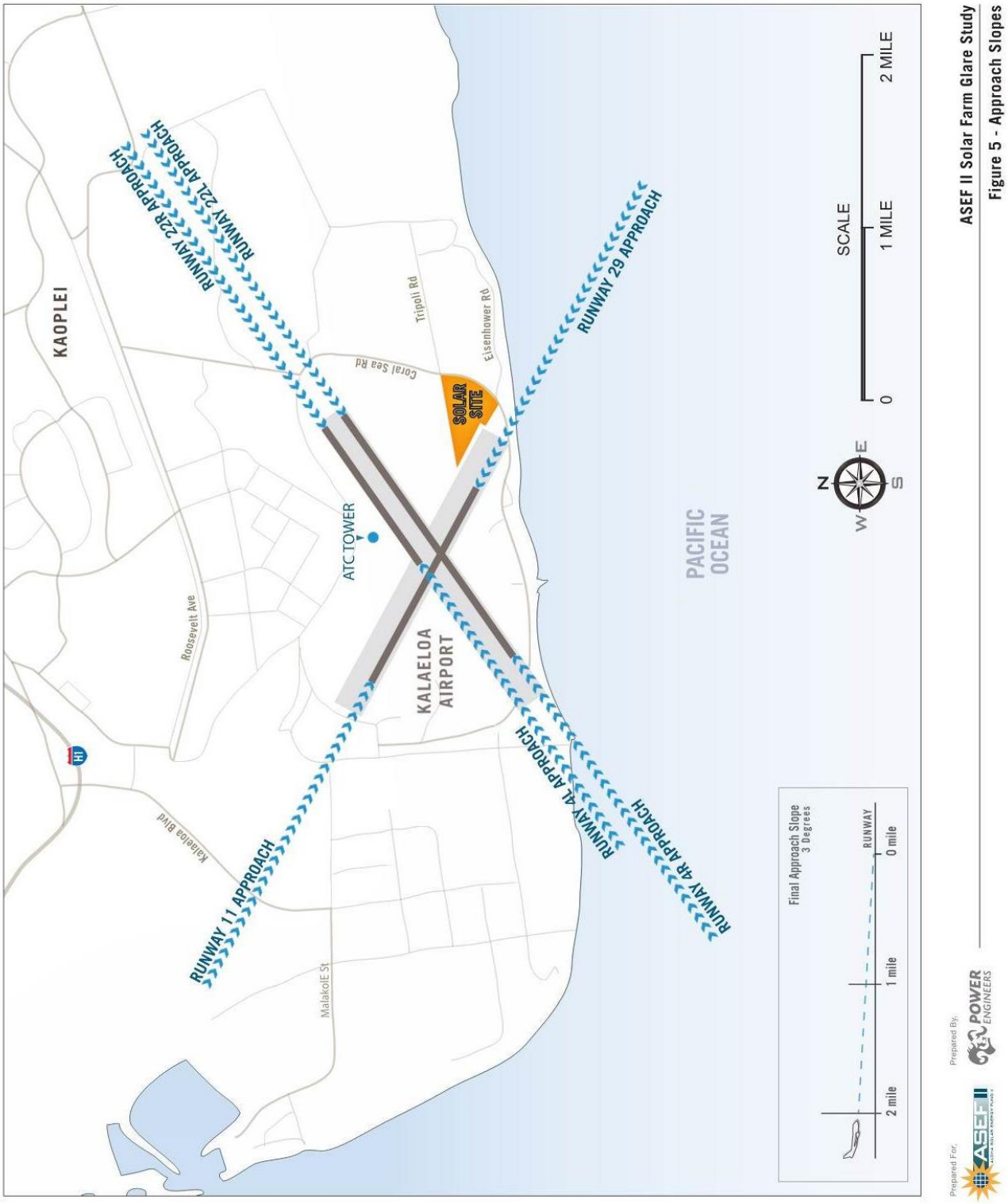
- Identifies the Air Traffic Control Tower (ATC Tower) and approach slopes associated with the Kalaeloa Airport.
- Characterizes typical glare behavior experienced from the solar project throughout the day and year.
- Evaluates when and where glare may be visible to ATC Tower personnel and pilots on final approach.

Existing Conditions

The existing project site is vacant, consisting of vegetation and plant growth. Therefore, no glare is present on the site.

Anticipated Impacts and Mitigation Measures

The FAA has asked solar developers to perform a glare hazard analysis to evaluate and document potential occurrences of glare. Proposed solar operations were studied for six landing approach scenarios and the ATC Tower at Kalaeloa Airport. POWER used information derived from the website (www.airnav.com/airport/PHJR) to determine the distance and angle of final approaches used in the glare analysis.



EA FIGURE 3-6 APPROACH SLOPES FOR SOLAR GLARE ANALYSIS

Review of the analysis determined glare will be limited to final approach of Runways 4R and 4L during the early morning hours from March to October. All occurrences of glare reported were categorized "green" for ocular impact levels with low potential for temporary after-image. These occurrences are within acceptable FAA limitations for glare on final approach. Due to the orientation of the approach slope relative to the proposed solar operations, the ATC Tower and approach slopes associated with Runways 11, 29, 22L, and 22R will not experience any glare. The following is a detailed description of each final approach where glare was reported. Conditions where no glare is reported were not listed.

- *Runway 4R*: Brief periods of green glare were recorded between 6:30 AM and 7:00 AM from Mid-March to Mid-September. Glare was recorded for 760 total minutes throughout the year with daily glare limited to less than 10 minutes in duration. All glare recorded is within the acceptable "green" category for ocular impact levels with low potential for temporary after-image.

- *Runway 4L*: Brief periods of green glare were recorded between 6:30 AM and 7:00 AM from March to October. Glare was recorded for 696 total minutes throughout the year with daily glare limited to less than 10 minutes in duration. All glare recorded is within the acceptable "green" category for ocular impact levels with low potential for temporary afterimage.

Occurrences of glare at Kalaeloa Airport resulting from proposed solar operations are anticipated to be minimal. Any glare experienced would occur intermittently in morning when the sun is lowest in the sky and not for a period longer than ten minutes. Glare intensity levels are within acceptable FAA limits for aircraft on final approach. Overall glare impacts are anticipated to be low. For full glare data and analysis, see *Appendix D*.

3.15 PUBLIC FACILITIES AND SERVICES

This section discusses the project's probable impact on public facilities and services of the project sites and surrounding areas.

3.15.1 Educational Facilities

Existing Conditions

Educational facilities located near the project site include:

- American Renaissance Academy located at Lexington Street is approximately one mile away from the project site and is the closest educational facility.
- Barbers Point Elementary School located at 3001 Boxer Road is approximately two miles away from the project site.
- Cole Academy is located at 1033 Ala Kahawai, and is approximately 2.3 miles away from the project site.

- Hoʻokele Elementary School is located off Kapolei Parkway and is less than two miles away from the project site.
- Island Pacific Academy located at 909 Haumea Street is approximately 2.5 miles away from the project site.
- Kapolei Elementary School, Kapolei Middle School, and Kapolei High School are located off Kapolei Parkway, and are all less than two miles away from the project site.
- Seagull Schools is located off Farrington Highway and is approximately 2.5 miles away from the project site.

Anticipated Impacts and Mitigation Measures

The project will not impact existing educational facilities near the project site, nor will it create additional demand for educational facilities. No mitigation is proposed.

3.15.2 Recreational Facilities

Existing Conditions

There are no existing recreational areas within the site. However, the open coastal waters located approximately 350 feet south of the project site are classified as Class A Open Coastal Waters. Class A waters are designated to be protected for recreational use and aesthetic enjoyment. Uses other than recreational are allowed as long as they are not in conflict with the protection and propagation of fish, shellfish, and wildlife, and with ocean-related recreational activities.

The Kalaeloa Master Plan identifies Coral Sea Road as a potential bicycle trail that would connect access from the shoreline with Geiger Road and further mauka to Franklin D Roosevelt Road and on to Kapolei Parkway.

Anticipated Impacts and Mitigation Measures

Project development will integrate the Kalaeloa Master Plan design guidelines, and, as applicable, any project improvements along the frontage of Coral Sea Road will integrate planning for the Kalaeloa Bicycle Network as outlined in the Kalaeloa Master Plan. The proposed project will not affect existing recreational facilities, therefore, no additional mitigation is recommended.

3.15.3 Police

Existing Conditions

The project site is within the Honolulu Police Department's (HPD) District 8, which encompasses the Leeward Coast and the ʻEwa Plain. There are approximately 100 field officers assigned to this district.

The Joint Base Pearl Harbor-Hickam police are headquartered at 850 Ticonderoga Street, Suite 105, in the US military base Joint Base Pearl Harbor-Hickam, located approximately eight miles away from the project site.

Anticipated Impacts and Mitigation Measures

This project should not impact police department's operations or ability to provide adequate protection services to the surrounding community. District 8 police protection should be adequate for project operations at the project site. No adverse impacts or mitigation is proposed.

3.15.4 Fire

Existing Conditions

Primary fire protection for the project area is provided by the East Kapolei Fire Station (Station 43) located approximately 2.5 miles away from the project site. Station 43 is currently operating out of two portable trailers during construction of the regional fire station which is planned to house an engine and ladder company, a regional emergency depot, a four-story training tower, and a regional tactical training ground. Response time to the project site will be approximately 7-9 minutes. Additional Fire Stations within four miles of the project area include:

- Kapolei Fire Station (Station 40) - 2020 Lauwiliwili Avenue, Kapolei, HI 96707
- ʻEwa Beach Fire Station (Station 24) - 91-832 Pohakupuna Road, ʻEwa Beach, HI 96706

The Federal Fire Department is headquartered at 850 Ticonderoga Street, Suite 105, in the US military base Joint Base Pearl Harbor-Hickam, located approximately eight miles away from the project site.

Anticipated Impacts and Mitigation Measures

This project is not expected impact the Fire Department's operations or ability to provide fire protection services to the project areas and surrounding areas. The PV system will be designed to meet all NEC, fire, and building code requirements. Fire access will be provided to ensure the property can be serviced by fire department vehicles. In addition, a firebreak (vegetation-free zone) Will be maintained within the property's perimeter fence. This firebreak will be constructed to a width of 10 ft. In the event of an electrical fire on site, power connections to and from the PV modules should be shut off. A non-combustible base will be provided at the facility and adequate clear space will be provided around the facility to serve as a fire break. The existing fire hydrant approximately 1,250-feet away from the project area along Coral Sea Road is available for HFD in the event of non-electrical fires such as wildfires.

3.15.5 Emergency Medical Services

Existing Conditions

The closest medical facility to the project site is The Queen's Medical Center, West Oʻahu. It is located approximately six miles from the project site.

Anticipated Impacts and Mitigation Measures

The proposed project will not impact the handling of EMS or medical emergencies. The Queen's Medical Center, West Oʻahu will continue to function in its present location and will be accessible from the project site. No mitigation is proposed.

3.15.6 Solid Waste Management

Existing Conditions

The existing project site is vacant; therefore, no solid waste is being generated and no form of solid waste disposal taking place on the site.

Anticipated Impacts and Mitigation Measures

The project will not result in significant generation of solid waste. Construction wastes are expected to be minimal since the site will require no demolition of existing structures. As necessary, commercial waste will be hauled to the Waimanalo Gulch Sanitary Landfill. Effective March 20, 2017, the landfill will only accept inert materials (e.g. dirt, rock, sand, gravel, and concrete). Another option would be the use of Covanta Honolulu, or known locally as the H-Power facility owned by the City and County of Honolulu. The facility processes up to 3,000 tons per day of municipal solid waste, generating up to 90 megawatts of energy– enough to meet nearly 8 percent of Oʻahu's energy needs.

No solid waste will be generated from the PV site during operations exception for the occasional need to replace failed components, during routine maintenance. Accordingly, any solid waste management needs will conform to State DOH and County requirements.

3.16 HISTORICAL AND ARCHAEOLOGICAL RESOURCES

Traditional Hawaiian History

ʻEwa was one of the largest of the six districts on the Island of Oʻahu. ʻEwa is depicted as an abundant and populated land where chiefs of distinguished lineages were born and resided. The land was fertile and well fed by mountain streams that helped sustain the agricultural lifestyle needed to support the chiefs, their households and their people.

The project area lies within the ahupua`a of Honouliuli in the moku of ʻEwa and is part of the unique geological feature known as the ʻEwa Plain (or the ʻEwa Karst). Oral histories tell of the traditional importance of the mauka or upland areas of Honouliuli Ahupuaʻa. Being one of the largest traditional Hawaiian land units on Oʻahu, Honouliuli served as a crossroads to many points east (towards Pearl Harbor and Honolulu), west (towards Waiʻanae) and north (towards Wahiawā and Waialua).

There are several places within Honouliuli Ahupuaʻa that are associated with traditional Hawaiian land uses, including Kalaeloa (or Barbers Point). The original Hawaiian name for this area was either Lae Loa or Kalaeloa; both names are seen in historic maps and text. Lae meaning cape or point and loa meaning distance or length. Kalaeloa may translate to "clear or calm stretch" of either water or land.

Despite the rapid and widespread changes of land ownership in Hawaiʻi in the late 1800s, Honouliuli Ahupuaʻa retained a semblance of its traditional form. After the death of Kekauʻōnohi in 1851, the titles for Honouliuli and her other lands were transferred to her husband Haʻalelea. In the few decades following Haʻalelea's death in 1864, his extensive lands became fragmented as they were sold or auctioned. in 1867, Haʻalelea's survivors regained a clear title to Honouliuli, and the ahupuaʻa was immediately sold in its entirety to John Coney. One decade later, in 1877, John Coney's wife sold Honouliuli Ahupuaʻa (again in its entirety) to James Campbell for a sum of US $95,000.

James Campbell was convinced that the coast of the ʻEwa Plain could be used successfully for sugar plantation land despite the overwhelming public opinion at the time that ʻEwa was a barren wasteland best utilized for cattle ranching. Campbell hired an expert well digger from California to sink a well in Honouliuli in 1879. James Campbell proceeded to establish profitable cattle ranches and engaged in sugar plantation ventures in Honouliuli. Honouliuli played an important role in the sugar plantation business in Hawaiʻi, eventually becoming the home of the ʻEwa Plantation Company.

Military History

Barbers Point is the post-contact name of the area and is attributed to Captain Henry Barber, whose ship ran aground on the shoals of Kalaeloa in 1796. In the 1930s, the United States (U.S.) military moved into the ʻEwa Plain. Among the various military facilities established in the area was Barbers Point Training Area. In 1931, the U.S. Army began construction of an artillery battery at Barbers Point Training Area to contain two 16-inch guns that had an effective range of 44,000 yards, the largest guns installed in an American coastal defense at the time.

In late 1941, the construction of the NASBP began. Several 400-foot sections of the dense *kiawe* forest had to be cut before survey sights could be taken. The Naval Air Station was intended as an auxiliary airfield for the Navy's Ford Island facility and was designed to accommodate the land-based operations of two aircraft carrier groups.

On December 7, 1941, the ʻEwa Mooring Mast Field was one of the targets of the Japanese attack on Pearl Harbor. At the time, there were 49 planes neatly lined up along the edge of the airfield. In the initial wave, 20 Japanese aircraft strafed the field in repeated passes, destroying nine Wildcat fighters, 18 Scout bombers, and all six utility planes. A second attack wave of dive bombers dropped bombs on surviving aircraft and strafed the airfield as well. With the onset of war, construction at the station accelerated. The station's operational capacity was increased to handle four aircraft carrier groups and a mix of both permanent and temporary buildings were quickly constructed.

From the 1950s to the present, NASBP has been an important mid-Pacific military installation, with a variety of functions, including anti-submarine patrol, headquarters of the Pacific Airborne Barrier Command (1958-1965), guided missile units, and the Pacific Sound Surveillance System.

Naval Air Station Barbers Point was closed in 1993 by the Defense Base Closure and Realignment Commission in accordance with the DBCRA act of 1990 There are numerous abandoned military

features scattered across Naval Air Station Barbers Point that probably are of World War II age. These include coastal bunkers, inland antiaircraft battery complexes, and training facilities

The archaeological inventory survey was conducted to determine the presence, nature, and extent of archaeological resources in the project area; evaluate their significance; and ensure compliance with the National Historic Preservation Act of 1966, as amended, Chapter 6E of the Hawai'i Revised Statutes (HRS), and the guidelines established by the State Historic Preservation Division (SHPD).

Existing Conditions

In February 2013, an Archaeological Inventory Survey (AIS) was completed for the project site by Scientific Consultant Services, Inc. (SCS) (*Appendix E*) with the purpose of identifying and documenting historical properties, assessing their historical significance for eligibility for listing on the Hawai'i Register of Historic Places, making project effect recommendations, and making mitigation recommendations. SCS also conducted an additional walk-through inspection and archaeological inventory survey with limited subsurface testing of the distribution line route along Coral Sea Road in ~~February~~ 2017, and completed a background literature review for this portion of the project which is attached as *Appendix F*.

During the 2013 survey, 23 historic properties comprised of 146 features were documented. Twenty-one sites were newly identified. Two sites previously identified by Tuggle and Tomonari-Tuggle (1994), were re-located and documented with new features being added to each site. Of the 146 features found within TMK: (1) 9-1-013:070 a total of eight features recorded by Wickler and Tuggle (1997) were re-located. Of the remaining 138 features nine features could not be confirmed as having been recorded by Wickler and Tuggle (1997) based on the current Archaeological Inventory Survey results and the site descriptions of Wickler and Tuggle (1997). The remaining 129 features are newly recorded.

Based on feature type, construction methods, and construction materials, State Site -5119, -7483 through -7485, -7487 (Features 1 and 4), -7488 through -7494, -5120 (Features 1 and 2), -7496 through -7499, -7502 through -7504 were interpreted to be associated with the pre- and/or post-Contact Period. State Site 50-80-12-7501 (Feature 1), State Site 50-80-12-7487 (Features 3 and 5), State Site 50-8012-5120(Features 3 through 9) were interpreted to be associated with United States Military occupation of the area during Historic Periods. Two features within the project area (State Sites 50-80-12-7486, Feature 5, and 50-80-12-7491) were interpreted as trails associated with the pre- and/or post-Contact Period, with use possibly as extending into the Historic Ranching Period.

The majority of the features recorded represent pre- and/or early post-Contact occupation of the area. These features include rock mounds, various small enclosures and structures such as C-shapes and L-shapes, modified pits (karst), unmodified pits, platforms, and small coastal trails. The pre- and/or early post-Contact sites were all composed of limestone, a locally available resource. Together, these represent a full suite of features often associated with a basic residential complex. Site features, in the form of rock mounds, platforms, modified pits, enclosures, C-shapes, L-shapes, and U-shapes in the area suggest components of a pre- and/or early Post-Contact local habitation and cultivation economy.

The documented habitation features are typically small, and represented by C-shapes, Ushapes, and remnant walls of various shapes. Only minimal counts of artifacts and midden were recovered during this project. This pattern intimates limited feature occupational duration but could be simply be a function of sampling (small sample size of excavated features). The mounds are less ambiguous, with the current research being in agreement with former interpretations that these mounds represent agricultural features. Sweet potato cultivation may be the primary function of most mounds, but these features take on many forms and sizes such that they could also represent cairns or boundary markers. Several of the mounds are thought to be possible burial locations. The mounds are variable in size, morphology, construction technique, and the presence/absence of cultural resources.

Two features identified during the current survey (State Site 50-80-12-7486, Feature 5, and State Site 50-80-12-7491) were interpreted as pre- and/or post-Contact coastal trails. However, archival research produced a 1928 aerial coastal photo and a 1927 USGS Quadrangle (Barbers Point) Map depicting State Site 50-80-12-7486, Feature 5 in an historic context. It is possible that Feature 5 is also associated with Historic Period ranching activities. Based on feature type, it is possible that State Site 50-80-12-7491 is also associated with Historic Period ranching activities. It should be noted, that although there was no supporting archaeological evidence, that the cobble-filled karst pits may have been filled-in during the Historic Ranching Period in an effort to prevent the cattle from stumbling or falling into the pits.

Several features recorded represent Historic World War II U.S. military occupation of the project area. These features include concrete structures (State Site -5120 Features 4, 5, and 7), remnant structures (State Site -5120 Features 6 and 8), and foundations/pads (State Sites -7487 Feature 3 and State Site -5120 Features 3 and 9). State Site 50-80-12-7501 is a limestone rock mound interpreted as a historic, mechanically-created bulldozer push pile, likely related to U.S. military operations in the project area.

As stated earlier, with the onset of World War II, construction at the NASBP accelerated. The Naval Air Station's operational capacity was increased to handle four aircraft carrier groups and a mix of both permanent and temporary buildings were quickly constructed. State Site 50-80-12-5120, Features 4 through 8 may represent the remnants of an anti-aircraft complex. This complex was damaged by bulldozing during the expansion of the runway clear zone, at some point prior to 1997, and is now under mowed grass.

The February 2017 field inspection of the distribution line work area did not observe historic properties within the eastern side of the Coral Sea Road ROW (*Appendix F*). However, the field inspection did identify (beyond the boundaries of the proposed project area) approximately 37 limestone dissolution pit caves, of which two were observed containing historic debris (if future development is proposed within the immediate vicinity of these possible historic properties then these possible historic properties should be investigated to determine the significance of these features and to identify if additional cultural materials exist).

Additionally, the field inspection identified a concrete foundation (likely a historic property needing additional documentation), two bulldozer push piles, and the reidentification of Building 92. Building

92 is a historic bombproof telephone building previously recommended as National Register of Historic Places eligible under criteria A and C. The field inspection observed these items beyond the boundaries of the Coral Sea Road ROW and therefore outside of the proposed project area. No historic properties were observed within the Coral Sea Road ROW during the field inspection.

The density of the observed limestone dissolution pit caves observed in the thick vegetation indicates that there are likely hundreds of limestone dissolution pit caves within 10m beyond the Coral Sea Road ROW, in both directions. As the proposed project is to be conducted within the Coral Sea Road ROW, the likelihood of encountering surface historic properties is drastically diminished. However, the chances of uncovering historic properties within previously infilled dissolution pit caves (at the time of Coral Sea Road construction) remains a possibility. See Figure 3-6 for previous archaeological studies in the project area.

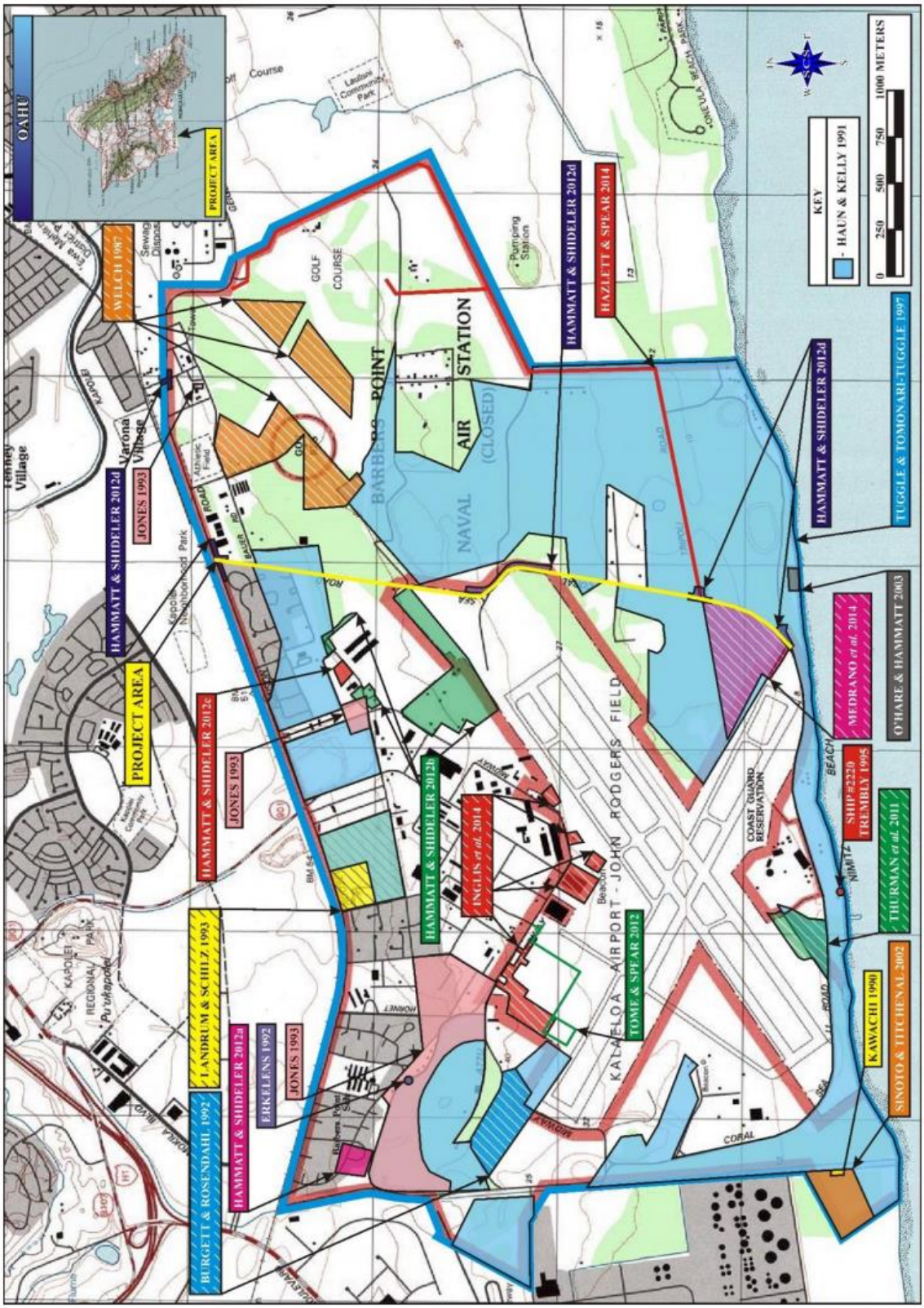


FIGURE 3-7 PREVIOUS ARCHAEOLOGICAL STUDIES IN THE PROJECT AREA

Anticipated Impacts and Mitigation Measures

The AIS conducted by SCS for the 44 acres of undeveloped land encompassing the solar farm parcel was reviewed and approved by the State Historic Preservation Division (SHPD) on February 25, 2014. The AIS identified 23 historic properties (Table 3-2), of which two were previously identified (Sites 5119 and 5120). The sites mainly consist of complexes of Traditional Hawaiian habitation and/or agricultural, refuse, and storage features. Also present are two probable burial features (Site 7483, Feature 4, and Site 7486, Feature 2), one site containing a military airplane wreckage (Site 7487) and one site containing military structural remnants (Site 5120).

All of the sites are recommended as significant pursuant to Hawai'i Administrative Rules (HAR) §13-275-6 under Criterion d (have yielded, or has potential to yield, information important to prehistory or history). Sites 7483 and 7486 also are recommended as significant under Criterion e (importance to Native Hawaiians) because of the probable presence of Native Hawaiian burials.

Four mitigation measures were recommended by SHPD to address the potential of the solar farm to affect historic properties. These measures consisted of the preparation and submittal of (1) a preservation plan for all historic properties initially recommended for preservation; (2) a burial treatment plan for Site 7483, Feature 4 and for Site 7486, Feature 2 which have been identified as probable burial features; (3) a data recovery plan for Site 7487, Features 2A-2C and for Site 7502, Feature 1; and (4) an archaeological monitoring plan for on-site monitoring during all project-related ground disturbing activities to address any potential subsurface historic properties that may be encountered and to ensure that the sites recommended for preservation are not adversely impacted during construction.

SHPD had recommended data recovery for Site 7487, Features 2A-2C and for Site 7502, Feature 1, while all other sites and/or features are recommended for preservation. Site 7487, Features 2A-2C (airplane crash wreckage) were recommended for data recovery because the Pacific Aviation Museum expressed interest in having the site further documented and having all materials collected for possible display. Site 7502, Feature 1 (agricultural rock mound) was recommended for data recovery because it was potentially impacted during installation under a previous solar farm structures configuration. However, after consulting with various stakeholder groups, it is the intention of this project to preserve all sites in place. Therefore a data recovery plan is no longer applicable. The sites identified for data recovery will be included in the preservation plan.

As a part of on-going consultation, SHPD ~~has~~ approved six (6) trenching locations along the east side of the Coral Sea Road ROW as the archaeological testing strategy for the underground portion of the interim distribution line work area. The trenches ~~will be~~ were approximately 16.5 feet long and 1.5 feet wide, and ~~will be~~ were dug to the depth of either the water table or the coral shelf, whichever ~~is~~ was reached first.

TABLE 3-2
LIST OF HISTORIC PROPERTIES IDENTIFIED DURING 2013 AIS

SIHP	Total Features	Feature Types	Function	Significance Recommendation	Mitigation Recommendation
7483	10	Karst pits, mounds (possible burial), mounds (agriculture)	Ag/refuse, w/possible burial component	d, e (Feature 4)	Preservation
7484	3	Karst pits, midden scatter	Ag/refuse, habitation complex	d	Preservation
7485	2	Karst pit, mound	Ag/refuse	d	Preservation
7486	5	Karst pits, linear path, and rock mound	Ag/refuse, ranching, transportation, w/possible burial component	d, e (Feature 2)	Preservation
7487	12	Karst pits, airplane crash remnants, concrete pads, L-shaped structure, and platform/wall	Ag/refuse, storage, military, and boundary	d	Preservation, Data Recovery (Features 2A-2C)
7488	1	Karst pit	Ag/refuse	d	Preservation
7489	2	Karst pits	Ag/refuse	d	Preservation
7490	3	Karst pits, walled karst pit	Ag/refuse	d	Preservation
7491	1	Path	Transportation	d	Preservation
7492	45	Rock mounds, enclosures, and C-, reverse J-, L-, T-, and U-shaped structures	Ag/habitation complex	d	Preservation
7493	1	Karst pit	Storage/refuse	d	Preservation
7494	1	Walled karst pit	Ag/storage	d	Preservation
7496	2	Platform, platform/mound	Ag/habitation and storage complex	d	Preservation
7497	1	Rock mound	Ag	d	Preservation
7498	3	Karst pits	Ag/refuse, storage complex	d	Preservation
7499	3	Karst pits, walled karst pit	Ag/storage and refuse complex	d	Preservation
5119	37	Karst pits, and C-, L-, and U-shaped structures	Ag/refuse, storage, habitation complex	d	Preservation
5120	9	Karst pit, wall, concrete pad, guard shack, and concrete enclosure, foundations, and pillbox	Ag/refuse, military, boundary	d	Preservation
7500	1	Karst pit	Ag/refuse	d	Preservation
7501	1	Mound	Dozer push pile	d	Preservation
7502	1	Mound	Ag	d	Data Recovery (Feature 1)
7503	1	C-shaped structure	Habitation	d	Preservation
7504	2	Karst pit, mound	Ag/refuse	d	Preservation

For the distribution line work along Coral Sea Road, based on the previous archaeology review and the results of a field inspection, it is recommended that work within this area proceed ~~after the completion of~~ with the archaeological inventory survey with limited subsurface testing now complete. This recommendation is due to the number of archaeological sites found within a half mile radius of the proposed project area, a lack of available data on the stratigraphy within the Coral Sea Road ROW, and the possibility of dissolution pit containing culturally-significant properties having been present but infilled during the previous construction of the Coral Sea Road ROW. Additionally, limiting the extent of the study ensures minimal disturbance to other utilities that lie within the ROW.

The project team is ~~coordinating~~ coordinated with the DOT-Highways Division and SHPD to move forward with the archaeological investigation. Pursuant to the letter sent to SHPD from DOT-Highways Division dated April 17, 2017, it has been determined that the 3,800 foot portion of the 12 kV interim electrical distribution line will be through an underground conduit due to Kalaeloa Airport clear airspace requirements. A field inspection conducted by SCS in February 2017 indicated while there are a number of limestone dissolution pit caves that lie immediately outside the DOT-Highways ROW, no historic properties were observed within the DOT-Highways ROW where the project line would be built. While the likelihood to encounter surface historic properties is extremely low, there is a possibility of uncovering historic properties within unidentified dissolution pit caves that may have been infilled during the initial construction of the roadway. ~~The letter also suggests an archaeological inventory survey with limited subsurface testing be conducted due to this uncovered dissolution pit cave possibility.~~

The archaeological inventory survey with limited subsurface testing conducted in July 2017 encountered no historic properties while excavating six Stratigraphic Trenches (ST) in the DOT-Highways ROW. Excavation of two of the trenches ceased upon encountering an active waterline within the excavation. The excavation for ST-1 reached a maximum depth of 0.80 meters below surface before encountering the waterline, and ST-6 reached a maximum depth of 0.80 meters below surface before encountering a limestone bedrock and the live waterline. The addendum AIS recommends that monitoring for the Coral Sea Road ROW portion be covered under an approved project wide Archaeological Monitoring Plan, but the roadway utility corridor portion be limited to on call monitoring due to the low likelihood of encountering historic properties within the Coral Sea Road ROW. The updated addendum AIS was submitted to SHPD in accordance with the HRS 6E-8 process, and approved in September 2017. Additional information about the addendum AIS can be found in Appendix F.

3.17 CULTURAL RESOURCES

Existing Conditions

A Cultural Impact Assessment (CIA) was completed for the project by SCS in May 2017, which is included in *Appendix G*. The following section provides a description of the CIA and findings for the project area.

The project requires compliance with Act 50 Session Laws of Hawai'i 2000 and the State of Hawai'i environmental review process under Chapter 343, Hawai'i Revised Statutes (HRS), which requires consideration of a proposed project's effect on traditional cultural practices. Through document research and cultural consultation efforts, the report provided information that was applicable to the assessment of the ASEF II project and its potential impacts to cultural practices. Hawaiian organizations, agencies, and community members have been contacted for both CIA studies in order to identify potentially knowledgeable individuals with cultural expertise and/or knowledge of the project areas and their vicinities.

In the case of the current undertaking, letters of inquiry were sent to 24 individuals and organizations that may have knowledge or information pertaining to the collection of cultural resources and/or practices currently, or previously conducted in close proximity to the proposed project parcel and associated electrical distribution line. Scientific Consultant Services, Inc. received four written responses, via e-mail, and one in-person interview in response to their inquiries. Two of those who provided responses did not express any concerns about the proposed undertaking having a negative impact on previously conducted or on-going traditional cultural practices in the proposed undertaking vicinity.

During the consultation process, three individuals expressed concerns that historic properties, including traditional Native Hawaiian burials, may be present within the proposed project area. One of these individuals encouraged an archaeological inventory survey be conducted. These concerns have been addressed, as SCS conducted an AIS for the proposed parcel as well as an AIS level investigation of the distribution line corridor, both discussed in Section 3.16.

An additional ten letters of inquiry and follow-up letters were sent to individuals and organizations in March and April 2017 to reflect the current description of the proposed undertaking. Two responses to these letters were received, one recommending an AIS be conducted, the other describing cultural practices and burial protection for the area as well as supporting the construction of the photovoltaic power plant on the 22 acre cleared portion of the site.

In addition to SCS interviews, as a part of the EA process, interviews were conducted with 23 state recognized cultural descendants and numerous presentations before the Oʻahu Island Burial Council, HCDA, Kalaeloa Heritage Park, Ahahui Siwila Hawaiʻi o Kapolei, and Kalaeloa Heritage and Legacy Foundation.

Anticipated Impacts and Mitigation Measures

Analysis of the potential effect of the project on cultural resources, practices or beliefs, its potential to isolate cultural resources, practices or beliefs from their setting, and the potential of the project to introduce elements which may alter the setting in which cultural practices take place is also a suggested guideline of the Office of Environmental Quality Control.

Based on the information presented in the CIA, archaeological mitigation measures have been developed through consultation with SHPD and appropriate cultural stakeholders as described in Section 3.16. Community concerns, such as the impact by construction activities on underground karst systems and impacts by the project on traditional resource gathering on flora such as limu and laʻau, will be addressed through appropriate environmental measures developed in concert with cultural stakeholders and implemented prior to construction. Accordingly, pursuant to Act 50, the exercise of native Hawaiian rights or any ethnic group related to traditional cultural practices will not be adversely impacted by the project.

3.18 VISUAL RESOURCES

Existing Conditions

The project site is located in Kalaeloa, ʻEwa, and is bounded by the Kalaeloa airport runway to the west, the Tripoli Street alignment to the north, and Coral Sea Road. Undeveloped lands surround the site to the east, north and south, and the runway is located to the west. The project site is currently vacant and covered with dense brush and vegetation (*Figure 3-8a through 3-8f*).

The ocean is partially visible from the southern edge of the project site along Coral Sea Road. The Waianae Mountain range is also visible in the distance to the north.

Table 3-1 of the ʻEwa Development Plan identifies significant views and vistas in the region. Significant views and vistas that are potentially applicable to the proposed project include distant vistas of the shoreline from the H-1 Freeway above the ʻEwa Plain, and mauka/makai views.

Anticipated Impacts and Mitigation Measures

The solar project will be located on undeveloped lands covered in dense scrub, which are relatively flat and level. The solar modules, racking, fencing, and site electrical equipment will generally not exceed 10 feet in height, and will not impact visibility at the adjacent airport runway. Utility poles leaving the site switchyard and along the distribution line path on Coral Sea Road are estimated to be approximately 40'-0" in height, and will not impact visibility for airport runways or scenic view planes. The project is consistent with the ʻEwa Development Plan. Views of the shoreline from H-1 Freeway will not be affected. Mauka/makai views will not be impacted, and partial views of the ocean and of the Waianae mountain range will still be visible from public vantage points along Coral Sea Road. Additionally, a natural vegetation buffer will be located along Coral Sea Road and adjacent to the Kalaeloa airport to make the project less visible from the roadways and runway. No significant impacts to the existing scenic landscape are anticipated.

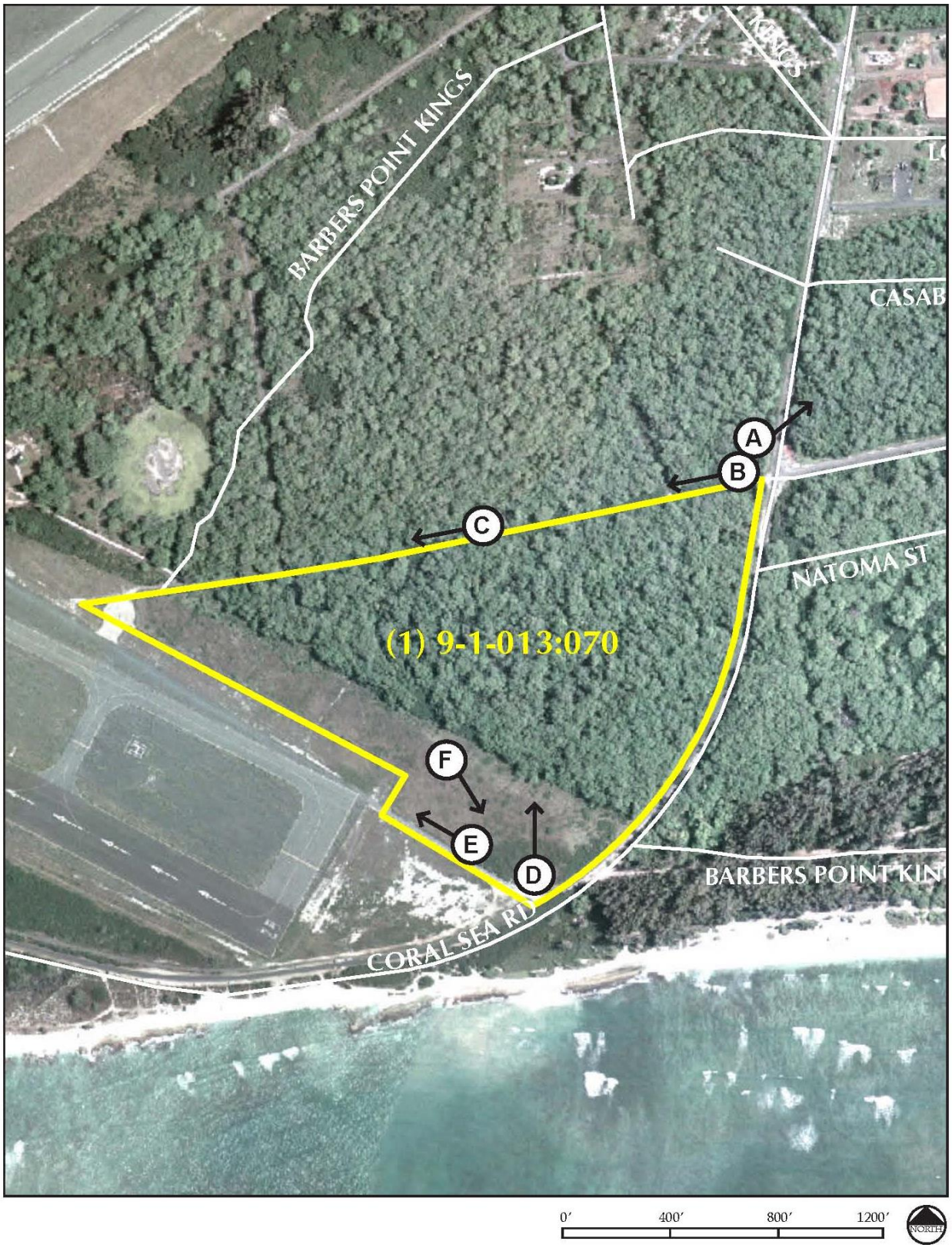


FIGURE 3-8 SITE PHOTO KEY

VIEW FROM CORAL SEA ROAD AND TRIPOLI STREET, LOOKING NORTHEAST
FIGURE 3-8A

VIEW FROM TRIPOLI STREET ALIGNMENT LOOKING WEST INTO THE PROJECT SITE
FIGURE 3-8B

PROJECT SITE INTERIOR, LOOKING WEST
FIGURE 3-8C

VIEW FROM SOUTHERN POINT OF PROJECT SITE, LOOKING NORTHEAST
FIGURE 3-8D

VIEW FROM SOUTHWESTERN PROJECT BOUNDARY, LOOKING NORTH
FIGURE 3-8E

VIEW FROM WESTERN PROJECT BOUNDARY, LOOKING MAKAI
FIGURE 3-8F

3.19 POTENTIAL CUMULATIVE AND SECONDARY IMPACTS

Cumulative effects 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 other actions.

