DEPARTMENT OF PLANNING AND PERMITTING
KA ʻOIHANA HOʻOLĀLĀ A ME NĀ PALAPALA ʻAE
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 7TH FLOOR • HONOLULU, HAWAIʻI 96813
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RICK BLANGIARDI
MAYOR
MEIA

DAWN TAKEUCHI APUNA
DIRECTOR
PO'O

May 16, 2024 2024/ED-1 (MAK)

Ms. Mary Alice Evans
Director
State of Hawaiʻi
Office of Planning and Sustainable Development
Environmental Review Program
235 South Beretania Street, Room 702
Honolulu, Hawaiʻi 96813

Dear Director Evans:

SUBJECT:	Hawaiʻi Revised Statutes Chapter 343 Revised Ordinances of Honolulu Chapters 25 and 26 Final Environmental Assessment (EA)
Project:	Garg Residence
Applicant:	NMG HI Properties LLC
Agent:	Hawaiʻi Engineering Group, Inc. (Roy Irei)
Address:	6973 Kalaniana'ole Highway - Hawaiʻi Kai
Tax Map Key:	3-9-002: 031
Determination:	Finding of No Significant Impact (FONSI)

With this letter, the Department of Planning and Permitting (DPP) hereby transmits the Final EA and FONSI for the above-referenced Project, which is located in the Special Management Area in the East Honolulu District, on the island of Oʻahu. Please publish this finding in the next edition of *The Environmental Notice*.

Based on the significant criteria outlined in Title 11, Chapter 200.1, Hawaiʻi Administrative Rules, the DPP has determined that the preparation of an Environmental Impact Statement is not required. The Final EA adequately discloses and describes relevant environmental impacts and responds to comments received during the required public comment period for the Draft EA.

We have uploaded an electronic copy of this letter and the Final EA to your online submittal site.

Should you or the public have any questions, please contact Michael Kat, of our Zoning Regulations and Permits Branch, at (808) 768-8013 or via email at michael.kat@honolulu.gov.

Very truly yours,

Dawn Takeuchi Apuna
Director

cc: Hawai'i Engineering Group, Inc. (Roy Irei)

From: webmaster@hawaii.gov
To: DBEDT OPSD Environmental Review Program
Subject: New online submission for The Environmental Notice
Date: Thursday, May 16, 2024 12:03:07 PM

Action Name

Garg Residence in Hawaii Kai

Type of Document/Determination

Final environmental assessment and finding of no significant impact (FEA-FONSI)

HRS §343-5(a) Trigger(s)

- (3) Propose any use within a shoreline area

Judicial district

Honolulu, Oʻahu

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

(1) 3-9-002:031

Action type

Applicant

Other required permits and approvals

• Special Management Area Use Permit • Shoreline Setback Variance • Certified Shoreline Survey • Chapter 6E HRS Compliance Historic Resources • Noise Permit • Sewage Connection Permit • Water Use Permit • Street Usage Permit • Building Permits (Demolition, Buildings, Electrical, Plumbing)

Discretionary consent required

Shoreline Setback Variance

Approving agency

City & County of Honolulu, Department of Planning and Permitting

Agency contact name

Michael Kat

Agency contact email (for info about the action)

michael.kat@honolulu.gov

Email address or URL for receiving comments

michael.kat@honolulu.gov

Agency contact phone

(808) 768-8013

Agency address

650 South King Street
Honolulu, Hawaii 96813
United States

Map It

Applicant

NMG HI Properties LLC

Applicant contact name

N/A N/A

Applicant contact email

roy@hawaiiengineering.net

Applicant contact phone

(808) 533-2092

Applicant address

2000 North Fashion Show Drive, #2407
Las Vegas, Nevada 89109
United States
Map It

Is there a consultant for this action?

Yes

Consultant

Hawaii Engineering Group, Inc

Consultant contact name

Roy Irei

Consultant contact email

roy@hawaiiengineering.net

Consultant contact phone

(808) 533-2092

Consultant address

1088 Bishop Street
Suite 2506
Honolulu, Hawaii 96813
United States
Map It

Action summary

The Applicant seeks an Shoreline Setback Variance and a Major Special Management Area (SMA) Use Permit to construct a new residence that is located within the SMA and on a shoreline parcel in Hawaii Kai. The Project involves the demolition of an existing two-story single-family dwelling and the construction of an approximately 4,748 square foot, two-story, single-family dwelling. The new proposed structure will encroach approximately 443 square feet into the 40-foot shoreline setback area. The site is a narrow shoreline lot along Kalanianaole Highway that is protected by a rock breaker wall that serves as the boat entranceway to the Hawaii Kai Marina. While the shoreline shows signs of accretion, a Shoreline Setback Variance is necessary as the certified shoreline follows the high water mark of an earlier field survey.

Reasons supporting determination

Based on the significant criteria outlined in Title 11, Chapter 200.1, Hawai'i Administrative Rules, the DPP has determined that the preparation of an Environmental Impact Statement is not required. The Final EA adequately discloses and describes relevant environmental impacts and responds to comments received during the required public comment period for the Draft EA.

Attached documents (signed agency letter & EA/EIS)

- 22-2030-FINAL-EA-Garg-Residence-Property-6973-Kalanianaole-Highway-Honolulu-Hawaii_5-9-241.pdf
- 25922001.pdf

Shapefile

- The location map for this Final EA is the same as the location map for the associated Draft EA.

Action location map

- Garg-Residence-Property1.zip

Authorized individual

Michael Kat

Authorization

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

FORD & ASSOCIATES, INC.
ENVIRONMENTAL SCIENTISTS & ENGINEERS

Final
Environmental Assessment
Report

Garg Residence Property
6973 Kalanianaole Highway
Tax Map Key (TMK) Number: (1) 3-9-002: Parcel 031
Honolulu, Honolulu County, Hawaii

FAI Project No. 22-2030

May 9, 2024

Prepared for:

NMG HI Properties LLC
c/o Hawaii Engineering Group, Inc.
1088 Bishop Street, Suite 2506
Honolulu, Hawaii 96813

Prepared by:

Ford & Associates, Inc.
928 Nuuanu Avenue, Suite 505
Honolulu, Hawaii 96817

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LIST OF ACRONYMS

AMSL	Above Mean Sea Level
AGL	Above Ground Level
BFE	Base Flood Elevation
BGS	Below Ground Surface
BMP	Best Management Practices
BWS	Board of Water Supply
CWB	State of Hawaii, Clean Water Branch
CZMP	Coastal Zone Management Program
dBa	Decibel, A-weighted
DLNR	State of Hawaii, Department of Land and Natural Resources
DOFAW	State of Hawaii, Division of Forestry and Wildlife
DOH	State of Hawaii, Department of Health
DOT	State of Hawaii, Department of Transportation
DPP	City and County of Honolulu, Department of Planning and Permitting
DTS	City and County of Honolulu, Department of Transportation Services
EA	Environmental Assessment
EHSCP	East Honolulu Sustainable Communities Plan
ERP	Environmental Review Program
FAI	Ford & Associates, Inc.
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FONSI	Finding of No Significant Impact
GP	City and County of Honolulu General Plan
HAR	Hawaii Administrative Rules
HEER	Hazard Evaluation and Emergency Response
HRS	Hawaii Revised Statutes
HSPA	Hawaii State Planning Act
IPCC	Intergovernmental Panel on Climate Change
LOC	Likelihood of Occurrence
mg/L	Milligrams per liter
mm/yr	Millimeters per year
OPSD	Office of Planning and Sustainable Development
ROH	Revised Ordinances of Honolulu
SCS	Scientific Consultant Services, Inc.
SHPD	State Historic Preservation Division
SLR	Sea Level Rise
SLR-XA	Sea Level Rise-Exposure Area
SMA	Special Management Area
sq. ft.	Square-foot
SSV	Shoreline Setback Variance
TEC	Threatened, Endangered, Candidate for Listing
TMK	Tax Map Key
UIC	Underground Injection Control

US	United States
USCB	United States Census Bureau
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey

Executive Summary

Purpose and Need

This Final Environmental Assessment (EA) for the Garg Residence Property located at 6973 Kalanianaole Highway (Tax Map Key [TMK] Number [1] 3-9-002: Parcel 031), Honolulu, Honolulu County, Hawaii 96825 (the "subject property"), has been prepared in accordance with Chapter 343, Hawaii Revised Statutes (HRS); and Hawaii Administrative Rules (HAR) Title 11, State of Hawaii, Department of Health (DOH), Chapter 200.1, Environmental Impact Rules. The proposed project encroaches within the 40-foot setback from the certified shoreline, which triggered the requirement of the EA.

The proposed project will encroach within the 40-foot shoreline setback, necessitating a Shoreline Setback Variance pursuant to the Revised Ordinances of Honolulu (ROH) Chapter 26 and SMA compliance pursuant to ROH Chapter 25. This process will require acceptance of the Chapter 343 HRS EA and submission of the applications for the SSV and SMA permits, which will require the approval of the City Council of Honolulu.

Proposed Action

The Garg Residence project currently involves demolishing the existing two-story single-family dwelling and constructing an approximately 4,748 square-foot (sq. ft.) two-story single-family dwelling (that will be elevated so that the living area – two floors – is above the base flood elevation), and an approximately 515 sq. ft. garage, pool, and landscaping. Architectural drawings for the Garg Residence Property are included in Appendix B

This shoreline lot is shaped triangular, narrowing at the north end, which influences the design of the structure to be similar in shape. As a result, the northwest side of the proposed dwelling will encroach approximately 442.74 square feet into the shoreline setback (see Figure 5). In accordance with the FEMA map, the subject property is rated as VE with a Base Flood Elevation (BFE) of 12 feet (see Figure 7).

Environmental Consequences

The Proposed Action is not expected to have any significant adverse effects on the environment. The Proposed Action involves demolition of the existing two-story residential dwelling, and construction of a new, elevated two-story residential dwelling including a garage, pool, and landscaping.

No adverse impacts are expected from the Proposed Action regarding encroachment into the shoreline setback area. The request for the variance will not impact public access to the beach and there will be no detrimental effect to public interest. The public rights to navigate the use of the shorelines will not be adversely affected; in fact, the size of the beach in the vicinity of the proposed project has increased following the construction of the nearby jetty for the Hawaii Kai Marina Entrance Groin Replacement Project in 2023.

Grading and excavation activities required for the Proposed Action are limited to the immediate vicinity of the subject property. No significant impact to the land is anticipated since previous grubbing and grading have been conducted at the site from past activities. Specific environmental resources with the potential for environmental consequences reviewed included natural physical and biological resources, noise, view and visual impacts, utilities, cultural resources, socioeconomics, environmental justice, air quality, public access, traffic impacts, land use, access to the area, and environmental conditions.

The Proposed Action is not expected to impact natural physical and biological resources, noise, view and visual impacts, utilities, cultural resources, socioeconomics, environmental justice, air quality, public access, traffic impacts, land use, access to the area, and environmental conditions.

Noise levels are anticipated to slightly increase during construction activities. However, this noise impact will be temporary and last only until project completion.

Air quality may decrease during construction due to a slight increase in particulate matter in the form of dust. However, due to the restricted access and protective measures, public health will likely not be affected.

PROJECT SUMMARY

Applicant:	NMG HI Properties LLC c/o Hawaii Engineering Group, Inc. 1008 Bishop Street, Suite 2506 Honolulu, HI 96813
Approving Agency:	City and County of Honolulu, Department of Planning and Permitting (DPP)
Project Name:	Garg Residence Property
Project Location: (Figures 1 and 2)	6973 Kalanianaole Highway Honolulu, HI 96825
Tax Map Key (TMK):	(1) 3-9-002: Parcel 031
Lot Area:	10,016 square feet
Zoning:	R-10 Residential
Special Management Area (SMA): (Figure 3)	The Project is entirely within the SMA.
FEMA/FIRM Map Zone: (Figure 7)	AE – denotes special flood hazard areas, with a base flood elevation of nine feet amsl, and within the 1 percent annual chance floodplain (north, east and southeast portions of the subject property) VE – denotes special flood hazard areas, with a base flood elevation of 12 feet amsl, and a coastal flood zone (1 percent annual chance) with velocity hazard (wave action) (northwest, west and south portions of the subject property)
State Land Use:	Urban
EHSCP Land Use Character:	Predominantly residential communities characterized by generally low-rise, low-density development
Existing Land Conditions: (Figure 4)	The subject property consists of an existing two-story residential dwelling located along the northeastern boundary, with a concrete lanai, grassy lawn, and areas of landscaped vegetation.
Determination:	Finding of No Significant Impact

1.0 INTRODUCTION

This Final Environmental Assessment (EA) for the Garg Residence Property located at 6973 Kalanianaole Highway (Tax Map Key [TMK] Number [1] 3-9-002: Parcel 031), Honolulu, Honolulu County, Hawaii 96825 (the "subject property"), has been prepared in accordance with Chapter 343, Hawaii Revised Statutes (HRS); and Hawaii Administrative Rules (HAR) Title 11, State of Hawaii, Department of Health (DOH), Chapter 200.1, Environmental Impact Rules. The proposed project encroaches within the 40-foot setback from the certified shoreline, which triggered the requirement of the EA.

The proposed project will encroach within the 40-foot shoreline setback, necessitating a Shoreline Setback Variance pursuant to the Revised Ordinances of Honolulu (ROH) Chapter 26 and SMA compliance pursuant to ROH Chapter 25. This process will require acceptance of the Chapter 343 HRS EA and submission of the applications for the SSV and SMA permits, which will require the approval of the City Council of Honolulu.

This EA was conducted to comply with the State of Hawaii, Office of Planning and Sustainable Development (OPSD), Environmental Review Program (ERP) requirements. The City and County of Honolulu, Department of Planning and Permitting (DPP) is the approving authority. The anticipated outcome of this EA will be a Finding of No Significant Impact (FONSI) for the Garg Residence Property.

2.0 SUBJECT PROPERTY DESCRIPTION

2.1 SUBJECT PROPERTY LOCATION

The Garg Residence Property consists of approximately 10,016 square feet of land located at 6973 Kalanianaole Highway, Honolulu, Oahu, Hawaii, in a residential setting (Figures 1 and 2).

The subject property is further described as the parcel of land designated as TMK Number (1) 3-9-002: Parcel 031. According to the City and County of Honolulu, DPP, the subject property is currently zoned "R-10 Residential." The State Land Use designation is "Urban," and lies within the SMA (Figure 3).

Subject property photographs are included behind the Photographs Tab.

2.2 CURRENT USE OF SUBJECT PROPERTY

The subject property consists of an existing two-story single-family residential dwelling located along the northeastern boundary, with a concrete lanai, grassy lawn, and areas of landscaped vegetation.

In accordance with the City records the previous owner demolished the existing dwelling in 1974 and applied for a building permit to construct a new dwelling in February 1975 that was eventually completed in September 1979. The existing dwelling is approximately 2,308 square feet of living area and 1,624 square feet of building footprint that is not up to current building standards that currently is

outside of the 40 feet shoreline setback. The existing two-story dwelling is approximately 25 high with the main living area at grade level that is within the designated base flood elevation (BFE) of 12 feet.

In August 2020, The Gargs (the current owners) applied for a building permit and discovered that a SMA permit was required, thus cancelling the permit.

2.3 SURROUNDING/ADJACENT PROPERTIES

The areas surrounding the subject property is listed below:

North: Kalanianaole Highway, beyond which are residential houses

East: Residential house, and Kalanianaole Highway

South: Beach at Maunalua Bay (Pacific Ocean)

West: Maunalua Bay (Pacific Ocean)

3.0 PROPOSED ACTION

3.1 TECHNICAL CHARACTERISTICS

The Garg Residence project currently involves demolishing the existing two-story single-family residential dwelling (Figure 4), and constructing an approximately 4,748 sq. ft., two-story, single-family residential dwelling (that will be elevated so that the living area – two floors – is above the base flood elevation), and an approximately 515 sq. ft. garage (Figure 5). Rendering of the Garg Residence is shown in Figure 6.

The existing residential dwelling is not located within the shoreline setback area. The proposed residential dwelling will result in a portion of the structure (the northwest corners of the dwelling) to be located within the shoreline setback area.

This shoreline lot is shaped triangular, narrowing at the north end, which influences the design of the structure to be similar in shape. As a result, the northwest side of the dwelling will encroach approximately 442.74 square feet into the shoreline setback (see Figure 5). In accordance with the FEMA map, the subject property is rated as VE with a Base Flood Elevation (BFE) of 12 feet (see Figure 7).

Based on preliminary architectural plans, the ground level of the proposed dwelling is not considered living space, and will comprise the elevator shaft, storage, stairs and garage. The main level will consist of the kitchen and dining room, a living room and bar, two guest bedrooms (each with a bathroom) and the main bedroom suite. The upper level will consist of four guest bedrooms (each with a bathroom) and an activity room.

The ground level will be concrete slabs on grade and the framing will consist of wood and steel. The new foundations will consist of continuous and isolated reinforced concrete footings. The ground level will have break-away walls including the garage.

In addition, a shallow pool will be located to the southwest of the dwelling near the garage. A concrete driveway will front the garage along the southeastern border of the subject property, all outside of the Shoreline Setback area.

Architectural drawings for the Garg Residence Property are included in Appendix B.

A shoreline survey for the subject property was conducted by Mr. Clayton Kaneshiro on October 16, 2023, and was certified by the Board of Land and Natural Resources on November 30, 2023. The Shoreline Certification Map is included in Appendix C.

In reference to the table below, Project Compliance between the existing and proposed dwelling. The proposed dwelling follows the current building codes including the flood elevation requirements. The existing dwelling is at 5 feet AMSL and the proposed dwelling will be at or above the 12 feet AMSL. Additionally, the currently dwelling structural post and lanai deck has approximately 20 SF encroaching into the required shoreline setback.

Project Compliance with Development Standards				
Project Compliance				
R-10 Zoning District Development Standard – Parcel 031			**Existing**	**Proposed**
Minimum Lot Area (sq. ft.)	One-family dwelling, detached, and other uses	N/A	10,007 sq. ft.	10,007 sq. ft.
Minimum Lot Width/ Depth (ft.)	65 for dwellings 100 for other uses		Triangular shaped lot Width: 198.81 ft. Depth: 94.42 ft.	Triangular shaped lot Width: 198.81 ft. Depth: 94.42 ft.
Yards (ft.)	Front	10 ft. for dwellings 30 ft. for other uses	10 ft.	10 ft.
	Side and rear	5 ft. for dwellings 15 ft. for other uses	Side: 15 ft. Rear: 15 ft.	Side: 5 ft. Rear: 5 ft.
Maximum Building Area	50% of the zoning lot = 5,004 sq. ft.		1,624 sq. ft. ~ 16%	3,017 sq. ft. ~ 30%
Maximum Height (ft.)	25-30 ft. 30 ft. in VE		25 ft.	30 ft.

Maximum Floor Area Ratio (FAR)	FAR 0.7	0.24 FAR	0.48 FAR
Maximum Floor Area (sq. ft.) Per 21-3.70-1(c)(3)(H)	7,011.20	2,390 sq. ft.	4,746 sq. ft.
Garage (sq. ft.)	N/A	480 sq. ft.	515 sq. ft.
Shoreline Setback Encroachment	40 feet	20 sq. ft.	443 sq. ft.
Base Flood Elevation (AMSL)	12 feet	5 ft. AMSL	14 ft. AMSL

The Proposed Action encroaches approximately 442.74 square feet into the shoreline setback, ROH Chapter 23, Article 1 – Establishment of the Shoreline Setback Line on shallow lots, of 40 feet, thereby a Shoreline Setback Variance is required.

3.2 ALTERNATIVES AND NO ACTION ALTERNATIVE

The No Action Alternative represents baseline conditions and would keep the subject property in its present condition with the existing dwelling. However, this alternative is not considered desirable due to the age (built in 1979), condition, and size of the existing dwelling, as well as land value. This No Action Alternative does not meet the needs of the current owners as space for their large family would not be accommodated.

An alternative considered was renovation of the existing dwelling. However, the investment to bring the existing dwelling to current code would be costly, the size is not adequate to meet the needs of the current owners (see explanation above), and it is not flood compliant. Therefore, this alternative is not considered desirable.

A second alternative considered was to demolish the existing dwelling and construct a new dwelling to not encroach within the shoreline setback area. However, the narrow, triangular-shaped shoreline lot influences the design of the structure to be similar in shape which would not be practical. The space needs of the current owners large family would not be accommodated.

The Proposed Action was selected (see Section 3.1) because the proposed project would meet the current building code, be flood compliant, and satisfy the space needs of the current owners large family. As a result, the northwest corners of the proposed project will encroach approximately 442.74 square feet into the shoreline setback (Figure 5).

4.0 PERMITS

Permits required for the Proposed Action to move forward are listed below:

Permit	Approving Agency
Special Management Area Permit, Major	DPP
Demolition Permit	DPP
Building Permit	DPP
Shoreline Setback Variance	DPP
Certified Shoreline Survey	State of Hawaii Department of Land and Natural Resources (DLNR)
Noise Permit	DOH, Indoor and Radiological Health Branch
Sewage Connection Permit	DPP
Water Use Permit	Board of Water Supply
Street Usage Permit	City and County of Honolulu Department of Transportation Services (DTS)

A National Pollutant Discharge Elimination System (NPDES) General Permit for discharges of storm water associated with construction activities will not be required from DOH, Clean Water Branch (CWB) for sites under one acre.

5.0 COMMUNITY CONSULTATION

Public and agency comment to the proposed Garg Residence Project has been initiated through meetings and letters. Copies of response letters, meeting minutes, meeting agendas, sign-in sheets and/or other meeting documentation materials are included in Appendix D.

Hawaii Kai Neighborhood Board No. 01

On July 26, 2022, a presentation was made by Hawaii Engineering Group, Inc. regarding the Garg Residence Property. The presentation provided background information and description of the project. During the presentation, questions from the neighborhood board and responses to these questions are included in Appendix D.

Maunalua Cultural Center and Maunalua Fishpond Heritage Center

On August 30, 2022, a site meeting was held by Hawaii Engineering Group, Inc. with Ms. Ann Marie Kirk, historian, with the Maunalua Cultural Center and Mr. Chris Cramer, executive director, Maunalua Fishpond Heritage Center, as advised by the Hawaii Kai Neighborhood Board. The meeting provided an on-site visit and a description of the project. Ms. Kirk and Mr. Cramer were supportive of the project.

State Historic Preservation Division 6E Filing

A State Historic Preservation Division (SHPD) 6E filing was made along with an accompanying DPP letter dated December 20, 2022. The DPP letter requests that the SHPD review and comment on any historic and cultural resources related to the subject property. A copy of the DPP letter is included in Appendix D.

State Department of Health, Clean Water Branch (DOH CWB)

A memorandum dated October 7, 2022 from the DOH CWB for comments. However, the proposed Project will not impact State waters. A copy of the memorandum is included in Appendix D.

DPP

A response letter from the DPP dated February 16, 2023 provided comments on the scope and content to be addressed regarding the proposed Project. A copy of the response letter is included in Appendix D.

State of Hawaii, Department of Transportation (DOT)

A response letter from the DOT dated March 7, 2023 provided comments related to any subdivision action and access changes, and for any work within the state right-of-way requires a permit. A copy of the response letter is included in Appendix D.

The proposed Project will not require any subdivision action and access changes. A permit will be obtained if any work is conducted within the state right-of-way.

State of Hawaii, Department of Land and Natural Resources (DLNR)

A response letter from DLNR dated March 22, 2023 provided comments on the proposed Project. DLNR's comments related to future climate change and sea level rise are addressed in Section 6.1.3 (Flood Zones and Sea Level Rise), and their comment regarding siting of structures conforms with the shoreline setback, ROH Chapter 23, Sec. 23-1.4 (b) – Adjustment of Shoreline Setback Line on Shallow Lots, of 40 feet from the certified shoreline.

A copy of the response letter is included in Appendix D.

U.S. Army Corps of Engineers

A pre-consultation letter was sent to the U.S. Army Corps of Engineers dated January 30, 2023 requesting comments on the proposed Project. However, no response was received.

A copy of the pre-consultation letter is included in Appendix D.

6.0 AFFECTED ENVIRONMENT

6.1 NATURAL RESOURCES – PHYSICAL RESOURCES

Discussions of physical resources of the natural environment include descriptions of earth and water resources, as well as coastal zone hazards and hazardous materials. Components of the earth include topography, geology, and soil. Topography describes the earth's surface features, including terrain and landforms. Geology studies the solid matter from which the earth is made and includes the history and processes that helped to shape it. Soil is the segment of the earth's surface particulates formed from a parent material when various environmental conditions cause the breakdown of that material. Water resources include surface water and groundwater.

6.1.1 Earth Resources

6.1.1.1 Baseline Conditions

The subject property lies in the physiographic region of the island of Oahu. The approximate latitude and longitude of the subject property are 21° 16' 50.64" North and 157° 42' 39.13" West, respectively.

According to the U.S. Geological Survey (USGS) 7.5-minute Koko Head, Hawaii topographic quadrangle map (2017), the elevation at the subject property is approximately 4.5 feet above mean sea level (amsl). The general topography of the subject property is relatively flat with the Pacific Ocean (Maunalua Bay) located on the southwestern boundary.

The soil type found on the north-northeast portion of the subject property is Fill Land, mixed (United States Department of Agriculture, Natural Resources Conservation Service). The remainder of the subject property is underlain by Jaucas Sand, 0 to 15 percent slopes (Scientific Consultant Services, Inc., 2022). In addition, four test borings were drilled at the subject property, and the soils identified were described as Fill, consisting of brown, humid, loose to dense, poorly graded sand; brown, humid, stiff silt silty clay with gravel; and brown, humid, well-graded, dense sandy gravel to a maximum depth of three feet. Below the Fill layer, there is gray-brown and dark gray, moist to saturated, very loose to semi-compact, poorly graded sand with some gravel to a maximum depth of 15 feet (JPB Engineering, Inc., 2020).

6.1.1.2 Proposed Action Impacts and Mitigation

According to the design information provided to FAI, the Proposed Action will not involve a significant disturbance to the ground surface. In addition, best management practices (BMPs) will be included in construction plans to mitigate dust and/or silt emissions, if any.

6.1.2 Water Resources

6.1.2.1 Baseline Conditions

The Aquifer Identification and Classification Technical Report No, 179, published by the Water Resources Research Center at the University of Hawaii, describe the aquifer below the subject property as part of the Waialae aquifer system in the Honolulu sector. The groundwater system below the subject property consists of an upper and lower aquifer.

The upper aquifer is an unconfined, basal aquifer of the sedimentary type, occurring in non-volcanic lithology. It is described as having potential use, but is not considered a drinking water source nor is it ecologically important. This aquifer is further described as replaceable with high salinity (5,000 to 15,000 milligrams per liter [mg/L] chloride). This aquifer has a high vulnerability to contamination.

The lower aquifer is a confined, basal aquifer of the flank type, occurring in horizontally extensive lavas. It is described as having potential use, and is an irreplaceable drinking water source with fresh salinity (<250 mg/L chloride). This aquifer has a low vulnerability to contamination.

The depth to groundwater is estimated to be approximately 7 feet below ground surface (bgs). The regional groundwater flow direction is generally inferred to flow in a southwesterly direction toward the Pacific Ocean/Maunalua Bay. However, the local gradient and flow direction under the property may be influenced naturally by zones of higher or lower permeability, tidal changes, or nearby pumping or recharge, and may deviate from the regional trend.

6.1.2.2 Proposed Action Impacts and Mitigation

The subject property is located below the State of Hawaii Department of Health (DOH) defined Underground Injection Control (UIC) line. Areas above the UIC line denote potential underground drinking water sources. Areas below the UIC line generally denote groundwater that is unsuitable for drinking water purposes. Consequently, the groundwater below the subject property is considered unsuitable for drinking water purposes. Therefore, mitigation measures are not necessary.

6.1.3 Flood Zones and Sea Level Rise

6.1.3.1 Baseline Conditions

Flooding

The Federal Emergency Management Agency Flood Insurance Rate Map (FEMA/FIRM Panel No. 15003C-0393G, Revised January 19, 2011) was reviewed to determine if the subject property is located in a flood hazard area. According to the map, the northern, eastern, and southeastern portions of the subject property and the southeastern adjoining properties are located in Zone AE, which denotes special flood hazard areas, with a base flood elevation of nine feet amsl, and within the 1 percent annual chance floodplain. The northwestern, western, and southern portions of the subject property are located in Zone VE, which denotes special flood hazard areas, with a base flood elevation of 12 feet amsl, and a coastal flood zone (1 percent annual chance) with velocity hazard (wave action) (Figure 7).

Sea Level Rise

Scientists predict that global mean sea level could rise approximately 1 foot in the next 40 years, and reach an average mid-range of approximately 3 feet over the next century. The rate of sea level rise (SLR) has increased since 1990. However, the pattern of sea level change is complex due to factors such as changing winds, ocean currents, runoff, salinity, gravity, and other factors that affect sea level.

The rate of actual SLR in Hawaii, at approximately 1.5 millimeters per year (mm/yr) at Honolulu and Nawiliwili, lags behind the global average of 3.2 mm/yr over the past two decades. However, long-term SLR exacerbates hazards such as chronic coastal erosion, impacts from seasonal high waves, coastal inundation due to storm surge and tsunami, and drainage problems due to the convergence of high tide and rainfall runoff.

Based on the 5th Assessment Report of the Intergovernmental Panel on Climate Change (IPCC), the United Nations body of leading climate scientists and governmental representatives, an upper-end projection of 3.2 feet of SLR by 2100 was used for SLR exposure mapping in the 2017 Hawaii Sea Level Rise Report.

Three SLR-induced coastal hazards (passive flooding, annual high wave flooding, and coastal erosion) were modeled and combined to define the projection of a "SLR Exposure Area" (SLR-XA). Passive flooding refers to still water high tide flooding in areas that are connected to the ocean (marine flooding) and isolated low-lying areas (groundwater inundation), and provides an initial assessment of low-lying areas susceptible to flooding by SLR. Annual high wave flooding and coastal erosion are also modeled to provide a more comprehensive picture of coastal hazards. Annual high waves will occur at high tide during typical seasonal swell events as waves run-up past the shoreline and into the backshore. Coastal erosion can be characterized by shoreline recession and land loss. While Hawaii has an overall trend of beach erosion, shoreline trends are highly variable at the scale of individual beaches.

Other Shoreline Hazards

The Atlas of Natural Hazards in the Hawaiian Coastal Zone (USGS, 2002) reports on the history and character of natural hazards on the Hawaiian coast. Seven potentially hazardous coastal processes in Hawaii are: (1) tsunamis, (2) stream flooding, (3) high waves, (4) storms, (5) erosion, (6) sea level, and (7) volcanic/seismic.

All sectors of the Hawaiian coast have some degree of hazard history and vulnerability.

According to the Atlas of Natural Hazards in the Hawaiian Coastal Zone (USGS, 2002), the Overall Hazard Assessment for the majority of this coastline is ranked moderate to low.

6.1.3.2 Proposed Action Impacts and Mitigation

Flooding

The project was designed to include a ground level with concrete slabs on grade that is 8-foot, 2-inch above ground level (AGL) in height (or 12.7 feet amsl) to accommodate the base flood elevation, and will have break-away walls.

Sea Level Rise

The potential impacts of SLR (SLR-XA) of 0.5 feet, 1.1 feet, 2.0 feet and 3.2 feet on the subject property is shown in Figures 8 to 11 and depends on factors discussed above (under Baseline Conditions) that affect sea level.

The projections of 0.5 feet and 1.1 feet are not expected to occur until approximately 2050 but should not adversely affect the Proposed Action.

The projections of 2.0 feet and 3.2 feet are not expected to occur until approximately 2100 (not anticipated for approximately 80 years) and may exceed the lifespan for the Proposed Action.

Other Shoreline Hazards

The Overall Hazard Assessment for this general area which includes the subject property is ranked moderate (USGS, 2002).

Construction conditions will conform to current construction requirements to avoid, minimize, and mitigate any potential impacts of the coastal zone hazards.

6.1.4 Hazardous Substances

6.1.4.1 Baseline Conditions

A database review of the DOH, Hazard Evaluation and Emergency Response (HEER) Office records was conducted regarding environmental concerns or violations at the subject property. The subject property was not listed in the HEER database (2021).

6.1.4.2 Proposed Action Impacts and Mitigation

Potentially hazardous materials are not used or stored onsite at the subject property.

The Proposed Action will not involve the use or creation of hazardous substances during construction. Since no impacts are anticipated, no mitigation measures are necessary.

6.2 NATURAL RESOURCES – BIOLOGICAL RESOURCES

Biological resources of the natural environment include wild plants and animals, both native and alien, which may be affected by the Proposed Action. These species live in an ecological community, or specific habitat, and interact with each other within that community. Ecological communities may include wetlands, oceans, shoreline, mountains, etc.

6.2.1 Wetlands

6.2.1.1 Baseline Conditions

The subject property was inspected for the presence of sensitive ecological areas by noting environmental indicators (e.g., wetlands vegetation, floodplains) located on or immediately adjoining the subject property.

No sensitive ecological areas were observed on the subject property. The USGS 7.5-minute Koko Head, Hawaii topographic quadrangle map (2017), does not depict creeks or delineated wetlands located on the subject property. Maunalua Bay/Pacific Ocean is located north, northwest, west, and southwest of the subject property. According to the United States Fish and Wildlife Service (USFWS) National Wetland Inventory Map, the subject property is not located in a designated wetland. The subject property is adjacent to Maunalua Bay which is described as Estuarine and Marine Deepwater and Wetland habitats (Hamer Environmental, 2022). A copy of the Hamer Environmental report is included in Appendix D.

No ponds or mudflats, as well as no hydrophytic vegetation and wetland hydrology were observed at the subject property. Wetland-type plants require hydric soils (or soils that do not have enough oxygen [anaerobic]) which were not observed at the subject property.

The Federal Emergency Management Agency Flood Insurance Rate Map (FEMA/FIRM Panel No. 15003C-0393G, Revised January 19, 2011) was reviewed to determine if the subject property is located in a flood hazard area. According to the map, the northern, eastern, and southeastern portions of the subject

property and the southeastern adjoining properties are located in Zone AE, which denotes special flood hazard areas, with a base flood elevation of nine feet amsl, and within the 1 percent annual chance floodplain. The northwestern, western and southern portions of the subject property is located in Zone VE, which denotes special flood hazard areas, with a base flood elevation of 12 feet amsl, and a coastal flood zone (1 percent annual chance) with velocity hazard (wave action) (Figure 7).

6.2.1.2 Proposed Action Impacts and Mitigation

According to the baseline conditions described in the previous section, the subject property is not located in a designated Wetland; therefore, the Proposed Action will have no effects on wetlands.

Use of BMPs will be implemented to control stormwater runoff and dust control throughout construction.

6.2.2 Wilderness Area

6.2.2.1 Baseline Conditions

The subject property consists of an existing two-story residential dwelling located along the northeastern boundary, with a concrete lanai, grassy lawn, and areas of landscaped vegetation.

The National Wilderness Preservation System website, https://www.wilderness.net, was reviewed for information on whether the subject property is located within an officially designated wilderness area. According to this website, four federal agencies (the National Park Service, Forest Service, Fish and Wildlife Service, and Bureau of Land Management) manage a total of 803 designated wilderness areas in the US. Two of these wilderness areas are located in the state of Hawaii, including Hawaii Volcanoes Wilderness on the island of Hawaii and Haleakala Wilderness on the island of Maui, which are managed by the National Park Service. Neither area encompasses the subject property.