The ASEF II project will help to provide new sources of renewable energy in Hawai'i. The proposed 5 MWac electricity production will help increase renewable energy's 23.4% share of energy production in the State. The project will promote sustainable energy industries on use vacant lands to help Hawai'i to move towards achieving HCEI target goals.

Construction activity during the proposed ASEF II project will generate direct employment as well as indirect and induced employment in construction-related industries. The operation and site restoration is expected to last approximately three years and will generate approximately 40 jobs to support project operations. The project is expected to cost approximately $27 million, which will provide positive economic benefits to the State and City and County of Honolulu.

4.0 ALTERNATIVES TO THE PROPOSED PROJECT

4.0 ALTERNATIVES TO THE PROPOSED PROJECT

This section evaluates alternatives to the proposed action described in *Section 2.0*. The range of alternatives to be discussed includes: 1) a "no-action" alternative in contrast to the proposed action; 2) consideration to the use of other alternative solar technologies; 3) alternative site locations; and 4) an alternative scale of intensified use. All of these alternatives were eliminated from further consideration with rationale as to their exclusion provided in each narrative.

4.1 ALTERNATIVE 1: NO-ACTION

The No-Action Alternative is the baseline against which other alternatives are measured. "No Action" refers to the probable future site and program conditions that would likely result should the proposed project not proceed.

This alternative would result in keeping the ASEF II project site vacant and undeveloped with no immediate change to the property. The parcel would remain dedicated under the KCDD Regulating Plan as Transect 2- Rural/Open Space. The existing environmental conditions at the site would remain unchanged. Infrastructure and other utility improvements to support the development of the project and its integration of technology, process design configurations, and other area specific improvements to this section of Kalaeloa would not occur.

The lands would remain unimproved and underutilized as construction of the ASEF II project would not occur. The investment by a private entity to help meet a public sector alternative energy goal would not be made and production of a new renewable energy source would be unrealized.

Relative to the potential use of this land for solar energy production, the No-Action Alternative in contrast to the proposed action is not consistent with Federal, State and County polices, including the HCEI specific target on the development of renewable energy technologies.

4.2 ALTERNATIVE 2: USE OF ALTERNATIVE SOLAR TECHNOLOGIES

Concentrated solar power (CSP) is one of the main alternative technologies to PV use that was considered early in the project development to generate renewable power. CSPs generate power by using a series of lenses, mirrors, or dishes to focus a larger area of sunlight into a smaller beam. The focused solar energy then heats a fluid that typically powers a steam turbine to generate electricity. Various CSP design techniques are used to track the sun and focus the energy including the use of a parabolic trough, reflectors, solar dishes, or a solar power tower. CSP systems are also capable of storing energy by use of Thermal Energy Storage technologies.

This alternative is not a viable option economically because the energy price of PV facilities has been shown to be less than the energy price equivalent of CSP facilities. Overall, PV systems constitute a more proven technology which can be built easier, at a lower cost and at much shorter time than CSP facilities, which also require larger areas and are associated with greater risks (Green, 2012).

4.3 ALTERNATIVE 3: OTHER SITE LOCATIONS

The proposed ASEF II project site is sized and situated ideally to support solar energy production on the scale required under HECO's Tier III Feed-In-Tariff (FIT) program (not to exceed 5 MWac). Kalaeloa, as a general land region, is one of the best solar radiation areas on O'ahu. Nearly all energy available on Earth is derived ultimately from solar radiation which differs from place to place based on terrain and absorption and reflection by the surrounding atmosphere (USACE HED, 2014).

The inclusion of this project is complementary to other on-going eco-industrial initiatives related to renewable energy production in the surrounding area. The proposed project site was chosen for its operational advantages relative to other planned future uses for the area. The proposed PV farm use is consistent with the current land use designation as Rural/Open Space under the KCDD Regulating Plan.

At this time, there are no other alternative site options within the Kalaeloa district as the opportunity here is creating a public-private partnership between ASEF II and HCDA as the landowner. The proposed site would help meet the objectives and needs of this scale of solar production.

4.4 ALTERNATIVE 4: SCALE OF INTENSIFIED USE

The proposed ASEF II project site is comprised of approximately 44 acres (*Figure 4-1*). Original conceptual design schemes included the provision of two 5 megawatt (MW) facilities on the parcel. However, given the sensitivity to the distribution, density, and composition of archaeological and cultural resources in the northern half of the parcel, the ASEF II PV module layout was downscaled to a single 5MW utility installation to ensure long-term preservation and stewardship of resources.

FIGURE 4-1 ALTERNATIVE SCALE OF INTENSIFIED USE – CONCEPTUAL 12.1 MW PV SYSTEM

5.0 APPLICABLE LAND USE PLANS AND POLICIES

5.0 APPLICABLE LAND USE PLANS AND POLICIES

The project's consistency with applicable Federal, State, and County land use plans and policy controls are discussed below.

5.1 FEDERAL CONTROLS

5.1.1 Public Utilities Regulatory Act of 1978

The Public Utility Regulatory Policies Act (PURPA) (16 U.S.C. Sections 2601-2645) was passed in 1978 as part of the National Energy Act. The purpose of this act was to promote greater use of renewable energy. PURPA requires utilities to buy power from independent companies that could produce power for less than what it would cost for the utility to generate the power.

Discussion: *The project as a renewable energy source from an independent company is consistent with this Act.*

5.1.2 Coastal Zone Management Act of 1972 & Chapter 205, HRS

The Coastal Zone Management Act (CZMA) of 1972 (16 United States Code (USC), Section 1451), as amended through Public Law 104-150, created the coastal zone management (CZM) program whose purpose is to effectively manage, use, protect, and develop coastal lands in response to competing demands upon their habitats and resources. The CZMA authorizes coastal states to develop and implement a State coastal zone management program.

In Hawai'i, the enforcement authority of the CZMA has been delegated under Chapter 205A, HRS (Coastal Zone Management), whose objectives and policies address: (1) recreational resources, (2) historic resources, (3) scenic and open space resources, (4) coastal ecosystems, (5) economic uses, (6) coastal hazards, (7) managing development, (8) public participation, (9) beach protection, and (10) marine resources. Virtually all relate to potential development impacts on the shoreline, near shore, and ocean area environments. The State Office of Planning is the lead agency of the State's CZM program.

Established in 1975, the Special Management Area (SMA) permit is part of the regulatory system that is the cornerstone to the CZM program. The SMA permitting system is the authority, as granted by 205A, HRS that regulates all types of land uses and activities under a broad definition of "development" for all lands within the SMA. The SMA designation places special controls on development within an area along the shoreline. Pursuant to 205A-22, HRS, "development" does include the construction, reconstruction, demolition, or alteration of the size of any structure.

Within the City and County of Honolulu, the SMA Use Permit application process and review is typically administered by the City and County of Honolulu Department of Planning and Permitting, and the decision on its issuance is rendered by the City Council, pursuant to Ordinance No. 84-4. However, pursuant to Chapter 206E-8.5, HRS and Chapter 15-150, HAR, actions that are defined as "development" within the SMA that lie within a community development district requires the review

and approval of the State Office of Planning. As the lead agency, the Office of Planning in its review and approval of SMA permit applications conforms to applicable county rules adopted in accordance with Section 205A-26, HRS (Special Management Area guidelines).

Under HRS Chapter 205A, the CMP is a comprehensive nationwide program that establishes and enforces standards and policies to guide the development of public and private lands within the coastal areas. In the State of Hawai'i, the CMP is articulated in the State CZM Law in Chapter 205A of the HRS. The State CZM objectives and policies address the following 10 subject areas: (1) recreational resources, (2) historic resources, (3) scenic and open space resources, (4) coastal ecosystems, (5) economic uses, (6) coastal hazards, (7) managing development, (8) public participation, (9) beach protection, and (10) marine resources. Virtually all relate to potential development impacts on the shoreline, near shore, and ocean area environments.

Table 5-1 outlines the objectives and policies of HRS Chapter 205A and discusses the applicability to the project.

Table 5-1 COASTAL ZONE MANAGMENT PROGRAM HRS SECTION 205 A- OBJECTIVE AND POLICIES **S = Supportive, N/S = Not Supportive, N/A = Not Applicable**	**S**	**N/S**	**N/A**
OBJECTIVES & POLICIES			
(1) Recreational resources;			
Provide coastal recreational opportunities accessible to the public.			
(A) Improve coordination and funding of coastal recreational planning and management; and			X
(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;			X
(ii) Requiring replacement of coastal resources having significant recreational value including, but not limited to, surfing sites, fishponds, and sand beaches, when such resources will be unavoidably damaged by development; or requiring reasonable monetary compensation to the State for recreation when replacement is not feasible or desirable;			X
(iii) Providing and managing adequate public access, consistent with conservation of natural resources, to and along shorelines with recreational value;			X
(iv) Providing an adequate supply of shoreline parks and other recreational facilities suitable for public recreation;			X
(v) Ensuring public recreational uses of county, state and federally-owned or controlled shoreline lands having recreational value consistent with public safety standards and conservation of natural resources.			X
(vi) Adopting water quality standards and regulating point and non-point sources of pollution to protect			X
(vii) Developing new shoreline recreational opportunities			X
(viii) Encouraging reasonable dedication of shoreline areas with recreational value for public use as part of discretionary approvals or permits by the land use commission, board of land and natural resources, and county authorities; and crediting such dedication against the requirements of section 46-6.			X
Discussion: *ASEF II supports CZM objectives for recreational opportunities; however, these objectives do not apply to the project as it is a solar facility with no planned recreational activities.*			
(2) Historic resources;			
Protect, preserve, and, where desirable, restore those natural and manmade historic and prehistoric resources in the coastal zone management area that are significant in Hawaiian and American history and culture.			
(A) Identify and analyze significant archaeological resources;	X		
(B) Maximize information retention through preservation of remains and artifacts or salvage operations; and	X		
(C) Support state goals for protection, restoration, interpretation, and display of historic resources.	X		

Table 5-1 COASTAL ZONE MANAGMENT PROGRAM HRS SECTION 205 A- OBJECTIVE AND POLICIES S = Supportive, N/S = Not Supportive, N/A = Not Applicable	S	N/S	N/A
Discussion: *ASEF II supports CZM objectives for historic resources; the project is coordinating with SHPD to protect all sites in place. An interim preservation plan, archaeological preservation plan, burial treatment plan, and archaeological monitoring plan are in various phases of being submitted for approval and implementation in partnership with SHPD.*			
(3) Scenic and open space resources;			
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;			X
(B) Ensure that new developments are compatible with their visual environment by designing and locating such developments to minimize the alteration of natural landforms and existing public views to and along the shoreline;	X		
(C) Preserve, maintain, and, where desirable, improve and restore shoreline open space and scenic resources; and	X		
(D) Encourage those developments that are not coastal dependent to locate in inland areas.			X
Discussion: *ASEF II supports CZM objectives for scenic and open space resource. The project will be sited to minimize the alteration of natural landforms, particularly those of historic and cultural significance. Sited on relatively flat and level undeveloped lands, the solar modules will generally not exceed 10 feet in height and will not impact visibility for airport runways or scenic viewplanes. Views of the shoreline from H-1 Freeway and partial views of the ocean from public vantage points along Coral Sea Road will not be affected.*			
(4) Coastal ecosystems;			
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;			X
(B) Improve the technical basis for natural resource management;			X
(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			X
(E) Promote water quantity and quality planning and management practices that reflect the tolerance of fresh water and marine ecosystems and maintain and enhance water quality through the development and implementation of point and non-point source water pollution control measures.			X
Discussion: *ASEF II supports CZM objectives for coastal ecosystems; however, these objectives do not apply to the project as the project is not located in a coastal ecosystem.*			
(5) Economic uses;			
Provide public or private facilities and improvements important to the State's economy in suitable locations.			
(A) Concentrate coastal dependent development in appropriate areas;			X
(B) Ensure that coastal dependent development such as harbors and ports, and coastal related development such as visitor industry facilities and energy generating facilities, are located, designed, and constructed to minimize adverse social, visual, and environmental impacts in the coastal zone management area; and	X		
(C) Direct the location and expansion of coastal dependent developments to areas presently designated and used for such developments and permit reasonable long-term growth at such areas, and permit coastal dependent development outside of presently designated areas when: (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.			X
Discussion: *As evaluated and discussed in Section 3.0 of this EA, ASEF II will be appropriately sited and designed in a manner that minimizes adverse social, visual, and environmental impacts. A portion of the project site is located within the SMA; however no permanent project improvements are planned in this area other than possibly a small portion of the perimeter fence. A determination is pending on whether any planned improvements in the immediate designated SMA area, which are primarily fencing and landscaping, meet the definition of "development" for a required SMA use permit.*			
(6) Coastal hazards;			
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 non-point source pollution hazards;			X
(B) Control development in areas subject to storm wave, tsunami, flood, erosion, hurricane, wind, subsidence, and point and non-point source pollution hazards;			X

Table 5-1 COASTAL ZONE MANAGMENT PROGRAM HRS SECTION 205 A- OBJECTIVE AND POLICIES S = Supportive, N/S = Not Supportive, N/A = Not Applicable	S	N/S	N/A
(C) Ensure that developments comply with requirements of the Federal Flood Insurance Program; and	X		
(D) Prevent coastal flooding from inland projects.	X		
Discussion: *ASEF II is located on lands designated as Flood Zone D (undetermined). All construction for the project will conform to relevant building codes to mitigate the risk of flooding, as appropriate to IB design requirements. Operational and maintenance plans for the site will address proper evacuation and emergency response procedures.*			
(7) Managing development;			
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;	X		
(B) Facilitate timely processing of applications for development permits and resolve overlapping or conflicting permit requirements; and			X
(C) Communicate the potential short and long-term impacts of proposed significant coastal developments early in their life cycle and in terms understandable to the public to facilitate public participation in the planning and review process.			X
Discussion: *A portion of the 44-acre parcel for the proposed utility installation is located within the SMA. However, planned site improvements within the SMA portion of the parcel are limited to approximately 400-feet of perimeter fencing to be built as a security measure around the facility. An SMA minor permit approval by the Office of State Planning is required for the fencing. No part of the planned PV array or the distribution line area work along Coral Sea Road is located within the SMA.*			
(8) Public participation;			
Stimulate public awareness, education, and participation in coastal management.			
(A) Promote public involvement in coastal zone management processes;			X
(B) Disseminate information on coastal management issues by means of educational materials, published reports, staff contact, and public workshops for persons and organizations concerned with coastal issues, developments, and government activities; and			X
(C) Organize workshops, policy dialogues, and site-specific mediations to respond to coastal issues and conflicts.			X
Discussion: *ASEF II supports CZM objectives for public participation in coastal management; however, these objectives do not apply to the project.*			
(9) Beach protection;			
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;	X		
(B) Prohibit construction of private erosion-protection structures seaward of the shoreline, except when they result in improved aesthetic and engineering solutions to erosion at the sites and do not interfere with existing recreational and waterline activities; and			X
(C) Minimize the construction of public erosion-protection structures seaward of the shoreline.			X
Discussion: *ASEF II supports CZM objectives for beach protection. The solar modules will be sited inland from the shoreline setback to conserve open space, minimize interference with natural shoreline processes, and minimize any loss or damage of the solar farm due to coastal erosion.*			
(10) Marine resources;			
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;			X
(B) Coordinate the management of marine and coastal resources and activities to improve effectiveness and efficiency;			X
(C) Assert and articulate the interests of the State as a partner with federal agencies in the sound management of ocean resources within the United States exclusive economic zone;			X
(D) Promote research, study, and understanding of ocean processes, marine life, and other ocean resources in order to acquire and inventory information necessary to understand how ocean development activities relate to and impact upon ocean and coastal resources; and			X

Table 5-1 COASTAL ZONE MANAGMENT PROGRAM HRS SECTION 205 A- OBJECTIVE AND POLICIES S = Supportive, N/S = Not Supportive, N/A = Not Applicable	S	N/S	N/A
(E) Encourage research and development of new, innovative technologies for exploring, using, or protecting marine and coastal resources.			X
Discussion: *ASEF II supports CZM objectives for marine resources; however, these objectives do not apply to the project.*			

5.1.3 Federal Aviation Act of 1958 and Federal Aviation Regulations Part 77

The Federal Aviation Act of 1958 established the Federal Aviation Administration (FAA), which has the sole responsibility for the management of air navigation and air traffic control in the United States. Federal Regulation Title 14 Part 77 establishes standards and notification requirements for objects affecting navigable airspace. This notification evaluates the effects of a construction project on operating procedures, determines the potential hazardous effects of the proposed construction on air navigation, and identifies mitigating measures to enhance safe air navigation in order to prevent or minimize the adverse impacts to the safe and efficient use of navigable airspace.

As stated in Part 77 of Federal Aviation Regulations, the Administrator of the FAA is to be notified as to any proposed construction or alteration of an object that extends outward and upward at a slope of 25:1 for a horizontal distance of 5,000 feet from the nearest point of the nearest landing and takeoff area of an airport, which could affect navigable air space, including approach and departure surfaces of airfields. The Federal Aviation Regulations Part 77 also requires a clear zone approach slope of 34:1 within a designated boundary. Part 77 also addresses concerns of glint and glare, attraction of hazardous wildlife, and obstruction hazards.

Discussion: *The proposed components of the ASEF II project, specifically the utility installation and distribution line, will be designed to comply with applicable FAA requirements and regulations. A portion of the 12 kV interim distribution line will be installed underground as to not create any obstruction to the established flight approaches. The parcel will be primarily unmanned so there are no concerns relative to proximity of long-term sustained human activities to airport noise. The ASEF II project has had ongoing coordination with the FAA and DOT-A since 2013 and will continue to coordinate with both agencies throughout the entitlements process and detailed design stage to ensure regulatory compliance. Compliance with specific FAA requirements relative to glint and glare, hazardous wildlife, and obstruction hazards is described in greater detail in Section 5.2.2, which outlines the State of Hawai'i Office of Planning's Technical Assistance Memorandum 2016-1, issued 01 August 2016.*

5.2 STATE OF HAWAI'I

5.2.1 Hawai'i State Plan, Hawai'i Revised Statutes (HRS) Chapter 226

The Hawai'i State Plan establishes a statewide planning system that provides goals, objectives, and policies that detail priority directions and concerns of the State of Hawai'i; these will be discussed as they relate to the proposed project.

It is the goal of the State, under the Hawai'i State Planning Act (HRS Chapter 226) to achieve the following:

- A strong, viable economy, characterized by stability, diversity, and growth, that enables the fulfillment of the needs and expectations of Hawai'i present and future generations.
- A desired physical environment, characterized by beauty, cleanliness, quiet, stable natural systems, and uniqueness, that enhances the mental and physical well-being of the people.
- Physical, social, and economic well-being, for individuals and families in Hawai'i, that nourishes a sense of community responsibility, of caring, and of participation in community life (Section 226-4, HRS).

The specific objectives and policies of the State Plan that pertain to the project are those for facility systems-energy, which include:

Section 226-18 Objectives and policies for facility systems-energy.

(c) To further achieve the energy objectives, it shall be the policy of this State to:

(1) Support research and development as well as promote the use of renewable energy sources;
(5) Ensure to the extent that new supply-side resources are needed, the development or expansion of energy systems utilizes the least-cost energy supply option and maximizes efficient technologies;

Table 5-2 assesses and evaluates how the ASEF II project supports the Hawai'i State Plan, as promulgated under HRS Chapter 226. Where appropriate, if the State Plan goals are not applicable, it is so noted.

Table 5-2 HAWAI'I STATE PLAN, HAWAI'I REVISED STATUTES, CHAPTER 226 **S = Supportive, N/S = Not Supportive, N/A = Not Applicable**	**S**	**N/S**	**N/A**
Section 226-4: State Goals. In order to guarantee, for the present and future generations, those elements of choice and mobility that insure that individuals and groups may approach their desired levels of self-reliance and self-determination, it shall be the goal of the State to achieve:			
(1) A strong, viable economy, characterized by stability, diversity, and growth, that enables the fulfillment of the needs and expectations of Hawai'i's present and future generations	X		
(2) A desired physical environment, characterized by beauty, cleanliness, quiet, stable natural systems, and uniqueness, that enhances the mental and physical well-being of the people.	X		
(3) Physical, social and economic well-being, for individuals and families in Hawai'i, that nourishes a sense of community responsibility, of caring, and of participation in community life.	X		
Discussion: *The project supports the goals of the State of Hawai'i to achieve a strong, viable economy by encouraging alternative, sustainable, natural types of energy production.*			
Section 226-5: Objective and Policies for Population. (A) It shall be the objective in planning for the State's population to guide population growth to be consistent with the achievement of physical, economic, and social objectives contained in this chapter; (B) To achieve the population objective, it shall be the policy of this State to:			
(1) Manage population growth statewide in a manner that provides increased opportunities for Hawai'i's people to pursue their physical, social and economic aspirations while recognizing the unique needs of each county.			X

Table 5-2 HAWAIʻI STATE PLAN, HAWAIʻI REVISED STATUTES, CHAPTER 226 S = Supportive, N/S = Not Supportive, N/A = Not Applicable	S	N/S	N/A
(2) Encourage an increase in economic activities and employment opportunities on the neighbor islands consistent with community needs and desires.			X
(3) Promote increased opportunities for Hawaiʻi's people to pursue their socioeconomic aspirations throughout the islands.			X
(4) Encourage research activities and public awareness programs to foster and understanding of Hawaiʻi's limited capacity to accommodate population needs and to address concerns resulting from an increase in Hawaiʻi's population.			X
(5) Encourage federal actions and coordination among major governmental agencies to promote a more balanced distribution of immigrants among states, provided that such actions do not prevent the reunion of immediate family members.			X
(6) Pursue an increase in federal assistance for states with a greater proportion of foreign immigrants relative to their state's population.			X
(7) Plan the development and availability of land and water resources in a coordinated manner so as to provide for the desired levels of growth in each geographic area.			X
Discussion: *While ASEF II supports the State's policies for population growth, they are not directly applicable to the project.*			
Section 226-6: Objectives and Policies for the Economy in General.			
(A) Planning for the State's economy in general shall be directed toward achievement of the following objectives:			
(1) Increased and diversified employment opportunities to achieve full employment, increased income and job choice, and improved living standards for Hawaiʻi's people, while at the same time stimulating the development and expansion of economic activities capitalizing on defense, dual-use, and science and technology assets, particularly on the neighbor islands where employment opportunities may be limited.			X
(2) A steadily growing and diversified economic base that is not overly dependent on a few industries, and includes the development and expansion of industries on the neighbor islands.			X
(B) To achieve the general economic objectives, it shall be the policy of this State to:			
(1) Promote and encourage entrepreneurship within Hawaiʻi by residents and nonresidents of the State.			X
(2) Expand Hawaiʻi's national and international marketing, communication, and organizational ties, to increase the State's capacity to adjust to and capitalize upon economic changes and opportunities occurring outside the State.			X
(3) Promote Hawai'i as an attractive market for environmentally and socially sound investment activities that benefit Hawaiʻi's people.			X
(4) Transform and maintain Hawaiʻi as a place that welcomes and facilitates innovative activity that may lead to commercial opportunities.			X
(5) Promote innovative activity that may pose initial risks, but ultimately contribute to the economy of Hawaiʻi.			X
(6) Seek broader outlets for new or expanded Hawai'i business investments.			X
(7) Expand existing markets and penetrate new markets for Hawaiʻi's products and services.			X
(8) Assure that the basic economic needs of Hawaiʻi's people are maintained in the event of disruptions in overseas transportation.			X
(9) Strive to achieve a level of construction activity responsive to, and consistent with, state growth objectives.			X
(10) Encourage the formation of cooperatives and other favorable marketing arrangements at the local or regional level to assist Hawaiʻi's small scale producers, manufacturers, and distributors.			X
(11) Encourage labor-intensive activities that are economically satisfying and which offer opportunities for upward mobility.			X
(12) Encourage innovative activities that may not be labor-intensive, but may otherwise contribute to the economy of Hawaiʻi.	X		
(13) Foster greater cooperation and coordination between the government and private sectors in developing Hawaiʻi's employment and economic growth opportunities.			X
(14) Stimulate the development and expansion of economic activities which will benefit areas with substantial or expected employment problems.			X
(15) Maintain acceptable working conditions and standards for Hawaiʻi's workers.			X
(16) Provide equal employment opportunities for all segments of Hawaiʻi's population through affirmative action and nondiscrimination measures.			X
(17) Stimulate the development and expansion of economic activities capitalizing on defense, dual-use, and science and technology assets, particularly on the neighbor islands where employment opportunities may be limited.			X

Table 5-2 HAWAIʻI STATE PLAN, HAWAIʻI REVISED STATUTES, CHAPTER 226 S = Supportive, N/S = Not Supportive, N/A = Not Applicable	S	N/S	N/A
(18) Encourage businesses that have favorable financial multiplier effects within Hawai'i's economy, particularly with respect to emerging industries in science and technology.			X
(19) Promote and protect intangible resources in Hawai'i, such as scenic beauty and the Aloha spirit, which are vital to a healthy economy.			X
(20) Increase effective communication between the educational community and the private sector to develop relevant curricula and training programs to meet future employment needs in general, and requirements of new, potential growth industries in particular.			X
(21) Foster a business climate in Hawai'i - including attitudes, tax and regulatory policies, and financial and technical assistance programs--that is conducive to the expansion of existing enterprises and the creation and attraction of new business and industry.			X
Discussion: *The project supports Policy 12 of the objective related to the economy in general. This solar energy farm will be able to produce an important source of renewable energy for Oʻahu without high levels of labor. While ASEF II supports State's remaining policies for the economy, they are not directly applicable to the project.*			
Section 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.			X
(2) Growth and development of diversified agriculture throughout the State.			X
(3) An agriculture industry that continues to constitute a dynamic and essential component of Hawai'i's strategic, economic, and social well-being.			X
(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.			X
(2) Encourage agriculture by making best use of natural resources.			X
(3) Provide the governor and the legislature with information and options needed for prudent decision making for the development of agriculture.			X
(4) Establish strong relationships between the agricultural and visitor industries for mutual marketing benefits.			X
(5) Foster increased public awareness and understanding of the contributions and benefits of agriculture as a major sector of Hawai'i's economy.			X
(6) Seek the enactment and retention of federal and state legislation that benefits Hawai'i's agricultural industries.			X
(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.			X
(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.			X
(9) Enhance agricultural growth by providing public incentives and encouraging private initiatives.			X
(10) Assure the availability of agriculturally suitable lands with adequate water to accommodate present and future needs.			X
(11) Increase the attractiveness and opportunities for an agricultural education and livelihood.			X
(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.			X
(13) Promote economically competitive activities that increase Hawai'i's agricultural self-sufficiency, including the increased purchase and use of Hawai'i-grown food and food products by residents, businesses, and governmental bodies as defined under section 103D-104.			X
(14) Promote and assist in the establishment of sound financial programs for diversified agriculture.			X
(15) Institute and support programs and activities to assist the entry of displaced agricultural workers into alternative agricultural or other employment.			X
(16) Facilitate the transition of agricultural lands in economically non-feasible agricultural production to economically viable agricultural uses.			X
(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.			X
(18) Increase and develop small-scale farms.			X
Discussion: *While ASEF II supports the State's policies for the economy in regard to agriculture, they are not directly applicable to the project.*			

Table 5-2 HAWAIʻI STATE PLAN, HAWAIʻI REVISED STATUTES, CHAPTER 226 S = Supportive, N/S = Not Supportive, N/A = Not Applicable	S	N/S	N/A
Section 226-8 Objective and Policies for the Economy - Visitor Industry.			
(A) Planning for the State's economy with regard to the visitor industry shall be directed towards the achievement of the objective of a visitor industry that constitutes a major component of steady growth for Hawaiʻi's economy.			
(B) To achieve the visitor industry objective, it shall be the policy of this State to:			
(1) Support and assist in the promotion of Hawaiʻi's visitor attractions and facilities.			X
(2) Ensure that visitor industry activities are in keeping with the social, economic, and physical needs and aspirations of Hawaiʻi's people.			X
(3) Improve the quality of existing visitor destination areas by utilizing Hawaiʻi's strengths in science and technology.			X
(4) Encourage cooperation and coordination between the government and private sectors in developing and maintaining well-designed, adequately serviced visitor industry and related developments which are sensitive to neighboring communities and activities.			X
(5) Develop the industry in a manner that will continue to provide new job opportunities and steady employment for Hawaiʻi's people.			X
(6) Provide opportunities for Hawaiʻi's people to obtain job training and education that will allow for upward mobility within the visitor industry.			X
(7) Foster a recognition of the contribution of the visitor industry to Hawaiʻi's economy and the need to perpetuate the aloha spirit.			X
(8) Foster an understanding by visitors of the aloha spirit and of the unique and sensitive character of Hawaiʻi's cultures and values.			X
Discussion: *While ASEF II supports the State's policies for the economy in regard to the visitor industry, they are not directly applicable to the project.*			
Section 226-9 Objective and Policies for the Economy - Federal Expenditures.			
(A) Planning for the State's economy with regard to federal expenditures shall be directed towards achievement of the objective of a stable federal investment base as an integral component of Hawaiʻi's economy.			
(B) To achieve the federal expenditures objective, it shall be the policy of this State to:			
(1) Encourage the sustained flow of federal expenditures in Hawai'i that generates long-term government civilian employment.;			X
(2) Promote Hawaiʻi's supportive role in national defense, in a manner consistent with Hawaiʻi's social, environmental, and cultural goals by building upon dual-use and defense applications to develop thriving ocean engineering, aerospace research and development, and related dual-use technology sectors in Hawaiʻi's economy;			X
(3) Promote the development of federally supported activities in Hawai'i that respect state-wide economic concerns, are sensitive to community needs, and minimize adverse impacts on Hawaiʻi's environment;			X
(4) Increase opportunities for entry and advancement of Hawaiʻi's people into federal government service;			X
(5) Promote federal use of local commodities, services, and facilities available in Hawai'i;			X
(6) Strengthen federal-state-county communication and coordination in all federal activities that affect Hawaiʻi; and			X
(7) Pursue the return of federally controlled lands in Hawai'i that are not required for either the defense of the nation or for other purposes of national importance, and promote the mutually beneficial exchanges of land between federal agencies, the State, and the counties.			X
Discussion: *While ASEF II supports the State's policies related to economy and federal expenditures, they are not directly applicable to the project.*			
Section 226-10 Objective and Policies for the Economy - Potential Growth and Innovative Activities.			
(A) Planning for the State's economy with regard to potential growth activities shall be directed towards achievement of the objective of development and expansion of potential growth activities that serve to increase and diversify Hawaiʻi's economic base.			
(B) To achieve the potential growth activity objective, it shall be the policy of this State to:			
(1) Facilitate investment and employment growth in economic activities that have the potential to expand and diversify Hawaiʻi's economy, including but not limited to diversified agriculture, aquaculture, renewable energy development, creative media, health care, and science and technology-based sectors;	X		
(2) Facilitate investment in innovative activity that may pose risks or be less labor-intensive than other traditional business activity, but if successful, will generate revenue in Hawaiʻi through the export of services or products or substitution of imported services or products;			X
(3) Encourage entrepreneurship in innovative activity by academic researchers and instructors who may not have the background, skill, or initial inclination to commercially exploit their discoveries or achievements;			X

Table 5-2 HAWAIʻI STATE PLAN, HAWAIʻI REVISED STATUTES, CHAPTER 226 S = Supportive, N/S = Not Supportive, N/A = Not Applicable	S	N/S	N/A
(4) Recognize that innovative activity is not exclusively dependent upon individuals with advanced formal education, but that many self-taught, motivated individuals are able, willing, sufficiently knowledgeable, and equipped with the attitude necessary to undertake innovative activity;			X
(5) Increase the opportunities for investors in innovative activity and talent engaged in innovative activity to personally meet and interact at cultural, art, entertainment, culinary, athletic, or visitor-oriented events without a business focus;			X
(6) Expand Hawaiʻi's capacity to attract and service international programs and activities that generate employment for Hawaiʻi's people;			X
(7) Enhance and promote Hawaiʻi's role as a center for international relations, trade, finance, services, technology, education, culture, and the arts;			X
(8) Accelerate research and development of new energy-related industries based on wind, solar, ocean, underground resources, and solid waste;	X		
(9) Promote Hawaiʻi's geographic, environmental, social, and technological advantages to attract new economic activities into the State;			X
(10) Provide public incentives and encourage private initiative to attract new industries that best support Hawaiʻi's social, economic, physical, and environmental objectives;			X
(11) Increase research and the development of ocean-related economic activities such as mining, food production, and scientific research;			X
(12) Develop, promote, and support research and educational and training programs that will enhance Hawaiʻi's ability to attract and develop economic activities of benefit to Hawaiʻi;			X
(13) Foster a broader public recognition and understanding of the potential benefits of new or innovative growth-oriented industry in Hawaiʻi;			X
(14) Encourage the development and implementation of joint federal and state initiatives to attract federal programs and projects that will support Hawaiʻi's social, economic, physical, and environmental objectives;			X
(15) Increase research and development of businesses and services in the telecommunications and information industries;			X
(16) Foster the research and development of nonfossil fuel and energy efficient modes of transportation;			X
(17) Recognize and promote health care and health care information technology as growth industries.			X
Discussion: *Construction of ASEF II will add to the growing number of solar farms in Hawaiʻi, and will help to promote and support investment, research, educational, and training programs related to the renewable energy sector of the economy. While ASEF II supports the State's remaining policies related to economy and potential growth activities, they are not directly applicable to the project.*			
Section 226-10.5 Objectives and Policies for the Economy - Information Industry. (A) Planning for the State's economy with regard to telecommunications and information technology shall be directed toward recognizing that broadband and wireless communication capability and infrastructure are foundations for an innovative economy and positioning Hawaiʻi as a leader in broadband and wireless communications and applications in the Pacific Region. (B) To achieve the information industry objective, it shall be the policy of this State to:			
(1) Promote efforts to attain the highest speeds of electronic and wireless communication within Hawaiʻi and between Hawaiʻi and the world, and make high speed communication available to all residents and businesses in Hawaiʻi;			X
(2) Encourage the continued development and expansion of the telecommunications infrastructure serving Hawaiʻi to accommodate future growth and innovation in Hawaiʻi's economy;			X
(3) Facilitate the development of new or innovative business and service ventures in the information industry which will provide employment opportunities for the people of Hawaiʻi;			X
(4) Encourage mainland- and foreign-based companies of all sizes, whether information technology-focused or not, to allow their principals, employees, or contractors to live in and work from Hawaiʻi, using technology to communicate with their headquarters, offices, or customers located out-of-state;			X
(5) Encourage greater cooperation between the public and private sectors in developing and maintaining a well-designed information industry;			X
(6) Ensure that the development of new businesses and services in the industry are in keeping with the social, economic, and physical needs and aspirations of Hawaiʻi's people;			X

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(7) Provide opportunities for Hawaiʻi's people to obtain job training and education that will allow for upward mobility within the information industry;			X
(8) Foster a recognition of the contribution of the information industry to Hawaiʻi's economy; and			X
(9) Assist in the promotion of Hawai'i as a broker, creator, and processor of information in the Pacific.			X
Discussion: *While ASEF II supports the State's policies related to economy and the information industry, they are not directly applicable to the project.*			
Section 226-11 Objectives and Policies for the Physical Environment - Land-based, Shoreline, and Marine Resources. (A) Planning for the State's physical environment with regard to land-based, shoreline, and marine resources shall be directed towards achievement of the following objectives:			
(1) Prudent use of Hawaiʻi's land-based, shoreline, and marine resources.			X
(2) Effective protection of Hawaiʻi's unique and fragile environmental resources.			X
(B) To achieve the land-based, shoreline, and marine resources objectives, it shall be the policy of this State to:			
(1) Exercise an overall conservation ethic in the use of Hawaiʻi's natural resources.			X
(2) Ensure compatibility between land-based and water-based activities and natural resources and ecological systems.			X
(3) Take into account the physical attributes of areas when planning and designing activities and facilities.			X
(4) Manage natural resources and environs to encourage their beneficial and multiple uses without generating costly or irreparable environmental damage.			X
(5) Consider multiple uses in watershed areas, provided such uses do not detrimentally affect water quality and recharge functions.			X
(6) Encourage the protection of rare or endangered plant and animal species and habitats native to Hawaiʻi.			X
(7) Provide public incentives that encourage private actions to protect significant natural resources from degradation or unnecessary depletion.			X
(8) Pursue compatible relationships among activities, facilities and natural resources.	X		
(9) Promote increased accessibility and prudent use of inland and shoreline areas for public recreational, educational and scientific purposes.			X
Discussion: *As discussed in Section 3.0 of this EA, ASEF II promotes renewable energy in Hawaiʻi in a manner compatible with existing diverse range of activities, facilities, and natural resources in Kalaeloa. While ASEF II supports the State's remaining policies related to the State's physical environment, they are not directly applicable to the project.*			
Section 226-12 Objective and Policies for the Physical Environment - Scenic, Natural Beauty, and Historic Resources. (A) Planning for the State's physical environment shall be directed towards achievement of the objective of enhancement of Hawaiʻi's scenic assets, natural beauty, and multi-cultural/historical resources. (B) To achieve the scenic, natural beauty, and historic resources objective, it shall be the policy of this State to:			
(1) Promote the preservation and restoration of significant natural and historic resources.	X		
(2) Provide incentives to maintain and enhance historic, cultural, and scenic amenities.	X		
(3) Promote the preservation of views and vistas to enhance the visual and aesthetic enjoyment of mountains, ocean, scenic landscapes, and other natural features.			X
(4) Protect those special areas, structures, and elements that are an integral and functional part of Hawaiʻi's ethnic and cultural heritage.	X		
(5) Encourage the design of developments and activities that complement the natural beauty of the islands.			X
Discussion: *ASEF II will protect historic resources within the parcel through mitigation and preservation measures developed in coordination with SHPD. An interim preservation plan, archaeological preservation plan, burial treatment plan, and archaeological monitoring plan are in various phases of being submitted for approval and implementation in partnership with SHPD.*			
Section 226-13 Objectives and Policies for the Physical Environment - Land, Air, and Water Quality. (A) Planning for the State's physical environment with regard to land, air, and water quality shall be directed towards achievement of the following objectives:			
(1) Maintenance and pursuit of improved quality in Hawaiʻi's land, air, and water resources.			X
(2) Greater public awareness and appreciation of Hawaiʻi's environmental resources.			X
(B) To achieve the land, air, and water quality objectives, it shall be the policy of this State to:			

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(1) Foster educational activities that promote a better understanding of Hawaiʻi's limited environmental resources.			X
(2) Promote the proper management of Hawaiʻi's land and water resources.			X
(3) Promote effective measures to achieve desired quality in Hawaiʻi's surface, ground and coastal waters.			X
(4) Encourage actions to maintain or improve aural and air quality levels to enhance the health and well-being of Hawaiʻi's people.			X
(5) Reduce the threat to life and property from erosion, flooding, tsunamis, hurricanes, earthquakes, volcanic eruptions, and other natural or man-induced hazards and disasters.			X
(6) Encourage design and construction practices that enhance the physical qualities of Hawaiʻi's communities.			X
(7) Encourage urban developments in close proximity to existing services and facilities.			X
(8) Foster recognition of the importance and value of the land, air, and water resources to Hawaiʻi's people, their cultures and visitors.			X
Discussion: *While ASEF II supports the State's policies related to the State's physical environment, they are not directly applicable to the project.*			
Section 226-14 Objective and Policies for Facility Systems - In General. (A) Planning for the State's facility systems in general shall be directed towards achievement of the objective of water, transportation, waste disposal, and energy and telecommunication systems that support statewide social, economic, and physical objectives. (B) To achieve the general facility systems objective, it shall be the policy of this State to:			
(1) Accommodate the needs of Hawaiʻi's people through coordination of facility systems and capital improvement priorities in consonance with state and county plans.	X		
(2) Encourage flexibility in the design and development of facility systems to promote prudent use of resources and accommodate changing public demands and priorities.			X
(3) Ensure that required facility systems can be supported within resource capacities and at reasonable cost to the user.			X
(4) Pursue alternative methods of financing programs and projects and cost-saving techniques in the planning, construction, and maintenance of facility systems.			X
Discussion: *As a new solar energy facility, ASEF II supports the State's policies related to facility systems. All improvements are being coordinated in consonance with relevant state and county plans, as well as with required permits in place.*			
226-15 Objectives and Policies for Facility Systems - Solid and Liquid Wastes. (A) Planning for the State's facility systems with regard to solid and liquid wastes shall be directed towards the achievement of the following objectives:			
(1) Maintenance of basic public health and sanitation standards relating to treatment and disposal of solid and liquid wastes.			X
(2) Provision of adequate sewerage facilities for physical and economic activities that alleviate problems in housing, employment, mobility, and other areas.			X
(B) To achieve solid and liquid waste objectives, it shall be the policy of this State to:			
(1) Encourage the adequate development of sewerage facilities that complement planned growth.			X
(2) Promote re-use and recycling to reduce solid and liquid wastes and employ a conservation ethic.			X
(3) Promote research to develop more efficient and economical treatment and disposal of solid and liquid wastes.			X
Discussion: *While ASEF II supports the State's policies related to facility systems and solid and liquid wastes, they are not directly applicable to the project.*			
226-16 Objective and Policies for Facility Systems - Water. (A) Planning for the State's facility systems with regard to water shall be directed towards achievement of the objective of the provision of water to adequately accommodate domestic, agricultural, commercial, industrial, recreational, and other needs within resource capacities. (B) To achieve the facility systems water objective, it shall be the policy of this State to:			
(1) Coordinate development of land use activities with existing and potential water supply.			X
(2) Support research and development of alternative methods to meet future water requirements well in advance of anticipated needs.			X
(3) Reclaim and encourage the productive use of runoff water and wastewater discharges.			X
(4) Assist in improving the quality, efficiency, service, and storage capabilities of water systems for domestic and agricultural use.			X

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(5) Support water supply services to areas experiencing critical water problems.			X
(6) Promote water conservation programs and practices in government, private industry, and the general public to help ensure adequate water to meet long-term needs.			X
Discussion: *While ASEF II supports the State's policies related to facility systems and water, they are not directly applicable to the project as there is no water use proposed for the action.*			
226-17 Objectives and Policies for Facility Systems - Transportation. (A) Planning for the State's facility systems with regard to transportation shall be directed towards the achievement of the following objectives:			
(1) An integrated multi-modal transportation system that services statewide needs and promotes the efficient, economical, safe, and convenient movement of people and goods.			X
(2) A statewide transportation system that is consistent with and will accommodate planned growth objectives throughout the State.			X
(B) To achieve the transportation objectives, it shall be the policy of this State to:			
(1) Design, program, and develop a multi-modal system in conformance with desired growth and physical development as stated in this chapter;			X
(2) Coordinate state, county, federal, and private transportation activities and programs toward the achievement of statewide objectives;			X
(3) Encourage a reasonable distribution of financial responsibilities for transportation among participating governmental and private parties;			X
(4) Provide for improved accessibility to shipping, docking, and storage facilities;			X
(5) Promote a reasonable level and variety of mass transportation services that adequately meet statewide and community needs;			X
(6) Encourage transportation systems that serve to accommodate present and future development needs of communities;			X
(7) Encourage a variety of carriers to offer increased opportunities and advantages to inter-island movement of people and goods;			X
(8) Increase the capacities of airport and harbor systems and support facilities to effectively accommodate transshipment and storage needs;			X
(9) Encourage the development of transportation systems and programs which would assist statewide economic growth and diversification;			X
(10) Encourage the design and development of transportation systems sensitive to the needs of affected communities and the quality of Hawaiʻi's natural environment;			X
(11) Encourage safe and convenient use of low-cost, energy-efficient, non-polluting means of transportation;			X
(12) Coordinate intergovernmental land use and transportation planning activities to ensure the timely delivery of supporting transportation infrastructure in order to accommodate planned growth objectives; and			X
(13) Encourage diversification of transportation modes and infrastructure to promote alternate fuels and energy efficiency.			X
Discussion: *While ASEF II supports the State's policies related to transportation systems, they are not directly applicable to the project.*			
226-18 Objectives and Policies for Facility Systems - Energy. (A) Planning for the State's facility systems with regard to energy shall be directed toward the achievement of the following objectives, giving due consideration to all:			
(1) Dependable, efficient, and economical statewide energy systems capable of supporting the needs of the people;	X		
(2) Increased energy security and self-sufficiency through the reduction and ultimate elimination of Hawaiʻi's dependence on imported fuels for electrical generation and ground transportation;	X		
(3) Greater diversification of energy generation in the face of threats to Hawaiʻi's energy supplies and systems;	X		
(4) Reduction, avoidance, or sequestration of greenhouse gas emissions from energy supply and use; and	X		
(5) Utility models that make the social and financial interests of Hawaiʻi's utility customers a priority.	X		
(B) To achieve the energy objectives, it shall be the policy of this State to ensure the provision of adequate, reasonably priced, and dependable energy services to accommodate demand. (C) To further achieve the energy objectives, it shall be the policy of this State to:			
(1) Support research and development as well as promote the use of renewable energy sources;	X		

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(2) Ensure that the combination of energy supplies and energy-saving systems is sufficient to support the demands of growth;			X
(3) Base decisions of least-cost supply-side and demand-side energy resource options on a comparison of their total costs and benefits when a least-cost is determined by a reasonably comprehensive, quantitative, and qualitative accounting of their long-term, direct and indirect economic, environmental, social, cultural, and public health costs and benefits;			X
(4) Promote all cost-effective conservation of power and fuel supplies through measures including: (A) Development of cost-effective demand-side management programs; (B) Education; and (C) Adoption of energy-efficient practices and technologies; (D) Increasing energy efficiency and decreasing energy use in public infrastructure;			X
(5) Ensure to the extent that new supply-side resources are needed, the development or expansion of energy systems utilizes the least-cost energy supply option and maximizes efficient technologies;	X		
(6) Support research, development, and demonstration of energy efficiency, load management, and other demand-side management programs, practices, and technologies;			X
(7) Promote alternate fuels and energy efficiency;			X
(8) Support actions that reduce, avoid, or sequester greenhouse gases in utility, transportation, and industrial sector applications;			X
(9) Support actions that reduce, avoid, or sequester Hawaiʻi's greenhouse gas emissions through agriculture and forestry initiatives;			X
(10) Provide priority handling and processing for all state and county permits required for renewable energy projects;			X
(11) Ensure that liquefied natural gas is used only as a cost-effective transitional, limited-term replacement of petroleum for electricity generation and does not impede the development and use of other cost-effective renewable energy sources; and			X
(12) Promote the development of indigenous geothermal energy resources that are located on public trust land as an affordable and reliable source of firm power for Hawaiʻi.			X
Discussion: *The goal of the ASEF II project is to create a cost efficient, commercial-scale solar photovoltaic project that can make a significant contribution to Hawaiʻi achieving its HCEI goals. The project will strengthen the capability of the State to provide a wide range of renewable energy products and achieve energy security and independence.*			
226-18.5 Objectives and Policies for Facility Systems - Telecommunications. (A) Planning for the State's telecommunications facility systems shall be directed towards the achievement of dependable, efficient, and economical statewide telecommunications systems capable of supporting the needs of the people. (B) To achieve the telecommunications objective, it shall be the policy of this State to ensure the provision of adequate, reasonably priced, and dependable telecommunications services to accommodate demand. (C) To further achieve the telecommunications objective, it shall be the policy of this State to:			
(1) Facilitate research and development of telecommunications systems and resources;			X
(2) Encourage public and private sector efforts to develop means for adequate, ongoing telecommunications planning;			X
(3) Promote efficient management and use of existing telecommunications systems and services; and			X
(4) Facilitate the development of education and training of telecommunications personnel.			X
Discussion: *While ASEF II supports the State's policies related to facility systems with regard to telecommunications, they are not directly applicable to the project.*			
226-19 Objectives and Policies for Socio-Cultural Advancement - Housing. (A) Planning for the State's socio-cultural advancement with regard to housing shall be directed toward the achievement of the following objectives:			
(1) Greater opportunities for Hawaiʻi's people to secure reasonably priced, safe, sanitary, and livable homes, located in suitable environments that satisfactorily accommodate the needs and desires of families and individuals, through collaboration and cooperation between government and nonprofit and for-profit developers to ensure that more affordable housing is made available to very low-, low- and moderate-income segments of Hawaiʻi's population.			X
(2) The orderly development of residential areas sensitive to community needs and other land uses.			X
(3) The development and provision of affordable rental housing by the State to meet the housing needs of Hawaiʻi's people.			X

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(B) To achieve the housing objectives, it shall be the policy of this State to:			
(1) Effectively accommodate the housing needs of Hawaiʻi's people.			X
(2) Stimulate and promote feasible approaches that increase housing choices for low-income, moderate-income, and gap-group households.			X
(3) Increase homeownership and rental opportunities and choices in terms of quality, location, cost, densities, style, and size of housing.			X
(4) Promote appropriate improvement, rehabilitation, and maintenance of existing housing units and residential areas.			X
(5) Promote design and location of housing developments taking into account the physical setting, accessibility to public facilities and services, and other concerns of existing communities and surrounding areas.			X
(6) Facilitate the use of available vacant, developable, and underutilized urban lands for housing.			X
(7) Foster a variety of lifestyles traditional to Hawaiʻi through the design and maintenance of neighborhoods that reflect the culture and values of the community.			X
(8) Promote research and development of methods to reduce the cost of housing construction in Hawaiʻi.			X
Discussion: *Residential development, such as new condominiums or conversion, is not proposed in the ASEF II project.*			
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.			X
(2) Maintenance of sanitary and environmentally healthful conditions in Hawaiʻi's communities.			X
(3) Elimination of health disparities by identifying and addressing social determinants of health.			X
(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.			X
(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.			X
(3) Encourage public and private efforts to develop and promote statewide and local strategies to reduce health care and related insurance costs.			X
(4) Foster an awareness of the need for personal health maintenance and preventive health care through education and other measures.			X
(5) Provide programs, services, and activities that ensure environmentally healthful and sanitary conditions.			X
(6) Improve the State's capabilities in preventing contamination by pesticides and other potentially hazardous substances through increased coordination, education, monitoring, and enforcement.			X
(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 Hawaiians, other Pacific Islanders, and Filipinos. The prioritization of affected demographic groups other than native Hawaiians may be reviewed every ten years and revised based on the best available epidemiological and public health data.			X
Discussion: *While ASEF II supports the State's policies related to socio-cultural advancement in regards to health, they are not directly applicable to the project.*			
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.			X
(2) Ensure the provision of adequate and accessible educational services and facilities that are designed to meet individual and community needs.			X
(3) Provide appropriate educational opportunities for groups with special needs.			X
(4) Promote educational programs which enhance understanding of Hawaiʻi's cultural heritage.			X

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(5) Provide higher educational opportunities that enable Hawaiʻi's people to adapt to changing employment demands.			X
(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.			X
(7) Promote programs and activities that facilitate the acquisition of basic skills, such as reading, writing, computing, listening, speaking, and reasoning.			X
(8) Emphasize quality educational programs in Hawaiʻi's institutions to promote academic excellence.			X
(9) Support research programs and activities that enhance the education programs of the State.			X
Discussion: *While ASEF II supports the State's policies related to socio-cultural advancement in regards to education, they are not directly applicable to the project.*			
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.			X
(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.			X
(3) Facilitate the adjustment of new residents, especially recently arrived immigrants, into Hawaiʻi's communities.			X
(4) Promote alternatives to institutional care in the provision of long-term care for elder and disabled populations.			X
(5) Support public and private efforts to prevent domestic abuse and child molestation, and assist victims of abuse and neglect.			X
(6) Promote programs which assist people in need of family planning services to enable them to meet their needs.			X
Discussion: *ASEF II supports the policies for government actions for socio-cultural advancement, social services. However, ASEF II is not directly applicable to these policies.*			
226-23 Objective and Policies for Socio-Cultural Advancement - Leisure. (A) Planning for the State's socio-cultural advancement with regard to leisure shall be directed towards the achievement of the objective of the adequate provision of resources to accommodate diverse cultural, artistic, and recreational needs for present and future generations. (B) To achieve the leisure objective, it shall be the policy of this State to:			
(1) Foster and preserve Hawaiʻi's multi-cultural heritage through supportive cultural, artistic, recreational, and humanities-oriented programs and activities.			X
(2) Provide a wide range of activities and facilities to fulfill the cultural, artistic, and recreational needs of all diverse and special groups effectively and efficiently.			X
(3) Enhance the enjoyment of recreational experiences through safety and security measures, educational opportunities, and improved facility design and maintenance.			X
(4) Promote the recreational and educational potential of natural resources having scenic, open space, cultural, historical, geological, or biological values while ensuring that their inherent values are preserved.			X
(5) Ensure opportunities for everyone to use and enjoy Hawaiʻi's recreational resources.			X
(6) Assure the availability of sufficient resources to provide for future cultural, artistic, and recreational needs.			X
(7) Provide adequate and accessible physical fitness programs to promote the physical and mental well-being of Hawaiʻi's people.			X
(8) Increase opportunities for appreciation and participation in the creative arts, including the literary, theatrical, visual, musical, folk, and traditional art forms.			X
(9) Encourage the development of creative expression in the artistic disciplines to enable all segments of Hawaiʻi's population to participate in the creative arts.			X
(10) Assure adequate access to significant natural and cultural resources in public ownership.			X

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Discussion: *ASEF II supports the policies for government actions for socio-cultural advancement, leisure. However, ASEF II is not directly applicable to these policies.*			
226-24 Objective and Policies for Socio-Cultural Advancement - Individual Rights and Personal Well-Being. (A) Planning for the State's socio-cultural advancement with regard to individual rights and personal well-being shall be directed towards achievement of the objective of increased opportunities and protection of individual rights to enable individuals to fulfill their socio-economic needs and aspirations. (B) To achieve the individual rights and personal well- being objective, it shall be the policy of this State to:			
(1) Provide effective services and activities that protect individuals from criminal acts and unfair practices and that alleviate the consequences of criminal acts in order to foster a safe and secure environment.			X
(2) Uphold and protect the national and state constitutional rights of every individual.			X
(3) Assure access to, and availability of, legal assistance, consumer protection, and other public services which strive to attain social justice.			X
(4) Ensure equal opportunities for individual participation in society.			X
Discussion: *ASEF II supports the policies for government actions for socio-cultural advancement in regards to individual rights and personal well-being. However, ASEF II is not directly applicable to these policies.*			
226-25 Objective and Policies for Socio-Cultural Advancement - Culture. (A) Planning for the State's socio- cultural advancement with regard to culture shall be directed toward the achievement of the objective of enhancement of cultural identities, traditions, values, customs, and arts of Hawaiʻi's people. (B) To achieve the culture objective, it shall be the policy of this State to:			
(1) Foster increased knowledge and understanding of Hawaiʻi's ethnic and cultural heritages and the history of Hawaiʻi.			X
(2) Support activities and conditions that promote cultural values, customs, and arts that enrich the lifestyles of Hawaiʻi's people and which are sensitive and responsive to family and community needs.			X
(3) Encourage increased awareness of the effects of proposed public and private actions on the integrity and quality of cultural and community lifestyles in Hawaiʻi.			X
(4) Encourage the essence of the aloha spirit in people's daily activities to promote harmonious relationships among Hawaiʻi's people and visitors.			X
Discussion: *ASEF II supports the state policies for socio-cultural advancement in regards to cultural advancement. However, ASEF II is not directly applicable to these policies.*			
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.			X
(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.			X
(3) Promotion of a sense of community responsibility for the welfare and safety of Hawaiʻi's people.			X
(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.			X
(2) Encourage increased community awareness and participation in public safety programs.			X
(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.			X
(2) Develop a coordinated, systematic approach to criminal justice administration among all criminal justice agencies.			X
(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.			X
(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.			X
(2) Enhance the coordination between emergency management programs throughout the State.			X

Table 5-2 HAWAIʻI STATE PLAN, HAWAIʻI REVISED STATUTES, CHAPTER 226 S = Supportive, N/S = Not Supportive, N/A = Not Applicable	S	N/S	N/A
Discussion: *ASEF II supports the state policies for the wellness and safety of the public. However, ASEF II is not directly applicable to these policies.*			
226-27 Objectives and Policies for Socio-Cultural Advancement - Government.			
(A) Planning the State's socio-cultural advancement with regard to government shall be directed towards the achievement of the following objectives:			
(1) Efficient, effective, and responsive government services at all levels in the State.			X
(2) Fiscal integrity, responsibility, and efficiency in the state government and county governments.			X
(B) To achieve the government objectives, it shall be the policy of this State to:			
(1) Provide for necessary public goods and services not assumed by the private sector.			X
(2) Pursue an openness and responsiveness in government that permits the flow of public information, interaction, and response.			X
(3) Minimize the size of government to that necessary to be effective.			X
(4) Stimulate the responsibility in citizens to productively participate in government for a better Hawaiʻi.			X
(5) Assure that government attitudes, actions, and services are sensitive to community needs and concerns.			X
(6) Provide for a balanced fiscal budget.			X
(7) Improve the fiscal budgeting and management system of the State.			X
(8) Promote the consolidation of state and county governmental functions to increase the effective and efficient delivery of government programs and services and to eliminate duplicative services wherever feasible.			X
Discussion: *Policies related to the operation of government are not directly applicable to the ASEF II project.*			
Hawai'i State Plan - HRS Ch. 226 - Part III. Priority Guideline			
226-101 Purpose. The purpose of this part is to establish overall priority guidelines to address areas of statewide concern.			
226-102 Overall Direction. The State shall strive to improve the quality of life for Hawaiʻi's present and future population through the pursuit of desirable courses of action in seven major areas of statewide concern which merit priority attention: economic development, population growth and land resource management, affordable housing, crime and criminal justice, quality education, principles of sustainability, and climate change adaptation.			
226-103 Economic Priority Guidelines.			
(A) Priority guidelines to stimulate economic growth and encourage business expansion and development to provide needed jobs for Hawaiʻi's people and achieve a stable and diversified economy:			
(1) Seek a variety of means to increase the availability of investment capital for new and expanding enterprises. (A) Encourage investments which:			
(i) Reflect long term commitments to the State;			X
(ii) Rely on economic linkages within the local economy;			X
(iii) Diversify the economy;			X
(iv) Reinvest in the local economy;			X
(v) Are sensitive to community needs and priorities; and	X		
(vi) Demonstrate a commitment to provide management opportunities to Hawai'i residents.			X
(B) Encourage the expansion of technological research to assist industry development and support the development and commercialization of technological advancements.			X
(i) Present or former residents acting as entrepreneurs or principals;			X
(ii) Academic support from an institution of higher education in Hawaiʻi;			X
(iii) Investment interest from Hawaiʻi residents;			X
(iv) Resources unique to Hawaiʻi that are required for innovative activity; and			X
(v) Complementary or supportive industries or government programs or projects.			X
(2) Encourage the expansion of technological research to assist industry development and support the development and commercialization of technological advancements.			X
(3) Improve the quality, accessibility, and range of services provided by government to business, including data and reference services and assistance in complying with governmental regulations.			X
(4) Seek to ensure that state business tax, labor laws, and administrative policies are equitable, rational, and predictable.			X

Table 5-2 HAWAIʻI STATE PLAN, HAWAIʻI REVISED STATUTES, CHAPTER 226 S = Supportive, N/S = Not Supportive, N/A = Not Applicable	S	N/S	N/A
(5) Streamline the building and development permit and review process, and eliminate or consolidate other burdensome or duplicative governmental requirements imposed on business, where public health, safety and welfare would not be adversely affected.			X
(6) Encourage the formation of cooperatives and other favorable marketing or distribution arrangements at the regional or local level to assist Hawaiʻi's small-scale producers, manufacturers, and distributors.			X
(7) Continue to seek legislation to protect Hawai'i from transportation interruptions between Hawai'i and the continental United States.			X
(8) Provide public incentives and encourage private initiative to develop and attract industries which promise long-term growth potentials and which have the following characteristics:			
(A) An industry that can take advantage of Hawaiʻi's unique location and available physical and human resources.	X		
(B) A clean industry that would have minimal adverse effects on Hawaiʻi's environment.	X		
(C) An industry that is willing to hire and train Hawaiʻi's people to meet the industry's labor needs at all levels of employment.	X		
(D) An industry that would provide reasonable income and steady employment.	X		
(9) Support and encourage, through educational and technical assistance programs and other means, expanded opportunities for employee ownership and participation in Hawai'i business.			X
(10) Enhance the quality of Hawaiʻi's labor force and develop and maintain career opportunities for Hawaiʻi's people through the following actions:			
(A) Expand vocational training in diversified agriculture, aquaculture, information industry, and other areas where growth is desired and feasible.			X
(B) Encourage more effective career counseling and guidance in high schools and post-secondary institutions to inform students of present and future career opportunities.			X
(C) Allocate educational resources to career areas where high employment is expected and where growth of new industries is desired.			X
(D) Promote career opportunities in all industries for Hawaiʻi's people by encouraging firms doing business in the State to hire residents.			X
(E) Promote greater public and private sector cooperation in determining industrial training needs and in developing relevant curricula and on- the-job training opportunities.			X
(F) Provide retraining programs and other support services to assist entry of displaced workers into alternative employment.			X
(B) Priority guidelines to promote the economic health and quality of the visitor industry:			
(1) Promote visitor satisfaction by fostering an environment which enhances the Aloha Spirit and minimizes inconveniences to Hawaiʻi's residents and visitors.			X
(2) Encourage the development and maintenance of well- designed, adequately serviced hotels and resort destination areas which are sensitive to neighboring communities and activities and which provide for adequate shoreline setbacks and beach access.			X
(3) Support appropriate capital improvements to enhance the quality of existing resort destination areas and provide incentives to encourage investment in upgrading, repair, and maintenance of visitor facilities.			X
(4) Encourage visitor industry practices and activities which respect, preserve, and enhance Hawaiʻi's significant natural, scenic, historic, and cultural resources.			X
(5) Develop and maintain career opportunities in the visitor industry for Hawaiʻi's people, with emphasis on managerial positions.			X
(6) Support and coordinate tourism promotion abroad to enhance Hawaiʻi's share of existing and potential visitor markets.			X
(7) Maintain and encourage a more favorable resort investment climate consistent with the objectives of this chapter.			X
(8) Support law enforcement activities that provide a safer environment for both visitors and residents alike.			X
(9) Coordinate visitor industry activities and promotions to business visitors through the state network of advanced data communication techniques.			X
(C) Priority guidelines to promote the continued viability of the sugar and pineapple industries:			
(1) Provide adequate agricultural lands to support the economic viability of the sugar and pineapple industries.			X
(2) Continue efforts to maintain federal support to provide stable sugar prices high enough to allow profitable operations in Hawai'i.			X

Table 5-2 HAWAIʻI STATE PLAN, HAWAIʻI REVISED STATUTES, CHAPTER 226 S = Supportive, N/S = Not Supportive, N/A = Not Applicable	S	N/S	N/A
(3) Support research and development, as appropriate, to improve the quality and production of sugar and pineapple crops.			X
(D) Priority guidelines to promote the growth and development of diversified agriculture and aquaculture:			
(1) Identify, conserve, and protect agricultural and aquacultural lands of importance and initiate affirmative and comprehensive programs to promote economically productive agricultural and aquacultural uses of such lands.			X
(2) Assist in providing adequate, reasonably priced water for agricultural activities.			X
(3) Encourage public and private investment to increase water supply and to improve transmission, storage, and irrigation facilities in support of diversified agriculture and aquaculture.			X
(4) Assist in the formation and operation of production and marketing associations and cooperatives to reduce production and marketing costs.			X
(5) Encourage and assist with the development of a waterborne and airborne freight and cargo system capable of meeting the needs of Hawaiʻi's agricultural community.			X
(6) Seek favorable freight rates for Hawaiʻi's agricultural products from inter-island and overseas transportation operators.			X
(7) Encourage the development and expansion of agricultural and aquacultural activities which offer long-term economic growth potential and employment opportunities.			X
(8) Continue the development of agricultural parks and other programs to assist small independent farmers in securing agricultural lands and loans.			X
(9) Require agricultural uses in agricultural subdivisions and closely monitor the uses in these subdivisions.			X
(10) Support the continuation of land currently in use for diversified agriculture.			X
(11) Encourage residents and visitors to support Hawaiʻi's farmers by purchasing locally grown food and food products.			X
(E) Priority guidelines for water use and development:			
(1) Maintain and improve water conservation programs to reduce the overall water consumption rate.			X
(2) Encourage the improvement of irrigation technology and promote the use of non-potable water for agricultural and landscaping purposes.			X
(3) Increase the support for research and development of economically feasible alternative water sources.			X
(4) Explore alternative funding sources and approaches to support future water development programs and water system improvements.			X
(F) Priority guidelines for energy use and development:			
(1) Encourage the development, demonstration, and commercialization of renewable energy sources.	X		
(2) Initiate, maintain, and improve energy conservation programs aimed at reducing energy waste and increasing public awareness of the need to conserve energy.			X
(3) Provide incentives to encourage the use of energy conserving technology in residential, industrial, and other buildings.			X
(4) Encourage the development and use of energy conserving and cost-efficient transportation systems.			X
(G) Priority guidelines to promote the development of the information industry:			
(1) Establish an information network that will serve as the catalyst for establishing a viable information industry in Hawai'i.			X
(2) Encourage the development of services such as financial data processing, products and services exchange, foreign language translations, telemarketing, teleconferencing, a twenty-four-hour international stock exchange, international banking, and a Pacific Rim management center.			X
(3) Encourage the development of small businesses in the information field such as software development, the development of new information systems and peripherals, data conversion and data entry services, and home or cottage services such as computer programming, secretarial, and accounting services.			X
(4) Encourage the development or expansion of educational and training opportunities for residents in the information and telecommunications fields.			X
(5) Encourage research activities, including legal research in the information and telecommunications fields.			X
(6) Support promotional activities to market Hawaiʻi's information industry services.			X
(7) Encourage the location or co-location of telecommunication or wireless information relay facilities in the community, including public areas, where scientific evidence indicates that the public health, safety, and welfare would not be adversely affected.			X

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Discussion: *ASEF II supports the Hawai'i State Plan Priority Guideline Policies related to sensitivity to communities' needs and priorities; industries with a promise for long-term growth, regarding economic priority guidelines; and encouraging the development, demonstration, and commercialization of renewable energy sources. The project has engaged with the community (individuals and organizations) throughout the planning phase, particularly as it relates to the preservation and care of cultural and historic resources present on the site. With respect to the cultural and historic sites and the proposed archaeological preserve, ASEF II will be developed in a site appropriate manner to generate renewable solar energy. The generation of renewable energy at ASEF II will help to promote the commercial viability and growth of the renewable energy sector in Hawai'i.*			
226-104 Population Growth and Land Resources Priority Guidelines.			
(A) Priority guidelines to effect desired statewide growth and distribution:			
(1) Encourage planning and resource management to insure that population growth rates throughout the State are consistent with available and planned resource capacities and reflect the needs and desires of Hawai'i's people.			X
(2) Manage a growth rate for Hawai'i's economy that will parallel future employment needs for Hawai'i's people.			X
(3) Ensure that adequate support services and facilities are provided to accommodate the desired distribution of future growth throughout the State.			X
(4) Encourage major state and federal investments and services to promote economic development and private investment to the neighbor islands, as appropriate.			X
(5) Explore the possibility of making available urban land, low-interest loans, and housing subsidies to encourage the provision of housing to support selective economic and population growth on the neighbor islands.			X
(6) Seek federal funds and other funding sources outside the State for research, program development, and training to provide future employment opportunities on the neighbor islands.			X
(7) Support the development of high technology parks on the neighbor islands.			X
(B) Priority guidelines for regional growth distribution and land resource utilization:			
(1) Encourage urban growth primarily to existing urban areas where adequate public facilities are already available or can be provided with reasonable public expenditures, and away from areas where other important benefits are present, such as protection of important agricultural land or preservation of lifestyles.			X
(2) Make available marginal or nonessential agricultural lands for appropriate urban uses while maintaining agricultural lands of importance in the agricultural district.			X
(3) Restrict development when drafting of water would result in exceeding the sustainable yield or in significantly diminishing the recharge capacity of any groundwater area.			X
(4) Encourage restriction of new urban development in areas where water is insufficient from any source for both agricultural and domestic use.			X
(5) In order to preserve green belts, give priority to state capital-improvement funds which encourage location of urban development within existing urban areas except where compelling public interest dictates development of a noncontiguous new urban core.			X
(6) Seek participation from the private sector for the cost of building infrastructure and utilities, and maintaining open spaces.			X
(7) Pursue rehabilitation of appropriate urban areas.			X
(8) Support the redevelopment of Kaka'ako into a viable residential, industrial, and commercial community.			X
(9) Direct future urban development away from critical environmental areas or impose mitigating measures so that negative impacts on the environment would be minimized.			X
(10) Identify critical environmental areas in Hawai'i to include but not be limited to the following: watershed and recharge areas; wildlife habitats (on land and in the ocean); areas with endangered species of plants and wildlife; natural streams and water bodies; scenic and recreational shoreline resources; open space and natural areas; historic and cultural sites; areas particularly sensitive to reduction in water and air quality; and scenic resources.			X
(11) Identify all areas where priority should be given to preserving rural character and lifestyle.			X
(12) Utilize Hawai'i's limited land resources wisely, providing adequate land to accommodate projected population and economic growth needs while ensuring the protection of the environment and the availability of the shoreline, conservation lands, and other limited resources for future generations.			X
(13) Protect and enhance Hawai'i's shoreline, open spaces, and scenic resources.			X
Discussion: *ASEF II supports the Hawai'i State Plan Priority Guideline Policy regarding population and land growth priority guidelines. However, ASEF II is not directly applicable to these policies.*			

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226-105 Crime and Criminal Justice Priority Guidelines.			
(A) Priority Guidelines in the Area of Crime and Criminal Justice:			
(1) Support law enforcement activities and other criminal justice efforts that are directed to provide a safer environment.			X
(2) Target state and local resources on efforts to reduce the incidence of violent crime and on programs relating to the apprehension and prosecution of repeat offenders.			X
(3) Support community and neighborhood program initiatives that enable residents to assist law enforcement agencies in preventing criminal activities.			X
(4) Reduce overcrowding or substandard conditions in correctional facilities through a comprehensive approach among all criminal justice agencies which may include sentencing law revisions and use of alternative sanctions other than incarceration for persons who pose no danger to their community.			X
(5) Provide a range of appropriate sanctions for juvenile offenders, including community-based programs and other alternative sanctions.			X
(6) Increase public and private efforts to assist witnesses and victims of crimes and to minimize the costs of victimization.			X
Discussion: *ASEF II supports the Hawaiʻi State Plan Priority Guideline Policy regarding crime and criminal justice priority guidelines. However, ASEF II is not directly applicable to these policies.*			
226-106 Affordable Housing Priority Guidelines.			
(A) Priority guidelines for the provision of affordable housing:			
(1) Seek to use marginal or nonessential agricultural land and public land to meet housing needs of low- and moderate-income and gap-group households.			X
(2) Encourage the use of alternative construction and development methods as a means of reducing production costs.			X
(3) Improve information and analysis relative to land availability and suitability for housing.			X
(4) Create incentives for development which would increase home ownership and rental opportunities for Hawaiʻi's low- and moderate-income households, gap-group households, and residents with special needs.			X
(5) Encourage continued support for government or private housing programs that provide low interest mortgages to Hawaiʻi's people for the purchase of initial owner- occupied housing.			X
(6) Encourage public and private sector cooperation in the development of rental housing alternatives.			X
(7) Encourage improved coordination between various agencies and levels of government to deal with housing policies and regulations.			X
(8) Give higher priority to the provision of quality housing that is affordable for Hawaiʻi's residents and less priority to development of housing intended primarily for individuals outside of Hawaiʻi.			X
Discussion: *ASEF II supports the Hawaiʻi State Plan Priority Guideline Policy of affordable housing; however, this policy does not apply to the project.*			
226-107 Quality Education Priority Guidelines.			
(A) Priority guidelines to promote quality education:			
(1) Pursue effective programs which reflect the varied district, school, and student needs to strengthen basic skills achievement;			X
(2) Continue emphasis on general education "core" requirements to provide common background to students and essential support to other university programs;			X
(3) Initiate efforts to improve the quality of education by improving the capabilities of the education work force;			X
(4) Promote increased opportunities for greater autonomy and flexibility of educational institutions in their decision-making responsibilities;			X
(5) Increase and improve the use of information technology in education by the availability of telecommunications equipment for:			X
(a) The electronic exchange of information.			X
(b) Statewide electronic mail.			X
(c) Access to the Internet.			X
Encourage programs that increase the public's awareness and understanding of the impact of information technologies on our lives;			X
(6) Pursue the establishment of Hawaiʻi's public and private universities and colleges as research and training centers of the Pacific;			X
(7) Develop resources and programs for early childhood education;			X

Table 5-2 HAWAIʻI STATE PLAN, HAWAIʻI REVISED STATUTES, CHAPTER 226 S = Supportive, N/S = Not Supportive, N/A = Not Applicable	S	N/S	N/A
(8) Explore alternatives for funding and delivery of educational services to improve the overall quality of education; and			X
(9) Strengthen and expand educational programs and services for students with special needs.			X
Discussion: *ASEF II supports the Hawaiʻi State Plan Priority Guideline Policy regarding quality education; however, this policy does not apply to the project.*			
226-108 Sustainability Priority Guidelines. (A) Priority guidelines to promote sustainability shall include:			
(1) Encourage balanced economic, social, community, and environmental priorities;			X
(2) Encourage planning that respects and promotes living within the natural resources and limits of the State;	X		
(3) Promote a diversified and dynamic economy;			X
(4) Encourage respect for the host culture;			X
(5) Promote decisions based on meeting the needs of the present without compromising the needs of future generations;	X		
(6) Consider the principles of the ahupuaʻa system; and			X
(7) Emphasize that everyone, including individuals, families, communities, businesses, and government, has the responsibility for achieving a sustainable Hawaiʻi.			X
Discussion: *ASEF II supports the Hawaiʻi State Plan Priority Guideline Policy regarding sustainability. The planning for this project, as evaluated and discussed in Section 3.0 of this EA, encourages and promotes living within the natural resources and limits of this State through reducing the State's reliance on fossil fuels and increasing renewable energy production. The provision of renewable sources of energy that does not harm the resources of future generations is one of the main goals of this project.*			
226-109 Climate Change Adaptation Priority Guidelines. (A) Priority guidelines to prepare the State to address the impacts of climate change, including impacts to the areas of agriculture; conservation lands; coastal and nearshore marine areas; natural and cultural resources; education; energy; higher education; health; historic preservation; water resources; the built environment, such as housing, recreation, transportation; and the economy shall:			
(1) Ensure that Hawaiʻi's people are educated, informed, and aware of the impacts climate change may have on their communities;			X
(2) Encourage community stewardship groups and local stakeholders to participate in planning and implementation of climate change policies;			X
(3) Invest in continued monitoring and research of Hawaiʻi's climate and the impacts of climate change on the State;			X
(4) Consider native Hawaiian traditional knowledge and practices in planning for the impacts of climate change;			X
(5) Encourage the preservation and restoration of natural landscape features, such as coral reefs, beaches and dunes, forests, streams, floodplains, and wetlands, that have the inherent capacity to avoid, minimize, or mitigate the impacts of climate change;			X
(6) Explore adaptation strategies that moderate harm or exploit beneficial opportunities in response to actual or expected climate change impacts to the natural and built environments;			X
(7) Promote sector resilience in areas such as water, roads, airports, and public health, by encouraging the identification of climate change threats, assessment of potential consequences, and evaluation of adaptation options;			X
(8) Foster cross-jurisdictional collaboration between county, state, and federal agencies and partnerships between government and private entities and other nongovernmental entities, including nonprofit entities;			X
(9) Use management and implementation approaches that encourage the continual collection, evaluation, and integration of new information and strategies into new and existing practices, policies, and plans; and			X
(10) Encourage planning and management of the natural and built environments that effectively integrate climate change policy.			X
Discussion: *ASEF II supports the Hawaiʻi State Plan Priority Guideline Policy regarding climate change adaptation; however, this policy does not apply to the project.*			

5.2.2 State of Hawaiʻi Office of Planning, Technical Assistance Memorandum (TAM-2016-1)

In August 2016, the State of Hawaiʻi Office of Planning issued a Technical Assistance Memorandum on that discusses FAA Order 5190.6B in regards to the use of land adjacent to or in the immediate vicinity of Hawaiʻi's airports. FAA Order 5190.6B's main goal is to ensure compatible land uses near federally

obligated airports. Compatibility is determined by noise level, hazardous attraction of wildlife, glint and glare, structure height, and compatibility with avigation easements.

The TAM-2016-1 specifically cites concerns about concentrated solar power (CSP) systems impacts to safe navigation including: 1) potential glare and glint caused by parabolic troughs and heliostats that might cause temporary loss of vision to pilots on arrival or departure, or to Air Traffic Control personnel in the control tower; 2) electromagnetic interference with on-and off-airport radar systems that may pick up a false signal from the metal components of the mirrors with impacts that can vary based on solar tracking activity; 3) Physical penetrations of navigable airspace from power towers that extend into Part 77 imaginary surfaces, terminal instrument procedures (TERPS) surfaces, or the path of radio emitting navigational aids; 4) thermal plumes emitted by the power tower that produce unexpected upward moving air columns into navigable air space; 5) proposed footprint to be developed within 3 nautical miles of the airport or approaching one-acre to submit a 7460-1.

Per Hawai'i Revised Statutes (HRS) Chapter 262, the Airport Zoning Act, it is necessary in the interest of the public health, public safety, and general welfare that the creation, maintenance, or establishment of airport hazards be prevented as the airport hazards are a public nuisance and an injury to the community served by an airport.

Discussion: *The project facilities and features have been designed to comply with FAA Order 5190.6B. The ASEF II project will continue ongoing coordination with the FAA throughout the project to ensure regulatory compliance. A glint/glare study has been included as a part of this report as Appendix D in order to comply with FAA Order 5190.6B, including multiple approach analyses. The project has no standing waters or potentially hazardous land use practices which could attract wildlife on-site to create potentially hazardous conditions for aircraft approaches at the Kalaeloa Airport.*

The project will be a fixed tilt photovoltaic system and, as such, will not have any of the components associated with a CSP system to include parabolic troughs, heliostats, mirrors, or towers. No electromagnetic interference with on-and off-airport radar systems is anticipated. There is also no power tower, thermal plumes, or any sources of unexpected upward moving air columns that would interfere with navigable air space.

In compliance with HRS Chapter 262, the Airport Zoning Act, any potential airport hazards such as glint, glare, or potential wildlife attracting elements have been reviewed in this report, and mitigation measures to reduce impacts have been outlined in Appendix C (Biological Survey) and Appendix D (Glint/Glare Study).

Per the KCDD rules, a PV farm is a compatible use in the designated T2 Rural/Open Space transect overlay zone.