6.2.2.2 Proposed Action Impacts and Mitigation

According to the baseline conditions, the subject property is not located in a wilderness area. Therefore, there will be no impacts and therefore, no mitigation measures are necessary.

6.2.3 Wildlife Preserve

6.2.3.1 Baseline Conditions

The website http://fws.gov/refuges/refugeLocatorMaps/Hawaii.html, maintained by the USFWS, was reviewed for information on whether the subject property is located within a designated wildlife preserve. According to this website, there are a total of nine wildlife preserves located within the Hawaiian islands, including:

1. Hakalau Forest National Wildlife Refuge
2. Hanalei National Wildlife Refuge

3. Huleia National Wildlife Refuge
4. James Campbell National Wildlife Refuge
5. Kakahaia National Wildlife Refuge
6. Kilauea Point National Wildlife Refuge
7. Kealia Pond National Wildlife Refuge
8. Oahu Forest National Wildlife Refuge
9. Pearl Harbor National Wildlife Refuge

None of the nine listed wildlife preserves identified encompasses the subject property.

Paiko Lagoon Wildlife Sanctuary is located approximately 0.5 mile northwest of the subject property.

6.2.3.2 Proposed Action Impacts and Mitigation

According to the baseline conditions, the project is not located in a wildlife refuge. Therefore, there will be no impacts and no mitigation measures related to this resource.

In addition, there will be no impacts to Paiko Lagoon Wildlife Sanctuary.

6.2.4 Listed or Proposed Threatened or Endangered Species and Designated or Proposed Critical Habitats

6.2.4.1 Baseline Conditions

A desktop exploration of available terrestrial wildlife, botanical, and ecological data was conducted for the subject property. Only species that are federal- and state-listed as Threatened (T), Endangered (E), or are a Candidate for Listing (C) were considered in this review (Hamer Environmental, 2022). The desktop analysis report is included in Appendix E.

The only species with a high Likelihood of Occurrence (LOC) are shorebirds (migratory species) and Hawaiian Stilts. The Hawaiian hoary bat has a medium LOC. Species with a low LOC included the Short-eared Owl, seabirds, other waterbird species (besides Hawaiian Silt), Hawaiian yellow-faced bee, dragonfly/damselfly species, and the Monarch butterfly. The only TEC terrestrial plant that may occur is the hairy purslane. All other species of terrestrial plants and wildlife considered in this analysis were ranked either zero (no possibility of occurring in the Analysis Area) or marked to indicate that insufficient data was available to assess LOC.

TEC Species	LOC
Mammals	
Hawaiian Hoary Bat	Medium
Birds	
Passerines	None
Fresh & Brackish Water Species: Hawaiian Stilts	High
Migratory Shorebirds	High
Seabirds	Low

Short-eared Owl	Low
Invertebrates / Insects	
Hawaiian Damselfly and Dragonfly Species	Low
Hawaiian Yellow-faced Bee	Low
Hawaiian Picture-wing Fly Species	None
Monarch Butterfly	Low
Plants	
TEC Plant Species (Oahu, Maunalua Bay) – Hairy Perslane	Low

Below is a summary of the analysis report findings:

- Habitat is present in and around the Analysis Area that could attract migratory shorebirds, seabirds, bats, owls, bees, and butterflies.
    - The residential neighborhood surrounding the subject property's footprint, though low in density, could harbor rodents and insects that may attract predators like bats and owls.
    - The residential neighborhood surrounding the subject property's footprint, though low in density, could harbor plants that attract and retain Monarch butterflies and Hawaiian yellow-face bees.
- The dominant passerine, plant, and invertebrate species utilizing the site currently are non-native. The TEC plant hairy purslane may occur on the site.
- The subject property is on the marine shoreline and has habitat for shorebirds (migratory species and Hawaiian Stilt). Shorebirds commonly use shorelines during transit flights (airspace corridor) and coastal habitats for foraging and resting. Seabirds, most commonly found far offshore over deep marine waters, will fly over coastal waters when they come ashore during their breeding season and fledglings can be light-attracted at night to fly toward land.

A site inspection was conducted on July 26, 2022. The subject property was observed with an existing two-story single-family residential dwelling located along the northeastern boundary, with a concrete lanai adjacent to the dwelling along the western side, grassy lawn and areas of landscaped vegetation. No shorebirds and/or Hawaiian Stilts were observed on the subject property and adjacent shoreline. In addition, no Hawaiian hoary bats and no hairy purslane plant were observed.

6.2.4.2 Proposed Action Impacts and Mitigation

According to the baseline conditions, the TEC species with high LOC for the subject property are the Hawaiian Stilt, and migratory shorebirds. Migratory shorebirds include Wandering tattler, Ruddy turnstone, Pacific golden plover, Long-billed Dowitcher, and Sanderling.

The Hawaiian Stilt could occur in the Analysis Area, although not for breeding purposes but more likely to rest, forage, or simply transit the area.

Migratory shorebirds may use the shoreline sandy habitat for resting purposes.

The TEC species with a medium LOC for the subject property is the Hawaiian hoary bat. The presence of the Hawaiian hoary bat has been documented in the area based on studies, and the Analysis Area contains habitats with characteristics preferred by the bats, such as prey abundance, low elevation, low precipitation, and near urban areas, and foraging habitat suitability is related to bat occurrence.

At the time of our site inspection, no TEC species were observed at the subject property or adjacent shoreline.

However, the following recommended conservation and minimization measures for terrestrial flora and fauna are:

- During construction and post-development, structures with lighting used/needed for nighttime illumination should follow state and city codes to protect nocturnal species (i.e., seabirds, owls, bats) and avoid negative impacts.

- Hawaiian Stilts, migratory shorebirds, as well as dragonfly/damselfly species – During construction, to avoid and minimize impacts to the Hawaiian Stilt, migratory shorebirds, as well as dragonfly/damselfly species, avoid creating temporary sources of standing water such as retention ponds or ditches, and open pools of water commonly used during construction activities (for cleaning, cement mixing, etc.) which could attract these species. Avoid work within the shoreline buffer.

  In addition, to avoid and minimize negative impacts to shorebirds, stop work if shorebirds are present within the work area. Work can resume once species leave the area on their own.

- Hawaiian hoary bats – Do not remove, trim or disturb woody plants (trees and shrubs) greater than 15 feet tall during bat breeding season (June 1 through September 15). In addition, avoid using/installing fence lines that use barbed wire, especially for the top two strands.

- Hawaiian yellow-faced bee, owl, and Monarch butterflies (low-LOC species) – Confine construction impacts to the immediate area of the project. No invasive-type plants species should be used for landscaping.

- Hairy Purslane plant (low-LOC species) – If the plant is found onsite, it should be marked and flagged so disturbance to it does not occur.

    - However, based on our site visit on July 26, 2022, the Hairy Purslane plant was not observed on the subject property.

Further recommendation to reduce impact to species:

- Minimize the project construction footprint to the area necessary to construct the project and use previously disturbed/developed areas where feasible for the new development.

- Avoid work and development within any shoreline buffers and setback areas.

- The duff layer, native topsoil, and natural vegetation should be retained in an undisturbed state as much as feasible.

- Locate large staging areas and temporary storage of materials during construction as far as practicable from shorelines and marine waters.

- Use BMPs for stormwater control throughout construction.

- Adhere to all applicable noise regulations, working hour limitations, and notification requirements. Comply with local dust control requirements.

- Inform project personnel and contractors about the potential presence of endangered species onsite and nearby.

The State of Hawaii, Department of Land and Natural Resources, Division of Forestry and Wildlife (DLNR-DOFAW) was contacted regarding concurrence of no impact to listed, threatened, and endangered species at the subject property. In a response letter dated September 20, 2022, the DLNR-DOFAW, Wildlife Program Manager indicated concurrence of no impact to listed, threatened, and endangered species, as well as concurrence with mitigation measures (detailed above). A copy of the correspondence from the DLNR-DOFAW is presented in Appendix F.

In addition, DLNR-DOFAW provided the following additional comments:

- They recommend https://dlnr.hawaii.gov/wildlife/files/2016/03/DOC439.pdf for illustrations and guidance related to seabird-friendly light styles.

- If the endangered Hawaiian Monk Seal and threatened Green Sea Turtle haul out onshore within 328 feet of the subject property, all nearby construction activities should cease until the seal or turtle has departed the area on its own accord.

- The threatened White Tern is known to nest in the vicinity of the subject property. If nesting of roosting White Terns is discovered (in mature trees), DLNR-DOFAW personnel should be notified for assistance.

- The Hawaiian Short-eared owl could potentially occur in the area. If Hawaiian Short-eared owl nests are present, DLNR-DOFAW personnel should be notified and a buffer zone should be established in which no clearing occurs until nesting is completed.

- Minimize movement of plant or soil material between worksites as they may contain pathogens, pests (such as Little Fire ants and/or Coconut Rhinoceros beetles) that could harm native species and ecosystems.

6.3 NOISE

Noise is generally regarded as unwelcome sound that can distract from normal activities. The negative impacts of noise on the environment are collectively known as noise pollution. Noise pollution is usually generated from cars, aircrafts, humans, animals, and industrial sites. Areas with excess of noise pollution are generally caused by poor planning. Projects should be analyzed for potential noise pollution so that good planning and mitigation takes place before they are implemented.

Depending on the level and duration of the noise pollution, it may have a harmful effect on human health. Minor levels of noise pollution can cause agitation or annoyance, while significant levels may cause hearing loss. The DOH, under Title 11, Chapter 46 of the HAR, sets the maximum permissible sounds level for a Class A zone, which includes "residential" zones at 55 A-weighted decibels (dBa) for daytime (7 a.m. to 10 p.m.) and 45 dBa for nighttime (10 p.m. to 7 a.m.). This standard does not apply to emergency generators. If noise is to be emitted above permissible sounds level, then a permit must be obtained prior to the related activities.

6.3.1 Baseline Conditions

Activities that may produce noise include traffic from cars on the main road (Kalanianaole Highway), overhead aircraft activities, and watercraft activities on Maunalua Bay and Kuapa Pond.

6.3.2 Proposed Action Impacts and Mitigation

Short-term noise impacts from construction activities are expected during the construction period. The construction related noise will have an impact on nearby residents although construction will occur during daylight hours when most adult residents are at work and children are at school. However, this noise impact will be temporary and last only until project completion.

Construction noise will be short-term, intermittent, and limited to daylight hours. Proper mitigation measures will be implemented to minimize noise impacts, and all work will comply with the DOH noise limits.

After construction, long-term noise impacts will be from traffic and associated noise conditions in the general vicinity of the subject property. However, there will be no adverse impacts because traffic operations in the vicinity of the subject property is expected to remain similar without project traffic conditions (see Section 6.11, Traffic Impacts). Therefore, no mitigation measures are necessary.

6.4 VIEW AND VISUAL IMPACTS

6.4.1 Baseline Conditions

The Proposed Action is to take place in a residential-zoned area. The subject property currently consists of an existing two-story residential dwelling located along the northeastern boundary, with areas of vegetation. The subject property is on the ocean side of Kalanianaole Highway and at the apex of a barrier spit of land. It abuts a short span of bridge that is situated southeast of Maunalua Bay Beach

Park. The general area surrounding the subject property is developed, suburban commercial and residential.

6.4.2 Proposed Action Impacts and Mitigation

The Proposed Action will not significantly change views from Kalanianaole Highway, the shoreline fronting the subject property, or other publicly accessible locations, relative to existing conditions.

Therefore, there will be no visual impacts.

6.5 UTILITIES

6.5.1 Baseline Conditions

An existing residential dwelling is located at the subject property, which is connected to water and sewer services from the East Honolulu Wastewater Treatment Plant (which is owned and maintained by Hawaii American Water), and electrical services from Hawaii Electric.

Hawaiian Electric has existing overhead power lines along Kalanianaole Highway, immediately to the north and northeast of the subject property. Hawaii American Water owns and maintains the water/sewer system that serves the area.

There is no natural gas servicing the subject property. However, a Hawaii Gas line runs underground along Kalanianaole Highway, which borders the north side of the subject property.

6.5.2 Proposed Action Impacts and Mitigation

The Proposed Action will replace the existing dwelling so there should be no effects to utilities. For natural gas service, Hawaii Gas would be required to trench approximately 70 feet from the road to the new residence to install a meter. Trenching activities would be limited to the immediate work area, and all applicable safety measures would be taken. Any traffic impact would be minimal, and any dust control measures will be implemented, if needed.

Therefore, there will be no impacts to utilities and no mitigation measures are necessary.

6.6 HISTORIC AND CULTURAL RESOURCES

Historic and cultural resources include districts, sites, buildings, structures, or objects significant in Hawaiian and American history, architecture, archaeology, engineering, or culture that are listed, or are eligible for listing, in the National and/or State Register of Historic Places, which may be directly impacted by the Proposed Action. (Direct impact is defined as the area of potential ground disturbance and any property, or any portion thereof, that will be physically altered or destroyed by the Proposed Action.)

6.6.1 Baseline Conditions

An archaeological field inspection and literature review was conducted by Scientific Consultant Services, Inc. (SCS) for the subject property. The review involved a field inspection, and background research including review of historic documents, maps, archaeological reports, as well as a review of known cultural resource survey and excavation reports. The archaeological field inspection and literature review report is included in Appendix G.

The project area is located in the southeast of Oahu, just south of Koolau Range, and on Portlock Peninsula, which separates the Pacific Ocean from the former marsh and fishpond, Kuapa Pond, a central feature of Hawaii Kai.

Background research for the general area closest to the subject property revealed the following:

- In 2003, an archaeological survey and monitoring was conducted by International Archaeological Research, Inc. approximately 0.25 mile south-southeast from the subject property, and human remains and possible cultural layer were encountered. A total of two skeletal fragments were identified.

- Between 1994 and 1998, human skeletal remains were discovered during widening of Kalanianaole Highway northwest from the subject property at distances greater than 0.5 mile (International Archaeological Research Institute, Inc., 1994; BioSystems Analysis, 1994, 1996; and Garcia and Associates, 1997, 1998).

No archaeological sites or features were identified at the subject property during the field inspection conducted on July 26, 2022.

6.6.2 Proposed Action Impacts and Mitigation

On September 22, 2022, the archaeological field inspection and literature review report was submitted to the Department of Land and Natural Resources, State Historic Preservation Division (DLNR-SHPD) for their review.

Based on the results of the archaeological field inspection and literature review, and anticipated clearance from the DLNR-SHPD, the Proposed Action is not expected to impact historic and cultural resources. As of this writing, DLNR-SHPD approval has not been received.

However, in the case that historic and/or cultural resources are found during construction activities, effects will be mitigated by ceasing work and notifying DLNR-SHPD. Therefore, should historic resources, including human skeletal remains, be identified during construction activities associated with the Proposed Action, all work will cease in the immediate vicinity of the find until additional consultation with the DLNR-SHPD is conducted and appropriate evaluation of the resources has been completed.

6.7 SOCIO-ECONOMICS

Socioeconomics describes the link between economic activity and social life, where one has as effect on the other. Many things can affect socioeconomic activities such as new technology, a change in the environment, and development. Effects of economics on social life can include redistribution of wealth and an alteration in quality of life.

6.7.1 Baseline Conditions

According to the United States Census Bureau (USCB) website, the town of Honolulu (zip code: 96825) had a population of 28,398 during the 2020 census. Approximately 23,403 of the housing units were owner-occupied, the average household income was approximately $129,292; and approximately 2 percent of individuals were living below the poverty line.

The nearest schools are as follows: (1) Kokohead Elementary School (public school) is located at 189 Lunalilo Home Road, (2) Henry J. Kaiser High School (public school) is located at 511 Lunalilo Home Road, and (3) Hahaione Elementary School (public school) is located at 595 Pepeekeo Street.

6.7.2 Proposed Action Impacts and Mitigation

The Proposed Action will have a negligible effect on socioeconomics as it will replace an existing dwelling on the subject property. Short-term construction jobs will be created from the Proposed Action.

Therefore, no mitigation is necessary.

6.8 ENVIRONMENTAL JUSTICE

Environmental justice is a movement that defines the environment as “where people live and work.” The movement seeks to balance the burden that is borne by minorities, women, the poor, and those who are generally discriminated against by redistributing these burdens (such as industrial developments that pollute the area) out of a select group of neighborhoods and making various goods more accessible.

6.8.1 Baseline Conditions

The USCB website has estimated percentages of people with various backgrounds residing in Honolulu (zip code: 96825) from the 2020 census. According to the website, in 2020 the population of Honolulu (zip code: 96825) was approximately 63 percent minority (non-Caucasian) and 2 percent of individuals were living below the poverty line.

6.8.2 Proposed Action Impacts and Mitigation

The Proposed Action would provide no environmental burden to minorities, women, or the poor. The Proposed Action entails replacing as existing dwelling on the subject property.

Therefore, no mitigation measures are necessary.

6.9 AIR QUALITY

6.9.1 Baseline Conditions

The air quality in the vicinity of the subject property is generally very good. The general area surrounding the subject property is developed, suburban commercial and residential.

6.9.2 Proposed Action Impacts and Mitigation

The Proposed Action is expected to have minimal to no impacts to air quality. Dust control measures will be implemented. No further mitigation measures will be necessary.

6.10 PUBLIC ACCESS

6.10.1 Baseline Conditions

The subject property is a privately owned parcel of land in a residential-zoned area, and does not include any public access to the shoreline. However, there are multiple public accesses from Portlock Road to the shoreline.

6.10.2 Proposed Action Impacts and Mitigation

Since the subject property is in a residential-zoned area, the Proposed Action is not expected to affect public access to the shoreline because of multiple public access points from Portlock Road. In addition, no impacts to lateral beach access is expected because all landscaping and irrigation will be contained and maintained within the property boundaries. Therefore, no mitigation measures are necessary.

The closest public access point to the shoreline is located at Maunalua Bay Beach Park.

6.11 TRAFFIC IMPACTS

6.11.1 Baseline Conditions

Access to the subject property is provided by an existing driveway off of Kalanianaole Highway, which is under the jurisdiction of the State of Hawaii, Department of Transportation, Highways Division. Traffic in the area is moderate and mostly uninterrupted except during rush-hour times.

6.11.2 Proposed Action Impacts and Mitigation

The projected traffic conditions with the activities of the Proposed Action is expected to remain similar to traffic conditions without the activities of the Proposed Action.

The only construction -related traffic that may occur is during: (1) delivery of construction materials and/or equipment, and (2) removal of construction waste for disposal and/or removal of equipment.

Though the Proposed Action it is not expected to have a significant impact on traffic operations the Contractor will implement a Traffic Management Plan and Construction Management Plan to minimize construction-related traffic on the surrounding area. The Construction Management Plan will identify the type, frequency and routing of heavy trucks and construction-related vehicles, off-street parking areas for employees, and mitigation measures related to any potential traffic and neighborhood impacts.

In addition, the following mitigation measures are recommended:

(1) deliveries and removals from the subject property will be scheduled during weekday, non-peak commuter periods (9:00 am to 3:00 pm),
(2) a street usage permit will be obtained from the State Department of Transportation for any construction-related work that may require the temporary closure of the State-owned highway,
(3) update on temporary construction related disruptions on the local street network with:
a) the State Department of Transportation, b) the Hawaii Kai Neighborhood Board No, 01 area residents and businesses, c) emergency personnel (fire, ambulance, and police), and d) the Oahu Transit Services, inc. (TheBus and The Handi-Van).

6.12 LAND USE

Land use pertains to the human modification of the natural environment, including deforestation, soil degradation, water usage, etc. Human-created land use divides land according to zones, land ownership, parcels, etc. The human division of land use is targeted towards a goal for the region and to promote smart growth of a particular area.

6.12.1 Baseline Conditions

The subject property currently consists of an existing two-story residential dwelling located along the northeastern boundary, with grassy lawn and areas of landscape vegetation. The general area surrounding the subject property is developed, suburban commercial and residential.

6.12.2 Proposed Action Impacts and Mitigation

The Proposed Action involves demolishing the existing two-story residential dwelling at the subject property, and constructing a new two-story residential dwelling. Therefore, the use of the land will remain unchanged.

The Proposed Action is anticipated to have no significant impact to the community and on the environment.

The subject property is in the SMA, and an application for a SMA Use Permit (Major) will be submitted prior to Implementation of the Proposed Action.

6.13 ACCESS TO THE AREA

6.13.1 Baseline Conditions

Access to the subject property is provided by an existing driveway off of Kalanianaole Highway.

6.13.2 Proposed Action Impacts and Mitigation

A new driveway will be installed in the same location as the existing driveway at the subject property. The ground surface may be disturbed during construction activities; however, any potential effects are expected to be minor and short-term.

6.14 HEALTH AND SAFETY

6.14.1 Baseline Conditions

The law enforcement station serving Hawaii Kai is the Honolulu Police Station located at 801 South Beretania Street in Honolulu (zip code: 96813). East Honolulu is also served by a Substation located in the Hawaii Kai Towne Center, 6600 Kalanianaole Highway, near the Hawaii Kai Satellite City Hall. The Substation's hours of operation are from 9:00 a.m. to 9:00 p.m.

In addition, a Burglary Theft Detail office serving East Honolulu and Waikiki is located in the Diamond Head area, within the National Guard compound. The Burglary Theft Detail office building was opened in early 2007 and is located at 4087 Diamond Head Road. Access to the building is from the 22nd Avenue roadway. The Burglary Theft Detail handles property crime investigations.

The nearest fire station is the Hawaii Kai Fire Station located at 515 Lunalilo Home Road in Honolulu (zip code: 96825).

Medical facilities/clinics in Hawaii Kai (zip code: 96825) are as follows: (1) Straub Clinic at Hawaii Kai located at 7192 Kalanianaole Highway, (2) Kaiser Permanente Health Care located at 6700 Kalanianaole Highway #111, (3) Queens Health Care Center located at 377 Keahole Street, Suite E108, (4) MinuteClinic located at 377 Keahole Street, and (5) Niu Health located at 6600 Kalanianaole Highway.

6.14.2 Proposed Action Impacts and Mitigation

The Proposed Action is consistent with the surrounding area and will not exceed normal services required for a single-family residence.

7.0 COMPLIANCE WITH PLANS AND PROGRAMS

7.1 STATE LAND USE

State Land Use districts, established under Chapter 205, HRS, together with the City and County of Honolulu General Plan and Development/ Sustainable Community Plans, guide population and land use growth over a 20-plus year timeframe.

The proposed Garg Residence Project lies within the "Urban" district designated by the State, and conforms to uses allowed in this district.

7.2 STATE PLANNING ACT

The Hawaii State Planning Act (HSPA) was created to guide for future long-range development of the state, to provide for wise use of Hawaii's resources, and to improve coordination among different agencies and levels of government in the planning process. The goals of the HSPA are to, "*achieve a strong, viable economy, characterized by stability, diversity, and growth, that enables the fulfillment of the needs and expectations of Hawaii's 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 Hawaii, that nourishes a sense of community responsibility, of caring, and of participation in community life.*"

The objectives of the HSPA relate to:

(1) Population,
(2) Economy-In General,
(3) Economy-Agriculture,
(4) Economy-Visitor Industry,
(5) Economy-Federal Expenditures,
(6) Economy-Potential Growth and Innovative Activities,
(7) Economy-Information Industry,
(8) Physical Environment-Land-Based, Shoreline, and Marine Resources,
(9) Physical Environment-Scenic, Natural Beauty, and Historic Resources,
(10) Physical Environment-Land, Air, and Water Quality,
(11) Facility Systems-In General,
(12) Facility Systems-Solid and Liquid Wastes,
(13) Facility Systems-Water,
(14) Facility Systems-Transportation,
(15) Facility Systems-Energy,
(16) Facility Systems-Telecommunications,
(17) Socio-Cultural Advancement-Housing,
(18) Socio-Cultural Advancement-Health,
(19) Socio-Cultural Advancement-Education,
(20) Socio-Cultural Advancement-Social Services,

(21) Socio-Cultural Advancement-Leisure,
(22) Socio-Cultural Advancement-Individual Rights and Personal Well-Being,
(23) Socio-Cultural Advancement-Culture,
(24) Socio-Cultural Advancement-Public Safety, and
(25) Socio-Cultural Advancement-Government.

The proposed Garg Residence Project will not affect or inhibit the HSPA objectives.

7.3 COASTAL ZONE MANAGEMENT PROGRAM

All land and water use activities in the state must comply with HRS, Chapter 205A, Hawaii Coastal Zone Law. The State of Hawaii designates the Coastal Zone Management Program (CZMP) to manage the intent, purpose, and provisions of HRS, Chapter 205A-2, as amended, for the areas from the shoreline to the seaward limit of the State's jurisdiction, and any other areas which a lead agency may designate for the purpose of administering the CZMP.

The following is an assessment of the Project with respect to the CZMP objectives and policies set forth in HRS, Chapter 205(A)-2.

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

natural resources, and county authorities; and crediting such dedication against the requirements of section 46-6.

The proposed Project does not affect any ocean-side recreational resources. The proposed Project will not obstruct public access to and along the lateral coastal and shoreline areas and recreational resources. Growth of shoreline vegetation will be managed to allow public access and recreation along the shoreline.

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

An archaeological field inspection and literature review was conducted for the subject property. No archaeological sites or features were identified at the subject property during a field inspection or literature review. In accordance with HRS, Chapter 6E, and the requirements of the SHPD, should any historic resources, including human skeletal and significant cultural remains, be identified during ground disturbing activities at the site the following will take place: (1) Work will cease in the immediate vicinity of the find; (2) The find will be protected from any additional disturbance; and (3) SHPD will be contacted immediately at (808) 692-8015 (Main Office, O‘ahu) for further instructions, including the conditions under which Project activities may resume.

Refer to Section 6.6, Historic and Cultural Resources for additional discussion and Appendix E, for the HPA.

(3) Scenic and open space resources
Objective: Protect, preserve, and, where desirable, restore or improve the quality of coastal scenic and open space resources.
Policies:
A) Identify valued scenic resources in the coastal zone management area;
B) Ensure that new developments are compatible with their visual environment by designing and locating such developments to minimize the alteration of natural land forms and existing public views to and along the shoreline;
C) Preserve, maintain, and, where desirable, improve and restore shoreline open space and scenic resources; and
D) Encourage those developments that are not coastal dependent to locate in inland areas.

The Proposed Action is to take place in a residential-zoned area. The subject property currently consists of an existing two-story residential dwelling located along the northeastern boundary, with areas of vegetation. The subject property is on the ocean side of Kalanianaole Highway and at the apex of a

barrier spit of land. It abuts a short span of bridge that is situated southeast of Maunalua Bay Beach Park. The general area surrounding the subject property is developed, suburban commercial and residential.

The Proposed Action will not significantly change views from Kalanianaole Highway, the shoreline fronting the subject property, or other publicly accessible locations, relative to existing conditions.

Therefore, the Proposed Action will not have a significant visual impact and no mitigation measures are necessary. Refer to Section 6.4, View and Visual Impacts, for a complete discussion.

(4) Coastal ecosystems

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

Policies:

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

The construction of the proposed Project is not expected to negatively affect any valuable ecosystems, including reefs. The proposed Project will not disrupt or degrade coastal water ecosystems via stream diversion or channelization. Maintenance of vegetation onsite will prevent debris from entering the bay.

(5) Economic uses

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

Policies:

A) Concentrate coastal dependent development in appropriate areas;
B) Ensure that coastal dependent development such as harbors and ports, and coastal related development such as visitor industry facilities and energy generating facilities, are located, designed, and constructed to minimize adverse social, visual, and environmental impacts in the coastal zone management area; and
C) Direct the location and expansion of coastal dependent developments to areas presently designated and used for such 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.

The proposed Project will not have an impact to socio-economics and no mitigation measures are necessary. Please refer to Section 6.7, Socio-Economics, for a complete discussion. The proposed Project will be outside of the 40-foot shoreline setback area for narrow lots, and will be designed and constructed to minimize exposure to coastal hazards and adverse impacts in the coastal zone management area.

(6) Coastal hazards

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

Policies:

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

According to the Federal Emergency Management Agency Flood Insurance Rate Map, the subject property is located in a flood hazard area. The northern, eastern and southeastern portions of the subject property and the southeastern adjoining properties are located in Zone AE, which denotes special flood hazard areas, with a base flood elevation of nine feet amsl, and within the 1 percent annual chance floodplain. The northwestern, western, and southern portions of the subject property are located in Zone VE, which denotes special flood hazard areas, with a base flood elevation of 12 feet amsl, and a coastal flood zone (1 percent annual chance) with velocity hazard (wave action).

Please see Sections 6.1.3.2 and 8.0, Findings, (Criteria 11) for a complete discussion.

(7) Managing development

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

Policies:

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

This Environmental Assessment is one of the many processes used by the City and County of Honolulu in implementing the development review process, informing the public about proposed projects, and engaging public participation in managing development within the “coastal zone.” Please see Section 4.0, Permits, for the development review processes for the Proposed Action.

(8) Public participation

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

Policies:

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

This Environmental Assessment is one of the many processes used by the City and County of Honolulu in implementing the development review process, informing the public about proposed projects, and engaging public participation in managing development within the "coastal zone." Please see Section 4.0, Permits, for the development review processes for the Proposed Action.

(9) Beach and coastal dune protection

Objective: (1) Protect beaches and coastal dunes for: public use and recreation, the benefit of coastal ecosystems, and use as natural buffers against coastal hazards; ND (2) Coordinate and fund beach management and protection.

Policies:

A) Locate new structures inland from the shoreline setback to conserve open space, minimize interference with natural shoreline processes, and minimize loss of improvements due to erosion;
B) Prohibit construction of private shoreline hardening structures, including seawalls and revetments, at sites having sand beaches and at sites where shoreline hardening structures interfere with existing recreational and waterline activities;
C) Minimize the construction of public shoreline hardening structures, including seawalls and revetments, at sites having sand beaches and at sites where shoreline hardening structures interfere with existing recreational and waterline activities;
D) Minimize grading of and damage to coastal dunes;
E) Prohibit private property owners from creating a public nuisance by inducing or cultivating the private property owner's vegetation in a beach transit corridor; and
F) Prohibit private property owners from creating a public nuisance by allowing the private property owner's unmaintained vegetation to interfere or encroach upon a beach transit corridor.

The proposed Project does not involve the construction of private erosion-protection structures seaward or at the shoreline. The proposed Project will be outside of the 20-foot setback for narrow lots. Growth of shoreline vegetation will be managed to allow public access and recreation along the shoreline. The proposed Project does not affect any beach resources.

(10) Marine and coastal resources

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

Policies:

A) Ensure that the use and development of marine and coastal resources are ecologically and environmentally sound and economically beneficial;
B) Coordinate the management of marine and coastal resources and activities to improve effectiveness and efficiency;
C) Assert and articulate the interests of the State as a partner with federal agencies in the sound management of ocean resources within the United States exclusive economic zone;
D) Promote research, study, and understanding of ocean processes, marine life, and other ocean resources in order to acquire and inventory information necessary to understand how ocean development activities relate to and impact upon ocean and coastal resources; and
E) Encourage research and development of new, innovative technologies for exploring, using, or protecting marine and coastal resources.

The proposed Project does not affect any marine or coastal resources. The proposed Project does not impede the research of marine life and ocean resources, especially those in the U.S. economic zone.

7.4 CITY AND COUNTY OF HONOLULU GENERAL PLAN

The Proposed Action was evaluated to confirm that it is in compliance with the General Plan (GP), as adopted in December 2021. The GP is a written commitment by the City to a future for the island of Oahu, which it considers desirable and attainable, and sets "*forth the City's objectives and broad policies for the long-range development of the island.*"

Specifically, the Proposed Action will occur on a previously disturbed land parcel and therefore, will not adversely affect the natural environment. In addition, the Proposed Action has considered coastal erosion, flood hazards, as well as to plan for coastal hazards that threaten life and property.

The proposed project will encroach within the 40-foot shoreline setback (see Executive Summary and Section 1.0 Introduction). However, 442.74 square feet on the northwest side of the dwelling will encroach. The location and design of the proposed dwelling negate the need for future protective structures.

The Proposed Action has integrated climate change adaptation into the planning, design, and construction, as well as prepared for the anticipated impacts of climate change and sea level rise as discussed in Sections 3.1 Technical Characteristics and 6.0 Affected Environment (specifically 6.1.3.1 and 6.1.3.2).

The proposed Garg Residence Project will not affect or inhibit the GP objectives.

7.5 SPECIAL MANAGEMENT AREA REVIEW

The Proposed Action is located in the City and County of Honolulu's Special Management Area (SMA), and requires a SMA Major Permit prior to commencement. The Revised Ordinance of Honolulu (ROH) Chapter 25 outlines special controls on development within the SMA to avoid permanent loss of valuable resources.

The objectives, policies, and guidelines summarized below are the basis for analysis of uses, activities, or operations within the special management area (ROH Chapter 25, Section 25-3.1):

(a) Recreational Resources: Development within the SMA should provide coastal recreational opportunities to the public. Adequate access, by dedication or other means, to beaches, coastal dunes, recreation areas, and natural reserves must be provided to the extent consistent with sound conservation principles. Adequate and properly located public recreation areas and wildlife preserves must be preserved.

The subject property is a privately owned parcel of land in a residential-zoned area, and does not include any public access to the shoreline. Lateral beach access will not be impacted. Construction activities will be confined within the subject property and will not affect public shoreline access or public lateral shoreline access.

The proposed Project does not affect any ocean-side recreational resources, and is not located in or adjacent to a wildlife refuge.

(b) Historic and Cultural Resources: Development within the SMA should protect, preserve, and restore natural or human-made historical and cultural resources.

Based on site inspections and archaeological/cultural literature review (See Section 6.6, Historical and Cultural Resources), there are no known historic properties on or adjacent to the site, and no cultural resources are anticipated to be affected.

The subject property has been previously disturbed from demolition of an existing dwelling by a previous owner in 1974 and subsequent construction of the current existing dwelling in 1979.

However, in the case that historic and/or cultural resources are found during construction activities, effects will be mitigated by ceasing work and notifying DLNR-SHPD. Therefore, should historic resources, including human skeletal remains, be identified during construction activities associated with the Proposed Action, all work will cease in the immediate vicinity of the find until additional consultation with the DLNR-SHPD is conducted and appropriate evaluation of the resources has been completed.

(c) Scenic and Open Space Resources: Development within the SMA should protect, preserve, and whenever desirable, restore or improve the quality of coastal scenic and open space resources. Alterations to existing land forms and vegetation, other than for the cultivation of coastal dependent crops, must be limited so they result in minimum adverse impacts on water resources, beaches, coastal dunes, and scenic or recreational amenities. Development that is not dependent on the coast is encouraged to locate mauka of the SMA.

The Proposed Action is not anticipated to affect nearby water resources or visual, scenic, and recreational amenities, and is not anticipated to exacerbate natural hazard threats. The subject property is in Flood Zone VE with a BFE of 12 feet. Therefore, the subject property will be slightly graded and finished floor elevations will be 14 feet amsl to comply with the underlying Flood Zone VE.

(d) Coastal Ecosystems: Development within the SMA should protect valuable coastal ecosystems, including reefs, beaches, and coastal dunes from disruption, and minimize adverse impacts on all coastal ecosystems. Solid and liquid waste treatment and disposition must be managed to minimize adverse impacts on SMA resources.

The construction of the proposed Project is not expected to negatively affect any valuable ecosystems, including reefs, beaches, and coastal dunes. The proposed Project will not disrupt or degrade coastal water ecosystems via stream diversion or channelization. Maintenance of vegetation onsite will prevent debris from entering the bay.