5.2.3 Hawai'i State Land Use District Boundaries, HRS Chapter 205

Under HRS, Chapter 205, all lands in Hawai'i are classified into four land use districts: (1) Conservation, (2) Agricultural; (3) Urban, and (4) Rural. The State Land Use Commission (LUC) is responsible for each district's standards and for determining the boundaries of each district (Chapter 205-2(a), HRS). The LUC is also responsible for administering all requests for district reclassifications

and/or amendments to district boundaries, pursuant to Chapter 205-4, HRS, and the HAR, Title 15, Chapter 15 as amended.

Discussion: *The project area is within the State Urban land use district. The ASEF II project is consistent with allowable uses in the Urban district.*

5.2.4 2050 Sustainability Plan

In 2005, the Hawai'i State Legislature determined that the State of Hawai'i should be responsible not only for resolving current public needs but provide guidance to assure that the preferred vision and goals for our future are met. The Hawai'i 2050 Sustainability Plan (Hawai'i 2050) is the result of that effort which creates a long-term action agenda for achieving sustainability in Hawai'i. Sustainability under the Hawai'i 2050 seeks to achieve the following: 1) respects the culture, character, and beauty, and history of our state's island communities; 2) strikes a balance among economic, social and community, and economic priorities; and 3) meets the needs of the present without compromising the ability of future generations to meet their own needs. One of five goals within the Hawai'i 2050 includes the necessity that our natural resources are responsibility used, replenished, and preserved for future generations. Under this goal, one of the strategic actions includes the reduction of and reliance on fossil (carbon-based) fuels by expanding renewable energy opportunities.

Discussion: *The ASEF II project will provide reliable and clean renewable energy for Hawai'i. The project is consistent with the Hawai'i 2050 by contributing to the reduction of and reliance on fossil fuels.*

5.2.5 Hawai'i Clean Energy Initiative

Launched in 2008, the Hawai'i Clean Energy Initiative (HCEI) is a partnership between the State of Hawai'i and the U.S. Department of Energy in the effort to achieve energy independence. The goal of the HCEI is to achieve 100 percent clean energy by 2045. The HCEI has three priorities that are critical to achieving the 2045 goal, which include:

- Transforming the regulatory framework environment to facilitate clean energy development.
- Collaborating with island utility companies to increase renewable energy generation.
- Integrating renewable energy into utility grids.

Discussion: *The ASEF II project will help the State of Hawai'i achieve its renewable energy goals under the HCEI. The project is an approved HECO Tier III Feed In-Tariff project with a 5MWac capacity that is anticipated to generate enough power to meet the needs of approximately 1,250 homes. Its production of renewable energy will be integrated into HECO's utility grid through the provision of a 12-kV interim distribution line that would extend along CSR to HECO's terminus on the north side of Roosevelt Avenue.*

5.2.6 Hawai'i Community Development Authority, HRS Chapter 206E

In summary, the HCDA, as a State agency, was established to supplement traditional community renewal methods by promoting and coordinating public and private sector community development. The creation of the entity was to plan for the future development of underutilized urban areas in

Hawai'i. The Legislature first designated the Kaka'ako area of Honolulu as the Authority's first Community Development District. In 2002, the role of HCDA was expanded to redeveloping the 3,700-acre of the KCDD in which the ASEF II project will reside. In 2011, HCDA was designated as the local redevelopment authority of approximately 400 acres of land in He'eia, O'ahu as part of a land exchange with then Bernice Pauahi Bishop Estate to facilitate culturally appropriate agriculture, education, and natural-resource restoration and management of the area's wetlands.

In September 2012, Hawai'i Administrative Rules (HAR) Chapter 15-215 were adopted for HCDA to protect and promote the public health, safety, and general welfare of the community and to protect and preserve places and areas of historical, cultural, architectural, or environmental importance and significance. These rules carry out the visions and concepts of the Kalaeloa Master Plan by classifying and regulating the types and intensities of development and land uses within the KCCD, consistent with the policies and objectives of HRS, 206E, which defines the purpose, powers, and program of the HCDA.

Discussion: As the ASEF II project parcel is within the HCDA KCDD, it is regulated per HAR Chapter 15-215. The ASEF II project is consistent with allowable uses in the Kalaeloa Community Development District, which is the current regulating plan for the district, as it is located in a T2 – Rural/Open Space transect overlay zone. The project will require an approved Development Permit by HCDA as the project is greater than 40,000 SF in total. HCDA will review the application and if approved, the Development Permit would be in effect for two years.

5.2.7 Kalaeloa Master Plan

In 2006, the HCDA prepared the Kalaeloa Master Plan to identify a course towards transforming Kalaeloa as a Wahi Ho'okela- a Center of Excellence within the 'Ewa region. The Kalaeloa Master Plan (KMP) is intended to serve as an amendment to the existing Kalaeloa Community Redevelopment Plan that was prepared as part of the U.S. Navy's Base Realignment & Closure (BRAC) process. The plan includes a regional economic analysis, infrastructural analysis, cash-flow model, noise study, land uses and urban design guidelines, and an assessment of the impacts to the area proposed by the U.S. Department of Defense (DOD) for the homeporting of an aircraft carrier strike group at Pearl Harbor. The vision of the KMP identifies opportunities that define the conceptual framework for the area's future land use plan. The opportunities include the following:

- Creating social value
- Providing new economic development & employment opportunities
- Balancing development
- Addressing regional traffic congestion
- Protecting open space and cultural and natural resources
- Integrating the possibility of military reuse

The KMP identifies the opportunity for developing alternative energy or ecological sustainable development at Kalaeloa, including solar energy generation.

Discussion: *The proposed ASEF II project would meet the objectives of the KMP through providing environmentally compatible development that protects open space and provides a source of alternative energy for Oʻahu and for the power demand needs within the Kalaeloa Community Development District. Section 3.2.2 of the KMP cites renewable energy, including solar energy generation in particular, as alternatives to continuing escalating fossil fuel energy prices, and potential development opportunities for Kalaeloa.*

The KMP zoning map shows the project area located in a space designated for Open Space/Recreation, specifically recreation and cultural uses. The project's protection of historical, archaeological, and cultural resources as described in EA Sections 3.14 and 3.15, along with its lack of tall structures that obscure view planes and open space, complies with the intent of this zoning. Also, the ASEF II project is consistent with allowable uses in the Kalaeloa Community Development District, which is the current regulating plan for the district, as it is located in an area designated as part of a T2 – Rural/Open Space transect overlay zone which includes PV energy farms as an allowable use.

5.2.8 Kalaeloa Airport Master Plan

In 1999, the future use of the NASBP was determined by the NASBP Redevelopment Commission's decision to transfer a portion of the Base to the State for use as a civilian public-use general aviation reliever airport. The State DOT-Airports, working with the Redevelopment Commission, created an Airport Master Plan to accommodate the various aviation needs identified for the Kalaeloa Airport.

The master plan's main objective is to help relieve Honolulu International Airport of its congestion and prevent potential delays by making Kalaeloa Airport available as a reliever airport for public-use general aviation. The master plan's objectives provide facilities for U.S. Coast Guard, Hawaiʻi National Guard, and University of Hawaiʻi training activities. Other goals of the master plan include providing jobs and providing space for other new aviation related revenue producing facilities.

The Kalaeloa Airport Master Plan aims to retain compatibility with other existing and planned uses in the area. The Master Plan states it retains a large amount of land for a regional park, recreational activities, and public access to the beach and shoreline. It has a smaller noise footprint than the previous military airfield, and maximizes aircraft takeoffs and landings over water to provide land use compatibility benefits for adjacent properties.

Discussion: *The ASEF II project site parcel and proposed 12 kV interim line area located outside of any avigation easements or controlled activity areas as listed on the Kalaeloa Airport Master Plan. The distribution line portion of the project does not conflict with any avigation easements. The portion of the distribution line that crosses the avigation easement area near San Juacinto Street is planned to be located underground as not to conflict with height restrictions in place for the adjacent runway approach.*

5.3 CITY AND COUNTY OF HONOLULU

The City and County of Honolulu guides and directs land use and development on the island of Oʻahu through a three-tier system: 1) the General Plan; 2) Development Plans and Sustainable Communities Plans for each of the eight geographical regions which include the Primary Urban Center, ʻEwa, Central Oʻahu, Waiʻanae, North Shore, Koʻolau Loa, Koʻolau Poko, and East Honolulu; and 3) the Land Use Ordinance or what is also referred to as the zoning code.

5.3.1 City and County of Honolulu – General Plan

Adopted by resolution in October 2002, the revised edition of the General Plan for the City and County of Honolulu sets forth the long-range objectives for the general welfare and prosperity of the people of Oʻahu and broad policies to attain those objectives. The applicable objectives under the General Plan's section on Energy include:

Objective A: To maintain an adequate, dependable, and economical supply of energy for Oʻahu residents.
Objective B: To conserve energy through the more efficient management of its use.
Objective C: To fully utilize proven alternative sources of energy.
Objective D: To develop and apply new, locally available energy resources.

Discussion: *The ASEF II project supports the long-range energy objectives of the City and County of Honolulu General Plan. The project will provide a new, local, dependable supply of alternative energy, helping to reduce the Oʻahu's rate of fossil fuel consumption and to move the island towards energy self-sufficiency.*

5.3.2 City and County of Honolulu – ʻEwa Development Plan

The ʻEwa Development Plan (EDP), as revised in 2013, amplifies the critical role that the area of ʻEwa has and continues to play in the implementation of directed growth policies of the General Plan. As a secondary employment center with its nucleus in Kapolei, the area of ʻEwa is considered an area for continued growth in providing both primary employment activities inclusive of resort and diversified agriculture, while providing significant residential development to meet the projected future housing needs on island. The EDP calls for the protection of agricultural lands and open space as well as natural and cultural resources while seeking to balance the needs of a secondary urban center with supportive master planned residential communities and adequate infrastructure.

The area that once comprised the former NASBP is identified as Kalaeloa in the EDP and is designated as a Special Area. In 2000, under the guidelines of the Federal BRAC, the Kalaeloa Redevelopment Plan was initially adopted as a Special Area Plan for the EDP. In July 2002, the State Legislature transferred responsibility for Kalaeloa to HCDA, which operationalizes its management of the area under the 2006 KMP (see Section 5.7 for more details). According to the 2013 EDP, HCDA was to have submitted the 2006 KMP as the revised Special Area Plan for the EDP. Formal adoption of the KMP into the EDP is still pending.

Approval for all development projects in Kalaeloa should be based on the extent to which the project supports the policies and guidelines of the EDP but guided by KMP.

Discussion: *The ASEF II project is consistent with the KMP which is a Special Area Plan under the EDP. The EDP identifies the project area as part of a park/open space setting. The project is compliant with the current KCDD regulating plan, as the project parcel is shown in a rural/open space zone as discussed in Section 5.9.*

6.0 FINDINGS SUPPORTING ANTICIPATED DETERMINATION

6.0 FINDINGS SUPPORTING ANTICIPATED DETERMINATION

6.1 SUMMARY OF MITIGATION MEASURES

Table 6-1 provides a summary of the potential environmental impacts that may result from implementation of the proposed project and the mitigation measures proposed to minimize these effects. Proposed mitigation measures for the project have reduced the potential for impacts below the threshold of significance.

TABLE 6-1 SUMMARY OF MITIGATION MEASURES

Section	Potential Impact	Proposed Mitigation	Significance after Mitigation
Topography	Soil erosion, fugitive dust	Implement BMPs	NSI
Soils and Geologic	NI	-	NI
Climate	NI	-	NI
Natural Hazards	Flooding, tsunami, seismic	Conform to building codes	NSI
Flora and Fauna	Protected seabirds and bats	Lighting, construction protection/mitigation	NSI
Air Quality	Fugitive dust from construction	Dust Control Plan	NSI
Noise	Construction noise	Limit to daytime hours	NSI
Utilities and Infrastructure	Construction drainage runoff, waste, storm water	Construction BMPs, NPDES permit	NSI
Hazardous Waste	NI	-	NI
Electrical and Communications	Additional sustainable power generation for City and County	-	NI
Traffic and Roadways	Limited during construction	-	NSI
Parking	NI	-	NI
Socio-Economic	Positive economic benefits	-	+PSI
Land Use Constraints	Navigable Airspace	Consult FAA	NSI
Public Facilities and Services	NSI	-	NSI
Historical and Archaeological Resources	NSI with potential discovery of unidentified sites during subgrade work.	Preservation plan, burial treatment plan, archaeological monitoring plan w/ SHPD coordination	NSI
Cultural Resources	NSI		NSI
Visual Resources	NSI	-	NSI

NI - No Impact
NSI - No Significant Impact
PtSI- Potentially Significant Impact
SI - Significant Impact
+PSI – Positive Significant Impact

6.2 ANTICIPATED DETERMINATION

After reviewing the significance criteria outlined in Chapter 343, HRS, and Section 11-200-12, State Administrative Rules, Contents of EA, the proposed action has been determined to not result in significant adverse effects on the natural or human environment. A Finding of No Significant Impact is anticipated (FONSI).

6.3 REASONS SUPPORTING THE ANTICIPATED DETERMINATION

The potential impacts of the ASEF II project have been fully examined and discussed in this ~~Draft~~ Final EA. As stated earlier, there are no significant environmental impacts expected to result from the proposed action. This determination is based on the assessments as presented below for criterion (1) to (13).

(1) Involve an irrevocable loss or destruction of any natural or cultural resources.

Natural and cultural resources have been documented in studies conducted specifically for the two distinct project areas. As detailed in Section 3.14 and 3.15 of this report, the project does not involve any known loss or destruction of existing natural, cultural, archeological or historical resources (*Appendix E, Appendix F,* and *Appendix G*). Twenty-three historic properties comprised of 146 features were newly identified as a result of the project's initial development efforts. Two previously identified sites were re-located (State Sites 50-80-12-5119 and 5080-12-5120). These sites have been evaluated for significance, as outlined in HAR Chapter13-275-6.

All sites have been assessed as significant under 'Criterion d,' with State Sites 50-80-12-7483, Feature 4, and State Site 50-80-12-7486, Feature 2, also being assessed as Significant under 'Criterion e' due to the possible presence of a human burial. All sites documented during this study are recommended for Preservation. These include State Site 50-80-12-7486, Feature 5 and State Site 50-80-12-7491, Feature 1, both coastal trail segments.

Four mitigation measures are recommended to address the potential for construction of the solar farm to adversely affect historic properties. These consist of (1) a preservation plan for all historic properties recommended for preservation (see Table 1); (2) a burial treatment plan for Site 7483, Feature 4 and for Site 7486, Feature 2 which have been identified as probable burial features; (3) a data recovery plan for Site 7487, Features 2A-2C and for Site 7502, Feature 1; and (4) an archaeological monitoring plan for on-site monitoring during all project-related ground disturbing activities to address any potential subsurface historic properties that may be encountered and to ensure that the sites recommended for preservation are not adversely impacted during construction.

The field inspection for the distribution line work area found no historic properties within the CSR ROW. SHPD will need to complete the historic preservation review process for the distribution line area of work as guided under 6E-42, HRS to make an anticipated determination of "no effect" to historic properties. We anticipate that SHPD will concur with the recommendation that no further work is required for the distribution line project areas.

Based on the information presented in the CIA, archaeological mitigation measures have been developed through consultation with SHPD and appropriate cultural stakeholders as described in Section 3.16. If cultural or archaeological resources are unearthed or ancestral remains are inadvertently discovered, the DLNR, SHPD, the Oʻahu Island Burial Council representative and participating interests of cultural descendants will be notified. The treatment of these resources will be conducted in strict compliance with the applicable historic preservation and burial laws.

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

The proposed activities of the ASEF II project will not curtail the range of beneficial uses of the environment. Existing uses conform to existing land use designations or are similar in nature to adjoining land uses. The project area's State Land Use Designation and County Zoning allow for the proposed use. The ASEF II project is consistent with the KCDD rules and the current regulating plan for the district, as it is an allowable use in the T2 – Rural/Open Space transect overlay zone the project is located in. The ASEF II project is also of a limited initial (20 year) duration, after which the property is available for other potential uses.

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

The proposed ASEF II project does not conflict with the State's long-term environmental policies or goals and guidelines as expressed in Chapter 344, HRS, and any revisions thereof and amendments thereto, court decisions, or executive orders.

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

Short-term economic benefits anticipated during construction will include direct, indirect, and induced employment opportunities and multiplier effects but not at a level that would generate significant economic expansion.

The long-term economic benefits from the project include promoting new venues for Hawaiʻi in renewable energy production. The ASEF II project will create both short-term and longer-term economic benefits including the provision of job during construction and operation. The project is expected to cost approximately $27 million, which will provide positive economic benefits to the State and City and County of Honolulu. No public funds will be used for this project.

(5) Substantially affects public health.

The project is consistent with existing land uses and is not expected to affect public health. However, there will be temporary short-term impacts to air quality from possible dust emissions and temporary noise in the immediate vicinity of both project sites resulting from construction equipment. Construction and operation-related impacts of noise, dust, and emissions will be mitigated by compliance with the State DOH Administrative Rules and compliance with applicable county permits

for the project. Long-term public health benefits are expected to accrue as a result of the reduction in emissions from fossil fuel plants located on O'ahu.

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

Although the ASEF II project will introduce new uses on vacant lands, it will not result in population changes in Kalaeloa, 'Ewa. The project will create a small increase in employment; however, this will have an incidental impact on population. Public facilities near both project sites will not be adversely impacted by the Kalaeloa project. Additional uses of public facilities are not anticipated to occur as a result of the project. Existing utilities and infrastructure are not anticipated to be impacted or relocated during project construction.

(7) Involves a substantial degradation of environmental quality.

The proposed ASEF II project will not involve a substantial degradation of environmental quality. The project design is a low-impact development with no long-term effect to the land. Federal, State, and County environmental regulations will be met throughout the construction and operation of the project. Any stormwater runoff/drainage will be met through the integration and development of low impact development standards and technology.

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

The project's development will not have a considerable effect on the environment or involve a commitment for larger actions. Although the project's contribution to the local area does provided a stable resource of power, the project itself will not generate effects upon the environment that are a precursor for other future actions.

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

Although the project site is overwhelmingly dominated by non-native kiawe trees and buffel grass, the potential exists for several listed plant species known from generally similar environments in the general Campbell Industrial Park / 'Ewa Beach / 'Ewa Plain area. However, no rare native species were found during both botanical surveys.

As discussed in Section 3.5.2, the principal potential impact that construction of the project and the operation of the PV facility poses to protected seabirds is the increased threat that birds will be disoriented by lights associated with the project during the seabird nesting season. To minimize the potential that the project's operation will attract endangered waterbirds, mitigation measures will be incorporated into the security lighting design to discourage listed birds from landing within the facilities. The principal potential impact that construction of the project poses to bats is during clearing and grubbing phases of construction as vegetation is removed. With that said, the tall trees on the site are all

kiawe, a species not usually identified as a bat roosting tree. Therefore, any risk from clearing activity on this species is highly unlikely at the project site.

No mammalian species currently protected or proposed for protection under either the federal or State of Hawai'i endangered species programs was detected during the course of this survey, nor were any expected. No federally delineated Critical Habitat incorporates any part of the project site or transmission line route.

(10) Detrimentally affects air or water quality or ambient noise levels.

General temporary effects associated with construction of the ASEF II project has been identified in this EA (*Section 3.0*). Mitigation measures which are outlined in this EA will be applied during construction activities. No detrimental long-term impacts to air, water, or acoustic quality are anticipated with project operations. The project will not detrimentally affect air or water quality or ambient noise levels.

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

The project site is located within Zone D (Unclassified) and within the designated normal tsunami zone (*Figure 1-10*). Similar to the adjacent Kalaeloa Airport, the development footprint is susceptible to the impact of an unknown tsunami risk. However, the facility will be in accordance with the State and County-approved standards relative to coastal inundation and flood design requirements. The facility is mainly remotely monitored and operated system with infrequent manned maintenance activities. Part of the site safety plan for the project will include proper notification for maintenance personnel as to nearest evacuation route and tsunami safe zone. The development of the project site will not affect any known environmentally sensitive areas. The ASEF II design is low-impact development and will have no long-term effect to the land. No significant adverse impacts are anticipated.

(12) Substantially affects scenic vistas and view-planes identified in county or state plans or studies.

The proposed ASEF II project will not affect scenic vistas and view-planes identified in County or State plans or studies. Critical lines of sight for aircraft at John Rodgers Field will not be obstructed. The proposed PV module systems will not exceed 10 feet in height and therefore will not impact mauka and makai views in the project vicinity. Additionally, a natural vegetation buffer will be located along a portion of the property boundaries that will make the project generally less visible from roadways. Utility poles along the distribution line path on Coral Sea Road are estimated to be approximately 40'-0" in height, and will not impact visibility for airport operations or scenic view planes.

(13) Require substantial energy consumption.

While the ASEF II project will consume power during construction, the outcome of the project will result in the generation of 5 MW of electricity that will be fed back into the HECO grid. This clean

source of power will contribute to energy security and will reduce greenhouse gas emissions. This will help Hawai'i move towards achieving the HCEI goals for renewable energy production.

6.4 SUMMARY

Based on the above findings, the proposed ASEF II project will not generate significant or adverse socio-economic or environmental impacts. The EA recommends mitigation measures to alleviate potential impacts when less than significant impacts are identified. Therefore, a FONSI for the project is anticipated.

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8.0 LIST OF AGENCIES, ORGANIZATIONS AND INDIVIDUALS RECEIVING COPIES OF THE EA

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Respondents and Distribution	Pre-Consultation	Pre-Consultation Comments Received	Receiving Draft EA	Comments Received	Receiving Final EA/ FONSI
Federal Agencies					
Federal Aviation Administration	X		X		X
Federal Fire Department			X		X
Joint Base Pearl Harbor-Hickam Police			X		X
NAVFAC Hawai'i	X		X		X
U.S. Coast Guard, 14th Coast Guard District			X		X
U.S. Coast Guard, Air Station Barbers Point			X		X
U.S. DOI, Fish and Wildlife Pacific Islands Fish and Wildlife Office	X		X		X
U.S Environmental Protection Agency Pacific Islands Contact Office			X		X
U.S. Geological Survey			X	X	X
State of Hawai'i Agencies					
Department of Business, Economic Development & Tourism (DBEDT)			X		X
DBEDT, State Energy Office	X		X		X
DBEDT, Strategic Industries Division – Renewable Energy Branch			X		X
Department of Hawaiian Home Lands			X		X
Department of Health (DOH)			X		X
DOH, Clean Water Branch	X	X	X	X	X
DOH, Environmental Management Division			X		X

Respondents and Distribution	Pre-Consultation	Pre-Consultation Comments Received	Receiving Draft EA	Comments Received	Receiving Final EA/ FONSI
DOH, Environmental Planning Office			X	X	X
DOH, Hazard Evaluation and Emergency Response Office			X		X
DOH, Wastewater Branch			X		X
Department of Land and Natural Resources (DLNR)			X		X
DLNR, Division of Conservation and Resources Enforcement	X		X		X
DLNR, Division of Forestry and Wildlife	X	X	X	X	X
DLNR, Engineering Division			X	X	X
DLNR, Land Division			X	X	X
DLNR, Oʻahu Island Burial Council	X		X		X
DLNR, State Historic Preservation Division	X		X		X
Department of Transportation (DOT)		X	X	X	X
DOT Highways Division: Traffic Office; Plans Review; Oʻahu District Office			X	X	X
DOT, Airports Division Engineering Branch	X		X	X	X
Hawaiʻi Air National Guard	X		X		X
Hawaiʻi Community Development Authority (HCDA)	X		X		X
HCDA, Kalaeloa Field Office	X		X		X
Office of Environmental Quality Control			X		X
Office of the Governor			X		X
Office of Hawaiian Affairs	X		X		X
Office of Planning			X	X	X
Coastal Zone Management Program			X		X
University of Hawaiʻi, Manoa Environmental Center			X		X

Respondents and Distribution	Pre-Consultation	Pre-Consultation Comments Received	Receiving Draft EA	Comments Received	Receiving Final EA/ FONSI
City and County of Honolulu					
Board of Water Supply			X	X	X
Department of Environmental Services			X		X
Department of Planning & Permitting	X	X	X	X	X
Department of Parks and Recreation			X	X	X
Department of Transportation Services			X	X	X
Ewa Neighborhood Board #23	X		X		X
Fire Department			X	X	X
Makakilo/Kapolei/Honokai Hale Neighborhood Board #34	X		X		X
Department of Emergency Management			X		X
Elected Officials					
Office of the Mayor			X		X
U.S. Senator Brian Schatz			X		X
U.S Senator Mazie Hirono			X		X
State House Representative Andria P.L. Tupola			X		X
State House Representative Bob McDermott			X		X
State House Representative Marcus Oshiro			X		X
State Senator Mike Gabbard			X		X
Councilmember Kymberly Marcos Pine			X		X
Libraries					
Hawai'i State Library			X		X
'Ewa Public Library			X		X
Kapolei Public Library			X		X
Public Utilities					
The Gas Company			X		X

Respondents and Distribution	Pre-Consultation	Pre-Consultation Comments Received	Receiving Draft EA	Comments Received	Receiving Final EA/ FONSI
Hawaiian Electric Company	X		X		X
Hawaiian Telcom			X		X
Oceanic Time Warner Cable			X		X
Pural Water Specialties Co., Inc.	X		X		X
Advisory & Citizen Groups, Individuals & Consulted Parties					
ʻAhahui Siwila Hawaiʻi O Kapolei	X		X		X
CP Makai LLC			X		X
ʻEwa Beach Community Association			X		X
Hawaiian Railway Society			X		X
Hoakalei Cultural Foundation	X		X		X
Kalaeloa Advisory Team			X		X
Kalaeloa Community Network			X		X
Kalaeloa Heritage and Legacy Foundation	X		X	X	X
Kalaeloa Public Safety Group			X		X
Kalaeloa Rental Homes			X		X
Kanehili Homestead Association			X		X
Kanehili Cultural Hui			X	X	X
Kapolei Community Development Corporation	X		X		X
Kaupeʻa Homestead Association			X		X
Maluʻohai Residents Association			X		X
Miyamoto, Owen			X	X	X
Naval Air Museum Barbers Point			X	X	X
Wakea Garden Apartments			X		X

APPENDIX A
COMMENT LETTERS AND RESPONSES

PRE-CONSULTATION COMMENT LETTERS AND RESPONSES

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

LORETTA J. FUDDY, A.C.S.W., M.P.H.
DIRECTOR OF HEALTH

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

In reply, please refer to:
EMD/CWB

09039PGH.13

September 16, 2013

Ms. Rachel Shaak, AICP, LEED AP
Senior Planner
Group 70 International, Inc.
925 Bethel Street, 5th Floor
Honolulu, Hawaii 96813-4307

Dear Ms. Shaak:

SUBJECT: Comments on the Pre-Consultation for Preparation of an Environmental Assessment for the Aloha Solar Energy Farm 2 (Coral Sea Road) TMK: (1) 9-1-013:070 (Kalaeloa, Island of Oahu, State of Hawaii)

The Department of Health (DOH), Clean Water Branch (CWB), acknowledges receipt of your letter, dated August 29, 2013, requesting comments on your project. The DOH-CWB has reviewed the subject document and offers these comments. Please note that our review is based solely on the information provided in the subject document and its compliance with the Hawaii Administrative Rules (HAR), Chapters 11-54 and 11-55. You may be responsible for fulfilling additional requirements related to our program. We recommend that you also read our standard comments on our website at: http://health.hawaii.gov/epo/files/2013/05/CWB-standardcomment.pdf.

1. Any project and its potential impacts to State waters must meet the following criteria:

   a. Antidegradation policy (HAR, Section 11-54-1.1), which requires that the existing uses and the level of water quality necessary to protect the existing uses of the receiving State water be maintained and protected.

   b. Designated uses (HAR, Section 11-54-3), as determined by the classification of the receiving State waters.

   c. Water quality criteria (HAR, Sections 11-54-4 through 11-54-8).

2. You may be required to obtain a National Pollutant Discharge Elimination System (NPDES) permit for discharges of wastewater, including storm water runoff, into State surface waters (HAR, Chapter 11-55). An application for an NPDES individual permit must be submitted at least 180 calendar days before the commencement of the discharge. To request NPDES permit coverage, you must submit the CWB

Individual NPDES Form through the e-Permitting Portal and the hard copy certification statement with $1,000 filing fee. Please open the e-Permitting Portal website at: https://eha-cloud.doh.hawaii.gov/epermit/View/home.aspx. You will be asked to do a one-time registration to obtain your login and password. After you register, click on the Application Finder tool and locate the "CWB Individual NPDES Form." Follow the instructions to complete and submit this form.

3. If your project involves work in, over, or under waters of the United States, it is highly recommend that you contact the Army Corp of Engineers, Regulatory Branch (Tel: 438-9258) regarding their permitting requirements.

   Pursuant to Federal Water Pollution Control Act [commonly known as the "Clean Water Act" (CWA)], Paragraph 401(a)(1), a Section 401 Water Quality Certification (WQC) is required for "[a]ny applicant for Federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may **result** in any discharge into the navigable waters..." (emphasis added). The term "discharge" is defined in CWA, Subsections 502(16), 502(12), and 502(6); Title 40 of the Code of Federal Regulations, Section 122.2; and HAR, Chapter 11-54.

4. Please note that all discharges related to the project construction or operation activities, whether or not NPDES permit coverage and/or Section 401 WQC are required, must comply with the State's Water Quality Standards. Noncompliance with water quality requirements contained in HAR, Chapter 11-54, and/or permitting requirements, specified in HAR, Chapter 11-55, may be subject to penalties of $25,000 per day per violation.

If you have any questions, please visit our website at: http://health.hawaii.gov/cwb/, or contact the Engineering Section, CWB, at (808) 586-4309.

Sincerely,

ALEC WONG, P.E., CHIEF
Clean Water Branch

GH:np

925 Bethel Street
5th Floor
Honolulu, HI 96813
808.523.5866
www.g70.design

July 8, 2017

Mr. Alec Wong, P.E., Chief
State of Hawai'i
Department of Health
Clean Water Branch
P.O. Box 3378
Honolulu, Hawaii 96801-3378

Subject: Pre-consultation for Draft Environmental Assessment
Aloha Solar Energy Fund II (Kalaeloa, O'ahu, Hawai'i)

Dear Mr. Wong:

Thank you for your comment letter dated September 16, 2013 concerning the Draft Environmental Assessment (DEA) pre-consultation for the Aloha Solar Energy Fund II (ASEF II) project.

We appreciate the resources you have provided relating to Standard Comments, the Environmental Health Portal, Water Quality Standards Maps, and various sources on strategies to support the sustainable and healthy design of communities and buildings. The project will apply sustainability strategies and principles to the extent possible.

1. We acknowledge that any project must meet state antidegregation policies (HAR, Section 11-54-1.1), designated uses (HAR, Section 11-54-3), and water quality criteria (HAR, Sections 11-54-4 through 11-54-8). All drainage requirements will be mitigated on-site with no anticipation of impacting State waters.
2. The project will file an application and all submittal requirements to obtain an NPDES permit per HAR, Chapter 11-55. This and other permit requirements necessary and prior to construction are listed in the DEA, Section 1.5.
3. This project does not involve work in, over, or under waters of the United States.
4. This project will comply with the State's Water Quality Standards, including requirements as applicable in HAR, Chapter 11-54 and 11-55. The project is not anticipated to affect either inland or marine waters. Appropriate measures to mitigate drainage and stormwater retention on-site are included in the DEA, Section 3.8.

We will provide your office with a copy of the DEA for your review. Thank you for your participation in the environmental review process. Please contact us if you have any questions or require additional information.

Sincerely,

Jeffrey H. Overton, AICP, LEED AP
Principal Planner

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

DIVISION OF FORESTRY AND WILDLIFE
1151 PUNCHBOWL ST., ROOM 325
HONOLULU, HAWAII 96813
TEL (808) 587-0166 FAX (808) 587-0160

September 24, 2013

Rachel Shaak
Senior Planner
Group 70 International
925 Bethel Steet, 5th Floor
Honolulu, HI 96813-4398

Re: Tax Map Key (1) 9-1-013:070 (Kalaeloa, Island of Oahu, State of Hawaii: Pre-Consultation for Preparation of an Environmental Assessment)

Dear Ms. Shaak,

The Department of Land and Natural Resources (DLNR), Division of Forestry and Wildlife (DOFAW) is in receipt of your letter dated August 29, 2013. Your letter informs us that you are beginning the Pre-consultation process for an Environmental Assessment (EA) for the construction of the five megewatt photovoltaic (PV) facility in Kalaeloa.

Past records indicate that the endangered species *Chamaesyce skottsbergii* var. *skottsbergii* (also known as *Chamaesyce scottsbergii* var. *kalaeloana, akoko,* and *Euphorbia scottbergii* var. *skottsbergii)* have been found in areas near the proposed project site. There is also a species of concern, *Capparis sanwichiana*, which is known from near this site. Current biological surveys should be conducted within the property prior to PV development. Should threatened or endangered species be detected, we recommend consulting with DOFAW to evaluate any potential impacts.

We appreciate your efforts to work with our office in support of the conservation of endangered species. Please contact Maggie Sporck (phone: 808-587-0058 or email: Margaret.j.sporck@hawaii.gov) should you have any questions.

Sincerely,

Roger Imoto
Administrator

Cc: Randy Kennedy, DOFAW

925 Bethel Street
5th Floor
Honolulu, HI 96813
808.523.5866
www.g70.design

July 8, 2017

Mr. Roger Imoto
Administrator
State of Hawai'i
Department of Land and Natural Resources
Division of Forestry and Wildlife
1151 Punchbowl Street, Room 325
Honolulu, Hawaii 96813

Subject: Pre-consultation for Draft Environmental Assessment
Aloha Solar Energy Fund II (Kalaeloa, O'ahu, Hawai'i)

Dear Mr. Imoto:

Thank you for your comment letter dated September 24, 2013 concerning the Draft Environmental Assessment (DEA) pre-consultation for the Aloha Solar Energy Fund II (ASEF II) project.

We appreciate the resources you have provided relating to endangered species previously found in areas near the proposed project site. Biological surveys have been conducted for the project parcel and distribution line area of work along Coral Sea Road, and can be found in EA Section 3.5 – Flora and Fauna, and the report featured in Appendix C.

Botanical surveys focused on locating rare native species if present. However, none were found. There are no known nesting colonies of any protected seabird species on or within close proximity of the project site. None of the avian species detected during the course of these two surveys are listed under either the federal Endangered Species Act of 1973, as amended, or the State of Hawaii's endangered species statute Hawaii Revised Statutes 195D. No mammalian species currently protected or proposed for protection under either the federal or State of Hawai'i endangered species programs was detected during the course of this survey, nor were any expected. No federally delineated Critical Habitat incorporates any part of the project site or transmission line route.

We will provide your office with a copy of the DEA for your review. Thank you for your participation in the environmental review process. Please contact us if you have any questions or require additional information.

Sincerely,

Jeffrey H. Overton, AICP, LEED AP
Principal Planner

NEIL ABERCROMBIE
GOVERNOR

GLENN M. OKIMOTO
DIRECTOR

Deputy Directors
JADE T. BUTAY
FORD N. FUCHIGAMI
RANDY GRUNE
JADINE URASAKI

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

IN REPLY REFER TO:
AIR-EP
13.0107

September 18, 2013

RECEIVED
SEP 23 2013
GROUP 70 INTL

Ms. Rachel Shaak, AICP, LEED AP
Senior Planner
Group 70 International, Inc.
925 Bethel Street, 5th Floor
Honolulu, Hawaii 96813-4307

Dear Ms. Shaak:

Subject: ALOHA SOLAR ENERGY FARM 2 (CORAL SEA ROAD)
TMK (1) 9-1-013:070, PRE-CONSULTATION FOR PREPARATION OF AN ENVIRONMENTAL ASSESSMENT

We have reviewed the proposed 5 megawatt (MW) photovoltaic facility and are concerned that it may have an impact upon flights approaching and departing Kalaeloa Airport (JRF).

1) The proposed location of the photovoltaic system is adjacent to end of Runway 11 at Kalaeloa Airport. We have serious concerns that photovoltaic (PV) systems, located in or near the approach path of the aircraft into the Airport, can create a hazardous condition for a pilot due to possible glint and glare reflected from the PV array. We recommend an analysis be done on this matter using the FAA solar guide "Technical Guidance for Evaluating Selected Solar Technologies on Airports," dated November 2010. This link can be found at the following: http://www.faa.gov/airports/environmental/policy_guidance/media/airport_solar_guide_print.pdf

2) The following website may also assist you with preparation of a glint and glare analysis: www.sandia.gov/glare

3) An agreement between the operator of the solar facility and the DOT-Airports Division should be pursued to address any impacts to flight operations that may occur as a result of the solar facility and to ensure that the appropriate mitigation measures are implemented. In the event glint and glare from the PV system creates a hazardous condition for a pilot, Aloha Solar Energy Farm 2 must be prepared to immediately mitigate the hazard, upon notice from the Department of Transportation, Airports Division (DOT-A) or the Federal Aviation Administration (FAA).

4) Due to the close proximity to Kalaeloa Airport, we recommend the developer file a Federal Aviation Administration (FAA) Form 7460-1, Notice of Proposed Construction or Alteration, be filed with the FAA according to the Code of Federal Regulations, Title 14, Part 77, Subpart B. This form can be found at the following website: https://www.oeaaa.faa.gov/oeaaa/external/portal.jsp

Please contact Mr. Hank Bruckner, General Aviation Officer at (808) 838-8701 or Ms. Lynette Kawaoka, Planner at (808) 838-8818 to clarify any questions you may have.

Very truly yours,

GLENN M. OKIMOTO, Ph.D.
Director of Transportation

c: Mr. Ronnie V. Simpson- Airports District Manager, FAA

925 Bethel Street
5th Floor
Honolulu, HI 96813
808.523.5866
www.g70.design

July 8, 2017

Glenn M. Okimoto, Ph.D.
Director of Transportation
State of Hawai'i
Department of Transportation
869 Punchbowl Street
Honolulu, Hawai'i 96813-5097

Subject: Pre-consultation for Draft Environmental Assessment
Aloha Solar Energy Fund II (Kalaeloa, O'ahu, Hawai'i)

Dear Dr. Okimoto:

Thank you for your comment letter dated September 18, 2013 concerning the Draft Environmental Assessment (DEA) pre-consultation for the Aloha Solar Energy Fund II (ASEF II) project.

We acknowledge your concerns regarding the PV systems proximity and potential hazards to Kalaeloa Airport approach paths. POWER Engineers, glint and glare consultant for this project, have completed studies for multiple approach angles for a variety of times during the year to evaluate all potential hazard conditions for approach paths.

Occurrences of glare at Kalaeloa Airport resulting from proposed solar operations are anticipated to be minimal, and would occur intermittently in morning when the sun is low in the sky. Potential glare within the focus view will occur for less than 15 minutes around the Summer Solstice. Any potential glare reported in the pilot's focus view occurs at a distance greater than one mile from the Project site. Also, PV modules are designed to absorb a majority of the sun's energy, resulting in reflection levels less than that of many other common materials (e.g., metal, glass, water). This glare would be similar in intensity to glare currently experienced by pilots on final approach to Runways 4R, 4L, and 29, which travel directly over the reflecting waters of the Pacific Ocean.

Although occurrences of glare are anticipated to be low, airport officials must be ready to mitigate glare if there are complaints received by pilots. In these cases, the following mitigation measures may be implemented:

- Educate pilots regarding any potential occurrences of glare. Provide times and seasons where glare may be visible to pilots. Include this information on the AIRNAV Website.

- Use solar covers on offending solar panels specific to seasonal glare.

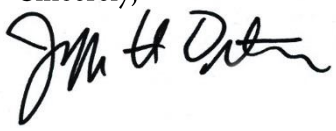
For full glare data and analysis, see Appendix D.

We acknowledge your recommendation regarding Federal Aviation Administration (FAA) notification and coordination. A Form 7460-1 is currently in progress for the project and will be submitted to the FAA for review when complete.

Glenn M. Okimoto, Ph.D.
Department of Transportation

We will provide your office with a copy of the Draft Environmental Assessment for your review. Thank you for your participation in the environmental review process. Please contact us if you have any questions or require additional information.