BMPs will be followed to minimize and control the generation of construction-related wastewater and pollutants that could be discharged in storm water runoff. Construction will not result in a disruption of solid waste collection services to neighboring parcels.

(e) Economic Uses: Development within the SMA should consist of facilities and improvements important to the State's economy, and ensure that coastal dependent development and coastal-related development are located, designed, and constructed to minimize exposure to coastal hazards and adverse social, visual, and environmental impacts within the SMA.

The proposed Project will be designed and constructed to minimize exposure to coastal hazards and adverse social, visual, and environmental impacts within the SMA.

The Proposed Action will not significantly change views from Kalanianaole Highway, the shoreline fronting the subject property, or other publicly accessible locations, relative to existing conditions.

(f) Coastal Hazards: Development within the SMA should reduce impacts of coastal hazards on life and property, and must be designed to minimize impacts from landslides, erosion, sea level rise, siltation, or failure in the event of earthquake.

According to the Federal Emergency Management Agency Flood Insurance Rate Map, the subject property is located in a flood hazard area. The northern, eastern and southeastern portions of the subject property and the southeastern adjoining properties are located in Zone AE, which denotes special flood hazard areas, with a base flood elevation of nine feet amsl, and within the 1 percent annual chance floodplain. The northwestern, western, and southern portions of the subject property are located in Zone VE, which denotes special flood hazard areas, with a base flood elevation of 12 feet amsl, and a coastal flood zone (1 percent annual chance) with velocity hazard (wave action).

Please see Sections 6.1.3 and 8.0, Findings, (Criteria 11) for a complete discussion.

(g) Managing Development and Public Participation: The development review process should stimulate public awareness, education, and participation in coastal management.

This Environmental Assessment is one of the many processes used by the City and County of Honolulu in implementing the development review process, informing the public about proposed projects, and engaging public participation in managing development within the "coastal zone." Please see Section 4.0, Permits, for the development review processes for the Proposed Action.

(h) Beach and Coastal Dune Protection: Development within the SMA should facilitate beach management and protection by safeguarding beaches and coastal dunes for public use and recreation, the benefit of ecosystems, and use as natural buffers against coastal hazards. New structures should be located mauka of the shoreline setback line to conserve open space, minimize interference with natural shoreline processes, and minimize the loss of improvements due to erosion.

The proposed Project does not involve the construction of private erosion-protection structures seaward or at the shoreline.

Growth of shoreline vegetation will be managed to allow public access and recreation along the shoreline. The proposed Project does not affect any beach resources.

(i) Marine and Coastal Resources: Development within the SMA should promote the protection, use, and development of marine and coastal resources to ensure that these resources are ecologically and environmentally sound and economically beneficial. Impacts on water resources, beaches, coastal dunes, and scenic or recreational amenities resulting from the construction of structures must be minimized. Development within wetland areas should be limited to activities that are dependent on or enhance wetlands, or are otherwise approved by appropriate State and federal agencies. Examples include traditional Hawaiian agricultural uses such as wetland taro production, aquaculture, and fishpond management, as well as activities that clean and restore traditional wetland areas or create new wetlands in appropriate areas.

The Proposed Action is not anticipated to affect marine and coastal resources. Construction activities will be confined within the subject property and will not affect public shoreline access or public lateral shoreline access. The Proposed Action will not be within any wetland areas.

(j) Cumulative Impact or Significant Effect and Compelling Public Interest: Development within the SMA should not have any cumulative impact or significant effect, unless minimized to the extent practicable and clearly outweighed by public health, safety, or other compelling public interest.

The Project is not anticipated to have a significant adverse environmental or ecological effect or significant cumulative effects. The Proposed Action involves demolishing the existing two-story dwelling, and constructing a new two-story residential dwelling (that will be elevated so that the living area – two floors – is above the base flood elevation).

(k) Consistency with Plans and Regulations: Development within the SMA must be consistent with the general plan, development plans, sustainable communities plans, and zoning ordinances; provided that a finding of inconsistency does not preclude concurrent processing of amendments to applicable plans or a zone change.

Sections 7.1 “State Land Use”, 7.4 “General Plan”, and 7.6 “East Honolulu Sustainable Communities Plan” documents the Proposed Action’s consistency with these plans.

7.6 EAST HONOLULU SUSTAINABLE COMMUNITIES PLAN

East Honolulu extends from Makapuu Point along the ridgeline of the Koolau Mountain Range to the Waialae Nui Gulch Stream. The East Honolulu Sustainable Communities Plan (EHSCP) was adopted in April 2021.

The EHSCP provides a vision for preservation, conservation, and enhancement of community resources.

East Honolulu is projected to experience population stabilization through 2035 and 2040 with a population at approximately 50,000 or roughly five percent of Oahu’s total population.

The proposed Garg Residence Project will not affect or inhibit the EHSCP land use, public facilities, and infrastructure policies.

The proposed project will replace an existing residential dwelling with a new single-family residence. The proposed residential dwelling will result in a portion of the structure (the northwest corners of the dwelling) to be located within the shoreline setback area.

This shoreline lot is shaped triangular, narrowing at the north end, which influences the design of the structure to be similar in shape. As a result, the northwest side of the dwelling will encroach approximately 442.74 square feet into the shoreline setback (see Figure 5). In accordance with the FEMA map, the subject property is rated as VE with a BFE of 12 feet (see Figure 7).

Construction activities will be confined within the subject property and will not affect public shoreline access or public lateral shoreline access.

BMPs will be followed to minimize and control the generation of construction-related wastewater and pollutants that could be discharged in storm water runoff. Construction will not result in a disruption of solid waste collection services to neighboring parcels.

To adapt to climate change and sea level rise, the proposed project would meet the current building code and be flood compliant.

The proposed project will be elevated so that the living area is above the BFE. The ground level is not considered living space and will have break-away walls. The ground level will comprise the mechanical room, the elevator pit, and garage.

The potential impacts of SLR (SLR-XA) of 0.5 feet, 1.1 feet, 2.0 feet and 3.2 feet on the subject property is shown in Figures 8 to 11 and depends on factors discussed in Section 6.1.3.1 that affect sea level.

The projections of 0.5 feet and 1.1 feet are not expected to occur until approximately 2050 but should not adversely affect the Proposed Action.

The projections of 2.0 feet and 3.2 feet are not expected to occur until approximately 2100 (not anticipated for approximately 80 years) and may exceed the lifespan for the Proposed Action.

The proposed Project is anticipated to have no significant impact to the community and on the environment.

8.0 SHORELINE SETBACK VARIANCE

The proposed project will encroach within the 40-foot shoreline setback, necessitating a Shoreline Setback Variance pursuant to the Revised Ordinances of Honolulu (ROH) Chapter 26.

The Proposed Action is necessary because hardship will result if the proposal is not allowed. Hardship may only be found if:

A) The applicant would be deprived of reasonable use of the land if required to comply with shoreline regulations.

   1) The applicant purchased the subject property on September 26, 2017, applied for a building permit on November 10, 2020 with approvals from Board of Water Supply, Wastewater, Civil Engineering and Storm Water Quality Branches. On May 2022, the applicant discovered that a SMA Major Permit was required from a comment from the Department of Planning and Permitting (DPP). A pre-consult with various agencies was prepared and submitted a Draft Environmental in December 2022 with DPP and was returned with the revision of the LUO in March 2023. Bill 041(22), CD2 and Bill 042(22), CD2 was passed and signed by the Mayor on March 9, 2023 into Ordinances 23-3 and 23-4, respectively. The amendment to Ordinances impacted the planning and design of the subject property since 2017.

   2) Applicant's lot is a triangular 10,016 square feet lot and 40 feet shoreline setback will remove 3,812.74 square feet of his precious land. Inclusive of the shoreline setback with the front yard and side yard, the total setback requirement will be approximately 5,914.72 square feet. Of which, approximately 1,128 square feet of the property is designed for a garage and driveway to allow sufficient room for the vehicle to rotate allowing for a head first exit from the property at the mauka side of the property.

   3) This means the applicant's useable square feet for a dwelling is approximately 30% of the land which he owns and will deprive the owner of reasonable use of the land for the size of his family.

   4) The lot does not meet applicable minimum development standards for the lot area, lot width, or depth due the triangular shape of the lot.

B) The proposed project is due to unique circumstance and does not draw into question the reasonableness of the shoreline regulations; and

1) The uniqueness in this situation and is not typical to any other lot within the neighborhood, this lot is triangular or irregular in shape, which means applicant has only 2 sides of the property to work from and the shoreline setback has a larger impact on a triangular as opposed to a rectangular lot as majority of the neighboring lots. The applicant will have 3,718.03 square feet of living area, compared to what was allowed under previous ordinance with 4,747.51 square feet, a loss of 1,029.48 square feet. This owner-occupied residence will house a family of seven and will require a reasonable amount of living area under roof.

2) The subject property is the only parcel within the Hawaii Kai shoreline that is triangular shaped or three-cornered lot.

C) The proposed project is the practicable alternative which best conforms to the purpose of the shoreline regulation;

1) The request for the variance will not impact public access to the beach and there will be no detrimental effect to public interest.

2) The request for the Shoreline setback variance will still be compatible with other permitted or authorized uses in the immediate project area within the East Honolulu Sustainable Communities Plan and granting the variance will not cause adverse effects to the neighboring properties and public beach.

3) The requested variance will not constitute any special privilege not enjoyed by other neighboring properties or public use of the beach.

4) The requested variance will not endanger the public safety or health and the public interest will not be compromised.

5) The public rights to navigate the use of the shorelines will not be adversely affected or impacted.

D) The Hawaii Kai Marina Entrance Groin Replacement Project recently built a jetty approved by DLNR, CDUA: OA-3820 in 2018 and constructed in 2023.

1) The construction of the jetty increased the size of the beach width and approximately 3 feet of height pushing the high water further towards the ocean.

2) Although there is no accretion of land, the shoreline setback requirements are established in ROH Chapter 23, *Shoreline Setbacks*, pursuant to HRS Chapter 205A. The policy was established to “protect and preserve the natural shoreline, especially sandy beaches; to protect and preserve public pedestrian access laterally along the shoreline and to the sea; and to protect and preserve open space along the shoreline. The enlarged beach is the reclaimed land of

government property, §501-33 (2) prohibits reclamation of shoreline although the high water mark receded back towards the ocean.

3) As a result of the Groin Replacement Project, the public benefited from approximately 15 to 30 feet of additional beach.

4) The proposed new family dwelling will not adversely affect the health and safety of the public. All improvements will be performed on the applicant's property and will not impact public access to the beach.

5) "Shoreline" means the upper reaches of the wash of the waves, other than storm and [tidal] seismic waves, at high tide during the season of the year in which the highest wash of the waves occurs, usually evidenced by the edges of vegetation growth or the upper limit of debris left by the wash of the waves. The Groin replacement moved the high-water mark approximately 15 to 30 feet towards the ocean and away from the applicant's property.

E) The proposal is the practicable alternative which best conforms to the purpose of the shoreline regulations.

1) The existing dwelling does not conform to the current building standards such as undersize slabs, footings, single wall construction, etc.

2) The proposed dwelling will meet the current land use and building codes which will reduce exposure to coastal hazards.

9.0 FINDINGS

We have prepared this Draft EA for the proposed Garg Residence Project (subject property) in conformance with Chapter 343, HRS; HAR Title 11; and DOH Chapter 200.1 Environmental Impact Rules. The findings presented in this Section are based on Ford & Associates, Inc.'s (FAI's) understanding of the subject property location and the Proposed Action at the subject property, as such action is described in Section 3.0. Should modifications to the location of the subject property or Proposed Action be made in the future, then additional inquiries may be prudent.

According to the DOH Rules (1-200-12), an applicant or agency must determine whether an action may have significant impact on the environment, including all phases of the project, its expected consequences both primary and secondary, its cumulative impact with other projects, and its short- and long-term effects.

In making the determination, the Rules establish "Significant Criteria" to be used as a basis for identifying whether significant environmental impacts will occur. According to the Rules, an action shall be determined to have significant impact on the environment if it meets any one of the following criteria:

(1) Involves an irrevocable commitment to loss or destruction of any natural or cultural resources;

The subject property is located in a residential-zoned area that currently consists of an existing two-story residential dwelling located along the northeastern boundary, with grassy lawn and areas of landscaped vegetation. Based on site inspections and archaeological/cultural literature review (See Section 6.6, Historical and Cultural Resources), there are no known historic properties on or adjacent to the site, and no cultural resources are anticipated to be affected.

No loss or destruction of cultural resources or natural resources (i.e. wetland, wilderness area, wildlife preserve, threatened and/or endangered species, and critical habitat) are expected.

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

The Garg Residence project conforms with State and City and County of Honolulu land use designations, and involves development of an Urban Use site. The subject property will continue to be used for residential purposes.

(3) Conflicts 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 Garg Residence project is not expected to have a significant impact on the surrounding natural environment, historical areas, or the existing community. Additionally, it will have no negative economic or social impacts on the area. Therefore, it is consistent with the Environmental Policies established in Chapter 344, HRS.

(4) Substantially affects the economic or social welfare of the community or state;

The Proposed Action will not substantially affect the economic or social welfare of the community or state.

(5) Substantially affects public health;

Impacts to public health may be affected by air and noise during construction; however, these will be short-term and are not expected to significantly affect public health. Construction activities will comply with applicable regulations.

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

The proposed project will not involve secondary impacts as it consists of demolishing an existing residential dwelling and constructing a new residential dwelling.

(7) Involves a substantial degradation of environmental quality;

The proposed activities will be limited to the area of the proposed project site. There could be short-term impacts by noise and air quality during construction; however, all construction activities will comply with applicable regulations. Therefore, the Proposed Action will not involve substantial degradation of environmental quality.

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

The Proposed Action will not cumulatively have considerable effect on the environment, or involve a commitment for larger actions. The Proposed Action consists of demolishing an existing residential dwelling and constructing a new residential dwelling.

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

No rare, threatened, or endangered species are known to utilize the subject property. In addition, the subject property is not located within or near a designated or proposed critical habitat.

See Section 6.2.4 “Listed or Proposed Threatened or Endangered Species and Designated or Proposed Critical Habitats” for details.

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

The Proposed Action is not anticipated to detrimentally affect air or water quality or ambient noise levels of the area.

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

The Federal Emergency Management Agency Flood Insurance Rate Map was reviewed to determine if the subject property is located in a flood hazard area. The northern, eastern, and southeastern portions of the subject property and the southeastern adjoining properties are located in Zone AE, which denotes special flood hazard areas, with a base flood elevation of nine feet amsl, and within the 1 percent annual chance floodplain. The northwestern, western, and southern portions of the subject property is located in Zone VE, which denotes special flood hazard areas, with a base flood elevation of 12 feet amsl, and a coastal flood zone (1 percent annual chance) with velocity hazard (wave action).

The project was designed to include a ground level with concrete slabs on grade that is 8-foot, 2-inch in height (or 12.7 feet amsl) to accommodate the base flood elevation of nine feet amsl, and will have break-away walls.

The potential impacts of SLR of 3.2 feet on the subject property is not expected to occur until 2100, and depends on factors that affect sea level which are discussed in Section 6.1.3.

These projections are not anticipated for approximately 80 years and may exceed the lifespan for the Proposed Action.

The Overall Hazard Assessment for this general area which includes the subject property is ranked moderate. The Overall Hazard Assessment looks at (1) tsunamis, (2) stream flooding, (3) high waves, (4) storms, (5) erosion, (6) sea level, and (7) volcanic/seismic.

Construction conditions will conform to current construction requirements to avoid, minimize, and mitigate any potential impacts of the coastal zone hazards.

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

No views will be obstructed or be visually incompatible with the surrounding area since the Proposed Action will be located in the area of the existing dwelling. The Proposed Action will include a wall along the Kalanianaole Highway side of the subject property, and will include landscaping.

(13) Requires substantial energy consumption.

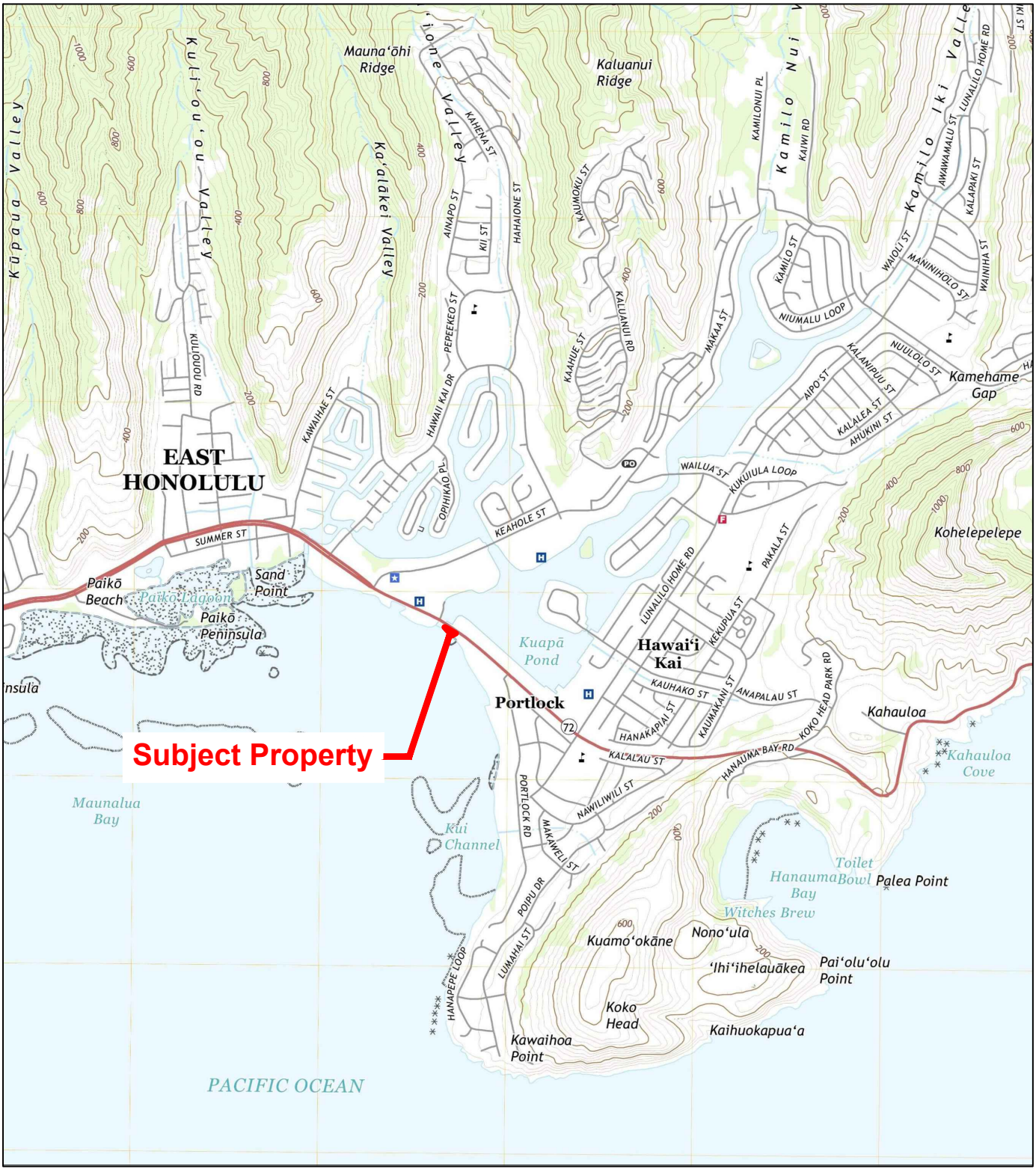
The Proposed Action will not require substantial energy consumption relative to other similar projects. In addition, Energy Star™ appliances will be installed, as applicable.

None of inquiries made or documents reviewed during this EA indicated direct evidence of significant negative conditions with respect to the Proposed Action at the subject property.

Based upon the EA and review of significant criteria above, a Finding of No Significant Impact has been determined.

Comments and responses received during the Draft EA 30-day comment period are included in Appendix H.

FIGURES



USGS Topographic Map
7.5-Minute Series
Koko Head Quandrangle
2017

FORD & ASSOCIATES, INC. ENVIRONMENTAL SCIENTISTS & ENGINEERS		Subject Property Location Map	Figure 1
Job Number: 22-2030	Created by: LF	Project: Garg Residence Property 6973 Kalanianaole Highway Honolulu, Honolulu County, Hawaii	
Date: 7/26/22	Reviewed By: DF	Client: Hawaii Engineering Group, Inc.	

Image Source: Google Earth 2016

N

0 35 70 140

Scale in Feet

FORD & ASSOCIATES, INC. ENVIRONMENTAL SCIENTISTS & ENGINEERS		Subject Property Vicinity Map	Figure 2
Project Number: 22-2030	Created by: LF	Project: Garg Residence Property 6973 Kalanianaole Highway Honolulu, Honolulu County, Hawaii	
Date: 7/26/22	Reviewed By: DF	Client: Hawaii Engineering Group, Inc.	

Image Source: Google Earth 2016

N

0 75 150 300

Scale in Feet

FORD & ASSOCIATES, INC. ENVIRONMENTAL SCIENTISTS & ENGINEERS		Special Management Area (SMA)	Figure 3
Project Number: 22-2030	Created by: LF	Project: Garg Residence Property 6973 Kalanianaole Highway Honolulu, Honolulu County, Hawaii	
Date: 8/16/22	Reviewed By: DF	Client: Hawaii Engineering Group, Inc.	

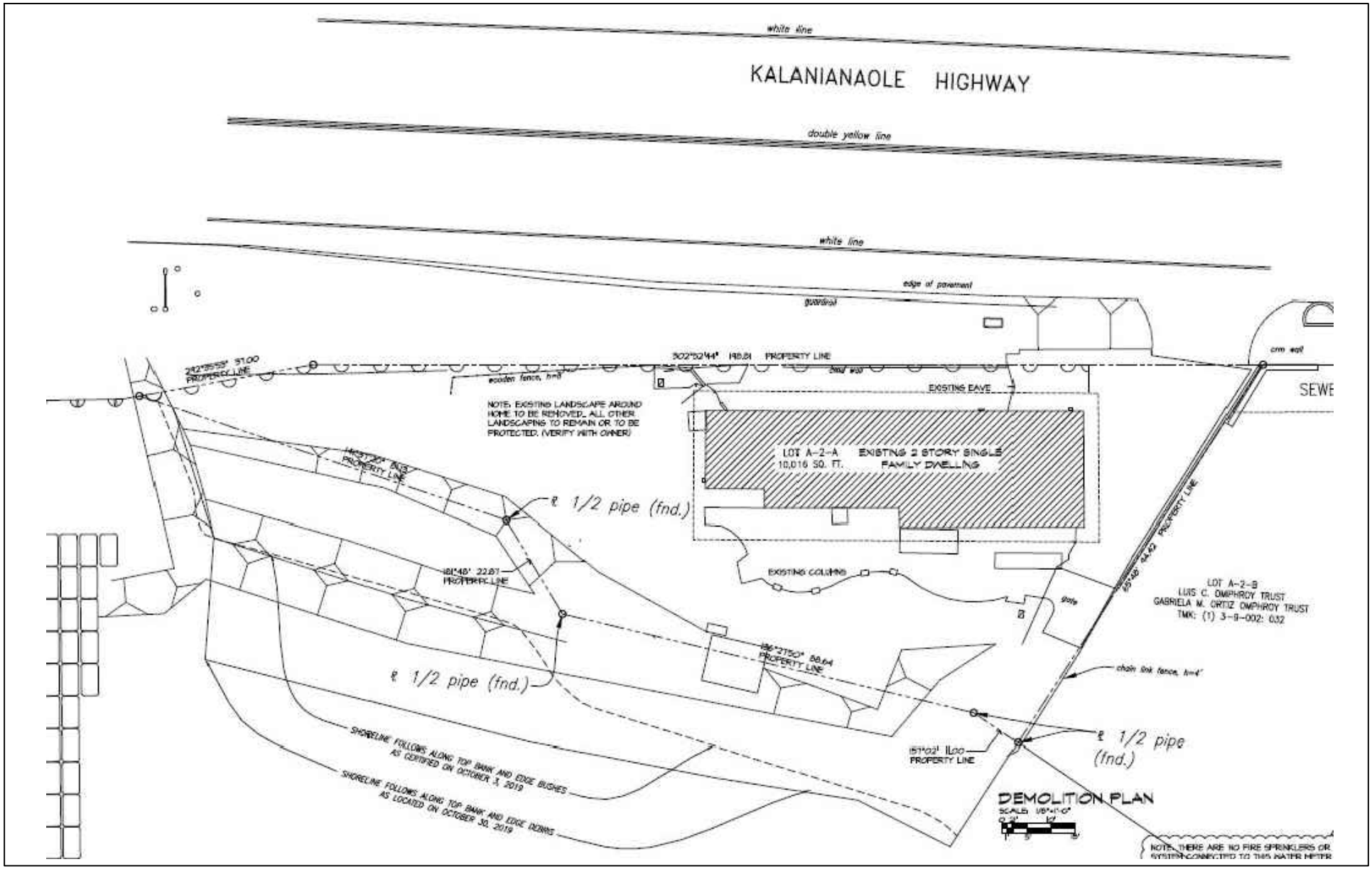


Image Source: Demolition Plan, Eric Trabert & Associates, 2021

N

0 15 30 60
Scale in Feet

FORD & ASSOCIATES, INC. ENVIRONMENTAL SCIENTISTS & ENGINEERS		Existing Site Dwelling Location	Figure 4
Project Number: 22-2030	Created by: LF	Project: Garg Residence Property 6973 Kalanianaole Highway Honolulu, Honolulu County, Hawaii	
Date: 7/26/22	Reviewed By: DF	Client: Hawaii Engineering Group, Inc.	

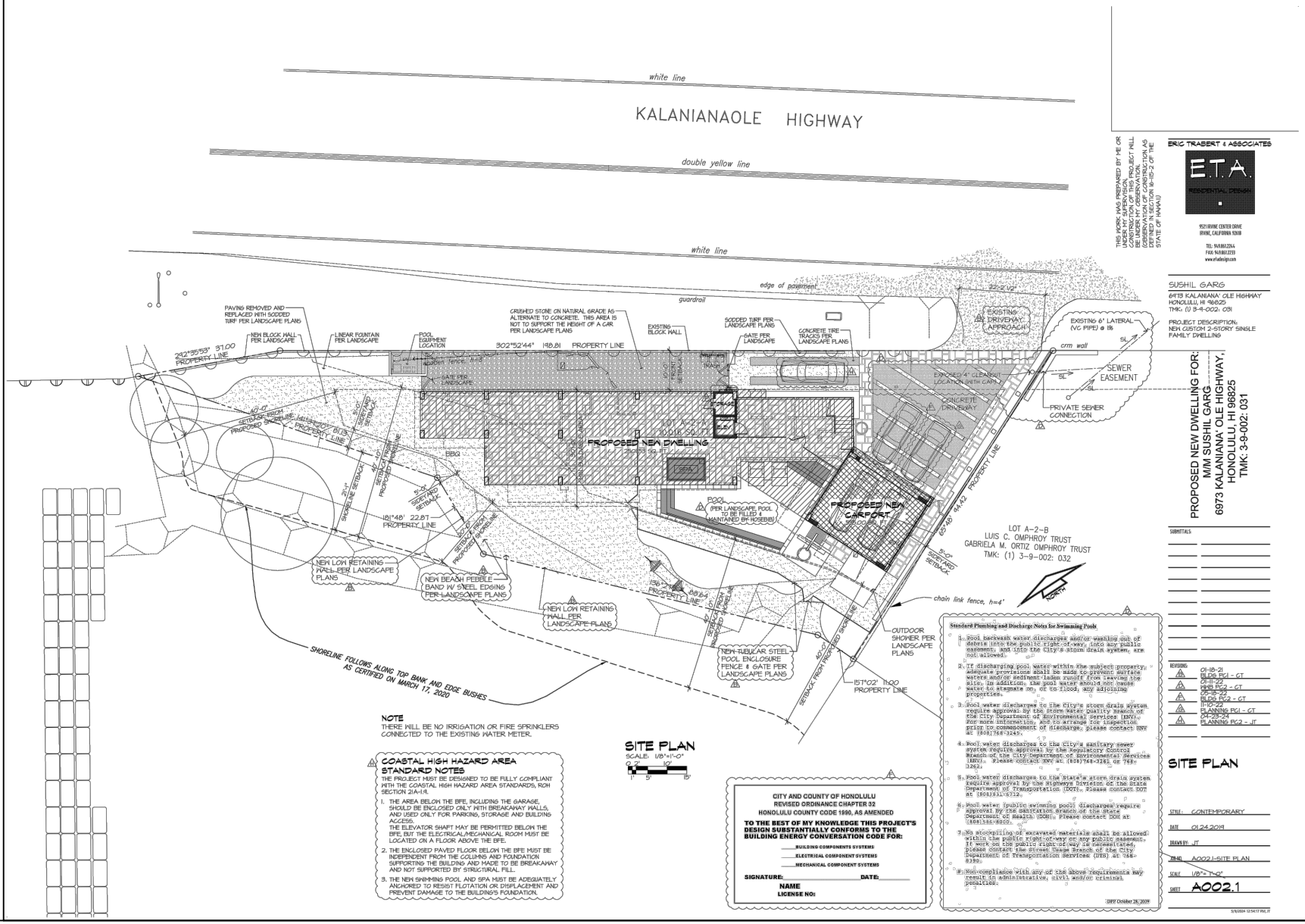
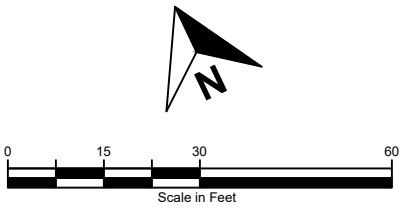


Image Source: Construction Plan, Eric Trabert & Associates, 2019



FORD & ASSOCIATES, INC. ENVIRONMENTAL SCIENTISTS & ENGINEERS		Proposed Site Dwelling Plan	Figure 5
Project Number: 22-2030	Created by: LF	Project: Garg Residence Property, 6973 Kalanianaole Highway, Honolulu, Honolulu County, Hawaii	
Date: 5/9/24	Reviewed By: DF	Client: Hawaii Engineering Group, Inc.	

FORD & ASSOCIATES, INC.
ENVIRONMENTAL SCIENTISTS & ENGINEERS

Project Number: 22-2030	Created by: LF
Date: 8/15/22	Reviewed By: DF

Rendering of Garg Residence Property

Project:
Garg Residence Property
6973 Kalanianaole Highway
Honolulu, Honolulu County, Hawaii

Client:
Hawaii Engineering Group, Inc.

Figure
6

Basemap: USGS Natonal Map: Orthoimagery: Data refreshed October 2020

N

FORD & ASSOCIATES, INC. ENVIRONMENTAL SCIENTISTS & ENGINEERS		FEMA/FIRM Map	Figure 7
Job Number: 22-2030	Created by: LF	Project: Garg Residence Property 6973 Kalanianaole Highway Honolulu, Honolulu County, Hawaii	
Date: 8/15/22	Reviewed By: DF	Client: Hawaii Engineering Group, Inc.	

Image Source: PacIOOS Sea Level Rise Exposure Area, 0.5 ft scenario

N

0 150 300 600

Scale in Feet

FORD & ASSOCIATES, INC. ENVIRONMENTAL SCIENTISTS & ENGINEERS		Sea Level Rise Exposure Area at 0.5 Feet	Figure 8
Project Number: 22-2030	Created by: LF	Project: Garg Residence Property 6973 Kalanianaole Highway Honolulu, Honolulu County, Hawaii	
Date: 4/24/24	Reviewed By: DF	Client: Hawaii Engineering Group, Inc.	

Image Source: PacIOOS Sea Level Rise Exposure Area, 1.1 ft scenario

N

0 150 300 600

Scale in Feet

FORD & ASSOCIATES, INC. ENVIRONMENTAL SCIENTISTS & ENGINEERS		Sea Level Rise Exposure Area at 1.1 Feet	Figure 9
Project Number: 22-2030	Created by: LF	Project: Garg Residence Property 6973 Kalanianaole Highway Honolulu, Honolulu County, Hawaii	
Date: 4/24/24	Reviewed By: DF	Client: Hawaii Engineering Group, Inc.	

Image Source: PacIOOS Sea Level Rise Exposure Area, 2.0 ft scenario

N

0 150 300 600

Scale in Feet

FORD & ASSOCIATES, INC. ENVIRONMENTAL SCIENTISTS & ENGINEERS		Sea Level Rise Exposure Area at 2.0 Feet	Figure 10
Project Number: 22-2030	Created by: LF	Project: Garg Residence Property 6973 Kalanianaole Highway Honolulu, Honolulu County, Hawaii	
Date: 4/24/24	Reviewed By: DF	Client: Hawaii Engineering Group, Inc.	

Image Source: PacIOOS Sea Level Rise Exposure Area, 3.2 ft scenario

N

0 150 300 600

Scale in Feet

FORD & ASSOCIATES, INC. ENVIRONMENTAL SCIENTISTS & ENGINEERS		Sea Level Rise Exposure Area at 3.2 Feet	Figure 11
Project Number: 22-2030	Created by: LF	Project: Garg Residence Property 6973 Kalanianaole Highway Honolulu, Honolulu County, Hawaii	
Date: 8/16/22	Reviewed By: DF	Client: Hawaii Engineering Group, Inc.	

PHOTOGRAPHS

Client:	Hawaii Engineering Group, Inc.	**Project No.:**	22-2030
Site Name:	Garg Residence Property, 6973 Kalanianaole Highway, Honolulu, Honolulu County, Hawaii	**Date:**	July 26, 2022

View of the subject property's existing driveway, garage and dwelling looking west.	PHOTO **1**

Client:	Hawaii Engineering Group, Inc.	**Project No.:**	22-2030
Site Name:	Garg Residence Property, 6973 Kalanianaole Highway, Honolulu, Honolulu County, Hawaii	**Date:**	July 26, 2022

Partial view of the subject property looking northeast.

PHOTO **2**

Client:	Hawaii Engineering Group, Inc.	**Project No.:**	22-2030
Site Name:	Garg Residence Property, 6973 Kalanianaole Highway, Honolulu, Honolulu County, Hawaii	**Date:**	July 26, 2022

The northwestern end of the subject property looking east.

PHOTO **3**

Client:	Hawaii Engineering Group, Inc.	**Project No.:**	22-2030
Site Name:	Garg Residence Property, 6973 Kalanianaole Highway, Honolulu, Honolulu County, Hawaii	**Date:**	July 26, 2022

View of the subject property from the northwest corner looking east.

PHOTO **4**

Client:	Hawaii Engineering Group, Inc.	**Project No.:**	22-2030
Site Name:	Garg Residence Property, 6973 Kalanianaole Highway, Honolulu, Honolulu County, Hawaii	**Date:**	July 26, 2022

View of the subject property looking south at the existing dwelling and yard.

PHOTO **5**

Client:	Hawaii Engineering Group, Inc.	**Project No.:**	22-2030
Site Name:	Garg Residence Property, 6973 Kalanianaole Highway, Honolulu, Honolulu County, Hawaii	**Date:**	July 26, 2022

Small wooden deck and yard located along the western boundary of the subject property looking southwest.	PHOTO **6**

Client:	Hawaii Engineering Group, Inc.	**Project No.:**	22-2030
Site Name:	Garg Residence Property, 6973 Kalanianaole Highway, Honolulu, Honolulu County, Hawaii	**Date:**	July 26, 2022

View of the western portion of the subject property looking northwest showing the yard and concrete patio (on the right side of photo).