Sincerely,



Jeffrey H. Overton, AICP, LEED AP
Principal Planner

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

GEORGE I. ATTA, FAICP
DIRECTOR

ARTHUR D. CHALLACOMBE
DEPUTY DIRECTOR

2013/ELOG-1692(RY)

September 20, 2013

RECEIVED

SEP 20 2013

GROUP 70 INTL

Ms. Rachel Shaak, AICP, LEED AP
Group 70 International, Inc.
925 Bethel Street, Fifth Floor
Honolulu, Hawaii 96813-4307

Dear Ms. Shaak:

We are in receipt of your pre-consultation request for a proposed 5 megawatt solar energy facility in Kalaeloa, Ewa, Oahu. We have no comments to offer at this time and look forward to review of the draft environmental assessment.

Thank you for the opportunity to provide comments. Should you have any questions, please contact Raymond Young of our staff at 768-8049.

Very truly yours,

tm George I. Atta, FAICP
Director

GIA:js

1079340

925 Bethel Street
5th Floor
Honolulu, HI 96813
808.523.5866
www.g70.design

July 8, 2017

Mr. Raymond Young
City and County of Honolulu
Department of Planning and Permitting
650 South Street, 7th Floor
Honolulu, Hawaii 96813

Subject: Pre-consultation for Draft Environmental Assessment
Aloha Solar Energy Fund II (Kalaeloa, O'ahu, Hawai'i)

Dear Mr. Young:

Thank you for your comment letter dated September 20, 2013 concerning the Draft Environmental Assessment (DEA) pre-consultation for the Aloha Solar Energy Fund II (ASEF II) project.

We acknowledge the Department of Planning and Permitting has no comments to offer at this time.

We will provide your office with a copy of the Draft Environmental Assessment for your review. Thank you for your participation in the environmental review process. Please contact us if you have any questions or require additional information.

Sincerely,

Jeffrey H. Overton, AICP, LEED AP
Principal Planner

DRAFT ENVIRONMENTAL ASSESSMENT
COMMENT LETTERS AND RESPONSES

United States Department of the Interior
U.S. GEOLOGICAL SURVEY
Pacific Islands Water Science Center
1845 Wasp Boulevard, Building 176
Honolulu, Hawaii 96818
Phone: (808) 690-9600/Fax: (808) 690-9599

July 14, 20107

Mr. Jeffrey H. Overton, AICP, LEED AP
Principal Planner
G70 925 Bethel Street, 5th Floor
Honolulu, Hawaii 96813

Dear Mr. Overton:

Subject: Chapter 343, HRS Draft Environmental Assessment
Anticipated Finding of No Significant Impact (DEA-AFONSI)
Aloha Solar Energy Fund II – Kalaeloa (ASEF II)
'Ewa, Island of O'ahu, Hawai'i
TMK (1) 9-1-013:070 (HCDA owned) and portion of 30-foot-wide State of Hawaii, Department of Transportation, Highways (DOT-H) Division Right-of-Way (ROW) along eastern edge of Coral Sea Road that borders (1) 9-1-013:039, 040, 043, 044, 072, 099, 100

Thank you for forwarding the subject DEA-AFONSI for review and comment by staff of the U.S. Geological Survey Pacific Islands Water Science Center. We regret however, that due to prior commitments and lack of available staff, we are unable to review this document.

We appreciate the opportunity to participate in the review process.

Sincerely,

Stephen S. Anthony
Center Director

September 25, 2017

925 Bethel Street
5th Floor
Honolulu, HI 96813
808.523.5866
www.g70.design

Mr. Steven S. Anthony, Center Director
United States Department of the Interior
U.S. Geological Survey
Pacific Islands Water Science Center
1845 Wasp Boulevard, Building 176
Honolulu, Hawaii 96813

Subject: **Draft Environmental Assessment**
Aloha Solar Energy Fund II (Kalaeloa, Oʻahu, Hawaiʻi)

Dear Mr. Anthony:

Thank you for your comment letter dated July 14, 2017 concerning the Draft Environmental Assessment (EA) for the Aloha Solar Energy Fund II (ASEF II) project.

We acknowledge the US Geological Survey Pacific Islands Water Science Center is unable to review this document due to prior commitments and lack of available staff.

A copy of the Final EA can be found at:
http://oeqc2.doh.hawaii.gov/EA_EIS_Library/Forms/AllItems.aspx

Thank you for your participation in the environmental review process.

Sincerely,

Jeffrey H. Overton, AICP, LEED AP
Principal Planner

DAVID Y. IGE
GOVERNOR OF HAWAII

VIRGINIA PRESSLER, M.D.
DIRECTOR OF HEALTH

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

In reply, please refer to:
EMD/CWB

07021PMHK.17

July 20, 2017

Mr. Jeffrey H. Overton
Principal Planner, AICP, LEED AP
G70
925 Bethel Street, 5th Floor
Honolulu, Hawaii 96813-4307

Dear Mr. Overton:

SUBJECT: Comments on the Draft Environmental Assessment
Aloha Solar Energy Fund II - Kalaeloa
TMKs: (1) 9-1-013:070 (HCDA owned) and portion of 30-foot-wide DOT-HWYS Right of Way along eastern edge of Coral Sea Road that borders (1) 9-1-013:039, 040, 043, 044, 072, 099, and 100
Honouliuli, Island of Oahu, Hawaii

The Department of Health (DOH), Clean Water Branch (CWB), acknowledges receipt of your letter, dated July 8, 2017, requesting comments on the subject project. The DOH-CWB has reviewed the document and offers these comments. Please note that our review is based solely on the information provided in the subject document and its compliance with the Hawaii Administrative Rules (HAR), Chapters 11-54 and 11-55. Aloha Solar Energy Fund II, LLC (Applicant) may be responsible for fulfilling additional requirements related to our program. We recommend that they also read our standard comments on our website at: http://health.hawaii.gov/epo/files/2013/05/Clean-Water-Branch-Std-Comments.pdf.

1. Any project and its potential impacts to State waters must meet the following criteria:

   a. Antidegradation policy (HAR, Section 11-54-1.1), which requires that the existing uses and the level of water quality necessary to protect the existing uses of the receiving State water be maintained and protected.

   b. Designated uses (HAR, Section 11-54-3), as determined by the classification of the receiving State waters.

   c. Water quality criteria (HAR, Sections 11-54-4 through 11-54-8).

2. The Applicant may be required to obtain National Pollutant Discharge Elimination System (NPDES) permit coverage for discharges of wastewater, including storm

water runoff, into State surface waters (HAR, Chapter 11-55). For NPDES general permit coverage, a Notice of Intent (NOI) form must be submitted at least 30 calendar days before the commencement of the discharge. An application for an NPDES individual permit must be submitted at least 180 calendar days before the commencement of the discharge. To request NPDES permit coverage, your Applicant must submit the applicable form ("CWB Individual NPDES Form" or "CWB NOI Form") through the e-Permitting Portal and the hard copy certification statement with the respective filing fee ($1,000 for an individual NPDES permit or $500 for a Notice of General Permit Coverage). Please open the e-Permitting Portal website located at: https://eha-cloud.doh.hawaii.gov/epermit/. They will be asked to do a one-time registration to obtain their login and password. After they register, click on the Application Finder tool and locate the appropriate form. They can then follow the instructions to complete and submit the form.

3. If your Applicant's project involves work in, over, or under waters of the United States, it is highly recommended that they contact the Army Corp of Engineers, Regulatory Branch (Tel: 835-4303) regarding their permitting requirements.

   Pursuant to Federal Water Pollution Control Act [commonly known as the "Clean Water Act" (CWA)], Paragraph 401(a)(1), a Section 401 Water Quality Certification (WQC) is required for "[a]ny applicant for Federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may **result** in any discharge into the navigable waters..." (emphasis added). The term "discharge" is defined in CWA, Subsections 502(16), 502(12), and 502(6); Title 40 of the Code of Federal Regulations, Section 122.2; and HAR, Chapter 11-54.

4. Please note that all discharges related to the project construction or operation activities, whether or not NPDES permit coverage and/or Section 401 WQC are required, must comply with the State's Water Quality Standards. Noncompliance with water quality requirements contained in HAR, Chapter 11-54, and/or permitting requirements, specified in HAR, Chapter 11-55, may be subject to penalties of $25,000 per day per violation.

5. It is the State's position that all projects must reduce, reuse, and recycle to protect, restore, and sustain water quality and beneficial uses of State waters. Project planning should:

   a. Treat storm water as a resource to be protected by integrating it into project planning and permitting. Storm water has long been recognized as a source of irrigation that will not deplete potable water resources. What is often overlooked is that storm water recharges ground water supplies and feeds streams and estuaries; to ensure that these water cycles are not disrupted, storm water cannot be relegated as a waste product of impervious surfaces.

Any project planning must recognize storm water as an asset that sustains and protects natural ecosystems and traditional beneficial uses of State waters, like community beautification, beach going, swimming, and fishing. The approaches necessary to do so, including low impact development methods or ecological bio-engineering of drainage ways must be identified in the planning stages to allow designers opportunity to include those approaches up front, prior to seeking zoning, construction, or building permits.

b. Clearly articulate the State's position on water quality and the beneficial uses of State waters. The plan should include statements regarding the implementation of methods to conserve natural resources (e.g., minimizing potable water for irrigation, gray water re-use options, energy conservation through smart design) and improve water quality.

c. Consider storm water Best Management Practice (BMP) approaches that minimize the use of potable water for irrigation through storm water storage and reuse, percolate storm water to recharge groundwater to revitalize natural hydrology, and treat storm water which is to be discharged.

d. Consider the use of green building practices, such as pervious pavement and landscaping with native vegetation, to improve water quality by reducing excessive runoff and the need for excessive fertilization, respectively.

e. Identify opportunities for retrofitting or bio-engineering existing storm water infrastructure to restore ecological function while maintaining, or even enhancing, hydraulic capacity. Particular consideration should be given to areas prone to flooding, or where the infrastructure is aged and will need to be rehabilitated.

If you have any questions, please visit our website at: http://health.hawaii.gov/cwb, or contact the Engineering Section, CWB, at (808) 586-4309.

Sincerely,

Alec Wong

ALEC WONG, P.E., CHIEF
Clean Water Branch

MHK

c: Mr. Jeffrey H. Overton, G70 [via e-mail ASEF@g70.design]
Mr. Jesse Souki, HCDA [via e-mail jesse.k.souki@hawaii.gov]
Mr. Michael Stout, ASEF II, LLC [via e-mail mstout@ecc.net]
DOH-EPO [via e-mail only]

September 25, 2017

925 Bethel Street
5th Floor
Honolulu, HI 96813
808.523.5866
www.g70.design

Mr. Alec Wong, P.E., Chief
State of Hawai'i
Department of Health
Clean Water Branch
P.O. Box 3378
Honolulu, Hawaii 96801-3378

Subject: **Draft Environmental Assessment**
Aloha Solar Energy Fund II (Kalaeloa, O'ahu, Hawai'i)

Dear Mr. Wong:

Thank you for your comment letter dated July 20, 2017 concerning the Draft Environmental Assessment (EA) for the Aloha Solar Energy Fund II (ASEF II) project.

We appreciate the resources you have provided relating to Standard Comments, the Environmental Health Portal, Water Quality Standards Maps, and various sources on strategies to support the sustainable and healthy design of communities and buildings. The project will apply sustainability strategies and principles to the extent possible.

1. We acknowledge that any project must meet state antidegregation policies (HAR, Section 11-54-1.1), designated uses (HAR, Section 11-54-3), and water quality criteria (HAR, Sections 11-54-4 through 11-54-8). All drainage requirements will be mitigated on-site with no anticipation of impacting State waters.

2. The project will file an application and all submittal requirements to obtain an NPDES permit per HAR, Chapter 11-55. This and other permit requirements necessary and prior to construction are listed in the Final EA, Section 1.5.

3. This project does not involve work in, over, or under waters of the United States.

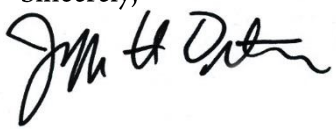
4. This project will comply with the State's Water Quality Standards, including requirements as applicable in HAR, Chapter 11-54 and 11-55. The project is not anticipated to affect either inland or marine waters. Appropriate measures to mitigate drainage and stormwater retention on-site are included in the Final EA, Section 1.5.

5. This project will consider BMPs and sustainable design practices where practically possible. The Final EA articulates the State's position on water quality and BMPs in Section 1.5 and 2.5.

A copy of the Final EA can be found at:
http://oeqc2.doh.hawaii.gov/EA_EIS_Library/Forms/AllItems.aspx

Thank you for your participation in the environmental review process.

Sincerely,



Jeffrey H. Overton, AICP, LEED AP
Principal Planner

DAVID Y. IGE
GOVERNOR OF HAWAII

VIRGINIA PRESSLER, M.D.
DIRECTOR OF HEALTH

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

In reply, please refer to:
File:

EPO 17-164

July 24 2017

Mr. Jeff Overton, Principal Planner
Group 70 International, Inc.
925 Bethel Street, 5th Floor
Honolulu, Hawaii 96813
Email: ASEF@g70.design

Dear Mr. Overton:

SUBJECT: Draft Environmental Assessment (DEA) for Aloha Solar Energy Fund II - Kalaeloa
TMK: (1) 9-1-013:070, (1) 9-1-013:039, 040, 043, 044, 072, 099, 100

The Department of Health (DOH), Environmental Planning Office (EPO), acknowledges receipt of your DEA to our office via the OEQC link:
http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2017-07-08-OA-DEA-Aloha-Solar-Energy-Fund-II-Kalaeloa.pdf

We understand from the OEQC publication form project summary that *"Aloha Solar Energy Fund II LLC is proposing to lease and develop a 5 megawatt solar power utility installation to be built on approximately 44.28 acres of lands owned by the HCDA in Kalaeloa, Oahu, Hawaii. Power generated by this facility would be transferred along an approximate 1.78 mile 12 kilovolt (kV) interim electrical distribution line that would be routed along the eastern side of Coral Sea Road, eventually connecting to the Hawaiian Electric Company ("HECO") grid within its existing right of way."*

Hawaii's environmental review laws require Environmental Assessments (EAs) and Environmental Impact Statements (EISs) to consider health in the discussion and the mitigation measures to reduce negative impacts. In its definition of 'impacts,' §11-200-2, Hawaii Administrative Rules (HAR) includes health effects, whether primary (direct), secondary (indirect), or cumulative. Further, §11-200-12(b)(5), HAR, lists public health as one of the criteria for determining whether an action may have a significant impact on the environment.

In the development and implementation of all projects, EPO strongly recommends regular review of State and Federal environmental health land use guidance. State standard comments to support sustainable healthy design are provided at: http://health.hawaii.gov/epo/landuse. Projects are required to adhere to all applicable standard comments. EPO has an updated environmental Geographic Information System (GIS) website page http://health.hawaii.gov/epo/egis It compiles various maps and viewers from our environmental health programs.

EPO also encourages you to examine and utilize the Hawaii Environmental Health Portal at: https://eha-cloud.doh.hawaii.gov. This site provides links to our e-Permitting Portal, Environmental Health Warehouse, Groundwater Contamination Viewer, Hawaii Emergency Response Exchange, Hawaii State and Local Emission Inventory System, Water Pollution Control Viewer, Water Quality Data, Warnings, Advisories and Postings.

We suggest you review the requirements of the Clean Water Branch (Hawaii Administrative Rules {HAR}, Chapter 11-54-1.1, -3, 4-8) and/or the National Pollutant Discharge Elimination System (NPDES) permit (HAR, Chapter 11-55) at: http://health.hawaii.gov/cwb. If you have any questions, please contact the Clean Water Branch (CWB), Engineering

Section at (808) 586-4309 or cleanwaterbranch@doh.hawaii.gov. If your project involves waters of the U.S., it is highly recommended that you contact the Army Corps of Engineers, Regulatory Branch at: (808) 835-4303.

Any waste generated by the project (that is not a hazardous waste as defined in state hazardous waste laws and regulations), needs to be disposed of at a solid waste management facility that complies with the applicable provisions (HAR, Chapter 11-58.1 "Solid Waste Management Control"). The open burning of any of these wastes, on or off site, is strictly prohibited. You may wish you review the Minimizing Construction & Demolition Waste Management Guide at: http://health.hawaii.gov/shwb/files/2016/05/constdem16.pdf Additional information is accessible at: http://health.hawaii.gov/shwb. For specific questions call (808) 586-4226.

You may also wish to review the draft Office of Environmental Quality Control (OEQC) viewer at: http://eha-web.doh.hawaii.gov/oeqc-viewer. This viewer geographically shows where some previous Hawaii Environmental Policy Act (HEPA) {Hawaii Revised Statutes, Chapter 343} documents have been prepared.

To better protect public health and the environment, the U.S. Environmental Protection Agency (EPA) has developed a new environmental justice (EJ) mapping and screening tool called EJSCREEN. It is based on nationally consistent data and combines environmental and demographic indicators in maps and reports. EPO encourages you to explore, launch and utilize this powerful tool in planning your project. The EPA EJSCREEN tool is available at: http://www.epa.gov/ejscreen.

We request that you utilize all of this information on your proposed project to increase sustainable, innovative, inspirational, transparent and healthy design. Thank you for the opportunity to comment.

Mahalo nui loa,

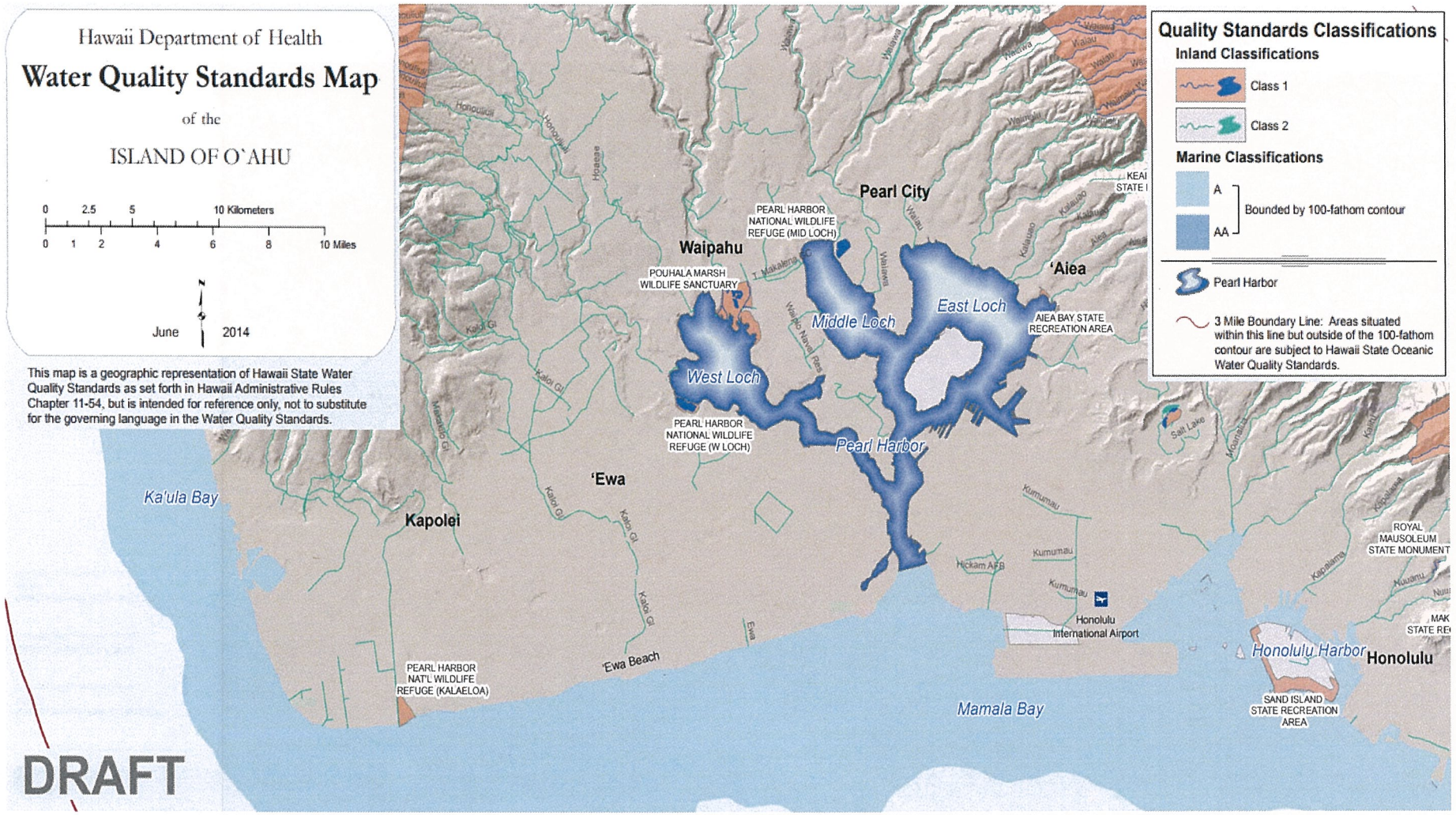
Laura Leialoha Phillips McIntyre, AICP
Program Manager, Environmental Planning Office

LM:nn

Attachment 1: Clean Water Branch: Water Quality Standards Map
Attachment 2: OEQC viewer (of some past EA's, EIS's in area)
Attachment 3: U.S. EPA EJSCREEN Report for Project Area

c: Michael Stout, Project Manager, Aloha Solar Energy Fund II, LLC (via email: mstout@ecc.net)
Jesse K. Souki, Executive Director, HCDA (via email: jesse.k.souki@hawaii.gov)
DOH: CWB {via email only}

Attachment 1: Clean Water Branch: Water Quality Standards Map



Attachment 2: OEQC viewer (of some past EA's, EIS's in area)

Attachment 3: U.S. EPA EJSCREEN Report for Project Area

EJSCREEN Report (Version 2016)

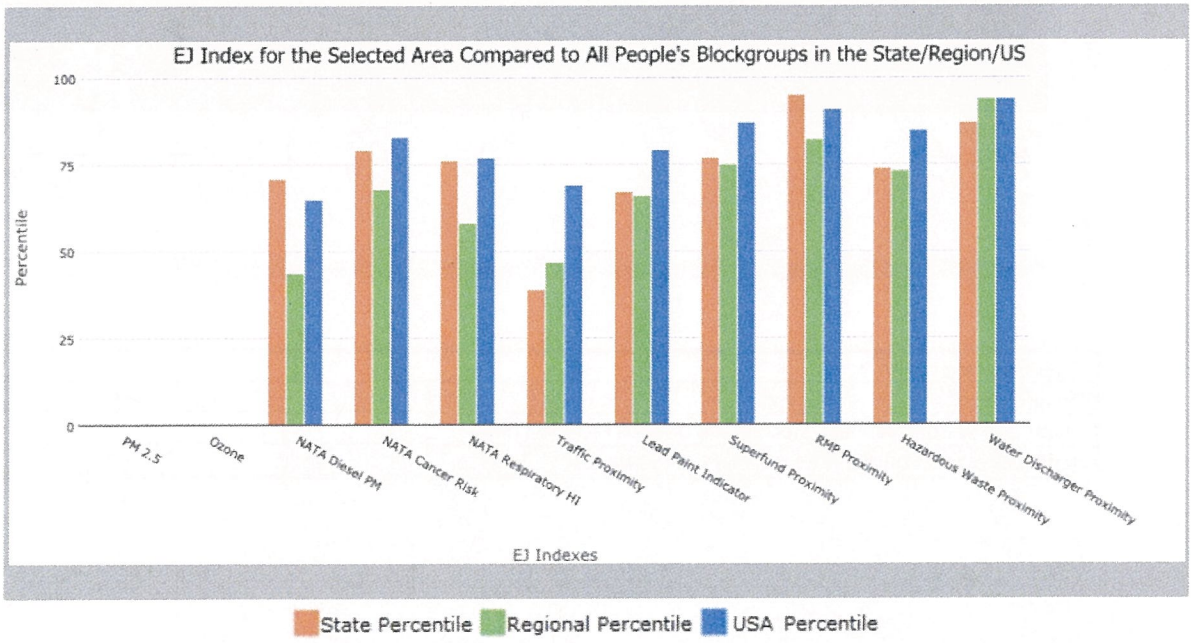
1 mile Ring Centered at 21.304768,-158.060201, HAWAII, EPA Region 9

Approximate Population: 133

Input Area (sq. miles): 3.14

(The study area contains 1 blockgroup(s) with zero population.)

Selected Variables	State Percentile	EPA Region Percentile	USA Percentile
EJ Indexes			
EJ Index for PM2.5	N/A	N/A	N/A
EJ Index for Ozone	N/A	N/A	N/A
EJ Index for NATA* Diesel PM	71	44	65
EJ Index for NATA* Air Toxics Cancer Risk	79	68	83
EJ Index for NATA* Respiratory Hazard Index	76	58	77
EJ Index for Traffic Proximity and Volume	39	47	69
EJ Index for Lead Paint Indicator	67	66	79
EJ Index for Superfund Proximity	77	75	87
EJ Index for RMP Proximity	95	82	91
EJ Index for Hazardous Waste Proximity+	74	73	85
EJ Index for Water Discharger Proximity	87	94	94



This report shows the values for environmental and demographic indicators and EJSCREEN indexes. It shows environmental and demographic raw data (e.g., the estimated concentration of ozone in the air), and also shows what percentile each raw data value represents. These percentiles provide perspective on how the selected block group or buffer area compares to the entire state, EPA region, or nation. For example, if a given location is at the 95th percentile nationwide, this means that only 5 percent of the US population has a higher block group value than the average person in the location being analyzed. The years for which the data are available, and the methods used, vary across these indicators. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports.

EJSCREEN Report (Version 2016)

1 mile Ring Centered at 21.304768,-158.060201, HAWAII, EPA Region 9

Approximate Population: 133

Input Area (sq. miles): 3.14

(The study area contains 1 blockgroup(s) with zero population.)

July 24, 2017

+ Digitized Point

Sites reporting to EPA	
Superfund NPL	0
Hazardous Waste Treatment, Storage, and Disposal Facilities (TSDF)	0
National Pollutant Discharge Elimination System (NPDES)	0

EJSCREEN Report (Version 2016)

1 mile Ring Centered at 21.304768,-158.060201, HAWAII, EPA Region 9

Approximate Population: 133

Input Area (sq. miles): 3.14

(The study area contains 1 blockgroup(s) with zero population.)

Selected Variables	Value	State Avg.	%ile in State	EPA Region Avg.	%ile in EPA Region	USA Avg.	%ile in USA
Environmental Indicators							
Particulate Matter (PM 2.5 in µg/m^3)	N/A	N/A	N/A	9.37	N/A	9.32	N/A
Ozone (ppb)	N/A	N/A	N/A	51	N/A	47.4	N/A
NATA* Diesel PM (µg/m^3)	0.0949	0.149	53	0.978	<50th	0.937	<50th
NATA* Cancer Risk (lifetime risk per million)	33	34	58	43	<50th	40	<50th
NATA* Respiratory Hazard Index	0.93	1	53	2	<50th	1.8	<50th
Traffic Proximity and Volume (daily traffic count/distance to road)	15	990	24	1100	15	590	22
Lead Paint Indicator (% Pre-1960 Housing)	0.1	0.16	50	0.24	45	0.3	36
Superfund Proximity (site count/km distance)	0.09	0.098	69	0.15	60	0.13	63
RMP Proximity (facility count/km distance)	0.65	0.19	93	0.57	75	0.43	81
Hazardous Waste Proximity+ (facility count/km distance)	0.087	0.14	55	0.14	55	0.11	62
Water Discharger Proximity (facility count/km distance)	0.45	0.34	73	0.2	90	0.31	82
Demographic Indicators							
Demographic Index	57%	52%	68	47%	65	36%	79
Minority Population	72%	77%	30	58%	62	37%	80
Low Income Population	42%	26%	83	36%	62	35%	66
Linguistically Isolated Population	0%	6%	23	9%	19	5%	44
Population With Less Than High School Education	17%	9%	83	17%	57	14%	68
Population Under 5 years of age	5%	6%	37	7%	36	6%	39
Population over 64 years of age	3%	15%	6	13%	5	14%	4

* The National-Scale Air Toxics Assessment (NATA) is EPA's ongoing, comprehensive evaluation of air toxics in the United States. EPA developed the NATA to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that NATA provides broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. More information on the NATA analysis can be found at: https://www.epa.gov/national-air-toxics-assessment.

+ The hazardous waste environmental indicator and the corresponding EJ index will appear as N/A if there are no hazardous waste facilities within 50 km of a selected location.

For additional information, see: www.epa.gov/environmentaljustice

September 25, 2017

925 Bethel Street
5th Floor
Honolulu, HI 96813
808.523.5866
www.g70.design

Ms. Laura Leialoha Phillips McIntyre, AICP, Program Manager
State of Hawai'i
Department of Health
Environmental Planning Office
P.O. Box 3378
Honolulu, Hawaii 96801-3378

Subject: **Draft Environmental Assessment**
Aloha Solar Energy Fund II (Kalaeloa, O'ahu, Hawai'i)

Dear Ms. Phillips McIntyre:

Thank you for your comment letter dated July 24, 2017 concerning the Draft Environmental Assessment (EA) for the Aloha Solar Energy Fund II (ASEF II) project.

We appreciate the resources you have provided relating to HAR 11-200-2, state standard comments, the Environmental Planning Office (EPO) updated environmental Geographic Information System (GIS) website page, the Hawai'i Environmental Health Portal, Clean Water Branch requirements in HAR 11-54-1.1, the National Pollutant Discharge Elimination System permit, HAR Chapter 11-58.1 regarding Solid Waste Management Control, the Office of Environmental Quality Control viewer, and the new environmental justice mapping and screening tool EJSCREEN. The project will apply these and other sustainability strategies and principles to the extent required and to the extent possible.

A copy of the Final EA can be found at:
http://oeqc2.doh.hawaii.gov/EA_EIS_Library/Forms/AllItems.aspx

Thank you for your participation in the environmental review process.

Sincerely,

Jeffrey H. Overton, AICP, LEED AP
Principal Planner

DAVID Y. IGE
GOVERNOR OF HAWAII

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

CARTY S. CHANG, P.E.
INTERIM FIRST DEPUTY

JEFFREY T. PEARSON, P.E.
DEPUTY DIRECTOR - WATER

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

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF FORESTRY AND WILDLIFE
1151 PUNCHBOWL STREET, ROOM 325
HONOLULU, HAWAII 96813

Jeffrey H. Overton, AICP, LEED AP
Principal Planner, G70
925 Bethel Street, 5th Floor
Honolulu, HI 96813-4307

August 15, 2017

Dear Jeffrey Overton,

The Department of Land and Natural Resources (DLNR) division of Forestry and Wildlife (DOFAW) has received your inquiry regarding the Draft Environmental Assessment for the proposed Aloha Solar Energy Fund II – Kalaeloa. The proposed project would be located in Kalaeloa, ʻEwa, Oahʻu at TMK (1) 9-1-013:070 and consist of developing a 5 MW solar power utility installation on 44.28 acres of land and construction of an approximately 1.78 mile long, 12 kilovolt interim electrical distribution line that includes overhead line and underground conduit.

It is not known how Hawaiian waterbirds interact with solar panels, but solar projects on the mainland have documented impacts to waterfowl and shorebirds. DOFAW recommends a wildlife education program that informs site personnel of species that may occur in the vicinity and could potentially be harmed by solar panels. Site personnel should document sightings of threatened or endangered species, as well as immediately report any mortality or injury of these species to DOFAW so that we may assist in avoiding and minimizing impacts.

DOFAW would like to ensure that effective avoidance measures are in place to prevent adverse impacts to native seabirds. DOFAW strongly recommends the use of only "seabird-friendly lighting" during the seabird nesting season beginning in March through mid-December. DOFAW Wildlife Biologists will be able to provide technical assistance in developing "seabird-friendly lighting."

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

The State and Federally listed Hawaiian hoary bat or ʻŌpeʻapeʻa (*Lasiurus cinereus semotus*) has the potential to occur in the vicinity of the proposed project. DOFAW recommends avoiding using barbed wire, as bat mortalities have been documented as a result of becoming ensnared by barbed wire during flight. Hawaiian hoary bats roost in both exotic and native trees. If any trees are planned for removal during the bat breeding season there is a risk of injury or mortality to juvenile bats. To minimize the potential for impacts to this species, woody plants greater than 15 feet (4.6 meters) tall should not be disturbed, removed, or trimmed during the bat birthing and

pup rearing season (June 1 through September 15). Site clearing should be timed to avoid disturbance to breeding Hawaiian hoary bats.

Although bat collisions with solar panels have not been documented in Hawaii, there has been some literature generated on the mainland that indicates that bats may perceive all smooth surfaces as water (Greif and Siemers 2010), which indicates a potential for bats to view the smooth, reflective surface of solar panels as resembling water. Any observations of Hawaiian hoary bats in the project area should be reported to DOFAW.

DOFAW requests that Aloha Solar Energy Fund II consult with DOFAW and the US Fish and Wildlife Service (USFWS) to determine if a threatened or endangered species is likely to be impacted by this project. We appreciate your efforts to work with our office for the conservation of native species. If you have any questions, or the scope of the project changes significantly, please contact Katherine Cullison, Conservation Initiatives Coordinator at (808)587-4148 or Katherine.cullison@hawaii.gov.

Sincerely,

James Cogswell
Wildlife Program Manager
Division of Forestry and Wildlife

925 Bethel Street
5th Floor
Honolulu, HI 96813
808.523.5866
www.g70.design

September 25, 2017

Mr. James Cogswell, Wildlife Program Manager
State of Hawai'i, Department of Land and Natural Resources
Division of Forestry and Wildlife (DOFAW)
1151 Punchbowl Street, Room 325
Honolulu, Hawai'i 96813

Subject: **Draft Environmental Assessment**
Aloha Solar Energy Fund II (Kalaeloa, O'ahu, Hawai'i)

Dear Mr. Cogswell:

Thank you for your comment letter dated August 15, 2017 concerning the Draft Environmental Assessment (EA) for the Aloha Solar Energy Fund II (ASEF II) project.

There has been no reported incidence of a waterbird in Hawai'i mistaking a solar panel for water and being harmed by attempting to land on it. We acknowledge your recommendation of a wildlife education program to inform site personnel of waterbird species that may occur in the vicinity, as well as informing them to immediately report any mortality or injuries of these species to DOFAW for assistance.

We also acknowledge your comment regarding "seabird-friendly lighting" during the seabird nesting season beginning in March through mid-December. The project currently does not plan to utilize any outdoor lighting, however, the project will coordinate with DOFAW for technical assistance in developing "seabird-friendly lighting" if necessary in the future.

Per your recommendation regarding the Hawaiian short-eared owl, or pueo, we intend to conduct a twilight preconstruction survey prior to clearing vegetation. Buffer zones are to be established in the event that pueo nests are present. According to our biology fauna technical report found in Appendix C of the EA, no pueo or their nests were observed in the site parcel or distribution line work areas at the time of the surveys.

We acknowledge your comment regarding the Hawaiian hoary bat, or 'ōpe'ape'a. Per the technical report found in Appendix C of the EA, 'ōpe'ape'a typically roost in woody vegetation taller than 15 feet in height. Tall trees on site are all kiawe, a species not typically associated with roosting. However, in the event that trees taller than 15 feet are removed, removal of trees will not occur during the bat pupping season. While barbed wire will be used on the project site, its use will be minimal as a required safety measure to enclose the switchyard. No additional barbed wire is intended for use around the solar farm.

Some limited data does suggest the 'ōpe'ape'a could mistake a smooth, horizontally placed solar panel for a water surface and attempt to drink from it. However, the proposed project will include solar modules that are installed at a 10-degree tilt. Accordingly, in the absence of horizontal placement at the

project site, it is reasonable to assume the mistake is far less likely to occur and that no physical harm to a bat is anticipated when drinking from the smooth surface fails.

Per your recommendation, any observations of ʻopeʻapeʻa in the project area will be reported to DOFAW.

The project team had engaged in both pre-consultation and included copies of the EA for comment to both DOFAW and US Fish and Wildlife service. Although we have no identified endangered or threaten species with our project area, we can continue to coordinate with your respective offices as the project moves forward. A copy of the Final EA can be found at:
http://oeqc2.doh.hawaii.gov/EA_EIS_Library/Forms/AllItems.aspx

Thank you for your participation in the environmental review process.

Sincerely,

Jeffrey H. Overton, AICP, LEED AP
Principal Planner

DAVID Y. IGE
GOVERNOR OF HAWAII

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

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

August 4, 2017

G70 International, Inc.
Attention: Mr. Jeffrey H. Overton
925 Bethel Street, 5th Floor
Honolulu, Hawaii 96813

via email: ASEF@g70.design

Dear Mr. Overton:

SUBJECT: Draft Environmental Assessment (DEA) for Aloha Solar Energy Fund II, LLC, Ewa, Island of Oahu; TMK No. (1) 9-1-013:070 and portion of 30-foot-wide State of Hawaii Department of Transportation, Highways Division Right-of-Way along eastern edge of Coral Sea Road that borders (1) 9-1-013:039, 040, 043, 044, 072, 099 & 100

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

At this time, enclosed are comments from the (a) Engineering Division and (b) Land Division – Oahu District on the subject matter. Should you have any questions, please feel free to call Darlene Nakamura at 587-0417. Thank you.

Sincerely,

Russell Y. Tsuji
Land Administrator

Enclosures
cc: Central Files

DAVID Y. IGE
GOVERNOR OF HAWAII

'17 JUL 12 PM01:47 ENGINEERING

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

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

July 11, 2017

RECEIVED
LAND DIVISION
2017 JUL 24 AM 11:00
DEPT. OF LAND & NATURAL RESOURCES
STATE OF HAWAII

MEMORANDUM

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

FROM: Russell Y. Tsuji, Land Administrator
SUBJECT: Draft Environmental Assessment (DEA) for Aloha Solar Energy Fund II LLC
LOCATION: Ewa, Island of Oahu; TMK No. (1) 9-1-013:070 and portion of 30-foot-wide State Highway-of-Way along eastern edge of Coral Sea Road that borders (1) 9-1-013:039, 040, 043, 044, 072, 099 & 100
APPLICANT: Aloha Solar Energy Fund II, LLC

Transmitted for your review and comment is information on the above-referenced project. We would appreciate your comments on this project. Please submit any comments by **August 3, 2017.**

The DEA can be found on-line at: http://health.hawaii.gov/oeqc/ (Click on the Current Environmental Notice in the middle of the page.)

If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Lydia Morikawa at 587-0410. Thank you.

Attachments

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

Signed: _____

Print Name: for Carty S. Chang, Chief Engineer
Date: 7/20/17

cc: Central Files

DEPARTMENT OF LAND AND NATURAL RESOURCES
ENGINEERING DIVISION

LD/Russell Y. Tsuji

Ref: DEA for Aloha Solar Energy Fund II LLC, Ewa , Oahu
TMK No: (1) 9-1-013:070 and portion of 30-foot-wide State DOT-Highways Right-of-Way along eastern edge of Coral Sea Road that borders (1) 9-1-013:039, 040, 043, 044, 072, 099 & 100

COMMENTS

The rules and regulations of the National Flood Insurance Program (NFIP), Title 44 of the Code of Federal Regulations (44CFR), are in effect when development falls within an area of special Flood Hazard.

The owner of the project property and/or their representative is responsible to research the Flood Hazard Zone designation for the project. Flood Hazard Zone designations can be found using the Flood Insurance Rate Map (FIRM), which can be accessed through the Flood Hazard Assessment Tool (FHAT) (http://gis.hawaiinfip.org/FHAT).

Be advised that 44CFR reflects the minimum standards as set forth by the NFIP. Local community flood ordinances may take precedence over the NFIP standards as local designations prove to be more restrictive. If there are questions regarding the local flood ordinances, please contact the applicable County NFIP Coordinators below:

- Oahu: City and County of Honolulu, Department of Planning and Permitting (808) 768-8098.
- Hawaii Island: County of Hawaii, Department of Public Works (808) 961-8327.
- Maui/Molokai/Lanai County of Maui, Department of Planning (808) 270-7253.
- Kauai: County of Kauai, Department of Public Works (808) 241-4896.

Signed: _____
for CARTY S. CHANG, CHIEF ENGINEER

Date: 7/20/17

September 25, 2017

925 Bethel Street
5th Floor
Honolulu, HI 96813
808.523.5866
www.g70.design

Mr. Carty S. Chang, P.E., Chief Engineer
State of Hawai'i
Department of Land and Natural Resources
Engineering Division
P.O. Box 621
Honolulu, Hawai'i 96809

Subject: **Draft Environmental Assessment**
Aloha Solar Energy Fund II (Kalaeloa, O'ahu, Hawai'i)

Dear Mr. Chang:

Thank you for your comment letter dated July 11, 2017 concerning the Draft Environmental Assessment (EA) for the Aloha Solar Energy Fund II (ASEF II) project.

We appreciate the resources you have provided relating to the rules and regulations of the National Flood Insurance Program (NFIP), Title 44 of the Code of Federal Regulations (44CFR).

Per Section 3.4 of the Environmental Assessment, the entire ASEF II project site is within flood Zone D, and is located over 250 feet outside the 100-year flood plain. Because the project area does not include existing flowing water courses, stream flooding is not anticipated.

A copy of the Final EA can be found at:
http://oeqc2.doh.hawaii.gov/EA_EIS_Library/Forms/AllItems.aspx

Thank you for your participation in the environmental review process.

Sincerely,

Jeffrey H. Overton, AICP, LEED AP
Principal Planner

DAVID Y. IGE
GOVERNOR OF HAWAII

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

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

RECEIVED
LAND DIVISION
2017 JUL 17 AM 9:00
DEPT. OF LAND & NATURAL RESOURCES
STATE OF HAWAII

July 11, 2017

MEMORANDUM

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

FROM: Russell Y. Tsuji, Land Administrator
SUBJECT: Draft Environmental Assessment (DEA) for Aloha Solar Energy Fund II LLC
LOCATION: Ewa, Island of Oahu; TMK No. (1) 9-1-013:070 and portion of 30-foot-wide State Highway-of-Way along eastern edge of Coral Sea Road that borders (1) 9-1-013:039, 040, 043, 044, 072, 099 & 100
APPLICANT: Aloha Solar Energy Fund II, LLC

Transmitted for your review and comment is information on the above-referenced project. We would appreciate your comments on this project. Please submit any comments by **August 3, 2017.**

The DEA can be found on-line at: http://health.hawaii.gov/oeqc/ (Click on the Current Environmental Notice in the middle of the page.)

If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Lydia Morikawa at 587-0410. Thank you.

Attachments

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

Signed: Darlene Bryant-Takamatsu
Print Name: Darlene Bryant-Takamatsu
Date: 7/14/17

cc: Central Files

925 Bethel Street
5th Floor
Honolulu, HI 96813
808.523.5866
www.g70.design

September 25, 2017

Ms. Darlene Bryant-Takamatsu
State of Hawai'i
Department of Land and Natural Resources
Land Division – O'ahu District
P.O. Box 621
Honolulu, Hawai'i 96809

Subject: **Draft Environmental Assessment**
Aloha Solar Energy Fund II (Kalaeloa, O'ahu, Hawai'i)

Dear Ms. Bryant-Takamatsu:

Thank you for your comment letter dated July 11, 2017 concerning the Draft Environmental Assessment (EA) for the Aloha Solar Energy Fund II (ASEF II) project.

We acknowledge the Department of Land and Natural Resources, Land Division – O'ahu District has no comments at this time.

A copy of the Final EA can be found at:
http://oeqc2.doh.hawaii.gov/EA_EIS_Library/Forms/AllItems.aspx

Thank you for your participation in the environmental review process.

Sincerely,

Jeffrey H. Overton, AICP, LEED AP
Principal Planner

DAVID Y. IGE
GOVERNOR

FORD N. FUCHIGAMI
DIRECTOR

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

IN REPLY REFER TO:

STP 8.2212

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

September 6, 2017

Mr. Jeffrey H. Overton, AICP, LEED AP
Principal Planner
G70
925 Bethel Street, 5th Floor
Honolulu, Hawaii 96813

Dear Mr. Overton:

Subject: Aloha Solar Energy Fund II – Kalaeloa (ASEF II)
Chapter 343, HRS Draft Environmental Assessment
Ewa Beach, Oahu, Hawaii
TMK: (1) 9-1-013: 070 (HCDA owned) and portion of 30-foot wide State of Hawaii, Department of Transportation, Highways (DOT-HWY) Division Right-of-Way (ROW) along eastern edge of Coral Sea Road that borders (1) 9-1-013:039, 040, 043, 044, 072, 099 and 100

Department of Transportation's (DOT) comments on the subject project are as follows:

Airports Division (DOT-AIR)

1. The proposed photovoltaic (PV) system is directly adjacent to the airport taxiway and Runway 29 at the Kalaeloa Airport (JRF). All applicants, agencies and subsequent construction contractors need to be aware of the duties of the state and county agencies to implement the Technical Assistance Memorandum (TAM) related to this project and all projects within five (5) miles of an airport. More information about the TAM can be found at the State of Hawaii Office of Planning Website: http://files.hawaii.gov/dbedt/op/docs/TAM-FAA-DOT-Airports_08-01-2016.pdf

2. We are aware that the developer has received a Determination of No Hazard to Air Navigation from the Federal Aviation Administration (FAA) in response to the submittal of Form 7460-1 "Notice of Proposed Construction or Alteration". This requirement is also applicable to tall equipment, such as cranes, that may be used during construction.

3. Although the developer has acknowledged in their letter to Glenn M. Okimoto, Ph.D., dated, June 27, 2017, that the occurrences of glare are anticipated to be low, the developer's statement that "airport officials must be ready to mitigate glare if there are complaints received by pilots" and the mitigation measures that follow are incorrect and unacceptable. Any mitigation measures for the proposed solar farm is the responsibility of the PV system's owner. If glint or glare from the PV array creates a hazardous condition for pilots, the owner of the photovoltaic system must be prepared to immediately mitigate the hazard, upon notification by the Department of Transportation, Airports Division (DOT-AIR) or the FAA. The FAA has advised that there can be no glint or glare from the PV array into the Air Traffic Control Tower cab at JRF.

Highways Division (DOT-HWY)

1. Based on the proposed utility lines in proximity to the Oahu Railway and Land right-of-way, the Applicant should verify and document in the Final Environmental Assessment (FEA) whether the scope and location of the work will trigger the federal action required by the National Environmental Policy Act and Section 106 of the National Historic Preservation Act.

2. Although the DOT-HWY do not believe there will be significant trip generated impacts by the PV project, the FEA should provide a Traffic Assessment or a discussion to disclose the day-to-day operation and maintenance schedule at the proposed PV facility.

3. The DOT-HWY has concerns with additional utility poles to be constructed on State facilities as potential obstruction and safety hazard.

4. Provide a discussion in the FEA of any cumulative traffic impacts to the State facility during construction work with potential road closures and any recommended mitigations. The discussion should also reference the construction hours and activities, including a phasing or completion schedule.

5. Construction for all work done in the right-of-way including driveway access within the Coral Sea Road and the Franklin D. Roosevelt Avenue, should be submitted and reviewed by the DOT-HWY, Right-of-Way Branch.

6. A permit is required from the DOT-HWY to transport oversized/overweight equipment/loads within our State highways facilities. The FEA should provide a description of the types of construction and heavy equipment vehicles to be used at the site.

If there are any questions, please contact Mr. Norren Kato of the DOT Statewide Transportation Planning Office at telephone number (808) 831-7976.

Sincerely,

FORD N. FUCHIGAMI
Director of Transportation

925 Bethel Street
5th Floor
Honolulu, HI 96813
808.523.5866
www.g70.design

September 25, 2017

Mr. Ford Fuchigami, Director of Transportation
State of Hawai'i, Department of Transportation
869 Punchbowl Street
Honolulu, Hawai'i 96813

Subject: **Draft Environmental Assessment**
Aloha Solar Energy Fund II (Kalaeloa, O'ahu, Hawai'i)

Dear Mr. Fuchigami:

Thank you for your comment letter dated September 6, 2017 concerning the Draft Environmental Assessment (EA) for the Aloha Solar Energy Fund II (ASEF II) project. The following responses are offered to your comments.

Airports Division DOT-AIR
We acknowledge that the photovoltaic system is directly adjacent to the airport taxiway and Runway 29 at the Kalaeloa Airport. We are aware of the Technical Assistance Memorandum (TAM) related to this project, and will keep construction contractors apprised of the duties of the state and county agencies in implementing the recommendations included in the TAM. The TAM includes assistance on a number of noise, obstruction, and other incompatible land uses (hazardous wildlife attractants, environmental reviews, land use compatibility, height limits, glint/glare, obstruction evaluation, avigation and noise), which have been evaluated for the project.

The Determination of No Hazard to Air Navigation issued in August 2017 from the FAA determined that the project would not physically or electronically interfere with any public-use airports or FAA navigational facilities. The Determination includes tall equipment that may be used during construction. Per the Determination of No Hazard to Air Navigation, equipment is allowable but not to exceed the overall heights that have been evaluated for each of the structures.

Thank you for the correction regarding the responsibility of mitigating any glare that creates hazardous conditions for pilots. We stand corrected that in the event glint or glare from the PV array creates a hazardous condition for pilots, the owner of the PV system is responsible, and will be required to immediately mitigate the hazard upon notification by the DOT-AIR or the FAA.

Highways Division (DOT-HWY)
The scope and location of the work will not trigger federal action required by the National Environmental Policy Act, as no Federal action, assistance, or licensing will be involved in the project. Consultation with SHPD has confirmed that the Federal Preservation Office of the FAA does not trigger Section 106 of the National Historic Preservation Act.

The solar farm will be an unmanned facility. Traffic associated with maintenance for the project will be comprised of 1-2 vehicle trips per month.

We acknowledge your concerns regarding additional utility poles on State facilities. Only one utility pole will be located on HCDA property; it is not anticipated that any additional poles will be installed on State facilities. Of note, the portion of the parcel that is being preserved is populated with trees that are taller than the proposed utility poles for the project and FAA has issued a Determination of No Hazard to Air Navigation. Additionally, the siting of utility poles along Coral Sea Road were strategically selected to prevent hindrances to existing roadway conditions, ingress/egress, and right of way use.

The details of construction hours and activities will be coordinated at the time of securing appropriate permits from DOT. Road closures will be coordinated closer to permitting, however the project will avoid movement of construction equipment at peak periods of major thoroughfares within the district.

Permits for construction for all work done in the right-of-way including driveway access within the Coral Sea Road and the Franklin D. Roosevelt Avenue will be submitted to the DOT-HWY, Right of Way Branch's review. The types of construction and heavy equipment vehicles that will be used on the site will be determined at the time of the required DOT-HWY permits to allow for oversized/overweight equipment and loads within State highways facilities.

A copy of the Final EA can be found at:
http://oeqc2.doh.hawaii.gov/EA_EIS_Library/Forms/AllItems.aspx

Thank you for your participation in the environmental review process.

Sincerely,

Jeffrey H. Overton, AICP, LEED AP
Principal Planner

OFFICE OF PLANNING
STATE OF HAWAII

DAVID Y. IGE
GOVERNOR

LEO R. ASUNCION
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/

Ref. No. P-15668

July 26, 2017

Mr. Jeffrey H. Overton
Principal Planner
G70
920 Bethel Street, 5th Floor
Honolulu, Hawaii 96813-4307

Dear Mr. Overton:

Subject: Draft Environmental Assessment for the Aloha Solar Fund II, Kalaeloa, Ewa, Oahu, Hawaii

TMK: (1) 9-1-013: 070 and portion of a 30-foot wide State of Hawaii, DOT Highways Right-of-Way, along eastern edge of Coral Sea Road, (1) 9-1-013: 039, 040, 043, 044, 072, 099, 100

Thank you for the opportunity to provide comments on the Draft Environmental Assessment (Draft EA) for the proposed Aloha Solar Fund II project. The Draft EA review material was transmitted to our office by letter dated July 8, 2017.

It is our understanding that the Aloha Solar Energy Fund II (ASEF II) is proposing the development of a five megawatt solar power utility system to be built on approximately 44 acres of lands in Kalaeloa, Oahu. Power generated by this facility would be transferred along an approximate 1.8 miles of electrical distribution line that would be connected to the Hawaiian Electric Company (HECO) grid within its existing right-of-way.

The purpose of the proposed ASEF II project is to be a source of renewable energy in the form of solar electric power to HECO's existing power grid. The project proposes to help the State in achieving its green renewable energy goal, reduce greenhouse gas emissions, decrease the State's dependency on foreign imports of fossil fuels, and the associated environmental risks from petroleum and hazardous waste spills during the transport and storage of fossil fuel.

The Office of Planning (OP) has reviewed the transmitted material and has the following comments to offer:

1. The Draft EA addresses many topics and issues that fall under the jurisdiction of our office.
   a. Coastal Nonpoint Source Pollution: Section 2.4.3, pages 2-9 to 2-10 examines drainage systems servicing the area. It states that there is no existing subsurface drainage system on the parcel. The area generally slopes toward the south corner of

the property with elevation drops between the north edge of the property and southernmost corner ranging from 6 to 12 feet. The general drainage pattern will not be altered, stormwater will continue to sheet flow southward through the site, and proposed stormwater discharges will not exceed existing discharge rates. This analysis addresses OP's program responsibilities for coastal nonpoint source pollution.

b. Stormwater Runoff Mitigation: Section 3.2, pages 3-1 to 3-2 states the solar farm will be a low-impact development (LID) located on undeveloped lands. General drainage patterns will not be modified as part of this project and there are not anticipated impacts as a result of grading operations. As correctly noted in this section, work performed as of August 2017 will be subject to updated Department of Planning and Permitting rules relating to storm drainage standards. These updated rules require the implementation of post-construction LID design features on Oahu. This analysis addresses OP's policies on polluted runoff mitigation.

c. Federal Aviation Administration (FAA) Operations Obstruction Requirement: Section 5.2.2, pages 5-3 to 5-4 examines the OP Technical Assistance Memorandum on the 2016-1 FAA Order 5190.6B in regards to the use of land adjacent to Hawaii Airports. The Draft EA states the proposed facilities have been designed to comply with FAA Order 5190.6B and will continue to coordinate with the FAA to ensure regulatory compliance. A glint/glare study is also included in Appendix D of the Draft EA. This analysis addresses the FAA Technical Assistance Order produced by OP on the prohibition of land development near active airports in interfering with aircraft operations.

2. Special Management Area Permitting: Section 1.5, page 1-3 correctly identifies that the project site is located within the Kalaeloa Community Development District (CDD), and the project falls under the jurisdiction of the Hawaii Community Development Authority.

   If any part of the proposed action is located within the special management area (SMA) of the Kalaeloa CDD, the applicant shall consult with the OP for the requirements of SMA use. Pursuant to HRS § 206E-8.5, all requests for developments within a SMA and shoreline setback variances for developments within a CDD, for which a community development plan has been developed and approved in accordance with HRS § 206E-5, shall be submitted to and reviewed by OP.

3. Hawaii Coastal Zone Management Program: Section 5.1.2, pages 5-1 to 5-2 examines the project in relation to the Coastal Zone Management Act. It concludes that since a portion of the 44-acre parcel is located within the SMA, an SMA minor permit may be required by OP. SMA permitting is a separate matter from what should be a larger evaluation of the

objectives and policies of the Hawaii Coastal Zone Management (CZM) program as listed in HRS § 205A-2. In its current form, Section 5.1.2, does not sufficiently address HRS § 205A-2.

The Final Environmental Assessment (Final EA) should include an analysis on the project's consistency with all of the objectives and policies of the Hawaii CZM program. These include: (1) Recreational Resources, (2) Historic Resources, (3) Scenic and Open Spaces, (4) Coastal Ecosystems, (5) Economic Uses, (6) Coastal Hazards, (7) Managing Development, (8) Public Participation, (9) Beach Protection, and (10) Marine Resources.

4. Hawaii State Planning Act: Section 5.2.1, State Planning Documents, page 5-3 of the Draft EA evaluates the project in relation to the Hawaii State Planning Act, HRS Chapter 226. The analysis states the project is consistent with the HRS § 226-18 (c) (1) and (5) – Objectives and policies for facility systems – energy.

There is no further analysis on the remaining themes, goals, objectives, policies, or priority guidelines listed within the HRS Chapter 226. The Final EA should include an examination on the project's ability to meet all of Part I – Overall Themes, Goals, Objectives and Policies; Part II – Planning Coordination and Implementation (State Functional Plans); and Part III – Priority Guidelines. If any of these themes are not applicable to the project, the Final EA should affirmatively state such determination followed by discussion paragraphs.

Because this project's core purpose is the production of renewable energy for use on Oahu, Section 5.2.1 should examine the project's consistency with HRS § 226-108(2) the priority guidelines on sustainability.

We have no further comments at this time. If you have any questions regarding this comment letter, please contact Joshua Hekekia of our office at (808) 587-2845.

Sincerely,

Leo R. Asuncion
Director

925 Bethel Street
5th Floor
Honolulu, HI 96813
808.523.5866
www.g70.design

September 25, 2017

Mr. Leo R. Asuncion, Director
State of Hawai'i
Office of Planning
235 South Beretania Street, 6th Floor
Honolulu, Hawaii 96804

Subject: **Draft Environmental Assessment**
Aloha Solar Energy Fund II (Kalaeloa, O'ahu, Hawai'i)

Dear Mr. Asuncion:

Thank you for your comment letter dated July 26, 2017 concerning the Draft Environmental Assessment (EA) for the Aloha Solar Energy Fund II (ASEF II) project.

We appreciate your feedback on the items below:

2. Special Management Area Permitting: Pursuant to HRS 206E-8.5, all requests for developments within a SMA shall be submitted to and reviewed by your office. The portion of the perimeter fence that is within the SMA will be submitted for permitting with OP.

3. Hawai'i Coastal Zone Management Program: Section 5.1.2 has been updated to include an analysis on the project's consistency with all objectives and policies of the Hawai'i CZM program applicable to the project.

4. Hawai'i State Planning Act: Section 5.2.1 has been updated to include an examination on the project's ability to meet Parts I, II, and III of HRS Chapter 226. The Final EA affirmatively states any themes that are not applicable to the project with discussion paragraphs. Section 5.2.1 also examines the project's consistency with HRS 226-108(2) regarding priority guidelines on sustainability.

A copy of the Final EA can be found at:
http://oeqc2.doh.hawaii.gov/EA_EIS_Library/Forms/AllItems.aspx

Thank you for your participation in the environmental review process.

Sincerely,

Jeffrey H. Overton, AICP, LEED AP
Principal Planner

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HI 96843
www.boardofwatersupply.com

August 3, 2017

Mr. Jeffrey H. Overton, AICP, LEED AP
Group 70 International, Inc.
925 Bethel Street, 5th Floor
Honolulu, Hawaii 96813-4307

Dear Mr. Overton:

Subject: Your Letter Dated July 8, 2017 Requesting Comments on the Draft Environmental Assessment for the Proposed Aloha Solar Energy Fund II Project in Kalaeloa – Tax Map Key: 9-1-031: 039, 040, 043, 044, 072, 099, 100

Thank you for your letter regarding the proposed photovoltaic utility installation and electrical distribution line.

Water service cannot be made available to the proposed project. We do not have a water system serving this area. The water system improvements necessary to provide water service to the photovoltaic utility installation and electrical distribution line are quite extensive and we do not have plans to undertake them at this time. Water service should be provided by the private water system serving this area.

If you have any questions, please contact Robert Chun, Project Review Branch of our Water Resources Division at 748-5443.

Very truly yours,

Barry Usagawa

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

925 Bethel Street
5th Floor
Honolulu, HI 96813
808.523.5866
www.g70.design

September 25, 2017

Mr. Barry Usagawa
City and County of Honolulu
Board of Water Supply (BWS)
630 South Beretania Street
Honolulu, Hawaii 96843

Subject: **Draft Environmental Assessment**
Aloha Solar Energy Fund II (Kalaeloa, Oʻahu, Hawaiʻi)

Dear Mr. Usagawa:

Thank you for your comment letter dated August 3, 2017 concerning the Draft Environmental Assessment (EA) for the Aloha Solar Energy Fund II (ASEF II) project.

We acknowledge your comment that water service cannot be made available to the project, and that BWS does not have a water system serving this area. Water service will be provided by a private company serving the area.

A copy of the Final EA can be found at:
http://oeqc2.doh.hawaii.gov/EA_EIS_Library/Forms/AllItems.aspx

Thank you for your participation in the environmental review process.

Sincerely,

Jeffrey H. Overton, AICP, LEED AP
Principal Planner

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

July 21, 2017

Mr. Jeffrey Overton
Group 70 International, Inc.
925 Bethel Street, 5th Floor
Honolulu, Hawaii 96813

Dear Mr. Overton:

Subject: Draft Environmental Assessment
Aloha Solar Energy Fund II - Kalaeloa
Tax Map Key: 9-1-013: 070 and Portions of 039, 040, 043, 044, 072, 099, and 100

In response to your letter dated July 8, 2017, regarding the above-mentioned subject, the Honolulu Fire Department (HFD) determined that there will be no significant impact to fire department services.

New buildings associated with this project shall comply with the following:

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 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; Uniform Fire Code [UFC]™, 2012 Edition, Section 18.2.3.2.2.)

   A fire department access road shall extend to within 50 feet of at least one exterior door that can be opened from the outside and that provides access to the interior of the building. (NFPA 1; UFC™, 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 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; UFC™, 2012 Edition, Section 18.3.1, as amended.)

3. Fire department access roads shall have an unobstructed width of not less than 20 feet or as approved by the AHJ. (NFPA 1; UFC™, 2012 Edition, Section 18.2.3.4.1.1, as amended.)

4. Submit civil drawings to the HFD for review and approval.

Photovoltaic Installations associated with this project shall comply with NFPA 1; UFC™, 2012 Edition, Section 11.12.

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

Sincerely,

Socrates D. Bratakos

SOCRATES D. BRATAKOS
Assistant Chief

SDB/DO:bh

September 25, 2017

925 Bethel Street
5th Floor
Honolulu, HI 96813
808.523.5866
www.g70.design

Mr. Socrates D. Bratakos, Assistant Chief
City and County of Honolulu
Honolulu Fire Department (HFD)
636 South Street
Honolulu, Hawaii 96813-5007

Subject: **Draft Environmental Assessment**
Aloha Solar Energy Fund II (Kalaeloa, Oʻahu, Hawaiʻi)

Dear Mr. Bratakos:

Thank you for your comment letter dated July 21, 2017 concerning the Draft Environmental Assessment (EA) for the Aloha Solar Energy Fund II (ASEF II) project.

We acknowledge your comment that the project will not have a significant impact to fire department services, as well as your new building requirements listed in your letter. At this time, there are no buildings planned for the ASEF II property.

1. Access will be provided to ensure the property can be serviced by fire department vehicles.
2. This project does not involve fire flow or water supply on site for fire protection services. The project will comply with NFPA 2012, which requires 10' clearance around the installations and a non-combustible base underneath.
3. The unobstructed width of 20 feet for fire department access roads has been noted.
4. Civil drawings will be submitted to HFD as a part of the building permit review process.

Photovoltaic installations will comply with NFPA 1; UFC 2012 Edition, Section 11.12.

In addition, a firebreak (vegetation-free zone) will be maintained inside of the property's perimeter fence. This firebreak shall be constructed to a width of 3m (10 feet).

A copy of the Final EA can be found at:
http://oeqc2.doh.hawaii.gov/EA_EIS_Library/Forms/AllItems.aspx

Thank you for your participation in the environmental review process.

Sincerely,

Jeffrey H. Overton, AICP, LEED AP
Principal Planner

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

KATHY K. SOKUGAWA
ACTING DIRECTOR

TIMOTHY F. T. HIU
DEPUTY DIRECTOR

2017/ELOG-1339(CK)

August 7, 2017

Mr. Jeffrey H. Overton
G70
925 Bethel Street, 5th Floor
Honolulu, Hawaii 96813

Dear Mr. Overton

SUBJECT: Draft Environmental Assessment (EA)
Aloha Solar Energy Fund II
Coral Sea Road - Kalaeloa
Tax Map Key: 9-1-013: 070 and portions of 039, 040, 043, 044, 072, 099, and 100

This responds to your July 8, 2017 request for comments about the Draft EA for the subject project.

Land Use Permits Division:

1. The project site in Kalaeloa is under the jurisdiction of the Hawaii Community Development Authority. The City and County of Honolulu does not have zoning jurisdiction within this portion of Kalaeloa. Therefore, the project is not subject to the Revised Ordinances of Honolulu, Chapter 21, Land Use Ordinance.

2. Section 3.0 (Environmental setting, possible impacts and mitigation measures) The Final EA should analyze the possible impact of sea level rise for new public and private projects in shoreline areas and incorporate, where appropriate and feasible, measures to reduce risks and increase resiliency to impacts of sea level rise.

Civil Engineering Branch (CEB):

1. Section 1.5.7 (Construction and Building Permits):

   a. A Department of Planning and Permitting (DPP) trenching permit is not required since no work is being done within an existing City right-of-way.

   b. There is no such thing as a "driveway connection permit" issued by DPP.

2. Section 3.1 (Topography), Section 3.8.3 (Storm Drainage) and Appendix B, Section 2.2.2:

   Construction and post-construction storm water quality best management practices requirements shall comply with the prevailing soil erosion and storm water quality standards at the time the grading plans are submitted to DPP for review and approval. Be advised that the current soil erosion and water quality standards will be superseded in its entirety with "The Rules Relating to Water Quality", effective August 16, 2017.

   The project's compliance with the City's storm drainage and water quality standards will be verified at the time that the construction/grading plans are submitted to DPP for review.

Please contact Don Fujii at 768-8107, if you have any questions regarding the CEB comments.

Thank you for the opportunity to review and comment on this project. Should you have further questions, please contact Charles Kelton at 768-8022.

Very truly yours,

for Kathy K. Sokugawa
Acting Director

925 Bethel Street
5th Floor
Honolulu, HI 96813
808.523.5866
www.g70.design

September 25, 2017

Ms. Joyce Shoji, Acting Director
City and County of Honolulu
Department of Planning and Permitting (DPP)
630 South King Street, 7th Floor
Honolulu, Hawaii 96813

Subject: **Draft Environmental Assessment**
Aloha Solar Energy Fund II (Kalaeloa, Oʻahu, Hawaiʻi)

Dear Ms. Shoji:

Thank you for your comment letter dated August 7, 2017 concerning the Draft Environmental Assessment (EA) for the Aloha Solar Energy Fund II (ASEF II) project.

We acknowledge your comments in the following divisions:

Land Use Permits Division
We acknowledge your comment that the project is not subject to the Revised Ordinances of Honolulu, Chapter 21, Land Use Ordinance. We also acknowledge your request for the Final EA to address the possible impact of sea level rise, and have added language to address this possible impact in Sections 3.3 and 3.4 of the EA.

Civil Engineering Branch (CEB)
We acknowledge your comments on the following:

- A DPP trenching permit is not required for the project.
- Construction and post-construction storm water quality best management practices (BMPs) shall comply with the prevailing soil erosion and storm water quality standards.
- The notice that current soil erosion and water quality standards will be superseded in its entirety with "The Rules Relating to Water Quality" effective August 16, 2017.
- The project's compliance with the City's storm drainage and water quality standards will be verified at the time of DPP's construction/grading plan review.

A copy of the Final EA can be found at:
http://oeqc2.doh.hawaii.gov/EA_EIS_Library/Forms/AllItems.aspx

Thank you for your participation in the environmental review process.

Sincerely,

Jeffrey H. Overton, AICP, LEED AP
Principal Planner

DEPARTMENT OF PARKS & RECREATION

CITY AND COUNTY OF HONOLULU

1000 Uluohia Street, Suite 309, Kapolei, Hawaii 96707
Phone: (808) 768-3003 • Fax: (808) 768-3053
Website: www.honolulu.gov

KIRK CALDWELL
MAYOR

MICHELE K. NEKOTA
DIRECTOR

JEANNE C. ISHIKAWA
DEPUTY DIRECTOR

July 7, 2017

Mr. Jeffrey H. Overton, AICP, LEED AP
Group 70
925 Bethel Street, 5th Floor
Honolulu, Hawaii 96813-4307

Dear Mr. Overton:

SUBJECT: Draft Environmental Assessment
Aloha Solar Energy Fund II-Kalaeloa (ASEF II)

Thank you for the opportunity to review and comment on the subject Draft Environmental Assessment.

The Department of Parks and Recreation has no comment. As the proposed project will have no impact on any program or facility of the Department, you may remove us as a consulted party to the balance of the EIS process.

Should you have any questions, please contact John Reid, Planner at 768-3017.

Sincerely,

Michele K. Nekota
Director

MKN:jr
(695714)

925 Bethel Street
5th Floor
Honolulu, HI 96813
808.523.5866
www.g70.design

September 25, 2017

Ms. Michele K. Nekota, Director
City and County of Honolulu
Department of Parks and Recreation
1000 Uluohia Street, Suite 309
Kapolei, Hawaii 96707

Subject: **Draft Environmental Assessment**
Aloha Solar Energy Fund II (Kalaeloa, Oʻahu, Hawaiʻi)

Dear Ms. Nekota:

Thank you for your comment letter dated July 7, 2017 concerning the Draft Environmental Assessment (EA) for the Aloha Solar Energy Fund II (ASEF II) project.

We acknowledge that the Department of Parks and Recreation has no comment. Per your request, we will remove the Department as a consulted party for the balance of the EA process.

A copy of the Final EA can be found at:
http://oeqc2.doh.hawaii.gov/EA_EIS_Library/Forms/AllItems.aspx

Thank you for your participation in the environmental review process.

Sincerely,

Jeffrey H. Overton, AICP, LEED AP
Principal Planner

DEPARTMENT OF TRANSPORTATION SERVICES
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 3RD FLOOR
HONOLULU, HAWAII 96813
Phone: (808) 768-8305 • Fax: (808) 768-4730 • Internet: www.honolulu.gov

KIRK CALDWELL
MAYOR

WES FRYSZTACKI
DIRECTOR

JON Y. NOUCHI
DEPUTY DIRECTOR

TP7/17-696746R

August 7, 2017

Mr. Jeffrey H. Overton, AICP, LEED AP
Principal Planner
Group 70 International, Inc.
925 Bethel Street, Fifth Floor
Honolulu, Hawaii 96813-4307

Dear Mr. Overton:

SUBJECT: Draft Environmental Assessment, Aloha Solar Energy Fund II, Ewa, Oahu, Hawaii

In response to your letter dated July 8, 2017, we have the following comments:

1. Construction materials and equipment should be transferred to and from the project site during off-peak traffic hours (8:30 a.m. to 3:30 p.m.) to minimize any possible disruption to traffic on the local streets.

2. The area Neighborhood Board, as well as the area residents, businesses, emergency personnel (fire, ambulance and police), Oahu Transit Services, Inc. (TheBus and TheHandi-Van), etc., should be kept apprised of the details of the proposed project and the impacts that the project may have on the adjoining local street area network.

Thank you for the opportunity to review this matter. Should you have any questions, please contact Renee Yamasaki of my staff at 768-8383.

Very truly yours,

Wes Fryszacki
Director

925 Bethel Street
5th Floor
Honolulu, HI 96813
808.523.5866
www.g70.design

September 25, 2017

Mr. Wes Frysztacki, Director
City and County of Honolulu
Department of Transportation Services
650 South King Street, 3rd Floor
Honolulu, Hawaii 96813

Subject: **Draft Environmental Assessment**
Aloha Solar Energy Fund II (Kalaeloa, Oʻahu, Hawaiʻi)

Dear Mr. Frysztacki:

Thank you for your comment letter dated August 7, 2017 concerning the Draft Environmental Assessment (EA) for the Aloha Solar Energy Fund II (ASEF II) project.

We acknowledge your comments. Construction materials and equipment will be transferred to and from the project site during off-peak traffic hours (8:30am to 3:30pm) when feasible. ASEF II will also notify the area Neighborhood Board and area residents, businesses, and agencies to the extent possible to keep them apprised of the details of the project and impacts the projects may have on the local street area network.

A copy of the Final EA can be found at:
http://oeqc2.doh.hawaii.gov/EA_EIS_Library/Forms/AllItems.aspx

Thank you for your participation in the environmental review process.

Sincerely,

Jeffrey H. Overton, AICP, LEED AP
Principal Planner

KALAELOA HERITAGE AND LEGACY FOUNDATION

P.O. Box 75447 Kapolei, HI 96707

August 3, 2017

Jeffrey H. Overton, AICP, LEED AP
Group 70
925 Bethel Street, 5th Floor
Honolulu, HI 96813-4307

Dear Mr. Overton:

This is in response to your request for comments on your Draft Environmental Assessment toward the proposed construction of Aloha Solar Energy Fund II Project on State of Hawaii Community Development Authority lands in Kalaeloa.

The mission of the Kalaeloa Heritage and Legacy Foundation, a 501c3 Native Hawaiian organization, for the Kalaeloa Heritage Park is the stewardship and preservation of its Native Hawaiian and Tahitian cultural sites and cultural landscape of Kalaeloa. It is an effort to educate the community on cultural practices, advocate cultural awareness, implement and maintain an authentic cultural presence in the growing and developing region of the Kapolei and Kalaeloa area. We hope that the proper care is taken with regard to the existing cultural landscape in alignment with SHPD recommendations.

The Kalaeloa Heritage and Legacy Foundation supports the work of Aloha Solar Energy Fund II Project. We look forward to working with you toward providing clean renewable energy and the care and protection of this unique cultural landscape.

Mahalo,

Shad Kane, Board Member/Facilities Manager
Kalaeloa Heritage and Legacy Foundation

September 25, 2017

925 Bethel Street
5th Floor
Honolulu, HI 96813
808.523.5866
www.g70.design

Shad Kane
Board Member/Facilities Manager
Kalaeloa Heritage and Legacy Foundation
P.O. Box 75447
Kapolei, HI 96707

Subject: Draft Environmental Assessment
Aloha Solar Energy Fund II (Kalaeloa, Oʻahu, Hawaiʻi)

Dear Mr. Kane:

Thank you for your comment letter dated August 3, 2017 concerning the Draft Environmental Assessment (EA) for the Aloha Solar Energy Fund II (ASEF II) project.

We acknowledge your comments in support of the ASEF II project, and per your comments, the project will take proper care of the cultural landscape, including on-going coordination with the State Historic Preservation Division.

A copy of the Final EA can be found at:
http://oeqc2.doh.hawaii.gov/EA_EIS_Library/Forms/AllItems.aspx

Thank you for your participation in the environmental review process.

Sincerely,

Jeffrey H. Overton, AICP, LEED AP
Principal Planner

From: Fukuba, Pearlyn <pearlyn.fukuba@hawaii.gov>
Sent: Thursday, July 13, 2017 11:45 AM
To: Brad Hayes
Cc: Brad Sekigawa; Chris Thompson, NAMBP; Romaine, Paul W.; ASEF
Subject: RE: Crash site and remains are smack dab smeared across entire proposed PV site! State law prohibits disturbing it.

Hello again Brad,

Sending this message to ASEF/G70 too.

Thanks,
Pearlyn

From: Brad Hayes [mailto:brad.hayes@nambp.org]
Sent: Thursday, July 13, 2017 11:41 AM
To: Fukuba, Pearlyn <pearlyn.fukuba@hawaii.gov>
Cc: Brad Sekigawa <bmeister.suza@hawaiiantel.net>; Chris Thompson, NAMBP <Chris.Thompson@nambp.org>; Romaine, Paul W. <promaine@honolulu.gov>
Subject: Re: Crash site and remains are smack dab smeared across entire proposed PV site! State law prohibits disturbing it.

Aloha Pearlyn,

Was going to submit my comments on this but here is a synopsis on my concerns about the proposed PV site near Runway 11/29 and Coral Sea Road and Tripoli.

1) I have personally surveyed that crash debris field and can verify that F-4 Phantom Wreckage from Bureau Number 153380 is STILL there.

2) And under state laws on the books, should not and will not be disturbed.

3) If you notice the ejection of the LT Phil Skaff (RIO) from the back seat was fouled by the kiawe tree line and his body and left leg and left foot were found in three different spots and about 600 feet apart from each piece of remains . I personally found LT Skaff's tinted visor from his flight helmet. around near where his Left boot is annotated in the drawing. The visor remanents had a part number on it that was back referenced to a dual visor APH-6D flight helmet's illustrated parts catalog. This type of helmet was worn by this units backseaters and the front seaters wore a single visor version. There were portions of the tail, Main landing gear, nose landing gear and other parts of the F-4 scattered over a large area.

It is my absolute fervent hope this stuff has not been disturbed at all by a commercial effort or by DOTA.

These marines killed on 17 December 1971 right before Xmas deserve to have their crash site and site of their deaths preserved and left untouched by any means.

Aloha,
Brad Hayes
Director,
Naval Air Museum Barbers Point.

On Thu, Jul 13, 2017 at 11:17 AM, Brad Hayes <bradhayes463@gmail.com> wrote:

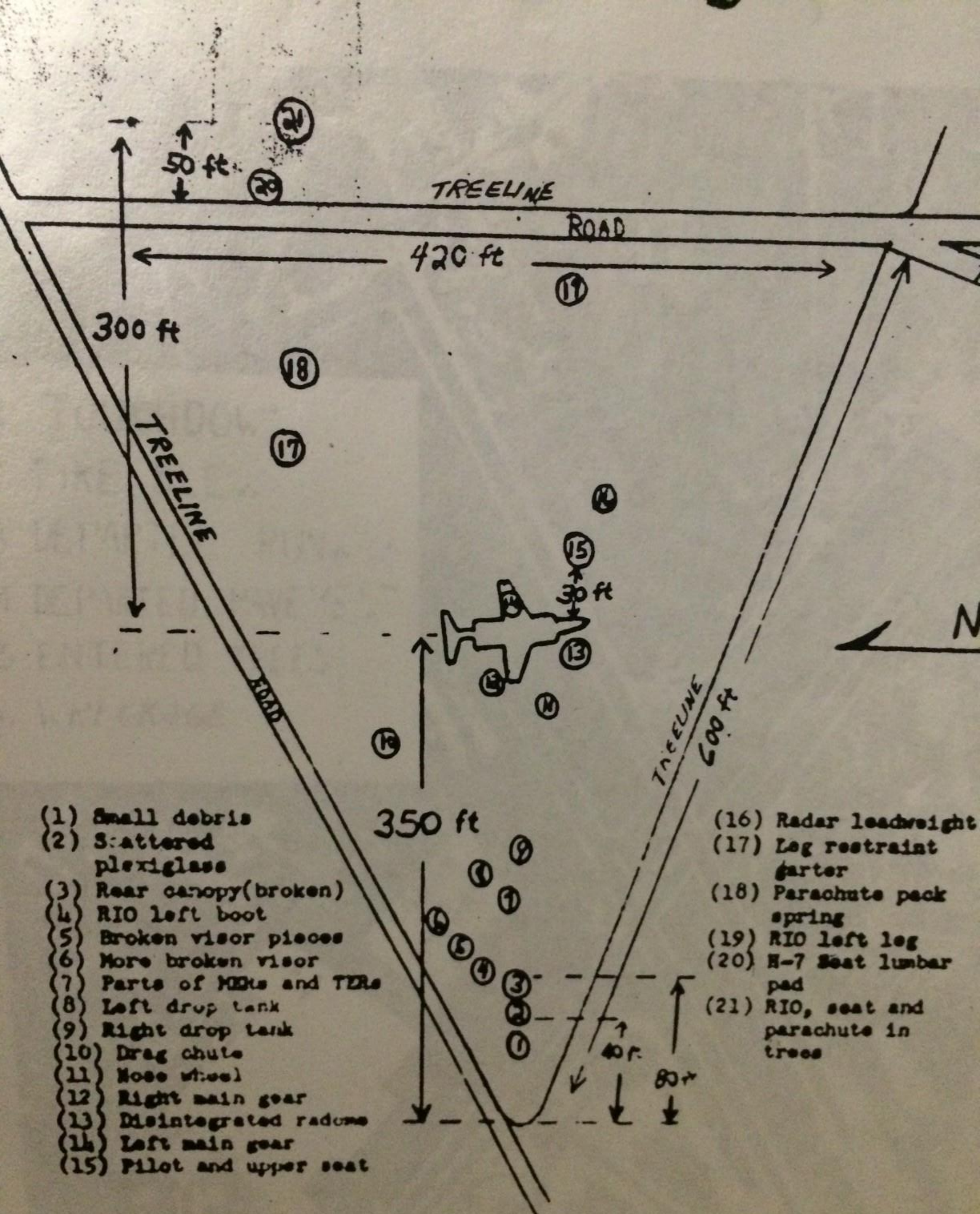
> Sent from 24 HR duty cell 673-NAVY.
> Naval Air Museum Barbers PT

From: Fukuba, Pearlyn <pearlyn.fukuba@hawaii.gov>
Sent: Thursday, July 13, 2017 11:41 AM
To: Brad Hayes
Cc: ASEF
Subject: RE: Crash site and remains are smack dab smeared across entire proposed PV site! State law prohibits disturbing it.

Mahalo Brad – I relayed your email message to ASEF/G70.