PHOTO **7**

Client:	Hawaii Engineering Group, Inc.	**Project No.:**	22-2030
Site Name:	Garg Residence Property, 6973 Kalanianaole Highway, Honolulu, Honolulu County, Hawaii	**Date:**	July 26, 2022

View of the concrete patio adjacent to the existing dwelling looking southeast.

PHOTO **8**

Client:	Hawaii Engineering Group, Inc.	**Project No.:**	22-2030
Site Name:	Garg Residence Property, 6973 Kalanianaole Highway, Honolulu, Honolulu County, Hawaii	**Date:**	July 26, 2022

View of the eastern boundary of the subject property looking northwest along Kalanianaole Highway.

PHOTO **9**

Client:	Hawaii Engineering Group, Inc.	**Project No.:**	22-2030
Site Name:	Garg Residence Property, 6973 Kalanianaole Highway, Honolulu, Honolulu County, Hawaii	**Date:**	July 26, 2022

View looking northwest from the beach adjacent to the subject property. Paiko Lagoon Wildlife Sanctuary is shown approximately 0.5 mile across Maunalua Bay in the distant background, and Maunalua Bay Beach Park to the right across the Kuapa Pond channel.

PHOTO **10**

Client:	Hawaii Engineering Group, Inc.	**Project No.:**	22-2030
Site Name:	Garg Residence Property, 6973 Kalanianaole Highway, Honolulu, Honolulu County, Hawaii	**Date:**	July 26, 2022

View from the beach adjacent to the subject property looking south.

PHOTO **11**

Client:	Hawaii Engineering Group, Inc.	**Project No.:**	22-2030
Site Name:	Garg Residence Property, 6973 Kalanianaole Highway, Honolulu, Honolulu County, Hawaii	**Date:**	July 26, 2022

View of the south adjacent property looking southwest (from the beach).

PHOTO **12**

Client:	Hawaii Engineering Group, Inc.	**Project No.:**	22-2030
Site Name:	Garg Residence Property, 6973 Kalanianaole Highway, Honolulu, Honolulu County, Hawaii	**Date:**	July 26, 2022

View of the south adjacent property looking south along Kalanianaole Highway.

PHOTO **13**

Client:	Hawaii Engineering Group, Inc.	**Project No.:**	22-2030
Site Name:	Garg Residence Property, 6973 Kalanianaole Highway, Honolulu, Honolulu County, Hawaii	**Date:**	July 26, 2022

View of residential properties across Kalanianaole Highway looking north-northeast.	PHOTO **14**

Maunalua Bay and adjacent shoreline looking west.	PHOTO **15**

APPENDIX A

REFERENCES

REFERENCES:

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.
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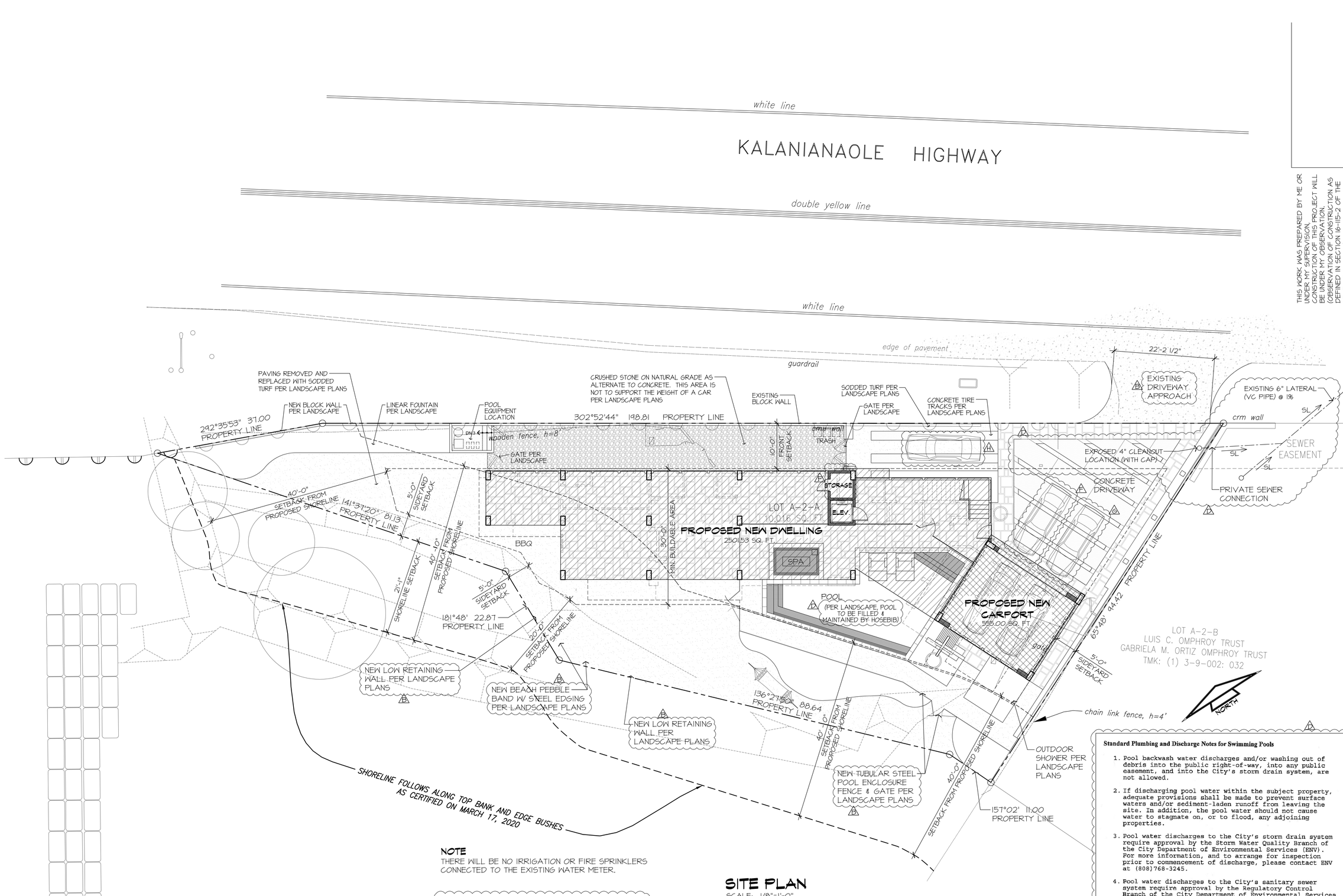
APPENDIX B

ARCHITECTURAL DRAWINGS



NOTE
THERE WILL BE NO IRRIGATION OR FIRE SPRINKLERS CONNECTED TO THE EXISTING WATER METER.

SITE PLAN
SCALE: 1/8"=1'-0"
0 2' 10'
1' 5' 15'

COASTAL HIGH HAZARD AREA STANDARD NOTES
THE PROJECT MUST BE DESIGNED TO BE FULLY COMPLIANT WITH THE COASTAL HIGH HAZARD AREA STANDARDS, ROH SECTION 21A-1.9.

1. THE AREA BELOW THE BFE, INCLUDING THE GARAGE, SHOULD BE ENCLOSED ONLY WITH BREAKAWAY WALLS, AND USED ONLY FOR PARKING, STORAGE AND BUILDING ACCESS.
   THE ELEVATOR SHAFT MAY BE PERMITTED BELOW THE BFE, BUT THE ELECTRICAL/MECHANICAL ROOM MUST BE LOCATED ON A FLOOR ABOVE THE BFE.
2. THE ENCLOSED PAVED FLOOR BELOW THE BFE MUST BE INDEPENDENT FROM THE COLUMNS AND FOUNDATION SUPPORTING THE BUILDING AND MADE TO BE BREAKAWAY AND NOT SUPPORTED BY STRUCTURAL FILL.
3. THE NEW SWIMMING POOL AND SPA MUST BE ADEQUATELY ANCHORED TO RESIST FLOTATION OR DISPLACEMENT AND PREVENT DAMAGE TO THE BUILDING'S FOUNDATION.

CITY AND COUNTY OF HONOLULU
REVISED ORDINANCE CHAPTER 32
HONOLULU COUNTY CODE 1990, AS AMENDED

TO THE BEST OF MY KNOWLEDGE THIS PROJECT'S DESIGN SUBSTANTIALLY CONFORMS TO THE BUILDING ENERGY CONVERSATION CODE FOR:

_____BUILDING COMPONENTS SYSTEMS
_____ELECTRICAL COMPONENT SYSTEMS
_____MECHANICAL COMPONENT SYSTEMS

SIGNATURE:_____**DATE:**_____
NAME
LICENSE NO:

Standard Plumbing and Discharge Notes for Swimming Pools

1. Pool backwash water discharges and/or washing out of debris into the public right-of-way, into any public easement, and into the City's storm drain system, are not allowed.
2. If discharging pool water within the subject property, adequate provisions shall be made to prevent surface waters and/or sediment-laden runoff from leaving the site. In addition, the pool water should not cause water to stagnate on, or to flood, any adjoining properties.
3. Pool water discharges to the City's storm drain system require approval by the Storm Water Quality Branch of the City Department of Environmental Services (ENV). For more information, and to arrange for inspection prior to commencement of discharge, please contact ENV at (808)768-3245.
4. Pool water discharges to the City's sanitary sewer system require approval by the Regulatory Control Branch of the City Department of Environmental Services (ENV). Please contact ENV at (808)768-3261 or 768-3262.
5. Pool water discharges to the State's storm drain system require approval by the Highways Division of the State Department of Transportation (DOT). Please contact DOT at (808)831-6712.
6. Pool water (public swimming pool) discharges require approval by the Sanitation Branch of the State Department of Health (DOH). Please contact DOH at (808)586-8000.
7. No stockpiling of excavated materials shall be allowed within the public right-of-way or any public easement. If work on the public right-of-way is necessitated, please contact the Street Usage Branch of the City Department of Transportation Services (DTS) at 768-8390.
8. Non-compliance with any of the above requirements may result in administrative, civil and/or criminal penalties.

DPP October 28, 2009

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. (OBSERVATION OF CONSTRUCTION AS DEFINED IN SECTION 16-115-2 OF THE STATE OF HAWAII)

ERIC TRABERT & ASSOCIATES
E.T.A. RESIDENTIAL DESIGN
9521 IRVINE CENTER DRIVE
IRVINE, CALIFORNIA 92618
TEL: 949.861.2244
FAX: 949.861.2233
www.etadesign.com

SUSHIL GARG
6973 KALANIANA' OLE HIGHWAY
HONOLULU, HI 96825
TMK: (1) 3-9-002: 031

PROJECT DESCRIPTION:
NEW CUSTOM 2-STORY SINGLE FAMILY DWELLING

PROPOSED NEW DWELLING FOR:
M/M SUSHIL GARG
6973 KALANIANA' OLE HIGHWAY,
HONOLULU, HI 96825
TMK: 3-9-002: 031

SUBMITTALS:

REVISIONS:
- 1 01-18-21 BLDG PC1 - CT
- 2 01-11-22 WWB PC2 - CT
- 3 05-18-22 BLDG PC2 - CT
- 4 11-10-22 PLANNING PC1 - CT
- 5 04-23-24 PLANNING PC2 - JT

SITE PLAN

STYLE: CONTEMPORARY
DATE 01.24.2019
DRAWN BY: JT
JOB NO. A002.1-SITE PLAN
SCALE 1/8"= 1'-0"
SHEET A002.1

5/9/2024 12:54:17 PM, JT

6.8 RETURN AIR GRILLE

6.9 PROVIDE A MINIMUM 100 CFM KITCHEN HOOD EXHAUST TO THE EXTERIOR WITH METAL DUCT WORK. A CEILING OR WALL EXHAUST MAY BE USED THAT PROVIDES CONTINUOUS 5 AIR CHANGES PER HOUR. EXHAUST TO EXTERIOR REQUIRED BY IBC 2006.

6.10 VENTILATION
1. (IBC 2006) BATHROOM EXHAUST FANS. EACH BATHROOM CONTAINING A BATHTUB, SHOWER OR TUB/SHOWER COMBINATION SHALL BE MECHANICALLY VENTILATED FOR PURPOSES OF HUMIDITY CONTROL
2. PROVIDE MECHANICAL VENTILATION IN BATHROOMS, WATER CLOSET COMPARTMENTS, LAUNDRY ROOMS & SIMILAR ROOMS CONNECTED DIRECTLY TO THE OUTSIDE CAPABLE OF PROVIDING 50CFM FOR INTERMITTENT VENTILATION OR 20cfm FOR CONTINUOUS VENTILATION (IBC 2006)
3. USE ENERGY STAR COMPLIANT FANS FOR ALL BATHROOMS & POWDER ROOMS & MUST BE DUCTED TO TERMINATE OUTSIDE THE BUILDING. PROVIDE TIMER SWITCH FOR AUTOMATIC SHUT OFF.
4. ALL EXHAUST FAN SWITCHES FOR BATHROOMS AND LAUNDRY ROOMS SHALL BE EQUIPPED WITH HUMIDISTAT.

6.11 A/C UNIT LOCATION. (SEE SITE PLAN)
VERIFY W/ SUBCONTRACTOR FOR EXACT LOCATION.
1. PROVIDE POWER TO A/C UNIT.
2. ALL NEW HVAC EQUIPMENT MUST HAVE AN EFFICIENCY RATING PER IBC 2006
3. PROVIDE A/C UNIT DISCONNECT SWITCH. VERIFY W/ SUBCONTRACTOR FOR EXACT LOCATION.

6.12 A / V & HOME NETWORK EQUIPMENT LOCATION. PROVIDE VENTILATION. VERIFY OWNER FOR EXACT LOCATION

6.13 SMOKE DETECTOR W/ CARBON MONOXIDE
1. SMOKE ALARMS SHALL RECEIVE THEIR PRIMARY POWER FROM THE BUILDING WIRING & SHALL BE EQUIPPED W/BATTERY BACKUP
2. WHEN ONE OR MORE SMOKE ALARM IS REQUIRED TO BE INSTALLED WITHIN THE DWELLING UNIT OR WITHIN A SLEEPING UNIT, THE ALARM SHALL BE INTERCONNECTED IN A MANNER THAT ACTIVATION OF ONE ALARM SHALL ACTIVATE ALL THE ALARMS IN THE INDIVIDUAL UNIT
3. WHEN ONE OR MORE CARBON MONOXIDE ALARM IS REQUIRED TO BE INSTALLED WITHIN THE DWELLING UNIT OR WITHIN A SLEEPING UNIT, THE ALARM SHALL BE INTERCONNECTED IN A MANNER THAT ACTIVATION OF ONE ALARM SHALL ACTIVATE ALL THE ALARMS IN THE INDIVIDUAL UNIT

6.14 "NATIONWIDE LIFTS" TRACTION TYPE RESIDENTIAL ELEVATOR WITH CAB & AUTOMATIC GATE CLOSURE. SHAFT OPENINGS TO BE PROTECTED BY SELF-CLOSING, TIGHT-FITTING DOOR. FULL HT. SHAFT TO BE LINED W/ 5/8" TYPE "X" GYP. BOARD.

6.15 ELEVATOR EQUIPMENT LOCATION. VERIFY EXACT LOCATION WITH OWNER.

6.16 CHIMNEY CHASE. CONTRACTOR TO VERIFY SIZE OF FIREPLACE FLUE.

EXTERIORS:

5.1 SOLID WOOD FRAMED SECTIONAL OVERHEAD GARAGE DOOR, INSTALLED PER MANUF. SPECS; AUTOMATIC GARAGE DOOR OPENERS SHALL BE LISTED IN ACCORDANCE WITH UL 325.

5.2 COLUMN PER ELEVATION

5.3 42" MIN. HIGH TEMP. GLASS GUARDRAIL PER ELEVATION

5.4 STONE DECKING ON CROSSFIELD PRODUCTS "DEX-O-TEX" WEATHERWEAR ROOF DECK COVERING, CLASS A ROOF SYSTEM, ICC-ESR 1757 o/ DRAINAGE BOARD o/ FULLY ADHERED WATERPROOF MEMBRANE o/ DECK SUBSTRATE o/ RIPPED DECK JOIST PER STRUCTURAL DWGS. AND SHALL SLOPE 2% TO DRAINAGE.

5.5 1. DECKING, STAIRS, PORCHES, BALCONIES SHALL BE IGNITION RESISTANT MATERIALS MEETING FM 12-7 A-4, PARTS A & B, OR HEAVY TIMBER, EXTERIOR FIRE-RETARDANT-TREATED WOOD OR APPROVED NONCOMBUSTIBLE MATERIALS.
2. UNDERSIDE OF FLOOR PROJECTIONS SHALL HAVE IGNITION-RESISTANT INTEGRITY OF EXTERIOR WALLS.
3. UNDER FLOOR AREAS SHALL BE ENCLOSED TO GRADE WITH APPROVED EXTERIOR WALLS.

5.6 OVERFLOW DRAIN (INLET 2" MIN. ABOVE DECK DRAIN INLET)

5.7 DECK DRAIN - MUST BE TIED TO YARD DRAINAGE SYSTEM

5.8 ROOF CHANNEL DRAIN - MUST BE TIED TO YARD DRAINAGE SYSTEM

5.9 ALUMINUM SCREEN LOUVER PER ELEVATION

5.10 EXPOSED WOOD RAFTER

MECHANICAL / ELECTRICAL:

6.1 1. PROVIDE DRYER VENT WITH BACK-DRAFT DAMPER AND TERMINATE ON THE OUTSIDE OF BUILDING.
2. DOMESTIC CLOTHES DRYER DUCT SHALL BE OF METAL AND A MINIMUM OR 4" NOMINAL IN DIAMETER.
3. LENGTH LIMITATION. UNLESS OTHERWISE PERMITTED OR REQUIRED BY THE DRYER MANUFACTURER'S INSTRUCTIONS AND APPROVED BY THE AUTHORITY HAVING JURISDICTION, DOMESTIC DRYER MOISTURE EXHAUST DUCTS SHALL NOT EXCEED A TOTAL COMBINED HORIZONTAL AND VERTICAL LENGTH OF 14 FEET, INCLUDING TWO 90-DEGREE ELBOWS. A LENGTH OF 2 FEET SHALL BE DEDUCTED FOR EACH 90-DEGREE ELBOW IN EXCESS OF TWO.
4. VENTS IN EXTERIOR WALLS SHALL BE SCREENED WITH A CORROSION- RESISTANT, NONCOMBUSTIBLE WIRE MESH WITH 1/4" OPENINGS.
5. EXHAUST OUTLETS SHALL BE 3 FEET FROM THE PROPERTY LINE; 3 FEET FROM OPENING INTO THE BUILDING.
6. DRYER COMPARTMENT SHALL BE PROVIDED WITH A MINIMUM OPENING OF 100 SQ IN. FOR MAKEUP AIR IN THE DOOR OR BY OTHER APPROVED MEANS

6.2 TANKLESS WATER HEATER WITH RECIRCULATING PUMP. NORITZ-NCC1991 (N-0751M) SERIES.
1. VERIFY WITH OWNER & SUB-CONTRACTOR FOR UNIT SIZE & EXACT LOCATION.
2. WATER HEATING SYSTEM SHALL COMPLY WITH IBC 2006.
3. PROVIDE EXTERIOR OPENING/VENTS FOR OUTDOOR COMBUSTION AIR FOR THE WATER HEATER
4. PROVIDE ELECTRICAL RECEPTACLE OUTLET WITHIN 3 FEET & GAS SUPPLY LINE CAPABLE OF 200,000 BTU

6.3 CABLE TV AND TELEPHONE BOXES LOCATION

6.4 ELECTRICAL METER CABINET LOCATION (SHALL BE APPROVED BY ELECTRIC COMPANY)
NOTES:
1. THE SERVICE PANEL OR SUBPANEL CIRCUIT DIRECTORY SHALL IDENTIFY THE OVERCURRENT PROTECTIVE DEVICE SPACE(S) RESERVED FOR FUTURE EV CHARGING AS "EV CAPABLE".
2. THE RACEWAY TERMINATION LOCATION SHALL BE PERMANENTLY AND VISIBLY MARKED AS "EV CAPABLE".

6.5 ELECTRICAL SUB-PANEL LOCATION. (SHALL BE APPROVED BY ELECTRIC COMPANY). SEE OWNER FOR EXACT LOCATION
NOTES:
1. THE SERVICE PANEL OR SUBPANEL CIRCUIT DIRECTORY SHALL IDENTIFY THE OVERCURRENT PROTECTIVE DEVICE SPACE(S) RESERVED FOR FUTURE EV CHARGING AS "EV CAPABLE".
2. THE RACEWAY TERMINATION LOCATION SHALL BE PERMANENTLY AND VISIBLY MARKED AS "EV CAPABLE".
3. THE SUB-PANELS SHALL BE GROUNDED & BONDED TO THE MAIN PANEL.

6.6 CONCRETE ENCASED ELECTRODE (UFER GROUND) LOCATION

6.7 WHOLE HOUSE FAN / EXHAUST GRILLE. VERIFY EXACT LOCATION WITH OWNER. CONTROLS FOR CONTINUOUSLY-RUNNING FANS TO BE MARKED "FAN TO BE LEFT ON FOR INDOOR AIR QUALITY."

4.4 GUARDRAIL (42" MIN).

4.5 1. GARAGE FLOOR SURFACES SHALL BE OF AN APPROVED NONCOMBUSTIBLE MATERIAL, AND THE AREA USED TO PARK VEHICLES SHALL BE SLOPED TO A DRAIN OR TOWARD THE MAIN VEHICLE ENTRY DOORWAY. (PER IBC 2006)
2. 1-HOUR FIRE RATED SEPARATION. (PER IBC 2006) DWELLING-GARAGE AND/OR CARPORT SEPARATION:
a. THE RESIDENCE AND ATTICS SHALL HAVE NOT LESS 1/2-INCH GYPSUM BOARD APPLIED TO THE GARAGE SIDE.
b. HABITABLE ROOMS ABOVE THE GARAGE OR CARPORT SHALL HAVE NOT LESS THAN 5/8-INCH TYPE X GYPSUM BOARD
c. STRUCTURES SUPPORTING FLOOR/CEILING ASSEMBLIES IN A GARAGE OR CARPORT (WALLS, COLUMNS, OR BEAMS IN THE GARAGE) SHALL HAVE NOT LESS THAN 1/2-INCH GYPSUM BOARD PROTECTION.
3. OPENING PROTECTION (PER IBC 2006) OPENINGS FROM A PRIVATE GARAGE DIRECTLY INTO A ROOM USED FOR SLEEPING PURPOSES SHALL NOT BE PERMITTED. OTHER OPENINGS BETWEEN THE GARAGE & RESIDENCE SHALL BE EQUIPPED WITH SOLID WOOD DOORS NOT LESS THAN 1-3/8 INCHES IN THICKNESS, SOLID OR HONEYCOMB-CORE STEEL DOORS NOT LESS THAN 1-3/8 INCH (34.9mm) THICK, OR 20-MINUTE FIRE-RATED DOORS, EQUIPPED WITH GARAGE AND THE RESIDENCE NEED ONLY BE SELF-CLOSING & SELF-LATCHING DEVICES.
EXCEPTION: WHERE THE RESIDENCE AND THE PRIVATE GARAGE ARE PROTECTED BY AN AUTOMATIC RESIDENTIAL FIRE SPRINKLER SYSTEM IN ACCORDANCE WITH SECTIONS R304.6 AND R313, OTHER DOOR OPENINGS BETWEEN THE PRIVATE GARAGE AND THE RESIDENCE NEED ONLY BE SELF-CLOSING & SELF-LATCHING.
4. DUCT PENETRATION (PER IBC 2006) DUCTS IN THE PRIVATE GARAGE AND DUCTS PENETRATING THE WALLS OR CEILINGS SEPARATING THE DWELLING FROM THE GARAGE SHALL BE CONSTRUCTED OF A MINIMUM NO. 26 GAGE SHEET STEEL OR OTHER APPROVED MATERIAL AND SHALL HAVE NO OPENINGS INTO THE GARAGE.

4.6 "TOWN & COUNTRY" DIRECT-VENT SEALED-COMBUSTION CHAMBER TYPE GAS FIREPLACE
ANSI Z21.50-2018.
MODEL TO BE VERIFIED WITH OWNER

NOTES:
1. EXTERIOR COMBUSTION AIR DUCTS SHALL BE LISTED COMPONENTS OF THE FIREPLACE & INSTALLED ACCORDING TO THE FIREPLACE MANUFACTURER'S INSTRUCTION (PER IBC 2006)
2. FACTORY-BUILT FIREPLACES, CHIMNEYS, & ALL OTHER COMPONENTS SHALL BE LISTED & INSTALLED IN ACCORDANCE WITH THEIR LISTING & MANUF'S INSTRUCTIONS.
3. DECORATIVE SHROUDS SHALL NOT BE INSTALLED AT THE TERMINATION OF FACTORY-BUILT CHIMNEYS EXCEPT WHERE SUCH SHROUDS ARE LISTED & LABELED FOR USE WITH THE SPECIFIC FACTORY-BUILT CHIMNEY SYSTEM & ARE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS (PER IBC 2006)
4. FIREPLACES MUST BE OF THE DIRECT-VENT SEALED-COMBUSTION CHAMBER TYPE (PER IBC 2006). NO WOOD-BURNING FIREPLACE IS PERMITTED PER AQMD REGULATIONS.
5. PROVIDE 2" MINIMUM CLEAR AIR SPACE BETWEEN CHIMNEY AND WOOD CONSTRUCTION FROM THE FRONT FACES AND SIDES AND 4" FROM THE BACK FACE. (PER IBC 2006)

4.7 FLUSH STONE HEARTH. HEARTH THICKNESS TO BE 2" MIN. (3/8" THK. IF FIRE BOX IS 8" HIGH, MIN.)

4.8 18" RAISED STONE HEARTH

4.9 RECESSED WALL ABOVE FIREPLACE FOR FLAT TV. VERIFY OWNER.

4.10 DRYWALL OPENING WITH SQUARE TOP

4.11 1-3/4" THK. SOLID WOOD, SELF-CLOSING, SELF-LATCHING, 20-MIN FIRE-RATED DOOR BETWEEN THE GARAGE & PRIVATE RESIDENCE

4.12 PROVIDE ONE LAYER OF 5/8" TYPE "X" GYPSUM BOARD ON ALL CEILINGS & ONE LAYER OF 5/8" TYPE "X" GYPSUM BOARD ON ALL WALLS & CEILING BEAMS

4.13 LINE OF FLOOR OR WALL ABOVE

4.14 LINE OF FLOOR OR WALL BELOW

4.15 1-HOUR FIRE RATED SEPARATION. PROVIDE IN ELEVATOR SHAFT.

4.16 HANGING ROD. VERIFY W/ OWNER

4.17 "MEILINK" WALL SAFE. VERIFY W/ OWNER

FLOOR PLAN KEYNOTES

CABINETS, DESKS & COUNTERS

1.1 36" HIGH CABINET @ KITCHEN, PANTRY & LAUNDRY. 34" HIGH CABINET @ PDR. RMS, BATHS & MASTER W.I.C.

1.2 36" HIGH KITCHEN ISLAND W/ KNEE SPACE BELOW

1.3 UPPER CABINETS

1.4 COAT CLOSET

1.5 BUILT-IN CABINET

1.6 AUDIO / VIDEO CABINET

1.7 VANITY W/ KNEE SPACE BELOW

APPLIANCES:

2.1 SLIDE IN RANGE WITH HOOD, LIGHT & FAN. VENT TO OUTSIDE THRU ROOF.

~~2.2 STEAMER OVEN W/ MICROWAVE. VENT TO OUTSIDE THRU ROOF.~~

PLUMBING:

3.1 KITCHEN SINK W/ GARBAGE DISPOSAL

3.2 SHOWER COMPARTMENTS
1. SHOWER COMPARTMENTS & WALLS WITH SHOWER HEADS INSTALLED SHALL BE FINISHED WITH A SMOOTH, NONABSORBENT SURFACE TO A HEIGHT OF NOT LESS 72" ABOVE THE FLOOR. (PER IBC 2006)
2. PROVIDE TILED SOAP NICHE. VERIFY WITH OWNER OR CONTRACTOR.
3. CEMENT, FIBER-CEMENT, FIBER-MAT REINFORCED CEMENT, GLASS MAT GYPSUM OR FIBER-REINFORCED GYPSUM BACKERS SHALL BE USED AS A BASE FOR WALL TILE IN TUB & SHOWER AREAS AND WALL & CEILING PANELS IN SHOWER AREAS. (PER IBC 2006)
4. PROVIDE ANTI-SCALDING SHOWER & TUB-SHOWER VALVES. (PER IBC 2006).

3.3 BATHTUBS OR WHIRLPOOL BATHS.
VERIFY W/ OWNER.
1. CEMENT, FIBER-CEMENT, FIBER-MAT REINFORCED CEMENT, GLASS MAT GYPSUM OR FIBER-REINFORCED GYPSUM BACKERS SHALL BE USED AS A BASE FOR WALL TILE IN TUB & SHOWER AREAS AND WALL & CEILING PANELS IN SHOWER AREAS. (PER IBC 2006)
2. PROVIDE WITH A TUB EQUIPMENT & A TRAP DOOR OR ACCESS WITHIN 20 FT. OF THE PUMP. SEE CONTRACTOR FOR LOCATION.

3.4 SHATTER PROOF SHOWER DOOR W/ GLASS ENCLOSURE (TEMP. GLASS)
1. GLAZING IN DOOR & ENCLOSURES FOR HOT TUBS, WHIRLPOOLS, SAUNAS, STEAM ROOMS, BATHROOMS, SHOWERS LESS THAN 5' ABOVE THE STANDING SURFACE SHALL HAVE A MINIMUM CATEGORY CLASSIFICATION OF II (PER IBC 2006)

3.5 1. PROVIDE ULTRA-LOW WATER FIXTURES & TOILETS.
2. PROVIDE WATER RESISTANT GYPSUM BACKING BOARD FOR WATER CLOSET COMPARTMENT WALLS (PER IBC 2006)
3. PROVIDE 24" x 30" CLEAR AREA IN FRONT OF TOILET BOWL.

3.6 FLOOR DRAIN TO MAIN SEWER.

3.7 PROVIDE SOAP NICHE. VERIFY WITH OWNER OR CONTRACTOR.

INTERIORS:

4.1 KITCHEN PANTRY WITH ADJUSTABLE SHELVES

4.2 MAIN STAIRS
LOWER TO MAIN FLOOR:
1 LANDING, 14 TREADS & 16 RISERS AT 7-1/8" (7-3/4" MAX).

MAIN TO UPPER FLOOR:
1 LANDING, 15 TREADS & 17 RISERS AT 7-1/16" (7-3/4" MAX).