Aloha,
Pearlyn

From: Brad Hayes [mailto:bradhayes463@gmail.com]
Sent: Thursday, July 13, 2017 11:18 AM
To: Fukuba, Pearlyn <pearlyn.fukuba@hawaii.gov>
Subject: Crash site and remains are smack dab smeared across entire proposed PV site! State law prohibits disturbing it.



(1) Small debris
(2) Shattered plexiglass
(3) Rear canopy(broken)
(4) RIO left boot
(5) Broken visor pieces
(6) More broken visor
(7) Parts of MEDs and TEDs
(8) Left drop tank
(9) Right drop tank
(10) Drag chute
(11) Nose wheel
(12) Right main gear
(13) Disintegrated radome
(14) Left main gear
(15) Pilot and upper seat
(16) Radar leadweight
(17) Leg restraint garter
(18) Parachute pack spring
(19) RIO left leg
(20) H-7 Seat lumbar pad
(21) RIO, seat and parachute in trees

ENCLOSURE ( )

SECTION A

A1 TO: COMMANDER NAVAL SAFETY CENTER FROM: MARINE FIGHTER/ATTACK SQUADRON TWO ONE TWO	A2 COPY DISTRIBUTION 2 CC NAVSAFECEN DIRECT 1 CC NAVAIRSYSCOM DIRECT
VIA: COMMANDER, NAVAL AIR PACIFIC	1 CC COMNAVAIRPAC DIRECT
COMMANDING GENERAL, FLEET MARINE FORCE PACIFIC	1 CC NAVPRO McDONNELL DOUGLAS ST LOUI
COMMANDING GENERAL, FIRST MARINE BRIGADE	1 CC CMC (CODE AAP)
COMMANDING OFFICER, MARINE AIRCRAFT GROUP TWO FOUR	1 CC CO NAVAERORECFAC EL CENTRO
	1 CC DIR, AFIP
	1 CC CG FMFPAC
	1 CC CG FIRST MARBDE
	1 CC CO MAG TWO FOUR

A3 NARRATIVE DESCRIPTION OF ACCIDENT (GIVE A DETAILED HISTORY OF FLIGHT, OR CHRONOLOGICAL ORDER OF FACTS AND CIRCUMSTANCES LEADING TO THE ACCIDENT AS APPLICABLE). CONTINUE ON SEPARATE SHEET IF MORE SPACE IS NEEDED.

At 1600 Thursday, 16 December 1971 the squadron flight schedule for 17 December had already been published. At this time the Schedules Officer notified First Lieuten E. D. HUGHES and P. S. SKAFF to brief at 0600 on the following day for a stereotype instrument training route. After a normal preflight with no noted discrepancies, WD-3 departed MCAS Kaneohe at 0743. Upon completion of the instrument route, WD-38 contact Kaneohe Approach Control at 0855, reported arrival at the TACAN holding fix at 0903 and commenced penetration to runway 22 at 0920. WD-38 cancelled instrument flight, reported visual contact with the airfield and entered a downwind approach to runway 04 at 0928. One minute later WD-38 reported his landing weight and speed requirements for a M-21 arrested landing as 37,000 pounds/120 knots. Because of deteriorating weather conditions in the final approach quadrant, WD-38 twice elected to "go around." Following the second approach, WD-38 was directed by tower to maintain runway heading, 040°, because of traffic inside the TACAN final approach fix. After considering traffi and weather conditions, WD-38 requested clearance to NAS Barbers Point. Honolulu Approach Control provided radar vectors, and advised that 11 was the active runway. WD-38 reported VFR conditions, cancelled IFR clearance and contacted Barber's Point Tower at 0944. WD-38 reported minimum fuel state nine miles west of the field, and requested a straight-in approach to runway 11. The straight-in approach was approved by tower, whiah reported winds at 18 knots from 160°. WD-38 requested and received a braking conditions report as good. The aircraft touched down 1,200 feet from the approach end of runway 11, throttles were retarded to idle and the drag chute deployed. The left main landing gear tire blew at approximately 1,200 feet from the touchdown area. Additional control problems were encountered and the pilot elected to wave-off from landing roll out, utilizing afterburner power. The aircraft continued to veer to the left, and departed the runway 4100 feet from the approach end. The aircraft remained on prepared surface for an additional 2,700 feet and then continued in a straight path for 903 feet over fairly level, grassy terrain. Forty feet prior to entering a heavily wooded area the RIO initiated rear seat ejection from the aircraft, which continued into the treeline for approximately 350 feet. The aircraft stopped, heading approximately 180°. The pilot made no apparent attempt to eject.

SPECIAL HANDLING REQUIRED
In accordance with OPNAVINST 3750.6G

A4 A/C BU. NO.	A5 MODEL A/C	A6 REPORTING CUSTODIAN			
153830	F-4J	UNIT VMFA-212	☐ EMBARKED	SHIP	
			☒ DISEMBARKED	MCAS KANEOHE BAY STATION	

A7 BER NO. ACDT.	A8 ACDT. CLASS	A9 ACDT. DATE	A10 TIME (Local)	A11				
1-72A	☒ MAJOR ☐ MINOR	17 DECEMBER 1971	0946			DAWN		DUSK
					X	DAY		NIGHT
						UNKNOWN		

A12 ACCIDENT LOCATION	LATITUDE	LONGITUDE
NAS BARBERS POINT, HAWAII	21° 19' N	158° 05' W

SECTION B - PILOT/FLIGHT CREW DUTY ASSIGNMENT

(Complete a separate Section B for each aircraft involved)

B1 PILOT IN COMMAND/PLT.LDR. (Last, First & Middle)	B2 RANK	B3 SERV BR	B4 SSAN/DESIG	B5 CAUSE FACTOR	B6 AGE
HUGHES, EDWIN DAVID	1/LT	USMC	/7598		25

B7 SEAT POSITION AT TIME OF ACCIDENT (Check applicable items)					B8 UNIT ASSIGNED
FRONT	REAR	LEFT	RIGHT	OTHER (Specify)	
X					VMFA-212

B9 PILOT/COPILOT (Last, First & Middle)	B10 RANK	B11 SERV BR	B12 SSAN/DESIG	B13 CAUSE FACTOR	B14 AGE
SKAFF, PHILLIP SAMUEL, JR.	1/LT	USMCR	/7522		28

B15 SEAT POSITION AT TIME OF ACCIDENT (Check applicable items)					B16 UNIT ASSIGNED
FRONT	REAR	LEFT	RIGHT	OTHER (Specify)	
	X				

B17 PILOT/COPILOT/OTHER (Last, First & Middle)	B18 RANK	B19 SERV BR	B20 SSAN/DESIG	B21 CAUSE FACTOR	B22 AGE
				YES NO	

B23 SEAT POSITION AT TIME OF ACCIDENT (Check applicable items)					B24 UNIT ASSIGNED
FRONT	REAR	LEFT	RIGHT	OTHER (Specify)	

SECTION C - FLYING EXPERIENCE

	C1 ASSIGNED DUTY ON FLIGHT SCHEDULE OR YELLOW SHEET (Last Name)	PILOT IN COMMAND FLIGHT LEADER	PLT/CP	PLT/CP/OTHER	OTHER	OTHER
		HUGHES	SKAFF			
C2	TOTAL FLYING HOURS	364	623			
C3	TOTAL TIME ALL SERIES THIS MODEL	78	251			
C4	TOTAL TIME ALL SERIES THIS MODEL LAST 90 DAYS	61	3			
C5	TOTAL NIGHT TIME ALL SERIES THIS MODEL LAST 90 DAYS	9	0			
C6	TOTAL SHIPBOARD HELO LANDINGS D _____ /N _____	N/A N/A	N/A N/A			
C7	TOTAL CV LANDINGS THIS MODEL D _____ /N _____	0 0	0 0			
C8	TOTAL (Fixed Wing) CV LANDINGS LAST 30 DAYS D _____ /N _____	0 0	0 0			
C9	DATE OF LAST NATOPS CHECK INDICATE INIAL NOT QUAL CONF QUAL	N/A	23 Oct 1971			
C10	INSTRUMENT CARD TYPE/EXPIRATION DATE	STD/26 Mar 1972	STD/4 Oct 1972			
C11	YEARS DESIGNATED NAVAL AVIATOR/NFO	1/2	1 2/3			

SYNTHETIC TRAINER SUMMARY - (Last 90 days)

C12 EMERGENCY PROCEDURES TRNR	6 Hrs	5 Hrs
C13 INST TRAINER	N/A	N/A
C14 GNI	N/A	N/A
C15 OTHER		

F 00

Sent from 24 HR duty cell 673-NAVY.
Naval Air Museum Barbers PT

From: Fukuba, Pearlyn <pearlyn.fukuba@hawaii.gov>
Sent: Thursday, July 13, 2017 2:19 PM
To: Brad Hayes
Cc: Romaine, Paul W.; Chris Thompson, NAMBP; Brad Sekigawa; ASEF
Subject: RE: Draft Environmental Assessment_Aloha Solar PV_Comment Period

Thanks Brad – also sending to ASEF/G70

From: Brad Hayes [mailto:brad.hayes@nambp.org]
Sent: Thursday, July 13, 2017 12:15 PM
To: Fukuba, Pearlyn <pearlyn.fukuba@hawaii.gov>
Cc: Romaine, Paul W. <promaine@honolulu.gov>; Chris Thompson, NAMBP <Chris.Thompson@nambp.org>; Brad Sekigawa <bmeister.suza@hawaiiantel.net>
Subject: Re: Draft Environmental Assessment_Aloha Solar PV_Comment Period

One more pic for quick ref:
Attached you can overlay the crash sketch with this pic which shows currently the survey bulldozing or clearing done to date by the PV company.

On Thu, Jul 6, 2017 at 4:09 PM, Fukuba, Pearlyn <pearlyn.fukuba@hawaii.gov> wrote:

> Dear Kalaeloa Community Network,
>
> On behalf of the Aloha Solar Energy Fund II, a Draft Environmental Assessment (DEA) has been prepared pursuant to Chapter 343, Hawai'i Revised Statutes. The proposed 5 megawatt photovoltaic project will be constructed on State of Hawaii (State), Hawaii Community Development Authority lands in Kalaeloa, Oahu, and the approximately 1.78-mile long interim electrical distribution line will be constructed in the Department of Transportation's right-of-way along Coral Sea Road. The utilization of State lands is a trigger to conduct an environmental review pursuant to state law and administrative rules.
>
> The DEA is available for download on the OEQC website at the link below:
>
> http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2017-07-08-OA-DEA-Aloha-Solar-Energy-Fund-II-Kalaeloa.pdf
>
> The 30-day comment period begins on July 8th, 2017 and ends on August 7th, 2017. Please submit your comments to:

G70

925 Bethel Street, 5th Floor

Honolulu, HI 96813-4307

Attn: Jeffrey H. Overton, AICP, LEED AP

Tel: (808)-523-5866

Fax: (808)-523-5874

Email: ASEF@g70.design

If you have any questions, please contact me. Thank you for your time and participation in the environmental review process.

Sincerely,

Jeffrey H. Overton, AICP, LEED AP
Principal Planner

September 25, 2017

925 Bethel Street
5th Floor
Honolulu, HI 96813
808.523.5866
www.g70.design

Brad Hayes
Naval Air Museum Barbers Point
91-1299A Midway St
Kapolei, HI 96707

Subject: Draft Environmental Assessment
Aloha Solar Energy Fund II (Kalaeloa, Oʻahu, Hawaiʻi)

Dear Mr. Hayes:

Thank you for your comment emails dated July 13, 2017 concerning the Draft Environmental Assessment (EA) for the Aloha Solar Energy Fund II (ASEF II) project.

We acknowledge your comments regarding the F-4 Phantom Wreckage site in the project parcel. Preservation in place has been recommended for this crash site per the approved Archaeological Inventory Survey as part of the project's Chapter 6E-8 Historic Preservation Review by the State Historic Preservation Division (SHPD). This SHPD Acceptance letter, dated February 25, 2014, can be found in Appendix E of the Final EA.

A copy of the Final EA can be found at:
http://oeqc2.doh.hawaii.gov/EA_EIS_Library/Forms/AllItems.aspx

Thank you for your participation in the environmental review process.

Sincerely,

Jeffrey H. Overton, AICP, LEED AP
Principal Planner

Kanehili Cultural Hui
P.O. Box 75578 Kapolei, Hi. 96707

August 7, 2017

Approving Agency
Hawai'i Community Development Authority (HCDA)
Jesse K. Souki, Executive Director, (808) 594-0300,
jesse.k.souki@hawaii.gov
547 Queen St, Honolulu, HI 96813

Applicant
Aloha Solar Energy Fund II, LLC
Michael Stout, Project Manager, (808) 486-3707,
mstout@ecc.net
2969 Mapunapuna Place, Suite 220
Honolulu, HI 96819

Consultant
Group 70 International, Inc.
Jeff Overton, Principal Planner, (808) 523-5866,
ASEF@g70.design
925 Bethel Street, 5th Floor, Honolulu, HI 96813

Susan Lebo, Hawaii SHPD
Kakuhihewa Building
601 Kamokila Blvd., Suite 555
Kapolei, HI 96707

Rae Gould
Office of Native American Affairs
Advisory Council on Historic Preservation
401 F Street NW, Suite 308
Washington, DC 20001-2637

Managing Director
Council on Environmental Quality,
722 Jackson Place, NW,
Washington, DC 20503

CC: Michael Kumukauoha Lee,
Ewa Honouliuli Cultural Descendant
Kanehili Cultural Hui

RE:

3. Shall the Authority Authorize the Executive Director to Enter Into Lease Negotiations with Aloha Solar Energy Fund II/ECC Energy Solutions, LLC to Develop a 5 Megawatt Photovoltaic Solar Farm on Parcel 13073-E, Tax Map Key (1) 9-1-013:070 at Kalaeloa, Oahu, Hawaii?

Aloha e,

Kanehili Cultural Hui (KCH) would like to provide final August 7, 2017 testimony about this project parcel project: 5 Megawatt Photovoltaic Solar Farm (Project) on Parcel 13073-E.

This 5 MW is really a small size project based upon todays much larger HECO Utility Scale projects. In fact I checked with the Hawaii public Utilities Commission and they have no apparent knowledge of this project and there is, according to them, no Power Purchase Agreement (PPA) on file.

This is very odd that so much time and money has been put into this project for years for a very small scale solar farm without a PPA. There was strong community objection to the HCDA scheme several years ago for the adjacent plan where there was extensive Hawaiian cultural sites with a 46 kV power line plan. Is this 12 kV proposal just a scheme to switch to 46 kV later?

We suspect they really want to get a long term lease on the land for other development purposes, as that is is what Hunt Corp did for their project. They sold it off to another company in Korea- and this seems to be what it is all about- packaging deals and then flipping them. The next party could care less about any “protective” agreements.

Solar Farms are just a step towards later land development. Hunt Corp massively violated prior protective Programmatic Agreements made in a PA when they went ahead and nuked the historic WW-II Ewa Field PV site with heavy equipment after signing an agreement that they would not.

This entire project should require an EIS because of the massive number of historic and cultural sites that may likely be destroyed or forever have their historic and cultural integrity destroyed.

The HCDA promises of all underground wiring are being totally violated by this project.

City and State statutes are being violated.

http://law.justia.com/codes/hawaii/2013/title-15/chapter-269/section-269-27.6

c) A public utility making an application to the public utilities commission under this section shall clearly and fully state and support its evaluation of each factor set forth in subsection (b). [L 1994, c 133, §2; am L 1997, c 95, §2; am L 1998, c 218, §1]

Underground installation of utility facilities along federal-aid highways, see §264-33.5

KCH is very familiar with the site and has extensively documented in photos and video the parcel before and after the extensive damage that was done. It was an especially disturbing experience, having seen prior land surveys done, that the damage was so widespread and extensive using a large bulldozer(s) in a wildly uncontrolled manner. There were not “trails” cut but instead wide city streets bulldozed as if there had been a complete approval to begin PV installations. It was truly the most insane, careless damage we have ever seen. Who could have possibly allowed this to happen in the first place?

Most importantly, this site is one of the most culturally and historically rich sites KCH members have ever seen, by just walking a few yards in any direction off the bulldozed roads was massive evidence of an ancient Hawaiian cultural habitation of all kinds, including trails, heiaus, burial sites, etc.

After a good ahead was given for DHHL PV Farm the entire area was totally leveled.

We believe massive damaged will be done on this project because construction crews are given the green light to destroy everything and totally flatten the ground surface, filing in karst water holes with concrete. The subsurface water flow will be forever altered and contaminated.

Karst caprock will be ripped up and the entire ancient features will be destroyed.

Kalaeloa Renewable Energy Park Programmatic Agreement — 30 July 2012 *[Amended and Restated]*

- Clearing shall be performed with manual labor and small-scale machinery and light trucks (maximum GVW of 8,500 pounds, as defined by Corporate Average Fuel Economy standards). Bulldozers and metal-tracked equipment shall not be used for clearing activities.

- KV will allow scheduled visitation/use for non-profit groups that maintain

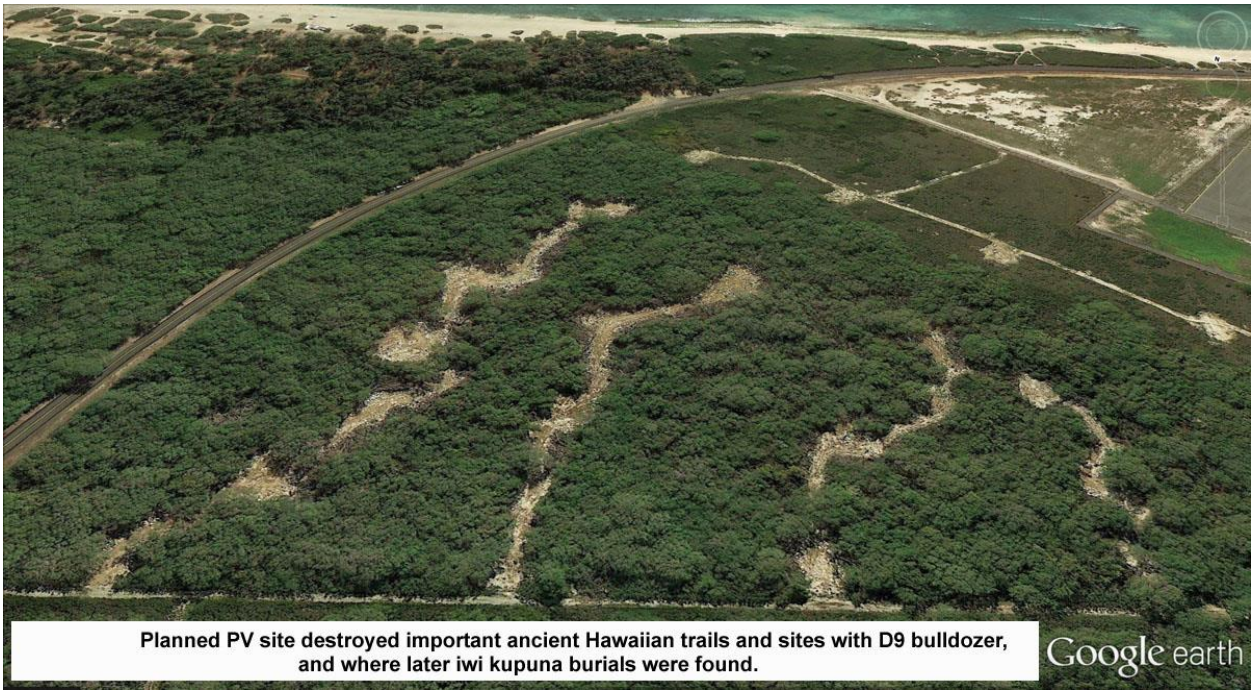
Hunt Corp signed a detailed protective programmatic Agreement for the Ewa Field PV Farm but once they had permission to enter and begin contruction they violated nearly all of the agreement and massively nuked the entire site, flattening it like a parking lot, filling in all karst holes containing iwi and subterranean caverns.

Hunt Corp violating the PA. They do not care at all once they gain permission to construct because they ALL know Hawaii SHPD will do NOTHING!

WW-II sites not even mentioned by SHPD will be destroyed!

Historic and cultural features will be totally flattened and filled with concrete.

Many of the site features will have their historic and cultural integrity forever destroyed which is the intention for the second phase of land development after the PV Farm.



We witnessed what had happened at Ordy Pond and what happened at this project PV site. Both major damages were done around the same approximate time period.

Earlier we had witnessed how a Section 106 signed agreement between the Navy and community was completely violated where stipulations were agreed upon as to how the site development would be done, weight of trucks, vehicles, etc. ALL was totally violated and the largest trucks and bulldozers were brought in to totally pulverize the site, crushing sub-surface features, pouring concrete into sinkholes and karst caves.

Once right of entry is granted and construction begins the contractors do everything possible to destroy all cultural features and damage as much as possible. Agreements mean NOTHING when the contractors come in and the consulting archeologist-practitioners are paid off.

Powerlines down Coral Sea Road?

Overhead power lines can AND WILL be blown down in wind storms, attract lightning strikes, chopped down by vandals, poles hit by cars and trucks, electrical lines can catch small planes and helicopters, which would impact all local residents and businesses with power outages.

Downed power lines can cause fires, electrocute animals and people stepping into water puddles that electrical current has made hidden contact with. Power outages mean loss of hot water, spoiled food, business closure, no pumped gas, no ATM, etc. A HECO power pole

corridor will require extensive maintenance over time and lead to sub-contractors using chemical pesticides to kill grassy areas and polluting the water table.

This PV Farm project is within a Tsunami and Hurricane Storm Surge Inundation Flood zone.

KCH testified about this several years ago and actually proposed that Coral Sea Road on the West side would be the best option for an "energy Corridor" and that the power lines should be placed into a five foot deep insulated trench with PV pipes insulating the power, telco and cable TV connections needed for the Coast Guard Air Station Barbers Point. This would be more expensive but much more survivable in the event of a major hurricane storm surge or tsunami.

Because the west side of the Coral Sea road route has no curbs, gutters, sidewalks, street lights or large trees to dig up, *trenching conditions for a five foot deep underground corridor in already disturbed ground coral are nearly ideal and would proceed very quickly.*

Here's how the 2011 Kalaeloa Energy Corridor EA justifies the UNDERGROUND choice:

"Overhead utility lines in lieu of underground duct lines were considered during the preliminary planning stages of the project. Although overhead utility lines are less expensive to install than underground ducts, ***the protective features of the new (underground) duct line makes this alternative more attractive."***

"Additionally, the underground location of the duct line would have real visual benefits to the community, as no unsightly overhead lines would occur along the main entry road of Kalaeloa."

And, *"The City and County of Honolulu General Plan has adopted land use policies and objectives that promote development that does not obstruct or interfere with existing vistas or view planes. The Revised Ordinances of Honolulu typically require electric and communication utilities to be installed underground… …Furthermore, HCDA's Kalaeloa Community Development District Rules establishes similar underground requirements."*

In the 1920s The Outdoor Circle (TOC), a highly influential environmental organization, succeeded in requiring new electric lines in urban Honolulu to be buried. TOC has advocated for underground wiring over the years and made many in-roads along the way (all federal highways must have underground lines, all new subdivisions must also).

The City of Honolulu adopted the underground utility installation policy in the 1960's and HCDA's Kalaeloa Master Plan ALSO adopted this as planning policy. However this project is in VIOLATION!

Coral Sea Road – Right Side going Makai would be ideal for underground powerline trench

The PV farm is only first development phase

These PV farms are just a phase development of the site where supposedly "careful" work is done to "preserve" historic and cultural features but actually they will largely be obliterated by bulldozers and heavy trucks, concrete pads, deep drilled holes for fencing, posts, transformers, etc, etc.

After the PV technology runs its course and some money is made the next phase is junking the old PV panels and then flattening of former PV site surface for buildings and strip malls near the White Plains beach. Because by then the original "historic integrity" will have been destroyed and the next environmental "study" will show there is "nothing there" except crushed coral and concrete pads with old fencing, poles, etc.

Conveyance is for "public benefit"

This 13073-E parcel shows as one of the original Navy BRAC City Park parcels in the 2008 map and was supposed to be used as open space park land. But then a quiet backroom deal was

arranged to have the city release this parcel and a couple of other shoreline parcels to HCDA so they could apparently lease them commercially. It was all done so no one in the community was aware the BRAC promised Kalaeloa Regional Park was being chopped up and sold off for commercial development.

The original Navy BRAC and NPS transfer documents show that the City Park parcels including 13073-E were supposed to have had protective Historic Preservation Covenants and use as parkland for public benefit. It is hard to see how using the land for a commercial PV solar farm, after destroying its historic and cultural features, is in the benefit of the public.

Because nearly all HECO and related PV farms are all done on a large scale open area of land, developing this very complicated cultural site as a PV farm doesn't sound economically feasible but instead more like an agenda for phased land development for commercial buildings later.

The land title is clouded because of Allodial Title

The evidence of 13073-E going through the land court with Campbell Estate brings up the issue of who is the real owner of the land parcel and it wasn't actually the Navy or Campbell. The Navy acquired use of the lands under emergency access orders from President Roosevelt but never acquired true title ownership. The 13073-E land is actually Allodial and not owned by Campbell but instead to heirs of Mikahela Kekauonohi. After the Great Mahele in 1848, Kekauʻōnohi was given the second largest land allotments, seventy-seven ʻāina (land parcels), many in Ewa, Honouliuli apupua'a, making her the largest landholder after the King. HCDA needs to have a consultation with Mr. Lee about this 13073-E parcel.

Keahikuni Kekauʻōnohi (c. 1805–1851) was a Hawaiian high chiefess who was a member of the House of Kamehameha. She was granddaughter to King Kamehameha I and one of the wives of Kamehameha II. Mikahela Kekauonohi is Mike Lee's 5th great aunt and he as well as his cousin Routh Bolomet are heirs of her allodial title no. 11216 42,000 acres. ROYAL PATENT No. 11216 Apana 8 and 9, to Mikahela Kekauonohi on page 655 of Volume 9, Land Commission Awards [Series 288]. Board of Commission to Quiet Land titles.

http://www.hoakaleifoundation.org/documents/helu-11216-claim-mikahela-kekauonohi

The Royal Patent says Allodial are higher than Fee Hold or Fee Simple. US patents are different from Hawaiian Kingdom patents because they are based on French Common Law not English Common law. Kamehameha III used the French legal dictionary ," Bouvier "as the foundation of the enure / inure interest that resides in the Hawaiian Royal Patents, not the English BLACK's legal dictionary, but Bouvier's legal dictionary 1856 4th edition.

This land title issue was previously brought up by Michael Kumukauoha Lee in the Haseko Marina case and subsequent testimonies and meetings, that are still on going, with the HART rail project. Mike Lee, is also a living descendent of Queen Kaomileika'ahumanu (a wife of King Kamehameha I, and true mother of King Kamehameha III.)

Michael Kumukauoha Lee Testimony to HCDA August 16, 2012

Minutes of a Regular Meeting of the Members of the Hawaii Community Development Authority, State of Hawaii MEETING NO. 376, Thursday, August 16, 2012

Decision Making: Shall the Authority Authorize the Executive Director to Accept the Remediation Measures Proposed by Aloha Solar Energy/Sunetric to Address the Damages Resulting from Unauthorized Activities on Parcel 13073-E in the Kalaeloa Community Development District?

Public Testimony:

Mr. Michael Kumukauoha Lee stated that he was the only cultural descendent recognized by SHPD and OIBC April 14, 2010 for this area. Mr. Shad Kane and the Civic Club were not cultural descendants recognized under state law. He stated that he represented the iwi and was a lineal descendant recognized for this area. Mikahela Kekauonohi was his 4th great grand-aunt and holder of the royal patent of 42,000 acres in the area. John Meek was his 5th great grandfather and the Campbell Estate derived the lands after his death. The Meek Estate held the leases on Pu'uloa 'Ewa with the Wilcox family and he had all the deeds. He questioned under what rules or statutes could the civic club take precedence over him and wanted the Authority to be aware that the civic club was the wrong party.

Mr. Ching stated that the HCDA has the position of landowner and did not currently have zoning rules which would give any jurisdiction. In this particular case where there has been fault found by a prospective tenant, the HCDA has sought to investigate the impact to historical cultural resources. In the course of the investigation, the HCDA consulted with SHPD, who has more expertise in the particular area and conducted its own analysis and research. Recognizing Mr. Lee's comments as to the status of and appropriateness of the Civic Club and SHPD, he would take under advisement and involve other appropriate parties in the development of a remediation plan.

Mr. Oamilda replied that it was. The 106 process was concerned first with historical and then with cultural. He represented the community on the cultural and historical levels which go arm-in-arm together. For over a hundred years, the underground has not been mitigated and they were concerned with what was underground considering the sensitivity of the cultural aspect of the area. They recommend an EIS above ground and underground. He was from the area and knows the area.

State Environmental Policy

The State Environmental Policy under HRS Chapter 344 establishes an environmental policy that: (1) encourages productive and enjoyable harmony between people and their environment; (2) promotes efforts that will prevent or eliminate damage to the environment and biosphere; (3) stimulates the health and welfare of humanity; and (4) enriches the

understanding of the ecological systems and natural resources important to the people of Hawaii.

WW-II Sites, Hawaiian Sacred Sites, Historic Trails

A Federally funded study for HART Rail produced with the work and research of Kepa Maly, KumuPono LLC, established that parcel 13073-E is in the designated *"Leina a ka 'uhane"* in the Ewa Plains area known in ancient times as *Kanehili* and *Kaupea*. This area today corresponds to a large area and includes the former MCAS Ewa, Barbers Point NAS which today still retains many relatively open and undeveloped areas that contain hundreds of sinkholes, caves, habitation sites, shrines, temples, ahus, trails, cairns and more that still evoke the special Traditional Cultural Property of the *Leina a ka Uhane*.

The Honolulu City Council passed unanimously in 2012 the Ewa Plain Trails resolution, advocating for the protection of the 1825 mapped Malden Trails (ancient Hawaiian trails) and Ewa Karst water system which fall within the former MCAS Ewa airbase.

Unfortunately addressing knowledge of the subsurface karst water system, caves and water channels is widely disregarded in order to allow large scale land development and waste sites without having to take any cultural or environmental responsibilities.

PHOTOS Below shows the shoreline area below this site where seals, turtles, limu, reef fish form an ecological system of interdependency. This seal is on the karst limestone beach below the Solar PV site. The contaminated water from this project is flowing right to here:

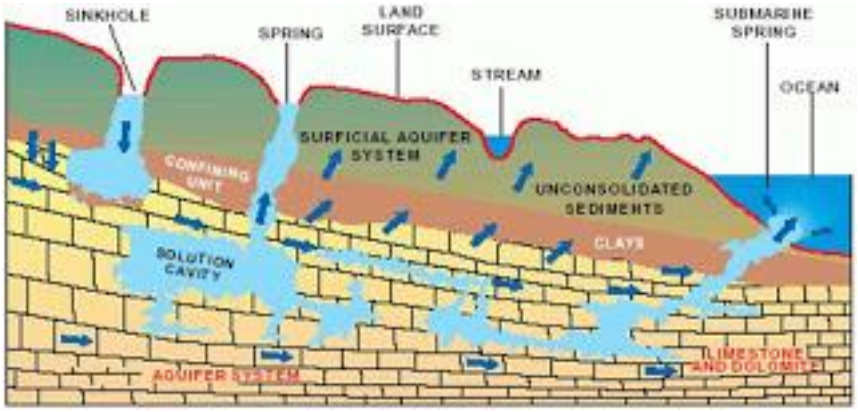
The area is the location of ancient Hawaiian karst ponds as seen in 1928 and later NASBP air photos . Air photos show this area has perennial surface water features and is historically a wetlands area that attracts migratory and endangered bird birds of many kinds. Surface water features that contain water at all times throughout the year.

Above, Photos of native migratory birds known to flock and nest at Ewa Plain wetlands and seasonal water features sometimes only six inches deep depending on storm rainfall.

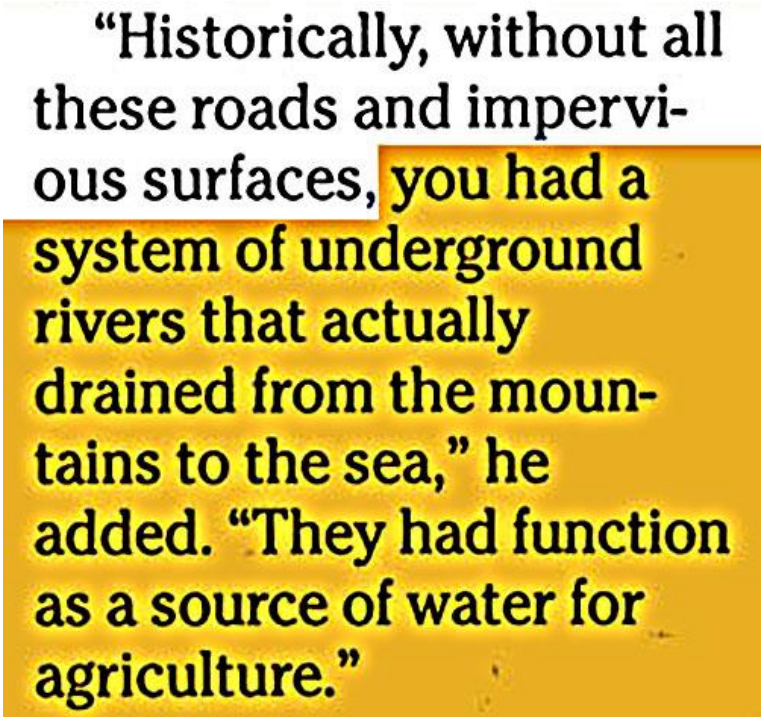
US Fish and Wildlife scientist at a nearby endangered species preserve points towards mountains to show where the water comes from that mixes with the ocean tide. The water runs right through the Solar PV Farm site.

Opae Ula Hawaiian Fresh Water Shrimp close to being on Endangered Species List

Karst ponds and underground channels act as storm drains during heavy rains.



Ewa Plain Karst Water System as also found worldwide



Interview with (former) HCDA director Tony Ching, William Cole, Honolulu Star-Advertiser

State plans to use sinkhole site to study the area's past

http://hawaiitribune-herald.com/news/state/state-plans-use-sinkhole-site-study-area-s-past

"Ordy Pond (nearby) to me is a very unique parcel, and its value really is for research," said Anthony Ching, HCDA's executive director.

A 2014 study published in American Antiquity by J. Stephen Athens, Timothy M. Rieth and Thomas S. Dye said Ordy Pond "has some almost unique characteristics" in that coring samples can be used to obtain high-resolution chronological and environmental information dating to and beyond the earliest human habitation on Oahu. Using plant remains analysis, the authors concluded colonization may have occurred between A.D. 936 and 1133.

UH described Ordy Pond's 44 feet of aquatic sediment as the "best-preserved, continuous, high-resolution Holocene sedimentary record in the Hawaiian Islands, and probably in the central Pacific."

This site is an identifiable ancient natural karst pond and wetlands and ancient Hawaiian habitation area. It was identified as wetlands and ancient Hawaiian sites in the major 1999 Tuggles research down for the closing of the Naval Air Station Barbers point.

1999 Naval Air Station, Barbers Point, Hawaii, BRAC Disposal and Reuse of Land

"Ordy Pond is hydraulically connected with the ocean.
The water level fluctuates with the tide."

https://books.google.com/books?id=gfY3AQAAMAAJ&pg=SA3-PA5&lpg=SA3-PA5&dq=Ordy+Pond&source=bl&ots=dLuc8rgrqW&sig=Y1SFBkg9tlxVs9OjIgC3Ec7FrDE&hl=en&sa=X&ved=0ahUKEwjNmcPr4JHVAhXFilQKHUfuDwsQ6AEIWDAL#v=onepage&q=Ordy%20Pond&f=false

2004 Board of Water Supply

The only (known) surface water feature at Kalaeloa is Ordy Pond. The pond hydraulically connects with the Pacific Ocean and its water surface level fluctuates with the tide.

http://oeqc.doh.hawaii.gov/Shared%20Documents/EA_and_EIS_Online_Library/Oahu/2000s/2004-06-23-OA-FEA-KALAELOA-REDEVELOPMENT-TRANSMISSION-MAINS.pdf

2003 FEA Army Guard, Kalaeloa

The only (known) water feature at Kalaeloa is Ordy Pond. The pond hydraulically connects to the Pacific Ocean and its water surface level fluctuates with the tide.

http://oeqc.doh.hawaii.gov/Shared%20Documents/EA_and_EIS_Online_Library/Oahu/2000s/2003-06-08-OA-FEA-HI-ARMY-NATL-GUARD-KALAELOA.pdf

2014 DEA Kalaeloa Heritage Park

The pond's surface area is approximately one acre. Like all anchialine ponds, it is hydraulically connected to the ocean, and the water level fluctuates with the tide.

http://oeqc.doh.hawaii.gov/Shared%20Documents/EA_and_EIS_Online_Library/Oahu/2010s/2014-07-08-OA-5B-DEA-Kalaeloa-Heritage-Park-Station.pdf

The Large Ewa Karst Cave Destroyed By Developers After A Quick Archaeology Look

A sizeable phreatic dissolution cave accidentally opened in 1973 during quarrying Kalaeloa Harbor operations ("Site B6-139") was an ''unmodified wet sink-cave".

Quarry operators deliberately tried to fill this cave before 1977 archaeological and palaeontological salvage studies (Sinoto, 1978, p. 45) but it was too large. . .

the west sink(cave) contains well-formed stalagtites (sic) and stalagmites, some of which are subsurface.

Dredging for the new barge harbor destroyed the most notable cave known in the Ewa Karst without it even receiving a name (Figures 4,5). *For unclear reasons, it was rarely even termed a cave and was variously referred to as a "flooded sink", a "wet sink (cave)", etc.* **It quickly became famous in palaeontological circles because of its content of bones of extinct birds. Then it was destroyed in order to construct the farthest reaches of the barge harbor.**

They also noted water level fluctuations of 40cm (16 inches) even though the cave is almost 2 km from the shore. However it was left to archaeologist Aki Sinoto to provide details about the cave. He termed it *"a unique flooded sinkhole",* and found that it measured 11 m in diameter.

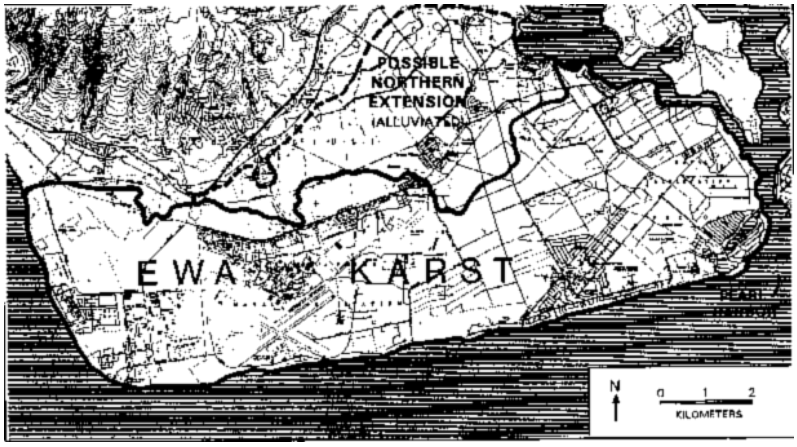
Fresh to brackish water filled 2/3 of parts of the cave. A nocturnal marine isopod, blue-green algae, and minute red shrimp (Holocaridinea rubra) were observed **but the primary finding was the rich deposit of intact bones of subfossil and-extinct birds (Sinoto, 1978).**

FINAL REPORT – MAY 2007 CENTRAL OAHU WATERSHED STUDY

Page 68: **An interesting ecosystem to note within the Ewa Plain is a network of karsts (pit caves, or sinkholes).** They could also be termed phreatic caves, which develop below the water table.

The Ewa Karst is the largest of several karsts on Oahu, but possibly the least studied. There are approximately 12,000 acres of exposed reef from Kahe Point to Puuloa, preserving the remains of ancient plants and animals, particularly shells, extinct birds, and two bats, of which one is new to science. Page 58: The U.S. Geological Survey Ewa Quadrangle shows numerous sinking streams and closed depressions within the karst, some manmade.

Page 70: Some remaining sinkholes of the Ewa Karst are home for öpae ula (Halocaridina rubra), tiny brackish water shrimp. A natural sinkhole with these shrimp is found near Chevron's Rowland's Pond preserve. Two to three artificial ponds were dug by the Division of Aquatic Resources (DAR), two of which filled back up with water.



Adonia Henry cleaning out anchialine pool with water and pump.

The "Possible Northern Extension" of the Ewa Karst is where the Ewa Plantation intentionally used water sluices (which is well documented) to wash hillside soils down to cover the Karst. In many areas in Ewa the Alluvial soil is only a few feet deep.

2.9.5.9 Karst Protection: In 2001, the Estate of James Campbell erected a substantial chain-link fence to protect eight acres of karst with at least 100 sinkholes from destruction by nearby quarry operations. Some other areas, "B6-137" and "B6-22" have been fenced due to efforts by former Bishop Museum vertebrate zoologist Alan Zeigler.

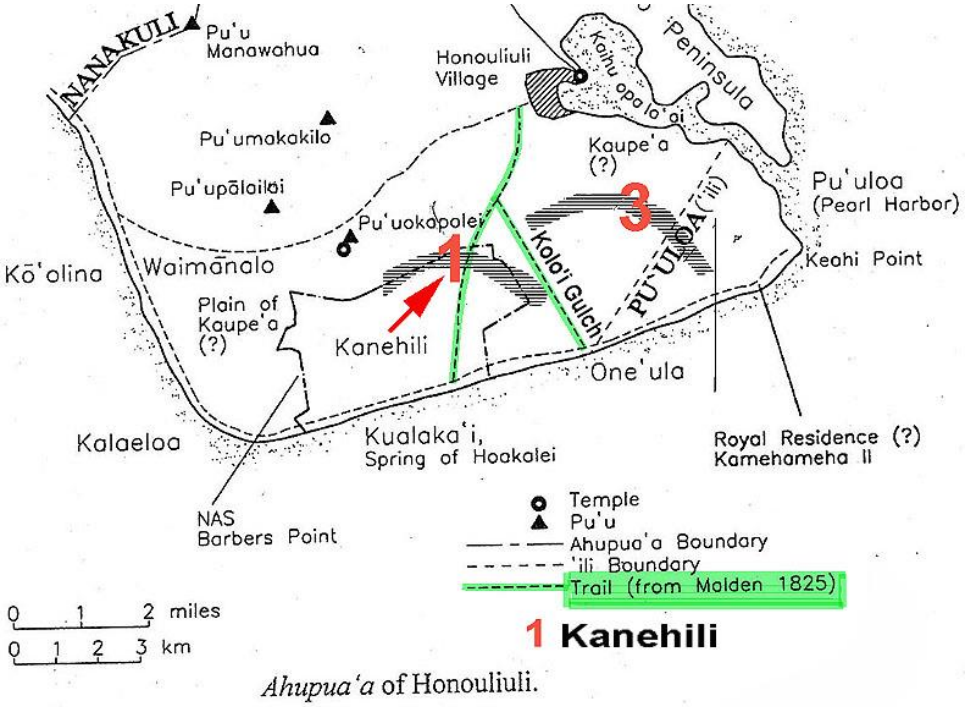
Page 234: Receiving surface and ground waters are both susceptible to contamination from these pollutants. *Contaminants can reach ground water quickly through fractured rock formations or sinkholes in karst areas, such as that found in Ewa. Ground water is more sensitive to contamination in these areas because runoff may pass directly into the subsurface with little if any infiltration through the soil, a process that typically filters at least some pollutants.*

A rare look inside a stalactite rich karst cave on Oahu with sparkly white Calcite. These caves also exist in Kalaeloa and the heavy equipment constructing this solar PV site would destroy them and iwi burials.

Calcite laden Oahu karst cave subsequently covered over forever by a land fill.

The PV Farm site is in an ancient area known as Kanehili

An open kula land, noted in tradition for its association with Kaupeʻa, and as a place of wandering spirits. Cited in the tradition of Hiʻiaka-i-ka-poli-o-Pele and in historical narratives.



Ahupuaʻa of Honouliuli.

Of the Honouliuli coral plains McAllister (44, site 146) says: '…It is probable that the holes and pits in the coral were formerly used by the Hawaiians. Frequently the soil on the floor of the larger pits was used for cultivation, and even today one comes upon bananas and Hawaiian sugar cane still growing in them.' (Handy 1940:82)

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The Synthesis of Cultural Resource Studies of the 'Ewa Plain by Dave and Myra Tuggle

Dave and Myra Tomonari-Tuggle of IARII, under a contract with Belt Collins Hawaii, published a Synthesis identifies much of the former Barbers Point NAS (including MCAS Ewa) as Kanehili.

Final Environmental Assessment Disposal and Reuse of Surplus Property at Naval Air Station Barbers Point, Oʻahu, Hawaiʻi, August 2011, Department of the Navy, Base Realignment and Closure Program Management Office stated regarding former NAS Barbers Point lands:

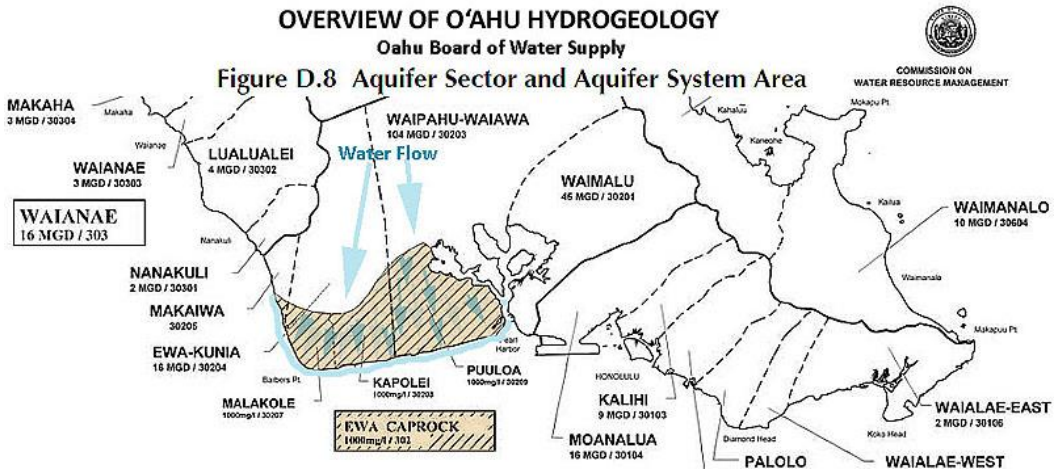
"Open Space/Recreation. This land area would be comprised of mostly passive open space land uses and preserve/cultural park space. These parcels contain a relatively high density of cultural and archaeological sites."

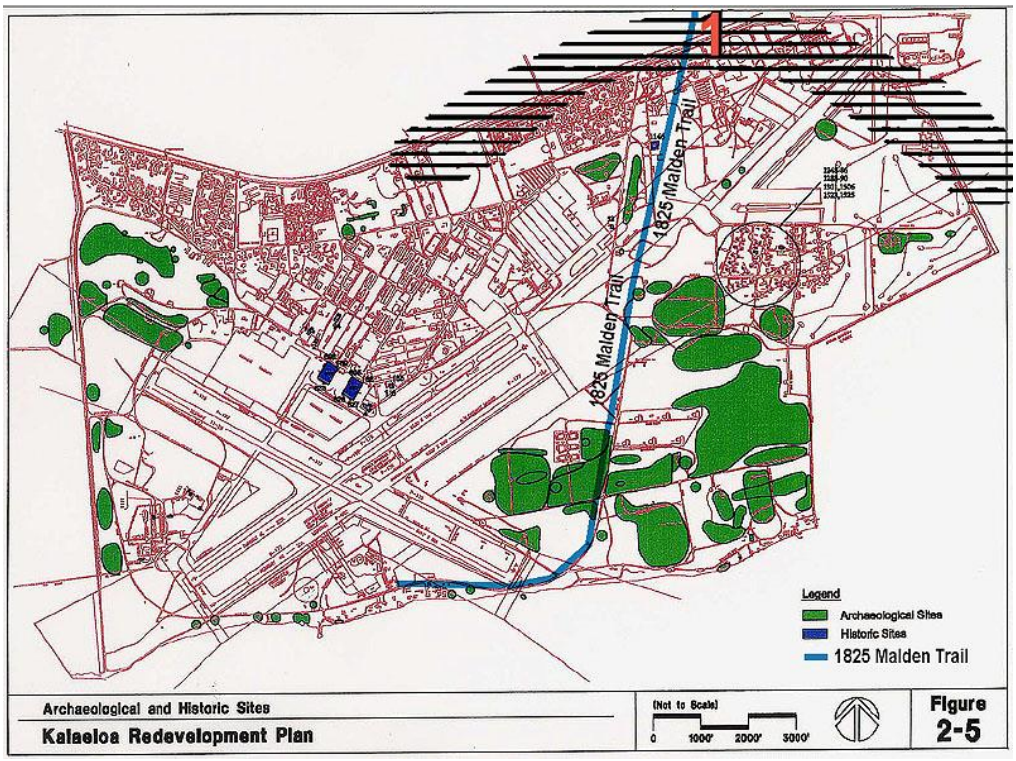
NAS Barbers Point Traditional cultural properties are NPS National Register eligible...

One kind of cultural significance a property may possess, and that may make it eligible for inclusion in the Register, is traditional cultural significance. "Traditional" in this context refers to those beliefs, customs, and practices of a living community of people that have been passed down through the generations, usually orally or through practice. The traditional cultural significance of a historic property, then, is significance derived from the role the property plays in a community's historically rooted beliefs, customs, and practices.

Sinkholes in the general area were utilized as natural planters for kalo (taro, dry-land variety), temporary shelters, storage features, and sources of water. The Kalaeloa lands were likely to have been planted in ʻulu (breadfruit), liliko'i (passion fruit), niu (coconut along the beach area), and two types of mai'a (banana). Additionally, birds (today extinct or nearly so) were trapped for feathers in or near to the area, including the ae'o (Himantopus mexicanus knudseni), i'iwi (Vestiaria coccinea), 'apapane (Himatione sanguine), and the mamo (Drepanis pacifica).

More contemporary cultural practices taking place in the area have included the gathering of ʻuha loa (Waltheria indica) for traditional Hawaiian medicine and ʻalae (red clay) for coloring salt, medicine, dye, and spiritual purification.





CULTURAL LANDSCAPE REPORT SHOULD BE DONE ON THIS SOLAR PV SITE – Site meets historic landscape criteria

A Cultural Landscape Report (CLR) is the primary report that documents the history, significance and treatment of a cultural landscape. A CLR evaluates the history and integrity of the landscape including any changes to its geographical context, features, materials, and use.

A CLR will often yield new information about a landscape's historic significance and integrity, even for those already listed on the National Register. Where appropriate, National Register files should be amended to reflect the new findings.

Executive Order 12898 directs federal agencies to make achieving environmental justice part of its mission.

The EO emphasizes the importance of NEPA's public participation process, directing that each Federal agency shall provide opportunities for community input in the NEPA process. Agencies are further directed to identify potential effects and mitigation measures in consultation with affected communities.

Traditional Hawaiian Trails Run through the Dump Site Area

In the Ewa Kalaeloa Cultural Context, from a larger International Archeological Research Institute Cultural Resource Inventory of NASBP, MCAS Ewa, by the (Tuggles, Denfeld, Yoklavich, MAI, 1997) there is put forth that a major feature of pre-Contact and early Contact Honouliuli, was the Kualakaʻi Trail, identified by Lt. Malden in an 1825 map featuring the south coast of Oʻahu. This prominent trail once connected Honouliuli Village to the coastal settlements of Oneula and Kualakaʻi, and would have been crucial to life on the ʻEwa Plain and its coast.

It is very likely that the probability of encountering subsurface archaeological deposits increases with proximity to where ancient trails, wetlands and pond was located as the sinkholes provided water, planting and burial sites.

The International Archeological Research Institute Cultural Resource Inventory of NASBP, MCAS Ewa, by the (Tuggles, Denfeld, Yoklavich, MAI, 1997) indicates many such archeological sites, trails, habitation sites, burial remains, etc exist in the former Naval Air Station.

In the Environmental Assessment done for the nearby DHHL Ka Makana Ali`i Cultural Impact Assessment (CIA) by Pacific Legacy states*: "interviewee also recalls the existence of at least one ahu (shrine) in the general area, which was dedicated to agriculture. This ahu ʻaina was made of stacked waterworn basalt boulders and cobbles, likely collected from a nearby stream bed, that stood up to five feet tall and possibly as wide as it was tall with a circular plan view. On these ahu, devotees, including the interviewee, would leave offerings to show appreciation for these natural resources and respect for the divine."*

Likely Discovery of New Sinkholes, Caves, Hawaiian burials or Disassociated Iwi Remains

The Ewa Kalaeloa Cultural Context, from a larger International Archeological Research Institute Cultural Resource Inventory of NASBP, MCAS Ewa, by the (Tuggles, Denfeld, Yoklavich, MAI, 1997) states: ***(Native Hawaiian) Burials- High potential for discovery of additional remains in dunes, habitation and untested sinkholes that may have been covered by base construction.***

Cultural Deposits - High potential for discovery of cultural deposits in dunes, habitation and untested sinkholes in areas with demolished surface features.

Haven spoken with various well regarded archeologists they all agree that the last real cultural history and archeology study of the Kanehili area, which was done in 1999, is way out of date. There is still the great likelihood of many archeological sites which have been overlooked, especially below ground caves and sinkholes, which could likely contain iwi.

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Chapter 200 - Environmental Impact Statement Rules HAR § 11-200

http://gen.doh.hawaii.gov/sites/har/AdmRules1/11-200.htm

"Effects" or "impacts" as used in this chapter are synonymous. Effects may include ecological effects (such as the effects on natural resources and on the components, structures, and functioning of affected ecosystems), aesthetic effects, historic effects, cultural effects, economic effects, social effects, or health effects, whether primary, secondary, or cumulative.

"Environment" means humanity's surroundings, inclusive of all the physical, economic, cultural, and social conditions that exist within the area affected by a proposed action, including land, human and animal communities, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance.

"Environmental impact" means an effect of any kind, whether immediate or delayed, on any component of the environment.

Under the EIS Rules "impacts" are far broader and more inclusive than "significant impacts" as defined under HEPA. The EIS Rules define "impacts"/"effects" as including "primary, secondary, or cumulative" effects. "Secondary impacts" are defined as follows:

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

"Cumulative impacts" are defined as follows:

"Cumulative impact" means the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions. Cumulative impacts can

result from individually minor but collectively significant actions taking place over a period of time. HAR § 11-200-2.

KANEHILI CULTURAL AND ARCHEOLOGICAL REFERENCES

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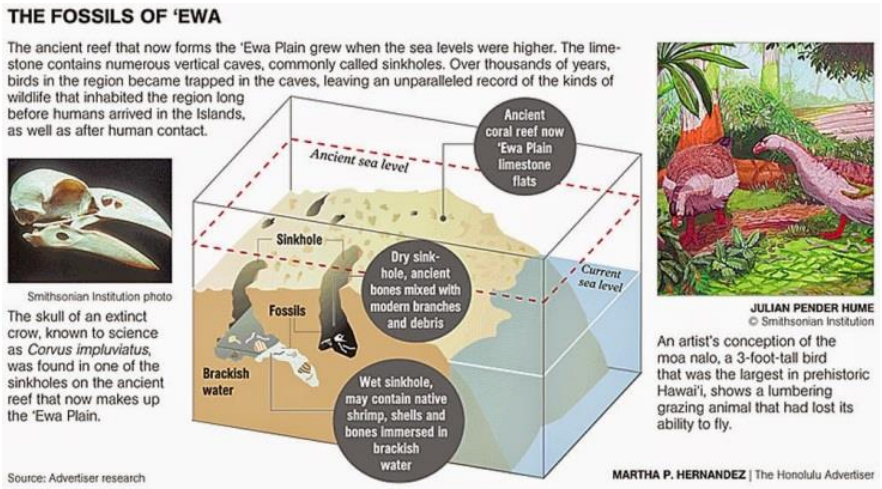
1991 *Archaeological Survey of Two Demonstration Trails of the Hawaii Statewide Trail and Access System.* Prepared for Na Ala Hele Statewide Trails and Access Program, Department of Land and Natural Resources. International Archaeological Research Institute, Inc., Honolulu.

Karst Systems Covered Under US Clean Water Act

"An unbroken surface or shallow sub-surface hydrologic connection to jurisdictional waters may be established by a physical feature or discrete conveyance that supports periodic flow between the wetland and a jurisdictional water. Water does not have to be continuously present in this hydrologic connection and the flow between the wetland and the jurisdictional water may move in either or both directions.

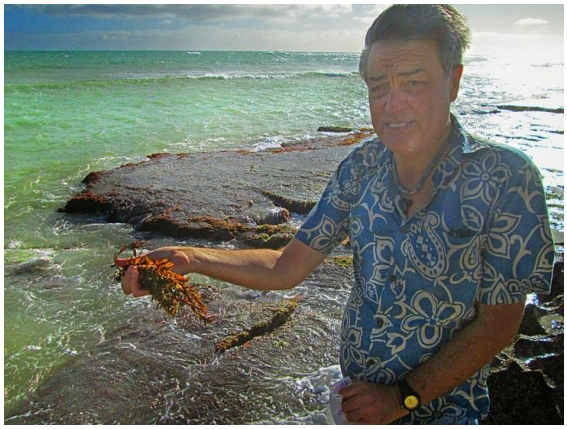
The hydrologic connection need not itself be a water of the U.S. A shallow subsurface hydrologic connection is lateral water flow through a shallow subsurface layer, such as may be found in steeply sloping forested areas with shallow soils, soils with a restrictive horizon, ***or in karst systems."***



A major karst cave site in Ewa in the 1970's was being destroyed by workers when the opening grew so large work finally had to be stopped and archaeologists were called in. After a fairly quick examination and some photos **it was destroyed. Pre-Western contact Oahu has many, many native Hawaiian stories of very large sea caves and coral water channels.** ***Schools of mullet were well known to pass under Oahu from places such as Hawaii Kai to Kailua's Enchanted Lakes via underground lava tubes connected to karst cave entrance portals.***

The Ewa Plain covers the southwestern corner of the island of Oahu, Hawaii. The coastal portion of the Ewa Plain is overlain by reef limestone material deposited during numerous past high stands of sea level. **The uppermost limestone layer is called the Upper Limestone Aquifer (ULA).**

Deep karst waterway channels flow underground through the entire Ewa Plain



Mike Lee: Mountain water and rain fall streams flow directly through the Ewa Plain ancient coral reef and into the shore and reef system, affecting the health and pollution of these traditional native Hawaiian resources which are also the basis for Oahu's marine ecosystem.

KARST: What Is It and *WHY Is It Called That?*

Karst is actually very wide spread all over North and South America as well as worldwide. Karst is actually one of the most important natural systems on the planet. *Native Hawaiian culture made very great use of karst terrain and the ecosystems it created in the islands.*

The international community has settled on **karst**, the German name for Kras, a region in Slovenia partially extending into Italy, where it is called "Carso" and where the first scientific research of a karst topography was made.

Karst landforms are generally the result of mildly acidic water acting on weakly soluble bedrock such as limestone or dolostone. The mildly acidic water begins to dissolve the surface along fractures or bedding planes in the limestone bedrock. Over time, these fractures enlarge as the bedrock continues to dissolve. Openings in the rock increase in size, and an underground drainage system begins to develop, allowing more water to pass through the area, and accelerating the formation of underground karst features.

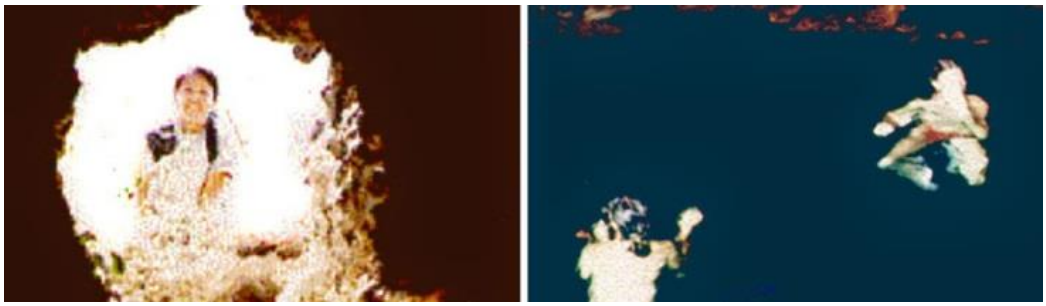
The carbonic acid that causes these features is formed as rain passes through the atmosphere picking up CO2, which dissolves in the water. Once the rain reaches the ground, it may pass through soil that can provide much more CO2 to form a weak carbonic acid solution, which dissolves calcium carbonate.

Near the coast the brackish ground water floats on saline water as a Ghyben-Herzberg lens

A location near Barbers Point where the surface karst layer was cut like a knife using a large powerful quarry saw shows a ***cross section of ancient life that may have included human or ancient bird bones, ancient seeds long extinct and other important pre-history clues.***

Receiving surface and ground waters are both susceptible to contamination from these pollutants.

Contaminants can reach ground water quickly through fractured rock formations or **sinkholes in karst** areas, such as that found in Ewa. Ground water is more sensitive to contamination in these areas because runoff may pass directly into the subsurface with little if any infiltration through the soil, a process that typically filters at least some pollutants.



The Ewa Karst is the largest on the island of Oahu

William R. Halliday **The Cave Conservationis**t February 1998

It covers at least 50 km2 in the southwest corner of the island of Oahu. It is a semitropical littoral karst formed on porous, permeable algal and coralline reef deposits formed during at least three high stands of sea level.

From present sea level these formations rise to an altitude of about 20 m. Tidal fluctuations extend inland from the shore line but freshwater at least 10 m deep has been found within 2 km of the shore, floating on salt water in the form of a Ghyben-Herzberg lens.

The U.S. Geological Survey Ewa Quadrangle shows numerous sinking streams and closed depressions within the Ewa Karst.

Despite its impressive extent and archaeological and palaeontological values, *the Ewa Karst is almost entirely unknown to karstographers and speleologists.*

In 1955, the late Harold S. Palmer (Professor of Geology at the University of Hawaii) told me he had seen a meter-long stalactite said to have come from a cave in the Ewa Karst.

An entire bountiful ecosystem and cultural heritage being destroyed by Kalaeloa developers

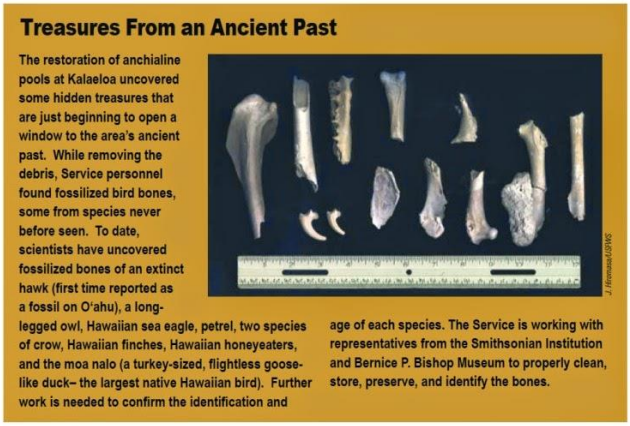
Off the Ewa shore are the numerous huge circular holes in the still living reef where vast amounts of upland fresh water has run through the ancient Karst reef and **out into the sea through underground caves.**

These huge fresh water outlets create excellent fishing grounds and feed nutrients into the sea that **create ideal spawning conditions.** These *once fantastic ecosystems fed native Hawaiians for a thousand years* however the waters are **increasingly being diverted, cut off and polluted by up stream development on the Ewa Plain.**

The health of the reef and wetlands directly sustains Oahu's marine life.

Fresh spring water is especially important in the propagation of plant and sea life and the food chains they create- from limu on up to large pelagic fish.

Surface and ground waters are very susceptible to contamination from pollutants. **Contaminants can reach ground water quickly through fractured rock formations or sinkholes in karst** areas, such as that found in Ewa. Ground water is more sensitive to contamination in these areas because *runoff may pass directly into the subsurface with little if any infiltration through the soil, a process that typically filters at least some pollutants.*



While most parties agree that groundwater generally flows from the mountains towards the ocean, there are specific geologic characteristics in the Ewa Plain area that may cause some groundwater to flow in directions other than directly towards the ocean. Understanding these geologic features is essential in determining the direction of groundwater flow in the Ewa Plain area. At this time, a much better understanding of the area's karst geology is needed before major damage is done.

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September 25, 2017

Mr. John Bond
Kanehili Cultural Hui
P.O. Box 75578
Kapolei, Hawaii 96707

Subject: **Draft Environmental Assessment**
Aloha Solar Energy Fund II (Kalaeloa, Oʻahu, Hawaiʻi)

Dear Mr. Bond:

Thank you for your comment letter dated August 7, 2017 concerning the Draft Environmental Assessment (EA) for the Aloha Solar Energy Fund II (ASEF II) project.

We acknowledge your comments below:

1. ***Hawaiʻi Public Utilities Commission (PUC), no apparent knowledge of this project, no Power Purchase Agreement (PPA) on file.***

This is an approved project under HECO's Tier III Feed-In-Tariff (FIT) program and, as such, is subject to the PPA terms that were approved by the PUC. This project entered the active Tier III FIT in 2014 and has been subject to a lengthy electrical interconnection requirement study (IRS). For these reasons, the PPA is not executed until the IRS is complete. HECO regularly updates the PUC on the status of the FIT program which includes this project. Thus, the PUC is indeed aware of this project.

2. ***Is the 12-kV proposal a scheme to switch to 46 kV later?***

See EA Section 2.4.5, Power and Telecommunications. The project is proposing a 12-kV line with no plans to increase voltage.

3. ***Other development purposes***

There are no other development purposes for this parcel. The project purpose is described in full in EA Section 2.1. This solar project is subject to HECO's FIT program, which has a 20-year term. The HCDA lease and development permit will only permit ASEF II to utilize the property for a photovoltaic system.

4. ***Concern about destruction and impact to historic and cultural sites***

ASEF II's design for the site will only utilize about half the acreage parcel in a manner that avoids all twenty-three (23) known archaeological/historic sites comprised of 146 features identified in 2013. The project has been coordinating with the State Historic Preservation Division (SHPD) since that time to address the required components of a burial treatment plan, an archaeological preservation plan, and an archaeological monitoring plan. A subsequent archaeological investigation was recently completed in 2017 for Coral Sea Road right-of-way with no significant finds. All efforts relative to the design of the project and the establishment of an archaeological preserve have been conducted in consultation with cultural and community input, including Mr. Michael Kumukauoha Lee.

5. HCDA promises of all underground wiring are being totally violated.

The provision of the 12-kV line is an interim line that would be a combination above and below ground line to minimize the extent of required ground and utility disturbance. This does not preclude the future use and possibility of permanently placing the entire line below ground.

6. Underground installation of utility facilities along federal-aid highways, see §264-33.5

Work proposed by this project within the State Department of Transportation (DOT) right-of-way will obtain all required approvals from their Highways Division before construction. HRS 264-33.5 applies to the installation of utility cables and facilities during the design or construction of any new or existing federal-aid highway project. It is our understanding that this is not a requirement applicable to our project.

7. Previous bulldozing work done without permit.

It has been acknowledged that prior to the issuance of a right of entry, an unfortunate event occurred with an unauthorized entry and subsequent work conducted within the parcel on April 16, 2012. This resulted with mechanical disturbance within the parcel. An investigation was immediately conducted by the Hawaii Community Development Authority (HCDA) with all work ceased in the affected parcel. Through consultation with the State Historic Preservation Division and the ʻAhahui Siwila Hawaiʻi o Kapolei, and project proponent, remediation measures were identified as required corrective action. These measures were summarized in a Mitigation Plan submitted by project proponents to HCDA. On August 16, 2012, the HCDA authorized its Executive Director to address damages from these unauthorized activities through the specified measures of the Mitigation Plan which were subsequently approved with SHPD's concurrence in October 2012.

Archaeological field work was conducted from February 20 through April 10, 2013. It should be noted that during the unauthorized entry, a portion of State Site 50-80-12-5119 was bulldozed. This site contains 37 surface features which include three karst pits, 26 rock mounds, two U-shaped structures, one semi-walled structure, three C-shape structures, one L-shaped structure, and one enclosure. The site has been interpreted as a habitation, agriculture, refuse, storage, military complex associated with pre- and early post-Contact through Historic Period.

State Site 50-80-12-7484 is a site comprised of two karst pits and one surface midden scatter. Of specific note, Feature 3 was a midden scatter identified within the bulldozed cut. The traditional artifacts identified in that scatter included one basalt micro-adze and several volcanic glass debitage flakes. This feature was mechanically altered and thus is in poor condition. Shovel Probes were conducted to identify any additional features or artifacts.

At present, the current project owners are working diligently with SHPD, the Oʻahu Island Burial Council, recognized state cultural descendants, and community/cultural organizations to prepare an interim preservation plan and long-term archaeological preservation plan as well as a burial treatment plan. The current project team is committed to ensure the long-term stewardship of these historic properties.

8. ***We believe massive damage will be done because construction crews are given the green light to destroy everything and totally flatten the ground surface, filling in karts water holes with concrete.***

The ASEF II project layout was purposefully designed to avoid all historic sites, all of which will be preserved. The majority of the northern portion of the property has been proposed to be a buffered archaeological preserve. See Figure 2-1 of the EA.

9. ***WW-II sites not even mentioned by SHPD will be destroyed!***

The military historical sites mentioned in your comment letter are discussed in the project AIS report that has been reviewed by SHPD and included in the EA. These sites and their related features are recommended for preservation.

10. ***Hunt Corporation violating Programmatic Agreement.***

We acknowledge your comment regarding the Hunt Corporation violating the programmatic agreement. We note that Hunt's Ewa Field PV Farm is unrelated to the ASEF II project.

11. ***Concern of historical and cultural integrity forever destroyed which is the intention of the second phase of land development.***

There are no plans for a "second phase" of land development for this parcel. An early alternative for the ASEF II project considered the possibly of two 5 MW systems located on the parcel. That alternative was dismissed in the EA as not feasible due to the discovery of 23 historic sites comprised of 146 features which are recommended for long-term preservation.

12. ***Section 106 signed agreement with Navy and community at Ordy Pond.***

This project currently has no federal component and therefore not subject to federal reviews like Section 106 of the National Historic Preservation Act. We note that agreements between the Navy and the community regarding Ordy Pond is unrelated to the ASEF II project. ***Use of Powerlines down Coral Sea Road versus underground lines.***

Power lines and poles will be designed and constructed to meet required building permit requirements to withstand natural hazards, including wind hazards, and are being reviewed by the Federal Aviation Administration (FAA) for appropriate height clearances. See Section 3.14.1 of the EA for additional information. The distribution line will meet all applicable requirements from agencies within the area of work.

13. ***This PV Farm project is within a Tsunami and Hurricane Storm Surge Inundation Flood zone.***

The entire ASEF II project site is within flood Zone D, defined as: "Areas in which flood hazards are undetermined, but possible". However, the site is located approximately 300 feet from the nearest coastal area. The site is located over 250 feet outside of the 100-year flood plain. The project area is located entirely within the Tsunami Evacuation Zone. To prevent ponding or localized flooding resulting from storm run-off, soils will be evaluated for permeability and, if necessary, drainage infrastructure at the site should be constructed to meet applicable standards. All construction for the

project will conform to relevant building codes to mitigate the risk of wind, flooding and seismic damage as appropriate to IBC design requirements. See Section 3.5 of the EA for additional information.

14. ***The City of Honolulu adopted the underground utility installation policy in the 1960's and HCDA's Kalaeloa Master Plan ALSO adopted this as planning policy. However, this project is in VIOLATION!***

The underground utility installation policy stated in Chapter 22 of the Revised Ordinances of Honolulu applies to residential subdivisions. The proposed overhead lines along Coral Sea Road is proposed as an interim measure.

15. ***Land Title is clouded because of Allodial Title.***

We acknowledge your comment that land title of the project is clouded because of Alloidial Title. Pursuant to the Quitclaim Deed (Land Court Document No. 4113681), title to the subject parcel was transferred to the Hawai'i Community Development Authority in 2011.

16. ***State Environmental Policy, Chapter 344 HRS***

This EA was prepared in accordance with Chapter 343, HRS and Hawaii Administrative Rules Chapter 11-200. The project supports the state environmental policy's purpose to "encourage productive and enjoyable harmony between people and their environment, promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of humanity, and enrich the understanding of the ecological systems and natural resources important to the people of Hawaii".

17. ***Unfortunately addressing knowledge of the subsurface karst water system, caves and water channels is widely disregarded to allow large scale land development and waste sites without having to take any cultural or environmental responsibilities.***

Drainage for the project is described in Section 2.0. The project will comply with NPDES permit requirements for construction activity. A NPDES permit for discharge of stormwater associated with construction activities will be obtained for the site. Construction, grading and drainage plans for the project will be submitted to the appropriate review agencies. Further, a geotechnical study under an a SHPD-approved monitoring plan will be conducted to verify the geological substrate to support the foundational requirements for the panels.

18. ***"The area is the location of ancient Hawaiian karst ponds as seen in 1928 and later NASBP air photos. Air photos show this area has perennial surface water features and is historically a wetlands area that attracts migratory and endangered bird birds of many kinds. Surface water features that contain water at all times throughout the year."***

Botanical surveys of the parcel site and the distribution line path line of work were conducted as a part of this report, see EA Section 3.5. Botanical surveys focused on locating rare native species if present. However, none were found by the survey. For those plants that have cultural value and importance, it has been recommended that an appropriate cultural group or nursery be provided access to the site prior to construction to either gather seeds, clipping, or roots for purposes of cultural use or prorogation for future plantings for other Kalaeloa ecosystem restoration projects.

There are no known nesting colonies of any protected seabird species on or within proximity of the project site. None of the avian species detected during these two surveys are listed under either the federal Endangered Species Act of 1973, as amended, or the State of Hawai'i's endangered species statute Hawai'i Revised Statutes (HRS) 195D.

No mammalian species currently protected or proposed for protection under either the federal or State of Hawai'i endangered species programs was detected during this survey, nor were any expected. No federally delineated Critical Habitat incorporates any part of the project site or transmission line route. The nearest critical habitat is Lowland Dry - Unit 11, at its closest point 1900 ft. (575 m) to the northeast of the site. Three other units (Lowland Dry-Unit 09 and Unit 10, and Coastal - Unit 15) have been designated in Kalaeloa, but these are at distances over 1 mi to the west. There is no equivalent statute under state law.

19. The PV farm site is in an ancient area known as Kanehili.

Current project proponents recognize the cultural importance of this area of Kalaeloa and are committed to ensure the long-term preservation and burial treatment measures are developed in concert and consultation with key agencies, recognized cultural descendants, and key cultural/community organizations to ensure the area's cultural heritage is protected.

20. "Final Environmental Assessment Disposal and Reuse of Surplus Property at Naval Air Station Barbers Point, O'ahu, Hawai'i, August 2011, Department of the Navy, Base Realignment and Closure Program Management Office stated regarding former NAS Barbers Point lands: "Open Space/Recreation. This land area would be comprised of mostly passive open space land uses and preserve/cultural park space. These parcels contain a relatively high density of cultural and arhaeological sites."

The project use is consistent with HCDA's Kalaeloa Master Plan, see EA Section 5.2.7. The KMP zoning map shows the project area located in a space designated for Open Space/Recreation, specifically recreation and cultural uses. The project's protection of historical, archaeological, and cultural resources as described in EA Sections 3.14 and 3.15, along with its lack of tall structures that obscure view planes and open space, complies with the intent of this zoning. Also, the ASEF II project is consistent with allowable uses as prescribed in Hawaii Administrative Rules, Chapter 215, Kalaeloa Community Development District Rules, October 2012, which is the current regulating plan for the district. The ASEF II project is in an area designated as part of a T2 – Rural/Open Space transect overlay zone which includes PV energy farms as an allowable use.

21. "CULTURAL LANDSCAPE REPORT SHOULD BE DONE ON THIS SOLAR PV SITE, Executive Order 12898"

Per the US Department of the Interior National Park Service document written in 1998, the purpose of Cultural Landscape Reports is to guide management and treatment decisions about a landscape within National Park lands. The ASEF II project is not located within National Park lands. The Executive Order you commented on emphasizes the importance of the National Environmental Policy Act's (NEPA) public participation process. The ASEF II project does not trigger NEPA review as it is not located on Federal lands, and does not utilize Federal funds. However, the project is complying with all applicable processes required by the Hawai'i Environmental Policy Act as it pertains to Environmental Assessment reports, including the public comment period for the Draft EA that you are participating in.

22. Definitions under Chapter 200, Environmental Impact Statement Rules HAR 11-200.

This EA was prepared in accordance with Chapter 343, HRS and Hawaii Administrative Rules Chapter 11-200. Short- and long-term impacts have been enumerated in the Draft EA and were subject to the legal 30-day review by key agencies, organizations, elected officials, and other parties.

23. "Karst Systems Covered Under US Clean Water Act"

This project, as described fully in Section 2.1 of the EA, will develop a photovoltaic system comprised of aboveground racked PV modules, with an overhead transmission line. Drainage for the project is described in Section 2.0. Operations and proper maintenance of the solar farm equipment will ensure that the chemicals contained in the photovoltaic modules are not exposed to the environment. The project will comply with all required permits, including US Clean Water Act, if applicable.

24. Deep karst waterway channels flow underground through the entire Ewa Plain.

A geotechnical study under an a SHPD-approved monitoring plan will be conducted to verify the geological substrate to support the foundational requirements for the panels. The project will also comply with NPDES permit requirements for construction activity. A NPDES permit for discharge of stormwater associated with construction activities will be obtained for the site. Construction, grading and drainage plans for the project will be submitted to appropriate agencies, such as DOT-HD, for review and approval. The City and State DOT will be consulted to ensure compliance with stormwater regulations continues after construction is complete.

25. The health of the reef and wetlands directly sustains Oahu's marine life and karst geology.

ASEF II supports the need to ensure the health of our reefs and nearshore habitat. The facility will be sited inland from the shoreline setback to conserve open space, minimize interference with natural shoreline processes, and minimize any loss or damage of the solar farm due to coastal erosion.

A copy of the Final EA can be found at:
http://oeqc2.doh.hawaii.gov/EA_EIS_Library/Forms/AllItems.aspx

Thank you for your participation in the environmental review process.

Sincerely,

Jeffrey H. Overton, AICP, LEED AP
Principal Planner

Owen Miyamoto
3209 Paty Drive
Honolulu, HI 96822-1439

July 24, 2017

Jeff Overton
Principal Planner
Group 70
925 Bethel Street, 5th Floor
Honolulu, HI 96813

Subject: DEIS for the Aloha Solar Energy Fund II Kalaeloa

Dear Mr. Overton,

Please consider the following comments on the subject draft environmental assessment.

It is recommended that the overhead section from the clear zones for runways 4-22 to Franklin D. Roosevelt Avenue be placed underground. Power generated by the project will be transmitted to the HECo distribution system by underground and overhead lines. Plans for power on Enterprise Avenue by HCDA will be underground. The use of underground utilities is consistent with long range plans for the development of Kalaeloa to comply with City and County planning codes for new subdivisions.

New construction at Kalaeloa should meet current subdivision standards to facilitate the transfer of the infrastructure to the City and County, which has objected to the transfer claiming the infrastructure does not meet their building requirements.

Sincerely yours,

Owen Miyamoto, PE, FASCE

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September 25, 2017

Mr. Owen Miyamoto
3209 Paty Drive
Honolulu, Hawaii 96822-1439

Subject: **Draft Environmental Assessment**
Aloha Solar Energy Fund II (Kalaeloa, Oʻahu, Hawaiʻi)

Dear Mr. Miyamoto:

Thank you for your comment letter dated July 24, 2017 concerning the Draft Environmental Assessment (EA) for the Aloha Solar Energy Fund II (ASEF II) project.

We acknowledge your comment that recommends the overhead section from the clear zones for runways 4-22 to Franklin D. Roosevelt Avenue be placed underground, and that new construction at Kalaeloa should meet current subdivision standards to facilitate the transfer of the infrastructure to the City and County.

The project is coordinating with and is under review by the Federal Aviation Administration (FAA) and will meet all guidelines as required by the FAA and by the Hawaiʻi Community Development Authority for the Kalaeloa Community Development District.

A copy of the Final EA can be found at:
http://oeqc2.doh.hawaii.gov/EA_EIS_Library/Forms/AllItems.aspx

Thank you for your participation in the environmental review process.

Sincerely,

Jeffrey H. Overton, AICP, LEED AP
Principal Planner