NOTES:
1. THE MAXIMUM DIFFERENCE BETWEEN THE STAIR RISERS & TREADS SHALL NOT BE GREATER THAN 3/8". (PER IBC 2006)
2. ALL STAIRWAYS SHALL HAVE AN ILLUMINATION LEVEL ON TREAD RUNS OF NOT LESS THAN 1 FOOT CANDLE (11 LUX) (PER IBC 2006)

4.3 HANDRAIL (34" - 38") ABOVE TREAD NOSING. HANDRAILS WITH A PERIMETER DIMENSION > 6-1/4" SHALL HAVE A GRASPABLE FINGER ON BOTH SIDES OF THE PROFILE BETWEEN 1-1/4" TO 2-3/4" BEGINNING WITHIN 3/4" FROM THE TOP OF THE PROFILE AND ACHIEVE A MINIMUM 5/16" DEPTH WITHIN 7/8" BELOW THE WIDEST PROFILE POINT AND SHALL CONTINUE A MINIMUM 3/8" TO A LEVEL NOT LESS THAN 1-3/4" BELOW THE TALLEST PORTION OF THE PROFILE. (PER IBC 2006)

SCALE: 1/4"=1'-0"
0 2' 10'
1' 5' 15'

ERIC TRABERT & ASSOCIATES
E.T.A. RESIDENTIAL DESIGN
9521 IRVINE CENTER DRIVE
IRVINE, CALIFORNIA 92618
TEL: 949.861.2244
FAX: 949.861.2233
www.etadesign.com

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. (OBSERVATION OF CONSTRUCTION AS DEFINED IN SECTION 16-115-2 OF THE STATE OF HAWAII)

SUSHIL GARG
6973 KALANIANA' OLE HIGHWAY
HONOLULU, HI 96825
TMK: (1) 3-9-002: 031

PROJECT DESCRIPTION:
NEW CUSTOM 2-STORY SINGLE FAMILY DWELLING

PROPOSED NEW DWELLING FOR:
M/M SUSHIL GARG
6973 KALANIANA' OLE HIGHWAY,
HONOLULU, HI 96825
TMK: 3-9-002: 031

SUBMITTALS:

REVISIONS:
1 01-11-22 WWB PC2 - CT
2 04-23-24 PLANNING PC2 - JT

FLOOR PLAN KEYNOTES

STYLE: CONTEMPORARY
DATE 01.24.2019
DRAWN BY: CT
JOB NO. A005-FPKEYNOTES
SCALE
SHEET A005

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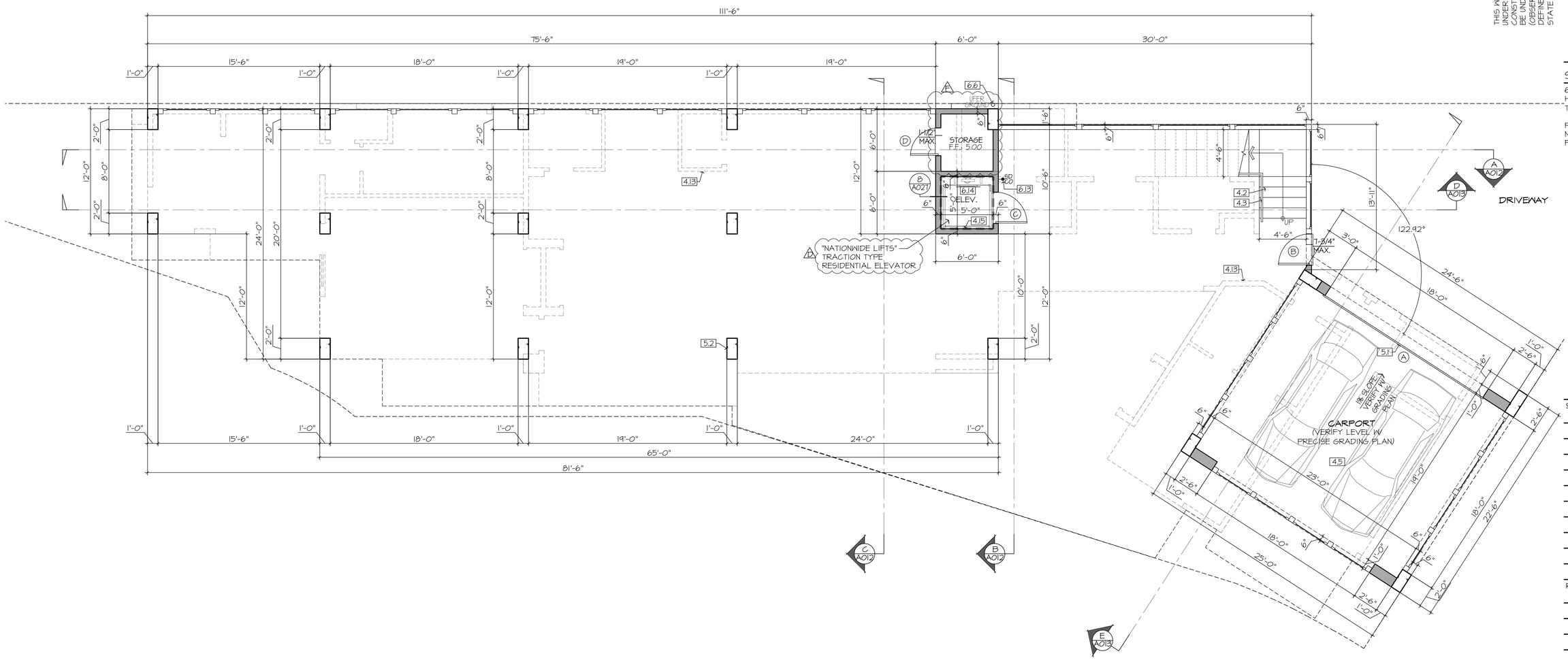

FLOOR PLAN LEGEND

1-HOUR FIRE RATED SEPARATION

EXTERIOR WALL TO BE MINIMUM OF 2X6

FLOOR PLAN NOTE

1. FOR FLOOR PLAN KEYNOTES, PLEASE REFER TO ARCHITECTURAL SHEET A005.
2. PROVIDE ULTRA-LOW WATER FIXTURES & TOILETS. (H)

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

0 2' 10'
1' 5' 15'

NORTH

ERIC TRABERT & ASSOCIATES

E.T.A.
RESIDENTIAL DESIGN

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6973 KALANIANA' OLE HIGHWAY,
HONOLULU, HI 96825
TMK: 3-9-002: 031

SUBMITTALS:

REVISIONS:

B	01-18-21 BLDG PC1 - CT
D	01-11-22 WWB PC2 - CT
F	05-18-22 BLDG PC2 - CT
H	04-23-24 PLANNING PC2 - JT

LOWER FLOOR PLAN

STYLE: CONTEMPORARY
DATE 01.24.2019
DRAWN BY: JT
JOB NO. A006-LOWER FLOOR PLAN
SCALE 1/4"= 1'-0"
SHEET A006

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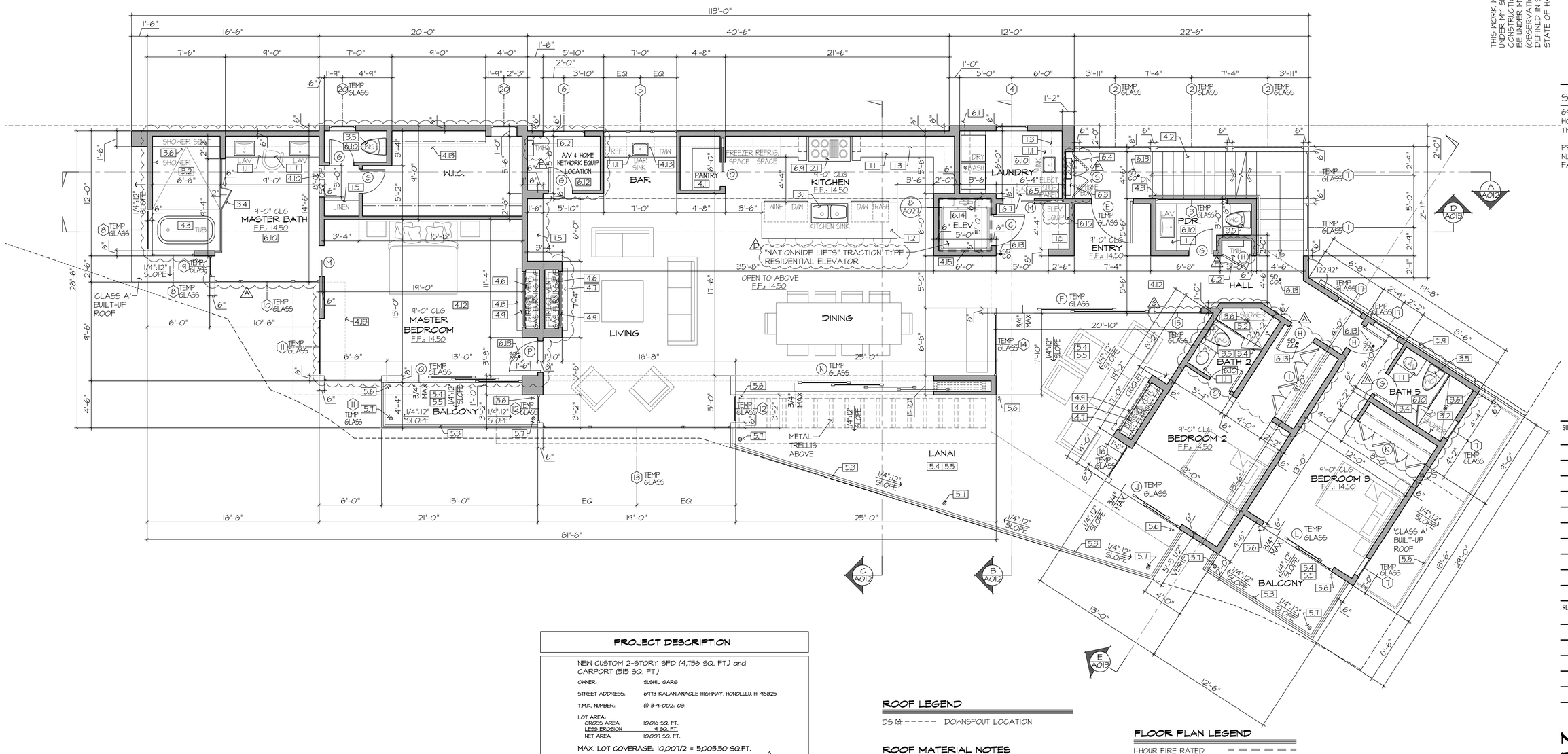

PROJECT DESCRIPTION

NEW CUSTOM 2-STORY SFD (4,756 SQ. FT.) and CARPORT (515 SQ. FT.)

OWNER:	SUSHIL GARG
STREET ADDRESS:	6473 KALANIANAOLE HIGHWAY, HONOLULU, HI 96825
T.M.K. NUMBER:	(1) 3-9-002: 031
LOT AREA:	
GROSS AREA	10,016 SQ. FT.
LESS EROSION	9 SQ. FT.
NET AREA	10,007 SQ. FT.

MAX. LOT COVERAGE: 10,007/2 = 5,003.50 SQ.FT.

MAX. TOTAL FLOOR AREA: 10,016x.7 = 7,011.20 SQ.FT. (1)

ZONING (LUO):	R-10 RESIDENTIAL DISTRICT
FLOOD ZONE:	VE-100 YEAR FLOOD, COASTAL, WAVE ACTION, BASE ELEVATION DETERMINED
SETBACKS:	FRONT 10'-0" MIN SIDE 5'-0" MIN REAR 5'-0" MIN
LOWER FLOOR CARPORT AREA:	515.00 SF
LOWER FLOOR ELEC/MECH'L AREA:	36.00 SF
MAIN FLOOR LIVING AREA:	2,888.51 SF
MAIN FLOOR LANAI AREA:	545.63 SF (2)
MAIN FLOOR BALCONY AREA:	143.11 SF
UPPER FLOOR LIVING AREA:	1,259.00 SF
UPPER FLOOR LANAI AREA:	235.00 SF
UPPER FLOOR BALCONY AREA:	74.00 SF
PROPOSED LIVING AREA (TOTAL):	4,147.51 SF (2)
PARKING:	
CARPORT - 5 (PROVIDED)	(1)

ROOF LEGEND

DS ⊠ - - - - - DOWNSPOUT LOCATION

ROOF MATERIAL NOTES

1. BUILT-UP ROOF.
   UL TGFUR1306 "GAF" OR APPROVED EQ.
   CLASS "A" ROOFING SYSTEM
   BUILT-UP ROOFING TO BE CRUSHED ROOFING MATERIAL OVER ONE LAYER OF APP, GRANULATED 80 LB. MODIFIED CAPSHEET USING A TORCH OVER ONE LAYER 28 LB. FIBERGLASS BASE SHEET MECHANICALLY FASTENED.
   COLOR TO BE LIGHT TAN GRAVEL.
2. ADJUSTABLE LOUVERED ROOF SYSTEM
3. METAL TRELLIS
4. TILE NAILING SHALL COMPLY WITH IBC 2006.
5. ROOF DRAINAGE SYSTEM & DOWNSPOUT SHALL NOT BE COPPER.
6. ROOF DRAINAGE SYSTEM MUST BE TIED TO LOT AREA DRAIN.
7. RADIANT BARRIERS TO BE ATTACHED TO UNDERSIDE OF ROOF DECKING

FLOOR PLAN LEGEND

1-HOUR FIRE RATED SEPARATION

EXTERIOR WALL TO BE MINIMUM OF 2X6

FLOOR PLAN NOTE

1. FOR FLOOR PLAN KEYNOTES, PLEASE REFER TO ARCHITECTURAL SHEET A005.
2. PROVIDE ULTRA-LOW WATER FIXTURES & TOILETS. (1)

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

0 2' 10'
1' 5' 15'

NORTH

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HONOLULU, HI 96825
TMK: (1) 3-9-002: 031

PROJECT DESCRIPTION:
NEW CUSTOM 2-STORY SINGLE FAMILY DWELLING

PROPOSED NEW DWELLING FOR:
M/M SUSHIL GARG
6973 KALANIANA' OLE HIGHWAY,
HONOLULU, HI 96825
TMK: 3-9-002: 031

SUBMITTALS:

REVISIONS:

A	01-06-20 OWNER'S CHANGES - JT
1	01-11-22 WWB PC2 - CT
2	05-18-22 BLDG PC2 - CT
3	11-10-22 PLANNING PC1 - CT
4	04-23-24 PLANNING PC2 - JT

MAIN FLOOR PLAN

STYLE: CONTEMPORARY
DATE 01.24.2019
DRAWN BY: JT
JOB NO. A007-MAIN FLOOR PLAN
SCALE 1/4"= 1'-0"
SHEET A007

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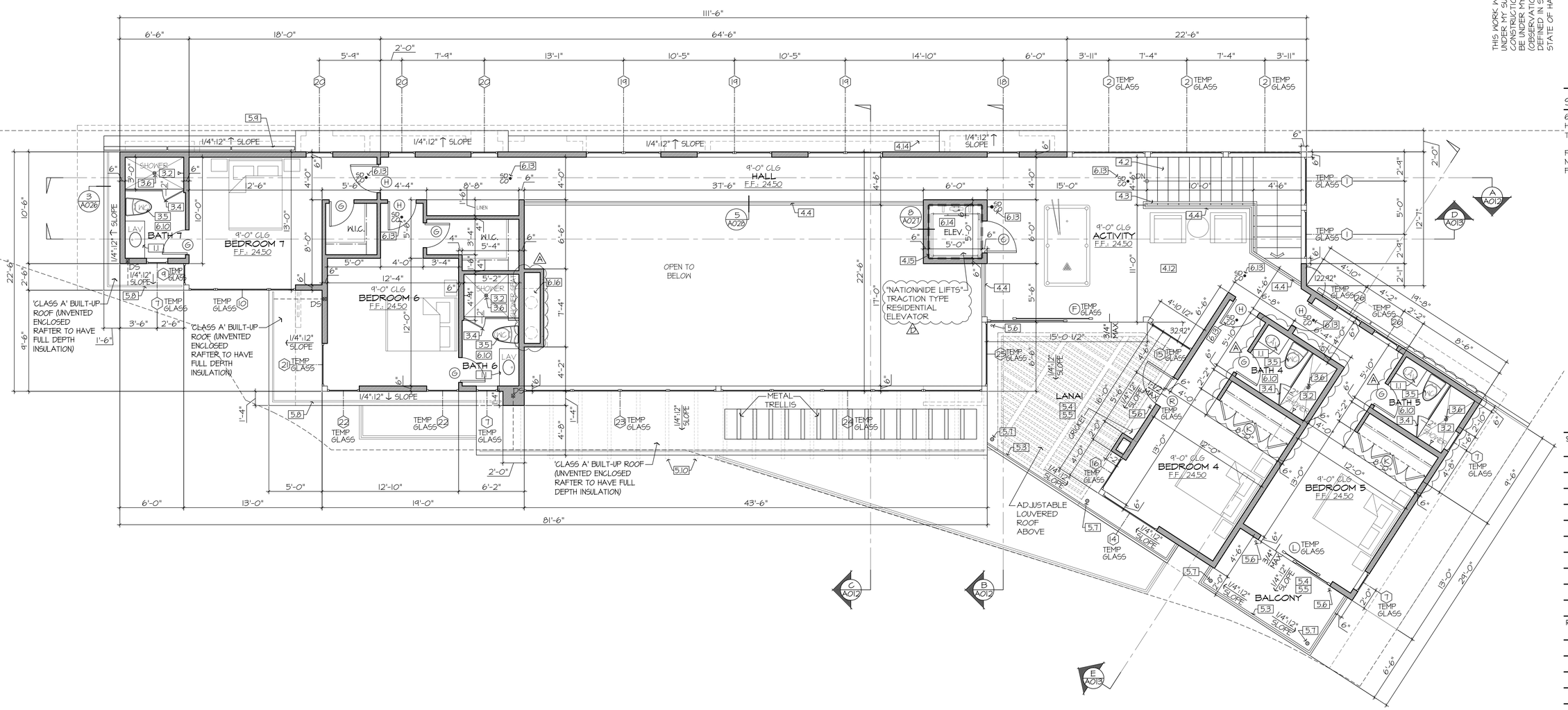

ROOF LEGEND

DS ⊠ - - - - - DOWNSPOUT LOCATION

ROOF MATERIAL NOTES

1. BUILT-UP ROOF:
   UL TGFUR1306 "GAF" OR APPROVED EQ.
   CLASS "A" ROOFING SYSTEM
   BUILT-UP ROOFING TO BE CRUSHED ROOFING MATERIAL OVER ONE LAYER OF APP, GRANULATED 80 LB. MODIFIED CAPSHEET USING A TORCH OVER ONE LAYER 28 LB. FIBERGLASS BASE SHEET MECHANICALLY FASTENED.
   COLOR TO BE LIGHT TAN GRAVEL.
2. ADJUSTABLE LOUVERED ROOF SYSTEM
3. METAL TRELLIS
4. TILE NAILING SHALL COMPLY WITH IBC 2006.
5. ROOF DRAINAGE SYSTEM & DOWNSPOUT SHALL NOT BE COPPER.
6. ROOF DRAINAGE SYSTEM MUST BE TIED TO LOT AREA DRAIN.
7. RADIANT BARRIERS TO BE ATTACHED TO UNDERSIDE OF ROOF DECKING

FLOOR PLAN LEGEND

1-HOUR FIRE RATED SEPARATION

EXTERIOR WALL TO BE MINIMUM OF 2X6

FLOOR PLAN NOTE

1. FOR FLOOR PLAN KEYNOTES, PLEASE REFER TO ARCHITECTURAL SHEET A005.
2. PROVIDE ULTRA-LOW WATER FIXTURES & TOILETS. (1)

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

0 2' 10'
1' 5' 15'

NORTH

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PROJECT DESCRIPTION:
NEW CUSTOM 2-STORY SINGLE FAMILY DWELLING

PROPOSED NEW DWELLING FOR:
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6973 KALANIANA' OLE HIGHWAY,
HONOLULU, HI 96825
TMK: 3-9-002: 031

SUBMITTALS:

REVISIONS:

A	01-06-20	OWNER'S CHANGES - JT
1	01-11-22	WWB PC2 - CT
1	04-23-24	PLANNING PC2 - JT

UPPER FLOOR PLAN

STYLE: CONTEMPORARY
DATE 01.24.2019
DRAWN BY: JT
JOB NO. A008-UPPER FLOOR PLAN
SCALE 1/4"= 1'-0"
SHEET A008

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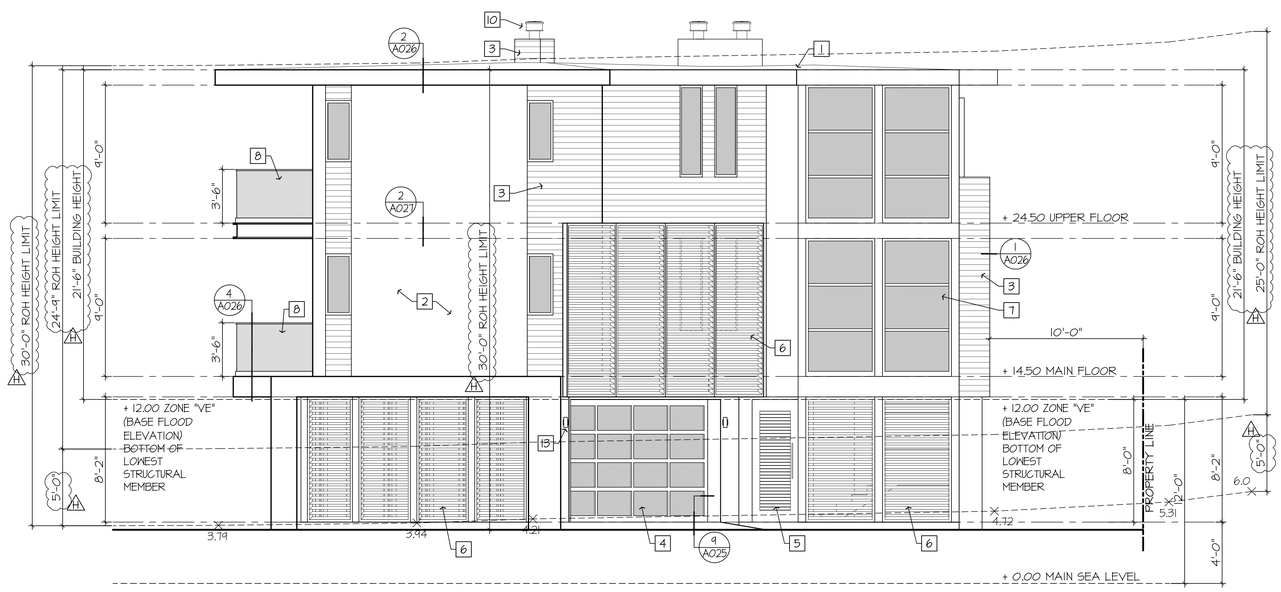
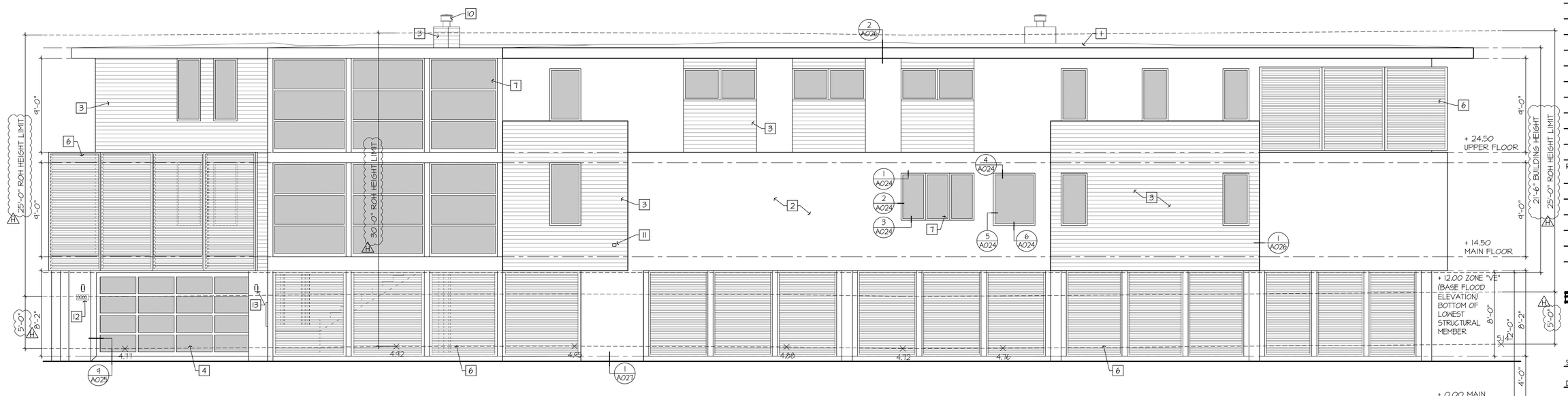


LEFT ELEVATION

NOTE: ALL BATHROOM WINDOWS SHALL BE OBSCURE



FRONT ELEVATION

NOTE: ALL BATHROOM WINDOWS SHALL BE OBSCURE

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

0 2' 10'

1' 5' 15'

ELEVATION KEYNOTES

1. BUILT-UP ROOF: UL TGFUR1306 "GAF" OR APPROVED EQ. CLASS "A" ROOFING SYSTEM BUILT-UP ROOFING TO BE CRUSHED ROOFING MATERIAL OVER ONE LAYER OF APP. GRANULATED 80 LB. MODIFIED CAPSHEET USING A TORCH OVER ONE LAYER 28 LB. FIBERGLASS BASE SHEET MECHANICALLY FASTENED. COLOR TO BE LIGHT TAN GRAVEL.
2. 7/8" THICK STUCCO ON CORROSION RESISTANT METAL LATH O/ 60 MIN., 2 LAYERS OF GRADE D' BUILDING PAPER
3. WOOD SIDINGS TO BE IPE HARDWOOD
4. GARAGE DOOR TO BE ALUMINUM FRAME WITH WHITE LAMINATED TEMPERED GLASS
5. ALUMINUM LOUVER DOOR
6. ALUMINUM SCREEN LOUVER
7. EXTERIOR DOORS & WINDOWS TO BE "WESTERN WINDOW SYSTEMS"
8. 42" MIN. HIGH TEMP. GLASS GUARDRAIL PER ELEV.
9. I-BEAM STEEL CANOPY PER ELEVATION
10. FIREPLACE VENT
11. 4" DRYER VENT LOCATION PER PLAN. 14' MAX. W/ TWO 90° BENDS FOR METAL DUCT; 6' MAX. FOR FLEX GAS CONNECTOR
12. HOUSE STREET NUMBER VISIBLE & LEGIBLE FROM STREET. MINIMUM 4" HIGH x 1" WIDE AND ILLUMINATED AT NIGHT.
13. EXTERIOR LIGHT FIXTURE
14. EXPOSED WOOD RAFTER
15. ADJUSTABLE LOUVERED ROOF

NOTES

1. ANY CHANGES TO THE SHAPE, SIZE AND DIVISIONS OF WINDOWS & DOORS MUST BE REVIEWED & APPROVED BY DESIGNER.
2. THE MUNTIN BARS FOR ALL THE DOOR AND WINDOW BREAK-UPS SHALL BE PROVIDED WITH A MINIMUM OF 1-1/4".
3. ROOF GUTTERS SHALL BE PROVIDED WITH THE MEANS TO PREVENT ACCUMULATION OF LEAVES & DEBRIS.
4. ALL PLUMBING & EQUIPMENT VENTS MUST BE CONSOLIDATED & LOCATED IN AREAS THAT MINIMIZE THEIR VISIBILITY. VENTS MUST BE AS LOW IN HEIGHT AS ALLOWED BY CODE & SATISFY THE REQUIREMENTS OF THE DESIGN GUIDELINES.
5. FIELD CUTTING ENDS, NOTCHES, AND DRILLED HOLES OF PRESERVATIVE TREATED WOOD SHALL BE TREATED IN FIELD.
6. WEEP SCREED SHALL BE OF MINIMUM NO. 26 GALVANIZED SHEET GAGE, CORROSION-RESISTANT LOCATED BELOW FOUNDATION PLATE LINE AND 4-INCHES ABOVE GRADE ON ALL EXTERIOR STUD WALLS OR 2-INCHES ABOVE PAVED AREAS.
7. ALL WOOD FRAMING MEMBERS THAT REST ON CONCRETE OR MASONRY EXTERIOR FOUNDATION WALLS & ARE LESS THAN 8" TO THE EXPOSED GROUND SHALL BE PRESSURE TREATED OR NATURALLY DURABLE TO DECAY.
8. SILLS & SLEEPERS IN DIRECT CONTACT WITH CONCRETE OR MASONRY THAT IS IN DIRECT CONTACT WITH THE GROUND & GIRDERS WITH LESS THAN 1/2" CLEARANCE TO MASONRY & CONCRETE SHALL BE PRESSURE TREATED OR NATURALLY DURABLE TO DECAY.
9. ATTIC & FOUNDATION VENTILATION OPENINGS IN VERTICAL WALLS & ATTIC ROOF VENTS SHALL BE FULLY COVERED WITH MINIMUM OF CORROSION-RESISTANT, NONCOMBUSTIBLE WIRE MESH WITH 1/8-INCH OPENING.
10. EXTERIOR WALLS SHALL BE APPROVED NONCOMBUSTIBLE OR IGNITION-RESISTANT MATERIAL, HEAVY TIMBER, OR LOG WALL CONSTRUCTION OR SHALL PROVIDE PROTECTION FROM THE INTRUSION OF FLAMES & EMBERS.
11. EXTERIOR GLAZING & WINDOW WALLS: EXTERIOR WINDOWS, WINDOW WALLS, GLAZED DOORS & GLAZED OPENINGS WITHIN EXTERIOR DOORS SHALL BE INSULATING-GLASS UNITS WITH A MINIMUM OF ONE TEMPERED PANE, OR GLASS BLOCK UNITS, OR HAVE A FIRE-RESISTIVE RATING OF NOT LESS THAN 20 MINUTES.
12. PROVIDE HOUSE STREET NUMBER VISIBLE & LEGIBLE FROM STREET. MINIMUM 4" HIGH x 1" WIDE AND ILLUMINATED AT NIGHT.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. (OBSERVATION OF CONSTRUCTION AS DEFINED IN SECTION 16-115-2 OF THE STATE OF HAWAII)

ERIC TRABERT & ASSOCIATES

E.T.A. RESIDENTIAL DESIGN

9521 IRVINE CENTER DRIVE
IRVINE, CALIFORNIA 92618

TEL: 949.861.2244
FAX: 949.861.2233
www.etadesign.com

SUSHIL GARG
6973 KALANIANA' OLE HIGHWAY
HONOLULU, HI 96825
TMK: (1) 3-9-002: 031

PROJECT DESCRIPTION:
NEW CUSTOM 2-STORY SINGLE FAMILY DWELLING

PROPOSED NEW DWELLING FOR:
M/M SUSHIL GARG
6973 KALANIANA' OLE HIGHWAY,
HONOLULU, HI 96825
TMK: 3-9-002: 031

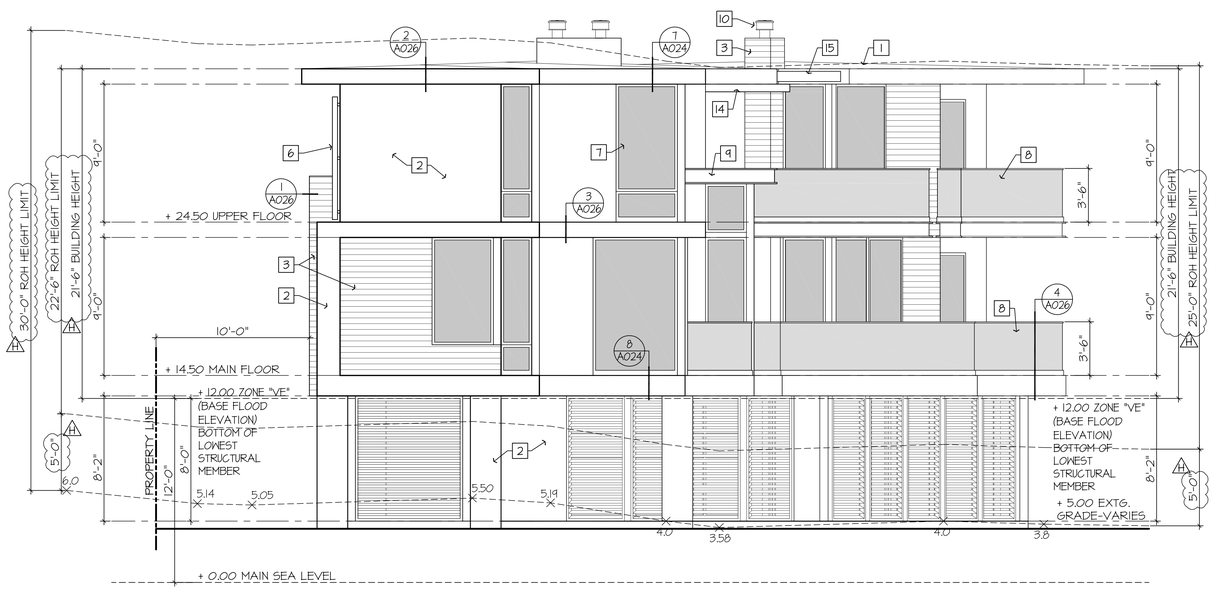
SUBMITTALS:

REVISIONS:
1 04-23-24 PLANNING PC2 - JT

ELEVATIONS

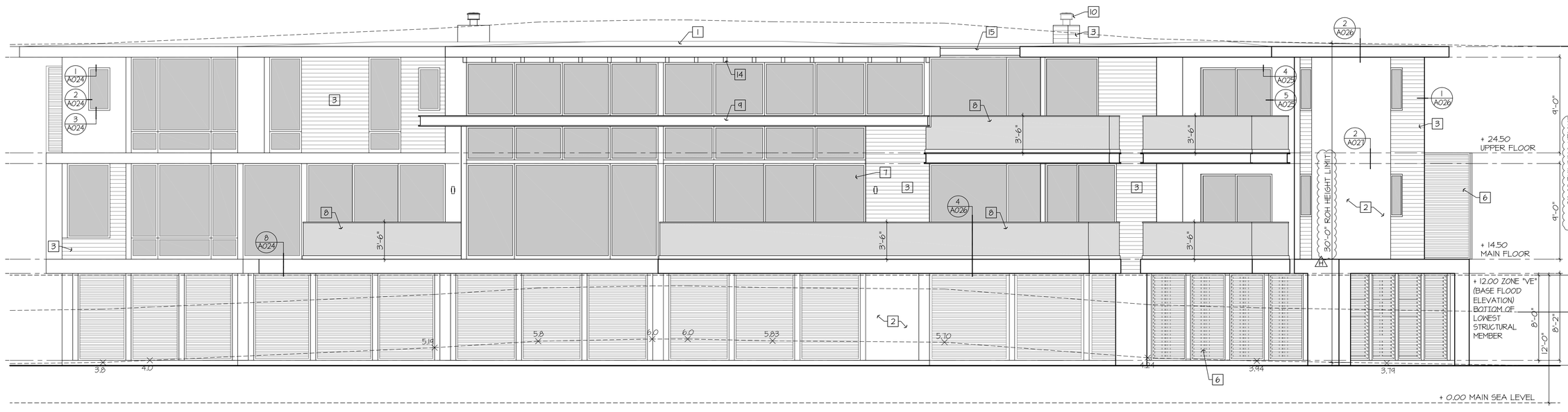
STYLE: CONTEMPORARY
DATE 01.24.2019
DRAWN BY: JT
JOB NO. A010-ELEVATIONS
SCALE 1/4"= 1'-0"
SHEET A010

4/30/2024 1:10:00 PM, JT



RIGHT ELEVATION

NOTE: ALL BATHROOM WINDOWS SHALL BE OBSCURE



REAR ELEVATION

NOTE: ALL BATHROOM WINDOWS SHALL BE OBSCURE

ELEVATION KEYNOTES

1. BUILT-UP ROOF:
   UL TGFUR1306 "GAF" OR APPROVED EQ.
   CLASS "A" ROOFING SYSTEM
   BUILT-UP ROOFING TO BE CRUSHED ROOFING MATERIAL OVER ONE LAYER OF APP. GRANULATED 80 LB. MODIFIED CAPSHEET USING A TORCH OVER ONE LAYER 28 LB. FIBERGLASS BASE SHEET MECHANICALLY FASTENED.
   COLOR TO BE LIGHT TAN GRAVEL.
2. 7/8" THICK STUCCO ON CORROSION RESISTANT METAL LATH O/ 60 MIN., 2 LAYERS OF GRADE D' BUILDING PAPER
3. WOOD SIDINGS TO BE IPE HARDWOOD
4. GARAGE DOOR TO BE ALUMINUM FRAME WITH WHITE LAMINATED TEMPERED GLASS
5. ALUMINUM LOUVER DOOR
6. ALUMINUM SCREEN LOUVER
7. EXTERIOR DOORS & WINDOWS TO BE "WESTERN WINDOW SYSTEMS"
8. 42" MIN. HIGH TEMP. GLASS GUARDRAIL PER ELEV.
9. I-BEAM STEEL CANOPY PER ELEVATION
10. FIREPLACE VENT
11. 4" DRYER VENT LOCATION PER PLAN. 14' MAX. W/ TWO 90° BENDS FOR METAL DUCT; 6' MAX. FOR FLEX GAS CONNECTOR
12. HOUSE STREET NUMBER VISIBLE & LEGIBLE FROM STREET. MINIMUM 4" HIGH x 1" WIDE AND ILLUMINATED AT NIGHT.
13. EXTERIOR LIGHT FIXTURE
14. EXPOSED WOOD RAFTER
15. ADJUSTABLE LOUVERED ROOF

NOTES

1. ANY CHANGES TO THE SHAPE, SIZE AND DIVISIONS OF WINDOWS & DOORS MUST BE REVIEWED & APPROVED BY DESIGNER.
2. THE MUNTIN BARS FOR ALL THE DOOR AND WINDOW BREAK-UPS SHALL BE PROVIDED WITH A MINIMUM OF 1-1/4".
3. ROOF GUTTERS SHALL BE PROVIDED WITH THE MEANS TO PREVENT ACCUMULATION OF LEAVES & DEBRIS.
4. ALL PLUMBING & EQUIPMENT VENTS MUST BE CONSOLIDATED & LOCATED IN AREAS THAT MINIMIZE THEIR VISIBILITY. VENTS MUST BE AS LOW IN HEIGHT AS ALLOWED BY CODE & SATISFY THE REQUIREMENTS OF THE DESIGN GUIDELINES.
5. FIELD CUTTING ENDS, NOTCHES, AND DRILLED HOLES OF PRESERVATIVE TREATED WOOD SHALL BE TREATED IN FIELD.
6. WEEP SCREED SHALL BE OF MINIMUM NO. 26 GALVANIZED SHEET GAGE, CORROSION-RESISTANT LOCATED BELOW FOUNDATION PLATE LINE AND 4-INCHES ABOVE GRADE ON ALL EXTERIOR STUD WALLS OR 2-INCHES ABOVE PAVED AREAS.
7. ALL WOOD FRAMING MEMBERS THAT REST ON CONCRETE OR MASONRY EXTERIOR FOUNDATION WALLS & ARE LESS THAN 8" TO THE EXPOSED GROUND SHALL BE PRESSURE TREATED OR NATURALLY DURABLE TO DECAY.
8. SILLS & SLEEPERS IN DIRECT CONTACT WITH CONCRETE OR MASONRY THAT IS IN DIRECT CONTACT WITH THE GROUND & GIRDERS WITH LESS THAN 1/2" CLEARANCE TO MASONRY & CONCRETE SHALL BE PRESSURE TREATED OR NATURALLY DURABLE TO DECAY.
9. ATTIC & FOUNDATION VENTILATION OPENINGS IN VERTICAL WALLS & ATTIC ROOF VENTS SHALL BE FULLY COVERED WITH MINIMUM OF CORROSION-RESISTANT, NONCOMBUSTIBLE WIRE MESH WITH 1/8-INCH OPENING.
10. EXTERIOR WALLS SHALL BE APPROVED NONCOMBUSTIBLE OR IGNITION-RESISTANT MATERIAL, HEAVY TIMBER, OR LOG WALL CONSTRUCTION OR SHALL PROVIDE PROTECTION FROM THE INTRUSION OF FLAMES & EMBERS.
11. EXTERIOR GLAZING & WINDOW WALLS: EXTERIOR WINDOWS, WINDOW WALLS, GLAZED DOORS & GLAZED OPENINGS WITHIN EXTERIOR DOORS SHALL BE INSULATING-GLASS UNITS WITH A MINIMUM OF ONE TEMPERED PANE, OR GLASS BLOCK UNITS, OR HAVE A FIRE-RESISTIVE RATING OF NOT LESS THAN 20 MINUTES.
12. PROVIDE HOUSE STREET NUMBER VISIBLE & LEGIBLE FROM STREET. MINIMUM 4" HIGH x 1" WIDE AND ILLUMINATED AT NIGHT.

SCALE: 1/4"=1'-0"
0 2' 10'
1' 5' 15'

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION. CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. (OBSERVATION OF CONSTRUCTION AS DEFINED IN SECTION 16-115-2 OF THE STATE OF HAWAII)

ERIC TRABERT & ASSOCIATES
E.T.A.
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REVISIONS:
1. 04-23-24 PLANNING PC2 - JT

ELEVATIONS

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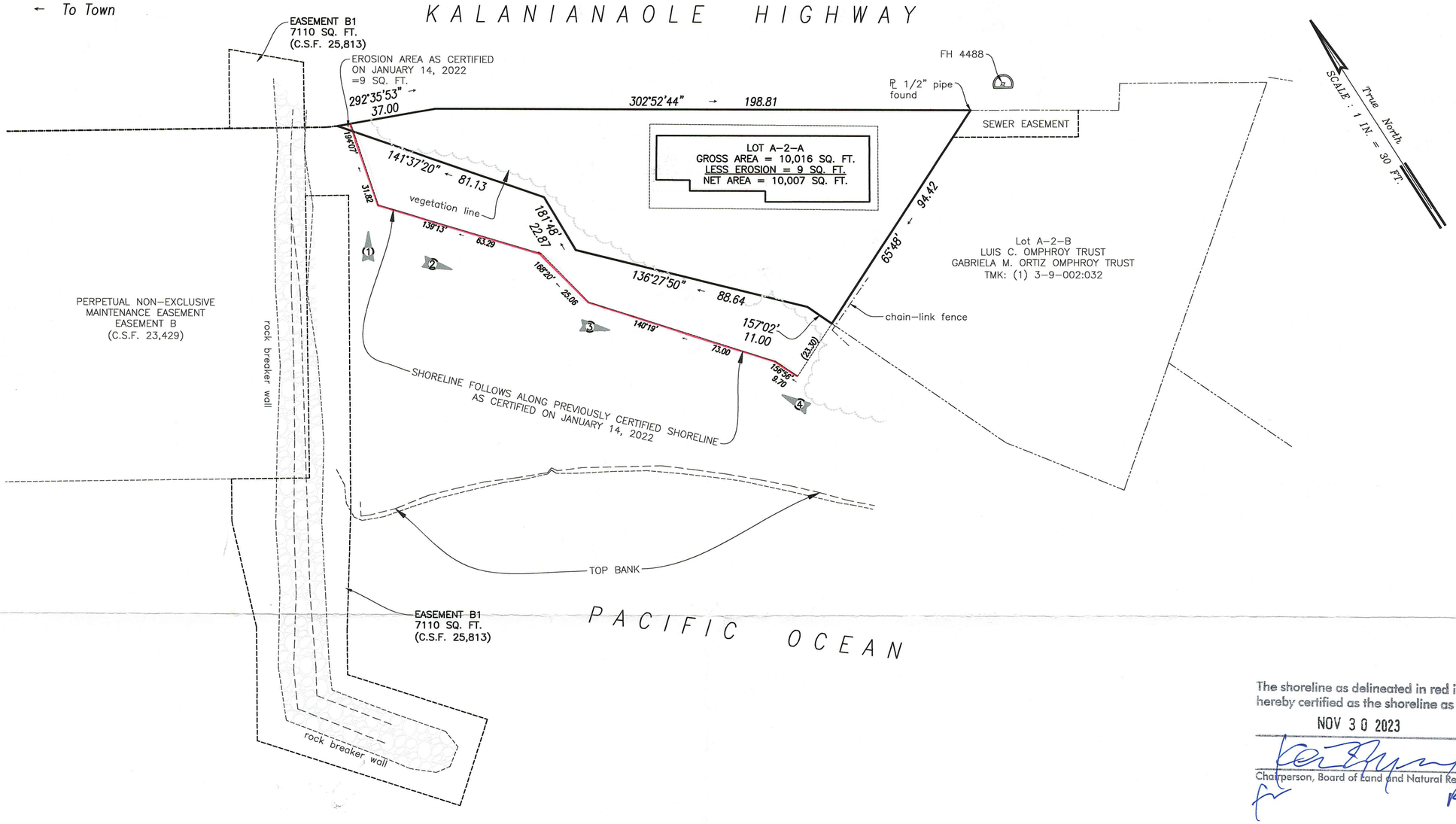
JOB NO. A011-ELEVATIONS
SCALE 1/4"= 1'-0"
SHEET A011

4/30/2024 1:13:14 PM, JT

APPENDIX C

SHORELINE CERTIFICATION MAP



The shoreline as delineated in red is hereby certified as the shoreline as of

NOV 30 2023

Chairperson, Board of Land and Natural Resources

NOTES:

1. Azimuths shown on this map are referred to Government Survey Triangulation Station "KOKO HEAD 3".
2. Shoreline certification is for building setback purposes.
   (1) Denotes photo number and direction.
3. Map is based on a field survey on July 6-7, 2023.

TMK: (1) 3-9-002: 031

SHORELINE CERTIFICATION MAP

6973 KALANIANAOLE HIGHWAY

BEING LOT A-2-A OF THE MAUNALUA BEACH SUBDIVISION

BEING A POR. OF R.P. 4475, L.C. AW. 7713, AP. 30 TO V. KAMAMALU

AT MAUNALUA, HONOLULU, OAHU, HAWAII

HAWAII ENGINEERING GROUP, Inc.
Civil & Structural Engineers
Executive Center
1088 Bishop Street, Suite #2506
Honolulu, Hawaii 96813
Phone: (808) 533-2092
Fax: (808) 533-2059
email: heg@hawaiiengineering.net

CLAYTON M. KANESHIRO
LICENSED PROFESSIONAL LAND SURVEYOR
No. 12972
HAWAII, U.S.A.

Clayton M. Kaneshiro
Licensed Professional Land Surveyor
Certificate Number 12972
Exp. Date: 04/30/24

OWNER: SUSHIL AND LORENE GARG
SITE ADDRESS: 6973 KALANIANAOLE HIGHWAY
HONOLULU, HAWAII 96825

JULY 10, 2023
REVISED: OCTOBER 16, 2023

JOB: 21-028

24" x 18"

ARCH full bleed C (24.00 x 18.00 Inches)

APPENDIX D

COMMUNITY CONSULTATION

HAWAII KAI
NEIGHBORHOOD BOARD

REGULAR MEETING AGENDA – INITIAL CONVENING MEETING

Tuesday, July 26, 2022

Hawaii Kai Neighborhood Board #1
c/o Neighborhood Commission Office
925 Dillingham Blvd., #160
Honolulu, Hawaii 96817
Phone: (808) 768-3710
Fax: (808) 768-3711
www.honolulu.gov/nco

Hawaii Kai Neighborhood Board meets 7 p.m. the last Tuesday of every month except Dec. at Hahaione Elementary School cafeteria. The public is welcome to attend.

7:00 pm Hahai'one Elementary School Cafeteria and Via WebEx – Access Information:

Meeting Link:
https://cchnl.webex.com/cchnl/j.php?MTID=m705bfb4e0e85975863f2530244a6a6ec
Meeting Number: 2487 410 3275
Password: HKNB#1 (456201 from phones and video systems)
Join By Phone: 1-408-418-9388
United States Toll Access Code: 2487 410 3275

1. CALL TO ORDER – *Chair Pro Tem Roberta Mayor*
1.1. Introduction of Board members

2. ELECTION OF OFFICERS TO SERVE FROM JULY 26, 2022 TO JUNE 30, 2023
The officers to be elected are the Chair, one or more Vice Chairs, a Secretary, a Treasurer.

3. MEETING DETERMINATION: DATE/TIME, LOCATION FROM AUGUST 2022 TO AUGUST 2023. Meetings have traditionally been held on the last Tuesday of each month, at Hahai'one Elementary School and/or on WebEx, beginning at 7:00 p.m.

4. DETERMINATION OF RECESS SCHEDULE FROM AUGUST 2022 TO AUGUST 2023
The Hawaii Kai Neighborhood Board has traditionally recessed its December meeting.

5. STATUS REPORTS–*Three (3) minutes maximum per department. Questions to follow.*
5.1. Honolulu Fire Department
5.2. Honolulu Police Department
5.3. Board of Water Supply
5.4 Kaiser Complex Schools

6. VACANCIES: SUBDISTRICTS 1 and 10.
Appointment through June 2023. Three minutes per candidate. See endnote[1]

7. COMMUNITY ANNOUNCEMENTS – *Brief announcements by board members and the public on events, activities, and general information directly relating to Hawaii Kai.*

8. PUBLIC-GENERATED ISSUES– *Two (2) minutes per speaker. Questions to follow. Issues/concerns not listed elsewhere on the Board's agenda may be raised but no Board action may be taken because of the "Sunshine Law."*

9. PRESENTATIONS – Five (5) minutes per presentation. Questions to follow. Discussion or action as needed.
9.1. Housing Hawaii's Future (Addressing the Workforce Housing Shortage) – Presenter: Sterling Higa, Executive Director of Housing Hawaii's Future
9.2. 6973 Kalanianaole Hwy Single Family Residential Project SMA Application – Presenter: Roy Irei, VP Telecom Division, Hawaii Engineering Group

10. OFFICIALS' REPORTS – *Three (3) minutes per speaker. Reports should relate to issues of interest to residents of Hawaii Kai. Questions to follow.*
10.1. Mayor Rick Blangiardi's Representative – Amy Asselbaye
10.2. City Council Chair Tommy Waters – District 4
10.3. Governor David Ige's Representative – Doug Murdock
10.4. Senator Stanley Chang – District 9

10.5. Senator Chris Lee – District 25
10.6. Representative Gene Ward – District 18
10.7. Representative Mark Hashem – District 19
10.8. Congressional Representatives

11. BOARD BUSINESS – *For discussion/action. Five (5) minutes.*
11.1. Update on Luana Kai, A Proposed Life Plan Community in Hawaii Kai
11.2. Update on Koko Crater Stables
11.3. Update on Kaiwi Coast Scenic Byway
11.4. Update on Kamilo Nui Valley Agriculture
11.5. Update on Early Morning Hikers at Koko Head District Park

12. BOARD COMMITTEES
12.1. Board Committees: Transportation, Education, Parks & Recreation, Planning & Environment
12.2. Announcements by committee chairpersons or members as needed.

13. TREASURER'S REPORT

14. APPROVAL OF REGULAR MEETING MINUTES – *Minutes for June 26, 2022.*

15. OTHER BOARD ANNOUNCEMENTS
15.1. Board Member Announcements
15.2. Board Chairperson Announcements

16. CLOSING ANNOUNCEMENTS
16.1. The next regular meeting of the Hawaii Kai Neighborhood Board is Tuesday, August 30, 2022, 7:00 p.m., at Hahai'one Elementary School Cafeteria.
16.2. Hawaii Kai Neighborhood Board regular meetings are cablecast on Olelo Ch. 49 on the 2nd Monday of the following month at 9:00 p.m. repeating on that month's 3rd Friday and the next month's 1st Friday at 7:00 a.m. Videos can also be seen online at *www.olelo.org/olelonet* (search "Hawaii Kai Board"), or via *www.honolulu.gov/nco/boards* ("Board Meeting Video Archive").

17. ADJOURNMENT

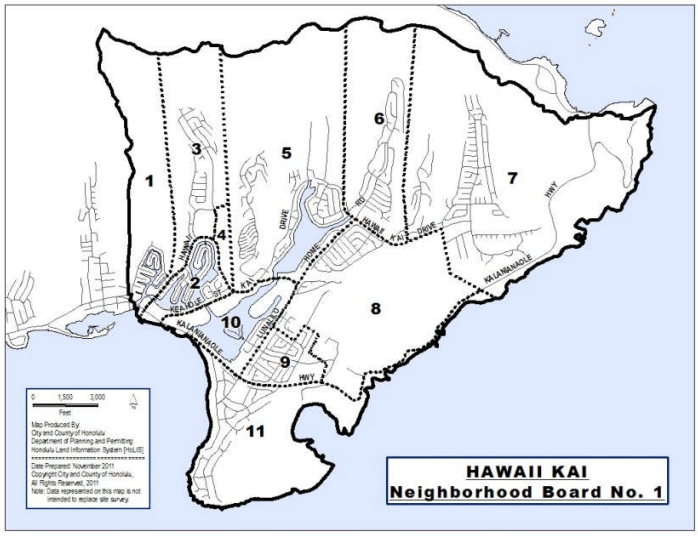
[1] **VACANCY: SUB DISTRICT 1 (Marina West) and SUB DISTRICT 10 (Marina East)** – *Appointment through June 30, 2023. Candidates must be 18 or older and reside in their district (bring official ID). Board majority of at least eight votes needed for appointment. More than one round of voting may occur. Successful candidate will take Oath of Office upon appointment.* ***Boundary descriptions are available online at http://www.honolulu.gov/cms-nco-menu/site-nco-sitearticles/20115-board-subdistrict-descriptions.html.***

Hawaii Kai Neighborhood Board

For agenda, minutes, member contact directory, and other information, go to www.honolulu.gov/nco/boards.

To receive this Board's agenda and minutes by mail or email, visit the Neighborhood Commission Office, 925 Dillingham Blvd., Suite 160, Honolulu, Hawaii 96817; call 768-3710 or fax 768-3711; or go to www.honolulu.gov/nco.

If you would like to attend a Neighborhood Board meeting and have questions about accommodations for a physical disability or a special physical need, call the Neighborhood Commission Office at 768-3710 between 8:00 a.m. and 4:00 p.m. at least 24 hours before the scheduled meeting.



HAWAIʻI KAI NEIGHBORHOOD BOARD NO. 1
NEIGHBORHOOD COMMISSION 925 DILLINGHAM BOULEVARD, SUITE 160 HONOLULU, HAWAII, 96817
PHONE (808) 768-3710 FAX (808) 768-3711 INTERNET http:///www.honolulu.gov/nco

DRAFT REGULAR MEETING MINUTES
TUESDAY, JULY 26, 2022
HAHAI'ONE ELEMENTARY AND VIDEO TELECONFERENCE (WEBEX)

CALL TO ORDER – Chair Roberta Mayor called the meeting to order at 7:00 p.m. and thanked attendees for coming. **A quorum was established with 12 members present at 7:00 p.m.** Note: This 15-member Board requires eight (8) members to establish a quorum and to take official Board action.

Board Members Present: Roberta Mayor, Elizabeth Reilly, Byron Apo, Greg Knudsen, Kaleo Nakoa, Marian Grey, Tatiana Quong, Samuel Wolff, Elijah Lee, Herb Schreiner, Kim Hollandsworth, and Paige Altonn.

Board Members Absent: Tehani Malterre.

Guests: Firefighter John Chun (Honolulu Fire Department); Lieutenant Nishimura, Sergeant Hong (Honolulu Police Department); Iris Oda (Board of Water Supply); Adam Doo (Councilmember Tommy Waters' Representative); Doug Murdock (Governor David Ige's Representative); Representative Gene Ward; Kama Hopkins (Manoa Neighborhood Board Chair); Sterling Higa (Housing Hawaii's Future); Diamond Garcia, Dick Johnson, Keola Fisher, Cynthia Sims, Lisa Bishop, Elizabeth Jordan, Hauoli Keawe-Aiko, Travis Counsell, Skip Williams, Chris Cramer, Simeon Rojas, Dylan Whitsell, (Residents); Olelo Virtual, and Neighborhood Assistant (NA) Partner Akiona (Neighborhood Commission Office). **Total Attendees: 28**

ELECTION OF OFFICERS
Chair: **Reilly NOMINATED Mayor to the Chair position. Mayor accepted the nomination. Mayor was elected to the Chair position by UNANIMOUS roll call vote.**

Vice Chair: **Altonn NOMINATED Reilly to the Vice Chair position. Reilly accepted the nomination. Reilly was elected to the Vice Chair position by MAJORITY roll call vote (Aye:** Mayor, Reilly, Nakoa, Grey, Quong, Wolff, Lee, Schreiner, Hollandsworth, Apo, Altonn; **Nay:** Knudsen; **Abstain:** None**).**

Secretary: **Knudsen NOMINATED Malterre to the Secretary position. Malterre was not present to accept the nomination. Malterre was elected to the Secretary position by MAJORITY roll call vote (Aye:** Mayor, Reilly, Knudsen, Nakoa, Grey, Quong, Wolff, Lee, Schreiner, Apo, Altonn; **Nay:** None; **Abstain:** Hollandsworth**).**

Treasurer: **Reilly NOMINATED Apo to the Treasurer position. Apo accepted the nomination. Apo was elected to the Treasurer position by UNANIMOUS roll call vote.**

Meeting Determination: **Chair Mayor proposed to retain the current meeting schedule of the last Tuesday of each month, at Haha'ione Elementary School and Webex, start time 7:00 p.m. The board retained the current meeting schedule by UNANIMOUS consent.**

Meeting Recess Schedule: **Chair Mayor proposed for the board to recess during the month of December. The board approved to recess during the month of December by UNANIMOUS consent.**

STATUS REPORTS
Honolulu Fire Department: Firefighter John Chun reported the following:
- June 2022 Statistics: One (1) Nuisance Fire; One (1) Cooking Fire; One (1) Activated Alarm; 81 Medical Calls; 10 Motor Vehicle Crash/Collision; Three (3) Mountain Rescues.
- Safety Tips – Grilling: Chun provided information on grilling safety. More information can be found at: http://www.honolulu.gov/hfd.

Questions, comments, and concerns followed:
1. Statistics: Member Knudsen requested the statistics relating to Emergency Medical Services (EMS) call responses/co-responses with HFD to an emergency call.

Honolulu Police Department: Sergeant Adam Lipka reported the following:
- June/May 2022 Statistics: 9/2 Motor Vehicle Thefts; 5/3 Burglaries; 13/17 Thefts; 16/26 Unauthorized Entry to a Motor Vehicle.
- Hurricane Preparedness Tips: Go to ready.hawaii.gov to find out and learn what to do to prepare for a hurricane.

Questions, comments, and concerns followed:
1. Staffing: Member Altonn inquired on the size of the district, the number of watches and the number of officers per watch. The district runs from Punahou Street to Makapu'u lighthouse, and operations assigns the officers to the 3 watches.
2. Maunalua Bay: Chair Mayor shared a resident's query if HPD is aware of the residentially-challenged individual currently residing at Maunalua Bay and if services have been provided or any action taken by HPD. Member Nakoa gave additional information regarding the individual.

Chair Mayor called a recess at 7:38 p.m. to restore order and decorum. Chair Mayor gaveled the meeting back to order at 7:43 p.m.

3. Vehicle: Member Reilly queried what HPD can do regarding a vehicle operating within the district with expired tags.
4. Encampment: Member Hollandsworth inquired about the residentially-challenged encampment on the mountain side of Kalanianaole Highway across from Wawamalu Beach Park. She expressed concerns about the unsanitary conditions and the possible fire hazard posed by the growing encampment.

Board of Water Supply (BWS): Iris Oda reported the following:

- General Water Announcements: July is Smart Irrigation Month. For information on ways to adjust your irrigation methods go to https://www.boardofwatersupply.com/irrigation.
- Response: Oda gave responses to questions and concerns mentioned during the June 2022 regular meeting.

Questions, comments, and concerns followed:

1. Pressure: Member Reilly commented on the water pressure issue for the farmers in Kamilo Nui Valley. She also commented on the delay in the completion of the Watershed Management Plan.
2. Cost: Member Wolff inquired about the cost the BWS (and the taxpayers of Hawaii) has incurred on behalf of the United States Navy in addressing the Red Hill Fuel Crisis.
3. Answers: Member Altonn asked for clarification on BWS's determination that improvements to the water infrastructure in Hawaii Kai have been made, thus making it possible to support the Luana Kai Development Project? Ms. Oda will inquire specifically about Kalama Valley and report at next month's meeting.
4. Watering: Member Altonn questioned the watering practices at Koko Head Elementary as it contradicts the watering guidelines advertised by BWS. Ms. Oda noted that some watering is done during the entity's working hours.
5. Support: Member Hollandsworth reiterated her question from previous meetings regarding the ability for the BWS infrastructure to support the Luana Kai Development Project.
6. Corrections: Member Knudsen commented on the current water infrastructure within Kalama Valley, noting that further improvement is necessary.
7. Request: Member Altonn suggested that BWS present an official to the board who can answer the questions the board presents.

Kaiser Complex Schools: Representative not present. No report given.

FILLING OF VACANCIES: Sub-Districts 1 and 10: There were no volunteers to fill the vacancies.

COMMUNITY ANNOUNCEMENTS:

- Hawea Heiau & Keawawa Wetland: Announcement of a volunteer workday on Saturday, August 13, 2022 and every second Saturday from 8:00a.m. - 11:30p.m. Sign-up sheet is available for volunteers.
- Kahala Hilton: Member Reilly mentioned the cultural activities calendar at the Kahala Hilton Hotel. Activities are free to Oahu residents. For more information and reservations call 808-739-8911.
- Century Ride: Travis Counsell from Hawaii Bicycling League announced the Century Ride taking place on Sunday, September 25, 2022, starting at 6:15 a.m. from Kapiolani Park.

PUBLIC-GENERATED ISSUES:

- Land: Member Lee reported on information he received regarding a parcel within the district known as the McCoriston Property and the equipment/material stockpiling that has occurred there. Member Reilly also commented on the status of the property. Chair Mayor will retain this item for the August 2022 regular meeting agenda for an update.
- Farms: Member Apo reported on a number of farms located behind Kaiser High School on Pakala Street and requested to know what State or City agency monitors the farms' use of pesticides and what measures the farms are taking to protect residents from the use of pesticides.
- Concern: Member Hollandsworth reiterated her concern regarding a car that was set on fire on the mauka side of Kalanianaole Highway across from Wawamalu Beach. Since the initial incident, four (4) additional vehicles have arrived at the same spot. She has reached out to countless city and state entities for help, to no avail.

PRESENTATIONS

Housing Hawaii's Future – Sterling Higa, Executive Director: Higa presented to all in attendance, his organization's focus and goal of improving the current workforce housing shortage in Hawaii and how that can become possible. Discussion followed. Higa responded to numerous questions concerning affordable housing, work force housing, reasons for the scarcity of housing, and median income required by an average family to acquire housing.

SMA Application – Roy Irei, Hawaii Engineering Group: Irei presented to all in attendance, an update regarding the proposed single family residential project SMA application for the property located at 6973 Kalanianaole Highway. Discussion followed. Irei responded to questions about any increases in size or height of the renovation, and if the property would be owner occupied. Concerns were also raised about possible cultural artifacts that might be present at the site that need to be removed and saved.

OFFICIALS' REPORTS:

Mayor Rick Blangiardi's Representative: Representative not present. No report given.

Council Chair Tommy Waters: Adam Doo reported the following:

- Deadline: The deadline to file for the homeowner's tax exemption is Friday, September 30, 2022. For more information go to www.realpropertyhonolulu.org or call 808-768-3799.
- Canal: The Ana Palau Canal was cleared on the week of July 11, 2022.
- Follow-up: Mr. Doo provided updates on last month's concerns.
- Concern: The Councilmember's office will look into the situation mentioned by member Hollandsworth regarding the vehicles used as housing by residentially challenged individuals along Kalanianaole Highway.

Questions, comments, and concerns followed:
Gate: The Chair requested a status update on the resolution submitted by Waters' office regarding the opening of the Koko Head District Park Gate for early morning hikers. Mr. Doo indicated it had not yet been acted upon.

Governor Ige's Office: Doug Murdock was present, but had no report. He was available to take concerns.

Senator Stanley Chang: Representative not present. No report given. Physical newsletter was available at the meeting venue.

Senator Chris Lee: Representative not present. No report given.

Representative Gene Ward: Ward reported on items covered in his monthly newsletter.
Questions, comments, and concerns followed:

Tactic: Member Altonn queried if Kamehameha Schools is utilizing the cesspool issue as a "playing card" due to the leases being up in 2025.
Beer Summit: Member Nakoa asked for a reason on choosing Josh Green and Duke Aiona as the featured candidates at the Beer Summit after the primary election is completed. Also, if Aiona loses in the primary, will Ward choose another candidate? Rep. Ward noted he was following the polls, and it was his intention to feature the two primary election winners.
Voting: Member Nakoa asked why in-person voting is not a listed option along with other options covered in his newsletter and Ward's opinion on the unmanned ballot droboxes. Discussion followed on the safety of ballots in the drop boxes.
Solution: Member Schreiner recommended a safety solution, that voters should hand deliver their mail-in ballots to a polling location to ensure voter identification and integrity.
Registration: Member Grey asked for Ward's best resolution to voter fraud.

Representative Mark Hashem: No representative present. No report given.

Congressional Representatives: No representatives present. No reports given.

BOARD BUSINESS
Update on Luana Kai - A Proposed Life Plan Community in Hawai'i Kai: No updates were provided by the project developers. Impact studies are still being conducted which will be reported once completed. The Planning and Environment Committee, co-chaired by members Reilly and Lee, will hold a public meeting on Luana Kai on Tuesday, August 16, 2022, 7:00 p.m. at Hawaii Kai Library. Co-chair Lee will solicit community input about Luana Kai, explore alternative uses for the Kalama Valley Shopping Center, and consider other possible locations in Hawaii Kai more suitable for a senior residential facility.

Update on Koko Crater Stables: No update provided. Member Reilly requested a copy of the RFP for board review. Member Schreiner provided a brief update, and Member Nakoa shared a personal experience in trying to work with the current management.

Update on Kaiwi Coast Scenic Byway: Chair Mayor forwarded resident Liggett's latest update regarding Wawamalu Beach. Member Reilly commented that the situation mentioned by member Hollandsworth might become the new concern in the protection of the coastline. Member Hollandsworth mentioned she will be meeting with elected officials and representatives tomorrow morning to observe the severity of the situation posed by the encampment across from Wawamalu Beach Park. Member Nakoa mentioned threats to public safety based on this issue.

Update on Kamilo Nui Valley Agriculture: Member Reilly, Co-Chair of the Planning and Environment Committee, is the point person regarding the issues affecting Kamilo Nui Valley. Updates on the poor water pressure, the requirement to connect to the sewer system, and the end of the leases in 2025, were given earlier in the meeting. This item will remain on future agendas.

Update on Early Morning Hikers at Koko Head District Park: This item was discussed earlier under the Council Chair's report. It has become a community issue as individuals waiting to enter the park prior to the gates being opened, cause a disruption to the surrounding residents and community.

Candidate Forum: Chair Mayor asked if the board is interested in hosting a candidate forum prior to the general election, possibly in conjunction with a regular Neighborhood Board meeting, and possibly with Neighborhood Board #2. Additional information will be shared at the next board meeting. Members willing to volunteer to work on such a forum should let the chair know.

BOARD COMMITTEES: No reports given.

TREASURER'S REPORT: The Neighborhood Commission will be reassessing the Treasurer's report in the coming months.

APPROVAL OF REGULAR MEETING MINUTES: **The board ADOPTED the Tuesday, June 26, 2022, regular meeting minutes as presented by UNANIMOUS consent.**

CLOSING ANNOUNCEMENTS:

- Meeting: The next regular meeting is Tuesday, August 30, 2022, 7:00 p.m. at Hahai'one Elementary School cafeteria and via WebEx.
- Olelo: The Hawai'i Kai Neighborhood Board's regular meetings are cablecast on Olelo Ch. 49 on the 2nd Monday of the following month at 9:00 p.m., repeating on that month's 3rd Friday and the next month's 1st Friday at 7:00 a.m. Videos can also be seen online at www.olelo.org/olelonet (search "Hawai'i Kai Board"), or via www.honolulu.gov/nco/boards ("Board Meeting Video Archive").

ADJOURNMENT – The meeting was adjourned by the Chair at 9:45 p.m.

Submitted By: Partner Akiona, Neighborhood Assistant
Reviewed and Finalized By: Roberta Mayor, Chair

Hawaii Kai Neighborhood Board No. 01

Questions Asked by the Neighborhood Board During the July 26, 2022 Meeting:

1. Will you be blocking traffic during construction?
   Hawaii Engineering Group, Inc. response: Yes, during non-peak traffic hours between 9 am to 3 pm, just for ingress/egress onto the property. There is an existing driveway on the property that is 16 feet wide to support deliveries.

2. Please consider donating the materials from demolition to Re-Use Hawaii.
   Hawaii Engineering Group, Inc. response: I will convey the message. (Owner will consider it)

3. How much taller will the new house be?
   Hawaii Engineering Group, Inc. response: Existing house is 25 feet; new house will be approximately 29 feet.

4. How far back will the new house be from the shoreline?
   Hawaii Engineering Group, Inc. response: Setback from the shoreline high water mark is 40', but this is a narrow lot.

5. How far back is the existing house from the shoreline?
   Hawaii Engineering Group, Inc. response: Approximately 40'.

6. How many bedrooms and bathrooms will the new house have?
   Hawaii Engineering Group, Inc. response: 6 bedroom and 4 baths (Note: I miss counted)

7. This new house is so much larger than the old, how much larger is it?
   Hawaii Engineering Group, Inc. response: Current house is approximately 2,800 sq. ft., and the new house is approximately 4,700 sq. ft. The existing house is a two-story and too small for the new family. The owner has 5 children.

8. Is the new owner a local resident or looking to move into Hawaii?
   Hawaii Engineering Group, Inc. response: No, the owner currently lives on the mainland looking to live in the new residence.

9. Will he be a Hawaii resident?
   Hawaii Engineering Group, Inc. response: He's looking to move here.

10. There is nearby Fishpond that is culturally sensitive and former owner of the property used be the caretaker. What kind of cultural studies have you done on the property and the Fishpond?
    Hawaii Engineering Group, Inc. response: Not sure, but we engaged Ford & Associates to conduct an EA.

11. Can we have the opportunity to review the draft EA? Please provide it to us when available.
Hawaii Engineering Group, Inc. response: Yes, will provide it to you.

12. Vice Chair will contact me (Hawaii Engineering Group, Inc.) to introduce Chris who is the care taker of the Fish Pond.

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

RICK BLANGIARDI
MAYOR

DAWN TAKEUCHI APUNA
ACTING DIRECTOR

December 20, 2022

Mr. Alan Downer
State Historic Preservation Division
Department of Land and Natural Resources
601 Kamokila Boulevard, Room 555
Kapolei, Hawaii 96707

Dear Mr. Downer:

SUBJECT: Request for Comments

Garg Residence
6973 Kalanianaole Hwy
(1) 3-9-002: Parcel 031

On behalf of the proponent for the above-mentioned project, the Department of Planning and Permitting (DPP) hereby requests that the State Historic Preservation Division review and comment on the effect of the above-mentioned project on historic and cultural properties, in accordance with any and all applicable regulations. This request will help facilitate the processing of a pending or future land use approval.

Please note that this project has not been initiated by the DPP, and this letter should not be construed as a land use approval of any kind.

Should you have any questions, please contact our staff at (808) 768-8000 or dpp@honolulu.gov, or contact the applicant or the applicant's agent for the project at:

Roy Irei
808-460-0006
roy@hawaiiengineering.net

Very truly yours,

Dawn Takeuchi Apuna
Acting Director

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

SYLVIA LUKE
LIEUTENANT GOVERNOR | KA HOPE KIA'ĀINA

KA MOKU'ĀINA 'O HAWAI'I
DEPARTMENT OF LAND AND NATURAL RESOURCES
KA 'OIHANA KUMUWAIWAI 'ĀINA
OFFICE OF CONSERVATION AND COASTAL LANDS
P.O. BOX 621
HONOLULU, HAWAII 96809

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

LAURA H.E. KAAKUA
FIRST DEPUTY

M. KALEO MANUEL
DEPUTY DIRECTOR - WATER

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

REF:OCCL:CM

Correspondence: OA 23-132

Mar 22, 2023

Lori Ford
Ford and Associates, Inc.
928 Nuuanu Avenue, Suite 505
Honolulu, HI 96817

SUBJECT: Pre-Assessment Consultation for Draft Environmental Assessment (DEA) of Proposed NMG HI Properties LLC Residence Project Located at 6973 Kalanianaole Highway; Maunalua Beach Subdivision, Oahu; Tax Map Key (TMK): (1) 3-9-002:031

Dear Ms. Ford,

The Office of Conservation and Coastal Lands (OCCL) has reviewed your correspondence regarding the proposed demolition and construction of a new home at the subject location. Accordingly, the project will include the demolition of an existing house and the re-building of a new dwelling. Staff's research identified the project site is in the State of Hawaii Urban Land Use District, and the City and County of Honolulu's R-10 Residential District. You are requesting a pre-consult for a DEA to determine possible environmental, social and economic impacts associated with the project.

The OCCL regulates land uses in the State Land Use Conservation District. Staff's research revealed that this property is currently not located in the Conservation District, however, the parcel abuts the shoreline area and may likely be impacted by future climate changes and sea level rise. A review of the Hawai'i State Sea Level Rise Viewer (https://www.pacioos.hawaii.edu/shoreline/slr-hawaii/) indicates that the subject parcel lies within the sea level rise exposure area (SLR-XA). The OCCL has attached **Exhibit 1** regarding the SLRXA for your information. We suggest that you include a thorough discussion of coastal hazards, climate change, sea level rise, and associated impacts in the EA. As the landowner's agent, you may want to consider reviewing the Hawaii Sea Level Rise Vulnerability and Adaptation Report (2017). A copy of the report can be obtained at https://climateadaptation.hawaii.gov/wp-content/uploads/2017/12/SLR-Report_Dec2017.pdf .

Potential structures should be sited away from the shoreline as private shoreline hardening structures are prohibited at sites having sand beaches under Act 16 (2020)

that amended HRS 205A. The OCCL also suggests the EA disclose any potential impacts to lateral shoreline access that the project may pose as well as how the landowner intends to support access along this stretch of coast.

OCCL notes that immediately west of the subject property is the boat entrance to the Hawaii Kai Marina. The shoreline of the boat entranceway is covered by a Land Office Deed No. 28553 issued to the Hawaii Kai Marina Community Association for a rock groin structure.

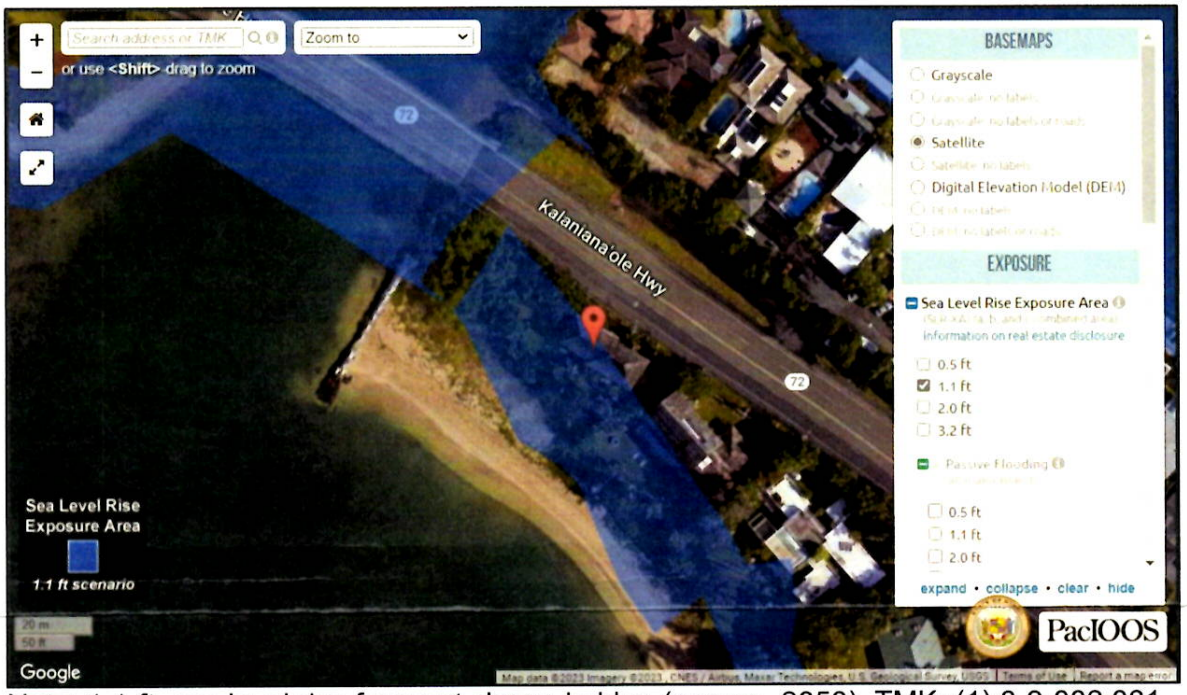
Should you have any questions regarding this correspondence, contact Cal Miyahara of the Office of Conservation and Coastal Lands at (808) 798-6147 or calen.miyahara@hawaii.gov.

Sincerely,

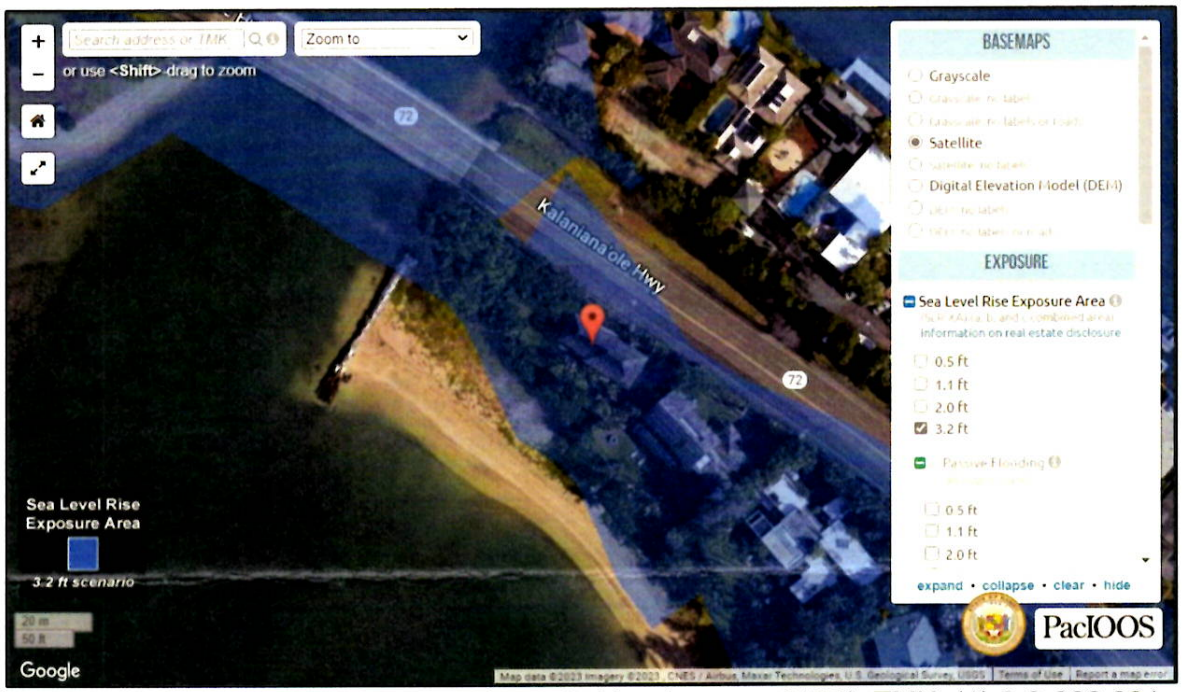
S Michael Cain

Michael Cain, Administrator
Office of Conservation and Coastal Lands

C: ODLO
City-Department of Planning and Permitting



Note: 1.1-ft. sea level rise forecast shown in blue (approx. 2050). TMK: (1) 3-9-002:031.



Note: 3.2-ft. sea level rise forecast shown in blue (approx. 2100). TMK: (1) 3-9-002:031.

Exhibit 1

HAWAII
ENGINEERING
GROUP, INC.

Consulting Civil Engineers, Structural Engineers, Land Surveyors, & Land Use Planning
US (SBA) SDB & DBE Certified

January 30, 2023

Lt. Col. Ryan Pevey
U.S. Army Corp of Engineers
Fort Shafter Bldg 230
Fort Shafter, Hawaii 96858-5440

Subject: Pre-Assessment Consultation for Draft Environmental Assessment and Environmental Review Record: Parcel, TMK Nos. (1) 3-9-002:031 Honolulu, O'ahu, Hawai'i

Attn: Lt. Col. Pevey,

Ford & Associates Inc., on behalf of NMG HI Properties LLC, is in the process of preparing a Chapter 343 Hawaii Revised Statutes (HRS) Environmental Assessment (EA) and National Environmental Policy Act (NEPA), 24 Code of Federal Regulations (CFR) Part 58 Environmental Record Review (ERR) for the proposed demolition and re-building a new residential dwelling (TMK No. (1) 3-9-002:031 in Honolulu on the Island of O'ahu. Please see the enclosed Location Map. This document is being prepared to evaluate and document the possible environmental, social and economic consequences associated with the project scope.

We are in the project scoping phase and are seeking your input in terms of issues that would identify potential environmental impacts associated with the proposed project.

In conjunction with this work, we are requesting any written comments and/or information with respect to your area(s) of concern. Please send your written comments to the following by February 28, 2023:

Lori Ford
Ford & Associates, Inc..
928 Nuuanu Avenue, Suite 505
Honolulu, Hawai'i 96817

Please send a copy of your comments to:

Roy Irei
Hawaii Engineering Group, Inc.
1088 Bishop Street, Suite 2506
Honolulu, HI 96813

Thank you for participating in the planning stages of this important project. If you have any questions or need clarification, please contact me at lford@fordassoc.com or 808-295-0604..

Sincerely,

Roy Irei

Encl.

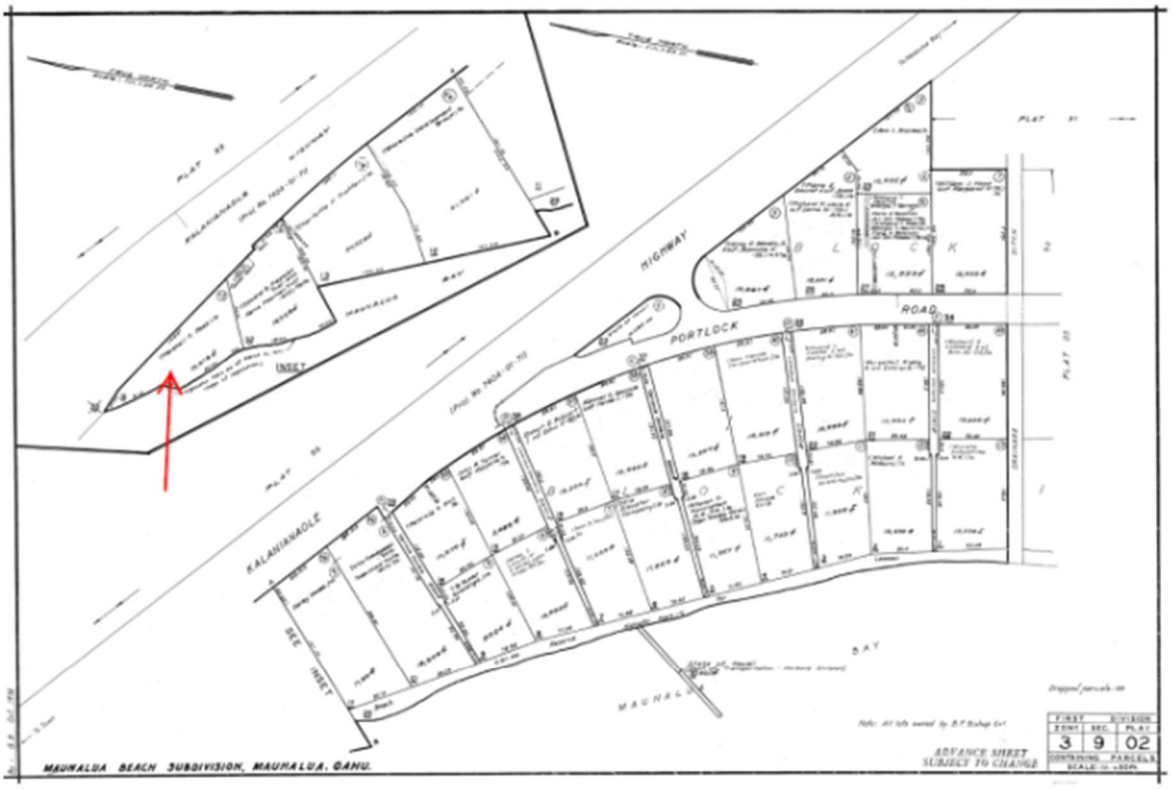


Figure 2-1 Project Location and Tax May Key 3-9-002:031

APPENDIX E

HAMER ENVIRONMENTAL REPORT

Head Office
P.O. Box 2561
Mount Vernon, WA 98273
Tel: 360.899.5156
Fax: 360.899.5146
www.HamerEnvironmental.com

Hawai'i Field Office
P.O. Box 793
Kurtistown, HI 96760

July 6, 2022

Lori Ford, MS
Senior Project Manager
Ford & Associates, Inc.
928 Nuuanu Avenue, Suite 505, Honolulu, HI 96817

Subject: **Desktop Review of Terrestrial Flora and Fauna for proposed development**
Site: TMK: (1) 3-9-002: 031; 0.23-acres
6973 Kalaniana'ole Hwy, Oahu Island, Hawai'i

Hamer Environmental, L.P. conducted a desktop exploration of available wildlife, botanical, and ecological data for the 0.23-acre parcel at 6973 Kalaniana'ole Hwy, Oahu Island, Hawai'i. The purpose of this analysis is to identify the terrestrial flora and fauna species that could potentially be impacted from proposed development of this parcel. Only species that are federal- and state-listed as Threatened (T), Endangered (E), or are a Candidate for Listing (C) were considered in this review.

Federal status definitions for species are:

- Threatened (T): species is likely to become endangered within the foreseeable future throughout all or a significant portion of its range;
- Endangered (E): species is in danger of extinction throughout all or a significant portion of its range;
- Candidate (C): Candidate species are plants and animals for which the U.S. Fish and Wildlife Service has enough information on their biological status and threats to propose them as endangered or threatened under the Endangered Species Act (ESA) (*see* Methods), but for which development of a proposed listing regulation is precluded by other higher priority listing activities. Candidate species receive no statutory protection under the ESA, however, Hawai'i Administrative Rules (HAR) Chapters 13-107 and 13-124 list activities that are prohibited to conserve threatened and endangered species and indigenous wildlife.

SITE DESCRIPTION

The parcel is situated on the southeastern shoreline of Oahu Island within Maunalua Bay. The property is at sea level (~25-feet elevation), latitude/longitude of 21° 16' 50.64" N, 157° 42' 39.48" W (Figure 1). Maunalua Bay is an elongated, semi-enclosed, coastal embayment that harbors a diverse variety of aquatic habitat types including open coastal waters, a barrier reef, reef crest, extensive reef flats, and boat access channels. The Bay is nestled within coastal mountain features: Koko Head Crater

to the east, the crater of and waters of Hanauma Bay to the south, and the precipitous slopes of Hawai'i Kai to the north and Kalani Iki to the west; the Bay's narrow mouth opens to the southwest.

The parcel is on the ocean-side and at the apex of a barrier spit of land along Kalaniana'ole Highway. It abuts the short span of bridge situated southeast of Maunalua Bay Beach. Water leaving Maunalua Bay mixes with waters from the Paikō Lagoon over a half mile to the west of the parcel and enters the Marine Deepwater environment (Figure 3). The area surrounding the parcel is developed, suburban commercial and residential, and is described as southern sprawl from Honolulu and Waikiki to the west. Over 50,000 people live in the Bay area and because the shoreline and reef flats are easily accessible, the Bay supports a number of popular recreational fishing opportunities.

Climate in this region of Oahu is warm and dry with a mean maximum temperature of about 87° F (30.5° C) in the summer months and about 75° F (24° C) in the winter months. Annual rainfall averages about 25 in. (63.5 cm).

The parcel is currently developed with landscaping (trees and shrubs) and a two-story residential dwelling. The project proposes to demolish the existing residential development and construct a new 2-story residence. Filled and stacked sandbags currently line the north-northeast boundary of the property adjacent to the bridge for erosion control due to water flowing to/from Maunalua Bay and the ocean. Myriad coastal reef and shoreline protection measures, State setback codes, and landscaping (runoff prevention)/outdoor lighting requirements will apply to the demolition, construction, and post-development phases. These regulatory drivers are only indirectly addressed in this report in how they relate to and potentially impact terrestrial flora and fauna.

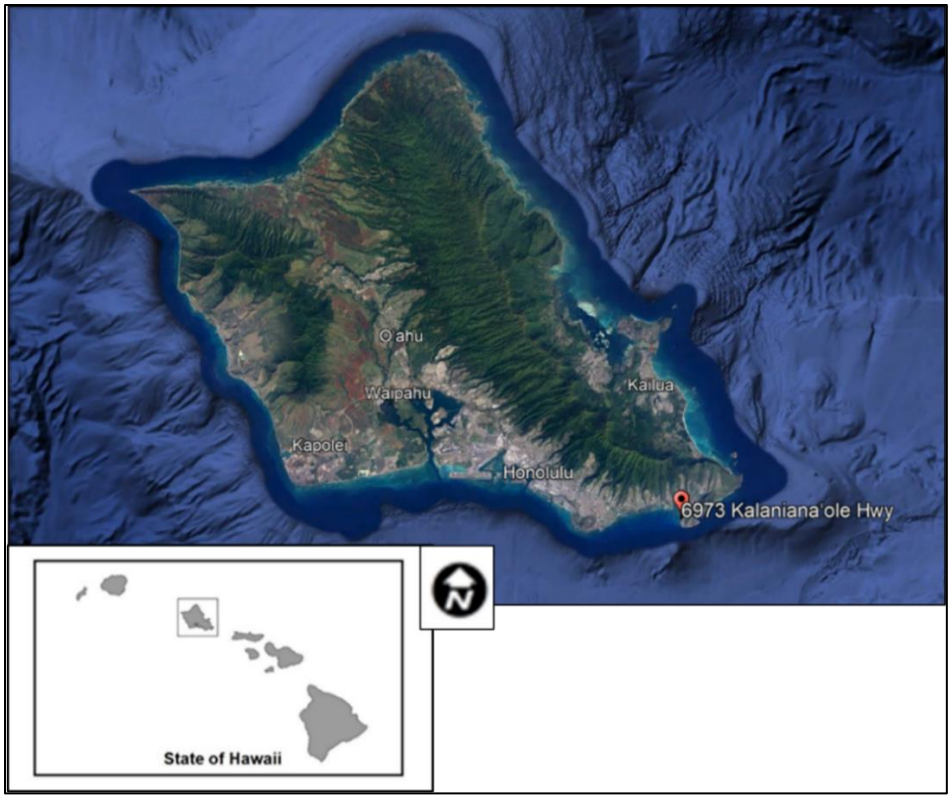


Figure 1. Site Location on Oahu Island's southeast coast.

METHODS

We conducted a desktop review of available terrestrial wildlife, botanical, and ecological data to identify potential biological resources which may require further study or pose issues to development plans. Our analyses focused on two landscape levels (from smallest to largest): the TMK parcel's footprint and a 300 ft. (91.4 m) buffer surrounding the footprint, collectively called the Analysis Area (Figure 2).

Figure 2. Approximate 300-foot (91.4 m) buffer around property (yellow circle). Terrestrial species only are considered in this review.

Regulatory Framework

Regulatory compliance is applicable to the project at federal and state levels. Marine waters and species and shoreline setback regulations are not addressed. The following regulations for terrestrial species are listed here and briefly summarized.

1. Endangered Species Act (ESA)

The purpose of the ESA is to protect and recover endangered and threatened species and the ecosystems upon which they depend. Section 9 of the ESA and Federal regulation pursuant to Section 4(d) of the ESA prohibit the "take" of endangered and threatened species without special exemption. Under the ESA, "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct (16 USC § 1532(19)). Further, "harm" includes significant habitat modification or degradation that results in death or injury to a listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering (50 CFR 17.3). "Incidental take" means take that is incidental to, and not the purpose of, the conduction of an otherwise lawful activity. Section 7(a)(2) of the ESA requires Federal agencies to ensure that actions, including the issuance of permits, do not jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat. "Jeopardize the continued existence of…" pursuant to

50 CFR 402.2, means to engage in an action that would be expected, directly or indirectly, to appreciably reduce the likelihood of the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species.

2. Federal Migratory Bird Treaty Act (MBTA)
The MBTA of 1918, as amended (16 USC § 703-712), prohibits the take of migratory birds and makes it unlawful to pursue, hunt, take, capture, kill, possess, offer to or sell, barter, purchase, deliver or cause to be shipped, exported, imported, transported, carried or received any migratory bird, part, nest, egg or product without proper authorization. Pursuant to U. S. Fish and Wildlife (USFWS) policy, an Incidental Take Permit (ITP) also constitutes a Special Purpose Permit under 50 CFR § 21.27 for the take of ESA-listed migratory bird species so long as the permit holder maintains compliance with the ITP terms and conditions. Under those circumstances, the take of ESA-listed migratory birds would not be considered a violation of the MBTA.

3. HRS Chapter 343, the "Hawai'i Environmental Policy Act" and HAR Chapter 200.1
The origin of the National Environmental Protection Act provided a model for the development of HRS Chapter 343 in 1974; it is commonly referred to as the "Hawai'i Environmental Policy Act" or HEPA. HEPA's implementing regulations are contained in Hawai'i Administrative Rule (HAR) Title 11, Chapter 200.1. HEPA established environmental policies and guidelines for state and county agencies. HEPA mandated environmental assessments for all state and county projects and some private projects.

4. HRS Chapter 195D
Chapter 195D of the HRS defines the State's responsibilities, with respect to species listed as endangered or threatened, to protect and conserve native wildlife and their habitats including species federally listed as endangered or threatened. Under the provisions of HRS Chapter 195D, species listed as endangered or threatened pursuant to the ESA are also listed as endangered or threatened by the State of Hawai'i law (HRS §195D-4). Section 195D-2 defines "take" similarly to the Federal ESA. Section 195D-3 expressly prohibits, except as permitted by rules, any person to take, possess, transport, transplant, export, process, sell, offer for sale, or ship any species that the Department of Land and Natural Resources (DLNR) has deemed in need of protection (see also §195D-4(e)).

Analysis Framework

Analysis methods assessed the Likelihood of Occurrence (LOC) of TEC species in the Analysis Area. To determine LOC we first compiled lists of the terrestrial plant and animal TEC species that are known to occur on Oahu Island, and more specifically, known to occur in the same region and locale of the Analysis Area (Tables 3 and 4). Second, we used a ranking system (matrix) to analyze influential factors that would increase or decrease the probability (i.e., the LOC) of finding a particular species at a particular site (i.e., the Analysis Area). These influential factors included, but were not limited to, elevation, annual average temperature and rainfall, availability of food/nutrients, type and quality of habitats and wetlands, documented occurrences of species and known population numbers, species' dispersal patterns, and the presence of any 'essential features' of federally-designated "critical habitat" for a particular TEC species.

Finally, based on the ranking system, we assigned an LOC for an individual species, or if applicable, to a taxonomic group of species. For example, an extremely rare species or a species that has narrowly defined, restrictive habitat requirements, would rank LOC=0 if the Analysis Area being assessed does

not contain such specialized habitat characteristics to support that species at any time during its life cycle.

The final LOC score was represented in the following way:

0 = No likelihood that species occur in the Analysis Area (no possibility of occurrence)
1 = Low likelihood that species occur in the Analysis Area (least likely to occur)
2 = Medium likelihood that species occur in the Analysis Area (likely to occur)
3 = High likelihood that species occur in the Analysis Area (known to occur)
n/d = No data (insufficient evidence available to determine LOC)
n/a = Not applicable (listing incorrect in database)

We used several sources of available data. A literature review was conducted using online sources of peer-reviewed scientific publications; federal- and state-agency reports, management plans, and natural resource inventories; and records of rare and incidental species observations. Databases of information used for this review included:

- The Environmental Conservation Online System (ECOS) U.S. Fish and Wildlife Service Critical Habitat for Threatened & Endangered Species Online Mapper (USFWS 2022);
- Exploring Species, U.S. Fish & Wildlife, Pacific Islands Fish and Wildlife Office (USFWS 2022b);
- The National Wetlands Inventory Online Wetlands Mapper (USFWS 2022c)
- Hawaii Ecosystems at Risk Project (HEAR) Species Information for Plants of Hawaii. (HEAR 2022);
- International Union for Conservation of Nature and Natural Resources. (IUCN) Red List of Threatened Species (IUCN 2022);
- NatureServe Explorer – Online Encyclopedia of Life (NatureServe 2022);
- Species of Greatest Conservation Need, Comprehensive Wildlife Conservation Strategy (CWCS) Fact Sheets, State of Hawaii, Division of Forestry and Wildlife, (Mitchell et al. 2005);
- USGS National Gap Analysis Project (GAP) for Species Distribution and Landcover Data (USGS 2022).

RESULTS

Our findings are presented in three separate tables: Species Analysis Summary (Table 1, below), and Species Assessment: Wildlife (Table 3) and Plants (Table 4) – included as attachments at the end of this report. Justification for assigned LOC values is summarized in the results section here and in Tables 3 and 4.

Table 1. Threatened, Endangered, and Candidate Species Analysis Summary.

TEC Species	LOC
MAMMALS	
Hawaiian Hoary Bat	Medium
BIRDS	
Passerines	None
Fresh & Brackish Water Species: Hawaiian Stilts	High
Migratory Shorebirds	High
Seabirds	Low
Short-eared Owl	Low
INVERTEBRATES / INSECTS	
Hawaiian Damselfly and Dragonfly Species	Low
Hawaiian Yellow-faced Bee	Low
Hawaiian Picture-wing Fly Species	None
Monarch Butterfly	Low
PLANTS	
TEC Plant Species (Oahu, Maunalua Bay) – Hairy Purslane	Low

Critical Habitat

No federal or state-designated critical habitats occur within the Analysis Area. Based on a desktop analysis using the National Wetlands Inventory, no wetlands, streams, riparian forests, or open freshwater habitats are mapped on the property or within the Analysis Area. The property footprint is adjacent to Estuarine and Marine Deepwater and Wetland habitats (Figure 3).

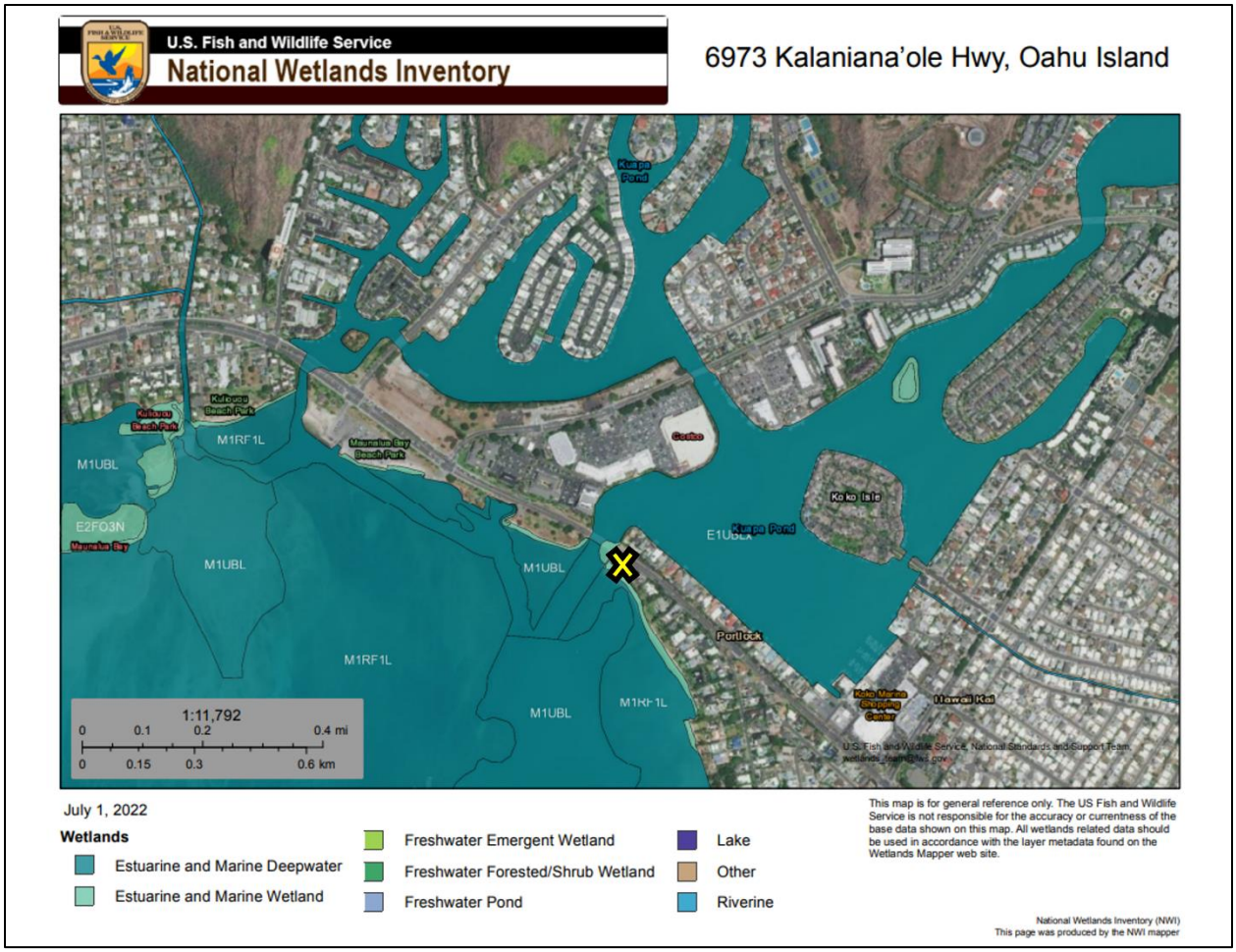


Figure 3. The property location (black/yellow "X") and surrounding wetland habitat (Source: Wetland Classifications Map; USFWS Wetland Mapper [Accessed 7.1.22]).

LIKELIHOOD OF OCCURANCE (LOC)

MAMMALS

Hawaiian Hoary Bat – Medium

The Hawaiian hoary bat weighs only 0.5-0.75 oz. (14.2-21.3 g) with a wingspan of 10.5–13.5 in. (26.7-34.3 cm) It is the only native terrestrial mammal of Hawaii. Its brown and gray fur is tipped with a frosty or hoary white tinge. Females are larger than males; both sexes are nocturnal. They are solitary when roosting, except for a female with pups. Pupping season is 1-June to mid-September; during this time, roost disturbance to females and their flightless pups is greatest. This species is widespread at all elevations from 33-6,562 ft. (10-2000 m). Little is known about the Hawaiian hoary bat on Oahu, except for military-managed areas of the island where populations exist (Gorresen et al. 2015, OANRP and PCSU 2013, 2017, NFECP and HHFP 2011). On the island of Hawai'i, bat activity varies with season and elevation; the greatest level of activity occurs at elevations below 4,000 ft. (1,280 m) from April-December.

Typically, the species ranges over very fragmented habitats and has adapted to using widely dispersed, multiple core use areas within a home range (USFWS 2011). The bats may occupy different habitat

types seasonally; lowland sites are generally most important during the pupping season and upland sites are used frequently during winter and spring. There is little to no available data on the seasonal and territorial movement patterns of this species on Oahu. They roost in native and non-native vegetation from 3-29 ft. (1-9 m) above ground level, in dense canopy foliage or the sub-canopy where foliage is less dense. They prefer trees with open access for launching into flight. Prime habitats for roosting include rain forests, disturbed habitats, xeric landscapes, and urban areas. They have been found roosting in ʻōhiʻa (*Metrosideros polymorpha*), pu hala (*Pandanus tectorius*), coconut palms (*Cocos nucifera*), kukui (*Aleurites moluccana*), kiawe (*Proscopis pallida*), avocado (*Persea americana*), shower trees (*Cassie javanica*), pūkiawe (*Styphelia tameiameiae*), and fern clumps; they are suspected to roost in Eucalyptus (*Eucalyptus spp.*) and Sugi pine (*Cyrptomeria japonica*) stands.

They begin foraging either just before or after sunset and feed on a variety of native and non-native, night-flying insects including moths, beetles, crickets, mosquitoes, and termites. Coastlines and forest/pasture boundaries appear to be important foraging areas along with open landscapes, urban areas, and around river mouths near wet forests. Insects that congregate around the glow of artificial lights at night are an ideal food source that attracts bats (USFWS 2011). Local occurrence of bats is influenced by insect prey abundance (USDA 2009, Bonaccorso 2008).

The LOC for the Hawaiian hoary bat is medium (2). This LOC is based upon several factors:

- Presence has been documented in the area based on studies between 1990-2014 (Mitchell et al. 2005).
- The species can commute >7 mi. (11 km) from their roost to foraging areas. Home range size varies with habitat type and available prey, and territories may overlap (Bonoccorso 2008).
- Various foraging and roosting habitats exist in and around the Analysis Area including residential subdivisions, agricultural fields, open expanses of grasslands, and wetland habitats.
- There is roosting, pupping, and foraging habitat in the Analysis Area.
- The Analysis Area contains habitats with characteristics preferred by Hawaiian Bats (*e.g.*, prey abundance, low elevation, low precipitation, and near urban areas), and foraging habitat suitability is related to bat occurrence.

BIRDS

Passerines - None

Hawai'i hosts many TEC forest birds, most if not all facing extinction. These species typically have narrow and restrictive needs in terms of habitat, food, and breeding conditions, and these specific requirements limit their range of occurrence to extremely small patches of known locations. The Analysis Area does not contain the habitat conditions to harbor or host native TEC passerine species.

Fresh and Brackish Water Species – None; except Hawaiian Stilt – High

The Hawaiian Duck, Hawaiian Stilt, Hawaiian Moorhen, and Hawaiian Coot prefer wetland habitats such as running streams, open ponds, tidal lagoons, and estuaries (Griffin et al. 1989) (Figure 4). These habitat types do not occur within the Analysis Area and therefore the action area is unlikely to attract and support these water bird species. All four Hawaiian waterbird species are ground nesters or more accurately described as over-water nesters. That is, all need some emergent vegetation to nest on or adjacent to open water. Importantly, all these species will use wetlands created incidental to human activities (*e.g.*, reservoir and retention ponds, open culverts, and flooded lowlands).

The Hawaiian Stilt has a tolerance for saline wetland habitats like sandy coastal shorelines. As a result, this species could occur in the Analysis Area, although not for breeding purposes but more likely to rest, forage, or simply transit the area. Nesting by this species is known on Rim Island 2 within the Bay, approximately 1.35 miles (2.17 km) to the north-northeast of the Analysis Area. Foraging and nesting stilts and individual Hawaiian coots have been documented on Rim Island 2 (Roig 2005).

Species	Selected Habitat Characteristics
Hawaiian Coot	• tall emergent vegetation with low stem density • optimal depth not reported; probably between moorhen and stilt requirements • fresh and brackish water
Hawaiian Moorhen	• dense emergent cover • water <60 cm deep • fresh water
Hawaiian Stilt	• limited and low-growing vegetation • water <15cm deep • fresh, brackish, or saline
Koloa	• dense terrestrial vegetation • water 2-12 cm deep • fresh water

Figure 4. Summary of water depths, salinity and vegetative cover used by each of the endangered water birds in Hawai'i (Source: Engilis and Reid 1994, Reed et al. 2011).

Migratory Shorebirds – High

Each year, millions of shorebirds migrate in waves from wintering grounds to their nesting grounds. In Hawai'i, migratory shorebirds are federally protected under the MBTA. These species spend their winters in areas of the Hawaiian Islands that provide habitat necessary for resting, foraging, shelter, and predator protection. Shorebirds most likely to occur in the Analysis Area are (PBIN 2005):

- Wandering tattler (*Tringa icana*)
- Ruddy turnstone (*Arenaria interpres*)
- Pacific golden plover (*Pluvialis fulva*)
- Long-billed Dowitcher (*Limnodromus scolopaceus*)
- Sanderling (*Calidris alba*)

The LOC is based upon several factors:

- The Analysis Area contains shoreline sandy habitat that may be used by migrating birds for resting purposes.
- The Analysis Area is in close proximity to the Paiko Lagoon Wildlife Sanctuary that does host migratory shorebirds during the winter months and during migration periods in the spring and fall.
- The inner Bay has habitat available for migratory shorebirds to forage and rest.

Seabirds – Low

In September 2007, the Hawai'i Audubon Society was given a one-acre coastal property at Black Point on the Southern coast of O'ahu, approximately 5 miles (9 km) to the west of the Action Area for seabird conservation purposes. This area has been managed successfully to host nesting colonies of Wedge-tailed Shearwaters (*Ardenna pacifica*) (Friswold et. al. 2018); this species is not listed and therefore not protected under the ESA. Two listed species, Hawaiian Petrel and Newell's Shearwater,

have not been documented to occur the island's southern coastline, however, transit flights by these species over the mountainous areas surrounding the Bay may occur (Young et al. 2019). Seabirds would only occur on land in the Action Area if they were grounded for some reason (inclement weather (high winds), attracted to nighttime light, injury/illness). Otherwise, seabirds would instead be flying over the area. Grounding can be caused by urban nighttime light pollution, prevalent in the surrounding area, and hence there is some likelihood that grounded seabird occurrence could occur.

Short-eared Owl – Low

This owl species is known as Pueo in Hawai'i. It is territorial and active during the day. This species occupies a variety of habitats including shrublands, urban areas, and montane forests; their preferred habitat is grasslands; Pueo also occur on lands where game birds are common (Price and Cotin 2018). This species nests on the ground in tall grass and thereby is easy prey for nonnative mammals. Pueo are carnivorous, favoring small insects and rodents. There is a lack of historical population data and information on the species' current, broad habitat use. Therefore, key habitat variables are difficult to determine (Mitchell et al. 2005). The Pueo is considered very rare on Oahu (Mitchell et al. 2005). In 2016, state officials increased efforts to track sightings of Pueo on Oahu (Price and Cotin 2018). The LOC for the Pueo is Low. This LOC is based upon several factors:

- Pueo numbers on Oahu is roughly estimated at 8-2,199 individuals, with a mean likely population size of 807 individuals (95% CI); most of the population appears to reside in the southern and southeastern parts of the island with sparse populations along the west coast (Price & Cotin 2018).
- Despite the small proportion of wetlands on Oahu (~1% of the total surface), a relatively high proportion of Pueo observations were made in wetland vegetation, however, the highest densities of owls were found in agricultural areas and native forests (Price & Cotin 2018).
- Based on modeled information, some potential for distribution across the Analysis Area occurs; owls may utilize habitat and food resources in the area, even if only infrequently.

INVERTEBRATES / INSECTS

Hawaiian Damselfly and Dragonfly Species – Low

These TEC species prefer inland aquatic and riparian habitats but can be attracted to areas where wetlands might be created incidentally because of human activities (*e.g.*, reservoir and retention ponds, open culverts, and flooded lowlands).

The order *Odonata* consists of two suborders, damselflies, and dragonflies. Damselflies are weak fliers; most species hold their wings close to the body at rest, while dragonflies are strong fliers and hold their wings away from the body at rest. Damselfly species in the genus *Megalagrion* are particularly well-studied; many are endemic to single islands or ridges; ten species in this genus are considered at risk including those found on Oahu (*M. leptodemas*, *M. nigrohamatum nigrolineatum, M. oahuense*, *M. oceanicum, M. pacificum*, and *M. xanthomelas* (Mitchell et al. 2005). In 2012, three damselflies of Oahu were listed as endangered, the blackline (*M. nigrohamatum nigrolineatum*), crimson (*M. leptodemas*), and oceanic (*M. oceanicum*) Hawaiian damselflies (USFWS 2012). In 2014, the orange-black Hawaiian damselfly (*M. xanthomelas*) was denied listing by the USFWS yet remains as a candidate species (USFWS 2014).

Larvae and adults of *Odonata* occur in or near a wide range of aquatic habitats including streams, reservoirs, montane forests, and lowland habitats, many of which are threatened by habitat change and loss (USFWS 2011, Imada et al. 2011). Rare species of *Megalagrion* once thought to be restricted

to high elevation native forests have been found at low elevations in populated areas using nonnative trees and shrubs (e.g., the Blackline Hawaiian Damselfly). Other species thought to have been extirpated were later discovered in discrete, small populations existing in pools of intermittent streams (*e.g.*, the Orange-black Hawaiian Damselfly) (Polhemus 1996, Englund 2000); *M. xanthomelas* historically ranged on Oahu from Honolulu, Kaimuki, Koko Head, Pearl City, Waialua, the Waianae mountains (Polhemus 1995), and Waianae (Williams 1936). While there are no freshwater pools of streams occur on or in the vicinity of the Analysis Area, the LOC is low because of the potential to attract these species during construction if temporary freshwater pools are formed.

Hawaiian Yellow-faced Bee – Low

Native Hawaiian Yellow-faced Bees are in the genus *Hylaeus*. These species have adapted to a wide array of native habitats ranging from coastal strand to high elevation wet forests. They are solitary bees and important pollinators of native Hawaiian plants and trees in every environment in which they occur. Yellow-faced Bees were once abundant across the Main Hawaiian Islands. Dramatic reductions in range and population sizes, and potentially extinctions, have occurred over the last 100 years. Hawaiian *Hylaeus* species almost exclusively visit native plants to collect nectar and pollen; they are very rarely found visiting nonnative plants (Magnacca 2007) and they are almost completely absent from habitats dominated by nonnative plant species (Daly and Magnacca 2003). Given that the flora in the Analysis Area is predominantly nonnative vegetation and at lower elevations than this species normally occurs, and that *Hylaeus* species are in small remnant populations on Oahu (Magnacca and King 2013), these species are not likely to occur in the Analysis Area.

Hawaiian Picture-wing Fly Species – None

Drosophila aglaia, D. differens, D. hemipeza, D. heteroneura, D. montgomeryi, D. musaphilia, D. neoclavisetae, D. obatai, D. ochrobasis, D. substenoptera, D. tarphytrichia, *D. mulli*

Twelve ESA-listed Hawaiian picture-wing fly species make up a small group in the genus *Drosophila*, a group that consists of 106 known species. In 2006, eleven species were listed as endangered and *D. mulli* as threatened. They are relatively large-sized insects with elaborate and colorful markings on otherwise transparent wings of both sexes. Flies in the *Drosophilidae* family are distributed throughout the higher-peaked Main Hawaiian Islands including Oahu (Table 2). No populations are found below 1,200 feet (366 meters) in elevation and all have specific host plants of which many are rare and federally protected as well (DOI 2007). The LOC is None because the Analysis Area does not contain the specific high elevation habitat and host plant requirements needed by these species.

Table 2. DISTRIBUTION OF 12 HAWAIIAN PICTURE-WING FLIES BY ISLAND, GENERAL HABITAT TYPE, AND PRIMARY HOST PLANT(S)

Species	Island	General habitat type	Primary host plant(s)
Drosophila aglaia	Oahu	Mesic forest	*Urera glabra*
D. differens	Molokai	Wet forest	*Clermontia* sp.
D. hemipeza	Oahu	Mesic forest	*Cyanea* sp., *Lobelia* sp., and *Urera kaalae*
D. heteroneura	Hawaii	Mesic to wet forest	*Cheirodendron* sp., *Clermontia* sp., *Delissea* sp.
D. montgomeryi	Oahu	Mesic forest	*Urera kaalae*
D. mulli	Hawaii	Wet forest	*Pritchardia beccariana*
D. musaphilia	Kauai	Mesic forest	*Acacia koa*
D. neoclavisetae	Maui	Wet forest	*Cyanea* sp.
D. obatai	Oahu	Dry to mesic forest	*Pleomele aurea* and *Pleomele forbesii*
D. ochrobasis	Hawaii	Mesic to wet forest	*Clermontia* sp., *Marattia* sp., and *Myrsine* sp.
D. substenoptera	Oahu	Wet forest	*Cheirodendron* sp. and *Tetraplasandra* sp.
D. tarphytrichia	Oahu	Mesic forest	*Charpentiera* sp.

Source: DOI 2006.

Monarch Butterfly - Low

The orange and black coloring mixed with a little white, make monarch butterflies instantly recognizable. This species tends to favor open meadows and roadsides in search of their preferred food source, giant milkweed (*Calotropis gigantean*) or crown flower (Hawaiian name: pua kalaunu). In Hawai'i, the monarch butterfly breeding period peaks Dec-Jan-Feb, which is opposite to that of temperate regions. During other months in Hawai'i, the species is scarce, even where its host plant is present year-round (Etchegaray and Nashida 1975). Monarch butterflies are migratory; a single individual can cover thousands of miles of flight in one season. The monarch butterfly plays an important role as a pollinator, and numbers have been on the decline in Hawai'i populations. The LOC for this species is Low because:

- Presence is primarily where host plant occurs. Within the Analysis Area, *C. gigantean* is not present. However, as an ornamental plant that is encouraged on Oahu (*e.g.*, Knudsen 2017), this plant's presence might occur in the vicinity that could attract monarch butterflies; and given the monarch's seasonal migratory behavior that is understood poorly on Oahu, and flight distance capabilities of the species, there is some LOC within the Analysis Area.

PLANTS

Plant Species – None; Hairy Purslane - Low

A list of individual TEC plants, their LOC, and corresponding information is provided in Attachment Table 4 (Plants). None of the Action Area's landscape is dominated by the region's historic native vegetation (Figure 11). Where these plant habitats do exist, they are located above about 1000 feet (305 m) elevation up the southwestern slopes of the Koʻolau Range that encloses the Maunalua Bay. The Analysis Area and greater vicinity has been altered in the past by human activities (residential development, infrastructure, boat harbors, dredging, etc.). In determining the LOC for individual TEC plants, we accounted for, among other factors, the type and quality of habitat. Because nonnative plant communities can inconspicuously harbor TEC species and given that populations of TEC species often contain a small number of individuals and are typically isolated, habitat characteristics, even nonnative ones, can be important indicators to the presence of TEC species.

Only one plant, hairy purslane (*Portulaca villosa*) could occur in the Analysis Area given its preference for coastal, sparsely vegetated habitats. This plant was recorded along the southern coast of Oahu, from ʻEwa beach to Makapuʻu (Bishop Museum 2020). The presence of this species would be obvious and easily protected during development.

SUMMARY

The only species with a high LOC are shorebirds (migratory species) and Hawaiian Stilts. the Hawaiian hoary bat has a medium LOC. Species with a low LOC include Short-eared Owl, seabirds, other waterbird species (besides Hawaiian Stilt), Hawaiian yellow-faced bee, dragonfly/damselfly species, and the Monarch butterfly (Table 1). The only TEC terrestrial plant that may occur is the hairy purslane. All other species of terrestrial plants and wildlife considered in this analysis were ranked either zero (no possibility of occurring in the Analysis Area) or marked to indicate that insufficient data was available to assess LOC.

Below is a summary of findings:

- Habitat is present in and around the Analysis Area that could attract migratory shorebirds, seabirds, bats, owls, bees, and butterflies.
    - The residential neighborhood surrounding the parcel's footprint, though low in density, could harbor rodents and insects that may attract predators like bats and owls.
    - The residential neighborhood surrounding the parcel's footprint, though low in density, could harbor plants that attract and retain Monarch butterflies and Hawaiian yellow-faced bees.
- The dominant passerine, plant, and invertebrate species utilizing the site currently are nonnative. The TEC plant hairy purslane may occur on the site.
- The property is on the marine shoreline and has habitat for shorebirds (migratory species and Hawaiian Stilt). Shorebirds commonly use shorelines during transit flights (airspace corridor) and coastal habitats for foraging and resting. Seabirds, most commonly found far offshore over deep marine waters, will fly over coastal waters when they come ashore during their breeding season and fledglings can be light-attracted at night to fly toward land.

Based on our desktop review and analysis, we recommend the following conservation and minimization measures for terrestrial flora and fauna:

1. During construction and post-development, structures with lighting used/needed for nighttime illumination should follow state and city codes to protect nocturnal species (bats, seabirds, owls) and avoid potential negative impacts (bats=light attracts food insect food source increasing potential human conflict that causes mortality; seabirds=injury/death from light attraction or temporary blindness, owls=for a crepuscular hunter becoming illuminated and made visible to prey hinders foraging success). Hawai'i State Department of Natural Resources provides information on seabird-friendly lighting options: https://dlnr.hawaii.gov/wildlife/files/2016/03/DOC439.pdf.
2. To avoid and minimize negative impacts to shorebirds:
    a. Stop work if shorebirds are present. Resting and feeding behaviors should be allowed and work can resume once species leave the area on their own.
3. To avoid and minimize negative impacts to the Hawaiian hoary bat:
    a. Do not disturb, remove, or trim woody plants (trees and shrubs) greater than 15-feet tall during the bat breeding season (1-June through 15-September). Surveying for pupping bats should be conducted prior to clearing or removing woody vegetation over 15-feet tall.
    b. Avoid using/installing fence lines that use barbed wire, especially for the top two strands.
4. To avoid and minimize negative impacts to the Hawaiian Stilt, migratory shorebirds, and dragonfly/damselfly species:
    a. During construction, avoid creating temporary sources of standing water such as retention ponds or ditches, and open pools of water commonly used during construction activities (for cleaning, cement mixing, etc.). Such open water sources could attract species.
    b. The proposed project design should avoid work within the shoreline buffer and wetland buffer, unless permitted.
5. It is unknown if Monarch butterfly occur, or if its host plant and larvae are being privately cultivated in the region. Given that the state and private entities have collectively provided funding and conservation management measures to increase populations of this species, the possibility exists.

6. To avoid and minimize negative impacts to the Hawaiian yellow-faced bee (as well as bats, owls, and Monarch butterflies):
    a. Minimize habitat disturbance and vegetation removal by confining construction impacts strictly to the area necessary to construct the project.
    b. Native plants are recommended for use when new plantings for landscaping occurs. No invasive-type plant species should be used; an invasive-type plant is a non-native species that causes or could cause harm to agriculture, natural resources, economy, or human health. These plants are capable of rapidly spreading into native habitats, outcompeting native plant species, and potentially impacting whole ecosystems. Invasive plants would include species like Japanese honeysuckle vine (*Lonicera japonica*), yellow flag iris (*Iris pseudacorus*), periwinkles *(Vinca major* and *V. minor*), coral ardisia *(Ardisia crenata*), and mimosa tree *(Albizia julibrissin*). A more comprehensive list can be found on the State of Hawai'i Invasive Species website: https://dlnr.hawaii.gov/hisc/info/invasive-species-profiles/.
7. To avoid and minimize negative impacts to the plant hairy purslane:
    a. If the plant is found onsite, it should be marked and flagged so disturbance to it does not occur.

Further recommendations to reduce impact to species:

1. Minimize the project construction footprint to the area necessary to construct the project and use the previously disturbed/developed areas where feasible for the new development.
2. Avoid work and development within any shoreline/wetland buffers and setback areas.
3. The duff layer, native topsoil, and natural vegetation should be retained in an undisturbed state as much as feasible. Minimize native vegetation removal. Where possible, leave stumps where tree clearing is required. Any new plantings shall be comprised of native species approved by the local jurisdiction.
4. Locate large staging areas and temporary storage of materials during construction in uplands and as far as practicable from shorelines and marine waters.
5. Use Best Management Practices (BMPs) for stormwater control throughout construction. BMPs may include secondary containment, high visibility silt fencing, straw wattle, compost socks, (BMPs adapted as needed), and daily equipment checks for leaks. Implement additional BMPs as necessary to ensure adequate erosion and sediment control. Contractors should be appropriately trained in BMP installation and maintenance.
6. Construction contractors should adhere to all applicable noise regulations, working hour limitations and notification requirements and best practices.
7. Contractors should comply with local dust control requirements.
8. Inform project personnel and contractors about the potential presence of endangered species on-site and nearby.
9. Obtain a Biologist to conduct appropriate flora and fauna surveys throughout the project if/as needed.
10. If active pupping by bats or active nesting by owls or Hawaiian Stilt are encountered during construction, stop work and call Hamer Environmental to discuss next steps.

The native flora and fauna of Oahu has undergone extreme alterations because of past and present land use and other activities. Intentional and inadvertent introductions of nonnative plant and animal species to the island has contributed to the reduction in range of many native and endemic species.

Databases for Hawaiian flora and fauna were sometimes lacking in up-to-date local and regional species information for use in this review.

Hamer Environmental appreciates the opportunity to assist you on this project.

Sincerely,

Cary Deringer, Senior Environmental Scientist and Endangered Species Biologists/Ornithologist
and
Vanessa Rogers, NEPA Director and Environmental Biologist
Hamer Environmental, L.P.

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Attachment: Table 3.
Federal- and State-Listed and Candidate Wildlife Species of Oahu (Maunalua Bay region) and LOC

Attachment: Table 4.
Federal- and State-Listed and Candidate Plant Species of Oahu (Maunalua Bay region) and LOC

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Attachments: Tables of Species Reviewed for 6973 Kalaniana'ole Hwy, Oahu Island, Hawai'i

Note: All species were identified from available species lists, including USFWS ECOS species range mapping program. Notes indicate research made to determine any Likelihood of Occurrence (LOC). LOC is scored in the following way:

0	=	No likelihood that species occur in the study area
1	=	Low likelihood that species occur in the study area
2	=	Medium likelihood that species occur in the study area
3	=	High likelihood that species occur in the study area
n/d	=	No data (insufficient evidence to make determination)
n/a	=	Not applicable (Listing incorrect in database)

ESA- and State-Listed Status (*see* METHODS)

E = Endangered
T = Threatened
C = Candidate for listing
SOC = Species of Concern

Table 3: Wildlife

Scientific Name	Common Name	Hawaiian Name	Type	LOC	ESA-listed	State-listed	Modeled Data Abbr.	Notes
Anas wyvilliana	Hawaiian duck	koloa māoli	Bird	0	E	E - Endemic	HAWDx	Source(s): Mitchell et al. 2005 (Map of home range (1976-present)), and DOD 2005 (https://semspub.epa.gov/work/09/2327020.pdf). Range of species includes both Oahu sites; generally found in wetland habitats from sea level to 9,900 ft (3,000 m) elevation.
Asio flammeus sandwichensis	Hawaiian short-eared owl	Pueo	Bird	0	-	E (Endemic at subspecies level)	HSEOs (no Range Data)	Source(s): NAVFAC 2014, Price & Cotin 2018, DOD 2005, and Mitchell et al. 2005 (http://dlnr.hawaii.gov/wildlife/hswap/cwcs/hawaii/species/fact-sheets/): Found on all the Main Hawaiian Islands from sea level to 2,450 meters (8,000 feet). Occupies a variety of habitats; most common in open habitats such as grasslands, shrublands, and montane parklands, including urban areas and those actively managed for conservation. Pueo occur in many areas that are managed by the State of Hawai'i or Federal agencies.
Branta sandvicensis	Hawaiian Goose	nēnē	Bird	0	E	E- Endemic	HAGOx	Source(s): Mitchel et al. 2005 (Map of detections, home range & critical habitat (1976-present)) (http://dlnr.hawaii.gov/wildlife/hswap/cwcs/hawaii/species/fact-sheets/). On Oahu, occurs in very low numbers and is not known to occur in this region.

Scientific Name	Common Name	Hawaiian Name	Type	LOC	ESA-listed	State-listed	Modeled Data Abbr.	Notes
Chasiempis sandwichensis ibidis	‘elepaio	Oahu ‘elepaio	Bird	0	E	E	ELEPo	Source(s): NFECP and HHFP 2011; Mitchell et al. 2005 (https://dlnr.hawaii.gov/wildlife/files/2013/09/Fact-sheet-oahu-elepaio.pdf). The Oahu 'elepaio is by far the rarest of the three 'elepaio species. The range of the Oahu 'elepaio is small and divided into several isolated fragments totaling only 5,187 ha; 100–550 m elevation in southern and central Koʻolau Mountains, and 500–850 m elevation in Waiʻanae Mountains. The largest remaining subpopulations occur in the central and southern Ko'olau Mountains.
Danaus plexippus plexippus	Monarch butterfly		Insect	1	Under Review			Source(s): Simek 2016, USFWS 2018, and Etchegaray and Nashida 1975. Species would only occur in areas where the host plant giant milkweed (*Calotropis gigantean*) or crown flower (Hawaiian name: Pua Kalaunu) is present. Neighboring communities may harbor host plants as garden ornamentals as a hobby or as part of the state’s program to increase Monarch populations.
Drepanis coccinea	`I`iwi	`i`iwi	Bird	0	T	Endemic	IIWIx	Source(s): Mitchell et al. 2005 (Map of home range (1976-present)) http://dlnr.hawaii.gov/wildlife/files/2013/09/Fact-sheet-iiwi.pdf. Range does not include Haleiwa site. Three small, isolated populations occur on Oʻahu. Surveys in 1996 suggested Oʻahu supports less than 50 birds. Occupies mesic and wet forest dominated by ʻōhiʻa, and koa (Acacia koa). Loss and degradation of habitat and high densities of cold-intolerant Culex mosquitoes, an important disease vector, in lowland areas restrict most birds to elevations above 4,100 ft. (1,250 m).
Fulica americana alai	Hawaiian coot	'alae kea	Bird	0	E	E - Endemic	HACOx	Source(s): Mitchell et al. 2005 (Map of home range (1976-present)) (http://dlnr.hawaii.gov/wildlife/hswap/cwcs/hawaii/species/fact-sheets/), DOD 2005 (https://semspub.epa.gov/work/09/2327020.pdf), Tetra Tech 2017, and Riggs 2016. Generally found in wetland habitats from sea level to 9,900 ft. (3,000 m) elevation. An estimated 500-1,000 birds are on Oahu. Population size has increased in recent decades as wetland protection and management efforts have increased. No wetlands in the Analysis Area or near vicinity to attract coots.

Scientific Name	Common Name	Hawaiian Name	Type	LOC	ESA-listed	State-listed	Modeled Data Abbr.	Notes
Gallinula chloropus sandvicensis	Hawaiian moorhen/gallinule	'alae 'ula	Bird	0	E	E - Indigenous	Not Avail for D/L, checked online	Source(s): Mitchell et al. 2005 (Map of home range (1976-present)) (http://dlnr.hawaii.gov/wildlife/hswap/cwcs/hawaii/species/fact-sheets/), Tetra Tech 2017, and Group70 International, Inc. 2017. Generally, occur in wetland habitats below 410 ft. (125 m) elevation. They are generally sedentary; however, they readily disperse in spring, presumably to breed. Dispersal may occur in relation to dry and wet periods.
Himantopus mexicanus knudseni	Hawaiian stilt	ae'o	Bird	1	E	E - Indigenous	HASTk	Source(s): NFECP and HHFP 2011, Mitchell et al. 2005). Map of home range (1976-present)) (http://dlnr.hawaii.gov/wildlife/hswap/cwcs/hawaii/species/fact-sheets/). Species prefers wetland habitats below 660 ft. (200 m) elevation; range overlaps. No wetlands occur within the Analysis Area or in the vicinity. Shoreline and beach habitat in the Analysis Area could provide stilts with resting habitat.
Hylaeus kuakea	Hawaiian yellow-faced bee		Insect	0	E		n/a	Source(s): Mitchell et al. 2005 (https://dlnr.hawaii.gov/ecosystems/hip/projects/yellow-faced-bee/), NFECP and HHFP 2011, and (https://xerces.org/hylaeus-kuakea/). The full range is unknown. All yellow faced-bees are in decline and little is known of existing populations and distributions. Many varieties can be found in small, isolated habitat areas. Unknown rare populations may exist. None are known to occur in the outer coastal areas of Maunalua Bay.
Lasiurus cinereus semotus	Hawaiian hoary bat	Ōpeaʻapeʻa	Mammal	2	E	E - Indigenous (Endemic at the subspecies level)	HOBAx (not modeled in Hawaii)	Source(s): Gorresen, et al 2015 (http://dspace.lib.hawaii.edu/bitstream/10790/2585/1/TR64_Gorresen_Bats_Final.pdf), Mitchell et al. 2005, and NFECP and HHFP 2011.
Manduca blackburni	Blackburn's sphinx Moth		Insect	n/d	E	E - Endemic	n/a	Source(s): Mitchell et al. 2005 and USFWS 2003. Prefers dry and mesic habitats between the elevations of sea level and 5,000 ft. (1,525 m) and receiving between 10-100 in. (25-250 cm) of annual precipitation. Historically occurred on Oahu with most records from coastal or lowland dry forest habitats in areas receiving less than 127 cm (50 inches) annual rainfall. Would only occur if host plants were present. Known populations occur only on Maui and Hawai'i.

Scientific Name	Common Name	Hawaiian Name	Type	LOC	ESA-listed	State-listed	Modeled Data Abbr.	Notes
Megalagrion nigrohamatum nigrolineatum	Blackline Hawaiian Damselfly		Insect	0	E		n/a	Source(s): https://xerces.org/blackline-hawaiian-damselfly/). On Oahu, some populations are robust.
Megalagrion pacificum	Pacific Hawaiian Damselfly		Insect	0	E		n/a	Source(s): (https://xerces.org/pacific-hawaiian-damselfly/).
Megalagrion xanthomelas	Orange-black Hawaiian Damselfly		Insect	1	C	Endemic	n/a	Source(s): USFWS 2014. Historically occurred in an area Honolulu. Prefers wetland habitats.
Puffinus auricularis	Newell's shearwater	a'o	Bird	1	T	T - Indigenous	NESH	Source(s): Pyle & Pyle 2017 (http://hbs.bishopmuseum.org/birds/rlp-monograph/pdfs/02-Galliformes-Procellariiformes/NESH.pdf), and Mitchel et al. 2005 (http://dlnr.hawaii.gov/wildlife/hswap/cwcs/hawaii/species/fact-sheets/). Breeding in west O'ahu (indicated by flight paths perpendicular to the coast) may occur in the western flanks of the northern Wai'anae Mountains, and not in the southern portion of Nu'uanu Valley (Young et al. 2019). Species may still transit over the nearshore waters on flight paths that run parallel to the coast.
Pterodroma sandwichensis	Hawaiian Petrel	'ua'u	Bird	0	E	Endemic	HAPE	Source(s): Pyle & Pyle 2017 (http://hbs.bishopmuseum.org/birds/rlp-monograph/pdfs/02-Galliformes-Procellariiformes/NESH.pdf), and Mitchel et al. 2005 (http://dlnr.hawaii.gov/wildlife/hswap/cwcs/hawaii/species/fact-sheets/). Breeding in west O'ahu (indicated by flight paths perpendicular to the coast) may occur in the western flanks of the northern Wai'anae Mountains, and not in the southern portion of Nu'uanu Valley (Young et al. 2019). Species may still transit over the nearshore waters on flight paths that run parallel to the coast.
	Damselfly / Dragon fly (general species)		Insect	0			n/a	Source(s): Mitchell et al. 2005. On Oahu, known TEC Odonata populations do not occur in the Analysis Area.
	Yellow Faced Bee (general species)		Insect	1			n/a	Source(s): Mitchell et al. 2005 (https://dlnr.hawaii.gov/ecosystems/hip/projects/yellow-faced-bee/). All yellow faced-bees are in decline, and little is known of existing populations and distributions. Many varieties can be found in small, isolated habitat areas. Unknown rare populations may exist.

Scientific Name	Common Name	Hawaiian Name	Type	LOC	ESA-listed	State-listed	Modeled Data Abbr.	Notes
	Oahu Tree Snails (general species)		Snail	0			n/a	Source(s): Rorher et al. 2016. Species occurs in upland habitats of native forest.
Drosophila (12 species). *D. mulli.*	Hawaiian picture-wing fly		Insect	0	E T		n/a	Montgomery (1975) reported that the larvae of this species may need specific host plants for survival. Eleven species were ESA listed as Endangered in 2006 and a twelfth was listed as Threatened (DOI 2006). Most are specific to elevations above 1,200 feet (forest habitats with cool temperatures and not marine coastal xeric landscapes.
Paroreomyza maculata	Oʻahu creeper	O'ahu 'alauahio	Bird	0	E	E - Endemic	OAAMx	Source(s): Mitchel et al. 2005 (Map of incidental sightings (1990-91)) (https://dlnr.hawaii.gov/wildlife/files/2013/09/Fact-sheet-oahu-alauahio.pdf). Probably extinct. The last well-documented sighting was of two birds in 1985. Oʻahu was not included in the Hawaiʻi Rare Bird Search in the late 1990s, so it is possible that the Oʻahu ʻalauahio still exists in remote valleys.

Table 4: Plants

Scientific Name	Common Name	Hawaiian Name	LOC	ESA-listed	State-listed	Notes
Abutilon menziesii	Ko`oloa`ula	Ko`oloa`ula	0	E	E	Sources: https://ecos.fws.gov/docs/recovery_plan/950929a.pdf; https://ecos.fws.gov/ecp0/reports/implementation-activity-status-ore-report?documentId=400258&entityId=617; http://explorer.natureserve.org/servlet/NatureServe?searchName=Abutilon+menziesii; and NFECP and HHFP 2011. Distribution: Oahu, Maui, and Lanai. Dry shrublands, including ones that are now dominated by alien plant species. Gulches, plateau lands, and old lava flows.
Abutilon sandwicense	No common name		0	E	E	Sources: https://ecos.fws.gov/ecp0/profile/speciesProfile?sId=7482 https://www.gpo.gov/fdsys/pkg/FR-2012-09-18/pdf/2012-19561.pdf http://explorer.natureserve.org/servlet/NatureServe?searchName=Abutilon+sandwicense; and NFECP and HHFP 2011 Found at elevations < 3,281 ft. (< 1,000 m) and with annual precipitation 50-75 in. (127-191 cm). Found on steep slopes in dry forest in the Waianae Mountains.
Achyranthes splendens var. rotundata	Round-leaved chaff-flower		0	E	E	Sources: http://hbs.bishopmuseum.org/endangered/ach_spl.html; https://plants.usda.gov/factsheet/pdf/fs_acsp3.pdf; http://explorer.natureserve.org/servlet/NatureServe?searchName=Achyranthes+splendens; NFECP and HHFP 2011; and https://ecos.fws.gov/ecp0/profile/speciesProfile?sId=4709. Distribution: Oahu, Maui, Molokai, Lanai; located sea level to 100 ft. (30.5 m), but up to 1,000 ft. (305 m) on western coast of Oahu. Habitat: low elevation, open, dry forest remnants and open thickets, on talus or rocky slopes, and on coralline plains (Wagner et al., 1990). It is currently known from two general areas on the island of O'ahu (Barbers Point and Ka'ena Point), that are also considered critical habitat areas.
Alectryon macrococcus var. macrococcus	Mahoe	Mahoe	0	E	E	Sources: http://explorer.natureserve.org/servlet/NatureServe?searchName=Alectryon+macrococcus; NFECP and HHFP 2011; and http://www.gpo.gov/fdsys/pkg/FR-2012-09-18/pdf/2012-19561.pdf. Distribution Oahu, Molokai, Kauai, Maui. Located in mountains of Oahu not lower than 1,200 ft. (366 m) elevation. Critical habitat on Maui, Lanai & Molokai. Habitat is mesic forests in gulch bottoms and on gulch slopes, or on old lava flows; can occur in areas dominated by non-native plants. On Lualualei DOD Base, last observed in 2004.
Asplenium dielfalcatum (syn. *Diellia falcata*)	Sickle Island-spleenwort		0	E	-	Sources: https://ecos.fws.gov/ecp0/profile/speciesProfile?sId=8198; NFECP and HHFP 2011; and http://www.iucnredlist.org/details/78774610/0. Between 1,312-3281 ft. (400-1,000 m) elevation in the Wai'anae Mountains on the island of O'ahu. Habitat deep shade or open understory on moderately steep slopes and gulch bottoms in mesic forest.
Bobaea sandwiccensis	`Ahakea	`Ahakea	0	C	-	Sources: NFECP and HHFP 2011; https://ecos.fws.gov/ecp0/profile/speciesProfile?sId=4908#petitions; and http://explorer.natureserve.org/servlet/NatureServe?searchName=Bobea+sandwicensis. Species is present in dry, coastal mesic and mixed mesic forests at 328-4,003 ft. (100-1,220 m) elevation.
Bonamia menziesii	Hawai'i lady's nightcap		0	E	E	Sources: https://www.gpo.gov/fdsys/pkg/FR-2012-09-18/pdf/2012-19561.pdf; NFECP and HHFP 2011; and http://nativeplants.hawaii.edu/plant/view/Bonamia_menziesii. Found on Kauai, Oahu, Lanai, Maui and Hawaii. Occurs in 150-2,000 ft. (46-610 m) elevation dry to mesic lowland dry & mesic shrub/forest and cliff habitats, vining plant in full sun.
Cenchrus agrimonioides	Agrimony Sandbur	Kamanomano	0	E	E	Sources: https://www.gpo.gov/fdsys/pkg/FR-2012-09-18/pdf/2012-19561.pdf; and https://ecos.fws.gov/ecp0/profile/speciesProfile?spcode=Q1U4. Grass found in lowland mesic shrub/forest & dry cliff ecosystems of Waianae mountains.
Centaurium (Schenkia) sebaeoides	‘Awiwi	‘Awiwi	0	E	E	Sources: http://eol.org/pages/581938/overview; and https://ecos.fws.gov/docs/five_year_review/doc4200.pdf. Dry shrublands, primarily at coastal sites with coralline of basalt substrates.
Colubrina oppositifolia	Kauila	Kauila	0	E	E	Sources: http://www.iucnredlist.org/details/30915/0; and http://explorer.natureserve.org/servlet/NatureServe?searchName=Colubrina+oppositifolia. Historically a dominant forest tree, but now very limited population of plants, found in lowland mesic forests of Waianae Mtns Oahu, Hawaii & Molokai, with critical habitat on Maui. Dry and moist forests. Gulch slopes on the older islands; old, forested lava flows on the island of Hawaii.

Scientific Name	Common Name	Hawaiian Name	LOC	ESA-listed	State-listed	Notes
Ctenitis squamigera	Pauoa	Pauoa	0	E	E	Sources: https://ecos.fws.gov/ecp0/profile/speciesProfile?sId=289; and http://www.iucnredlist.org/details/44128/0. Found on Kauai, Oahu, Maui, Lanai & Molokai. Small populations of ferns at 1240 ft. (378 m) elevation and above. Moist forests on gulch slopes and in gulch bottoms.
Cyanea calycina	Haha	Haha	0	E	-	Sources: https://ecos.fws.gov/ecp0/profile/speciesProfile?sId=2031; https://www.gpo.gov/fdsys/pkg/FR-2012-09-18/pdf/2012-19561.pdf; and NFECP and HHFP 2011. Found in lowland mesic, lowland wet, montane wet and wet cliff ecosystems. In the Waianae Mountains, *C. calycina* occurs in Acacia-Metrosideros-Dicranopteris (koaohia-uluhe) forests at elevations between 1,800-3,920 ft. (550-1,195 m), and in the Koolau Mountains this species occurs in wet Metrosideros Dicranopteris forest and shrubland at elevations between 1,830-3,000 ft (558-900 m) (HBMP 2008).
Cyanea grimesiana ssp. obatae	Haha	Haha	0	E	SOC	Sources: https://dlnr.hawaii.gov/wildlife/files/2013/09/Fact-Sheet-Cyanea-grimesiana-subsp-obatae.pdf; https://www.gpo.gov/fdsys/pkg/FR-2012-09-18/pdf/2012-19561.pdf; https://ecos.fws.gov/docs/five_year_review/doc4154.pdf; USFWS 1995; and https://ecos.fws.gov/docs/five_year_review/doc1128.pdf. Found on Oahu at 1,640-8,858 ft. (500-2,700 m) elevation and in areas of 48-100 in. (123-254 cm) of rain per year. Typically grows on steep, moist, shaded slopes in diverse mesic to wet forests. Associated plants include mamaki, *Charpentiera* (papala), *Claoxylon sandwicens*e (poola), papala kepau, koa, and various ferns.
Cyanea lanceolata ssp. calycina	Oahu Cyanea	Haha	0	C	C	Source: http://explorer.natureserve.org/servlet/NatureServe?searchName=Cyanea+calycina. Shrub located on Oahu only. Terrestrial Habitat(s): forest/hardwood, forest/woodland, mesic to wet forest 984-2,953 ft. (300-900 m) elevation.
Cyanea lanceolata ssp. lanceolata	Lanceleaf Cyanea	Haha	0	C	C	Source: http://explorer.natureserve.org/servlet/NatureServe?searchName=Cyanea+lanceolata. Endemic to the Koolau Mountains on Oahu. The remaining plants number fewer than 123. Wet and mesic forests 984-3,002 ft. (300-915 m) elevation.
Cyperus trachysanthos	Pu`uka`a	Pu`uka`a	0	E	E	Sources: https://ecos.fws.gov/docs/recovery_plan/990710.pdf; https://ecos.fws.gov/roar/pub/planImplementationStatus.action?documentId=400380&entityId=1108; and NFECP and HHFP 2011. Found on Oahu, Molokai and Kauai; critical habitat on Molokai. In dry regions, often coastal, but in wet or seasonally wet situations such as in marshes, seeps, seasonally flooded wetlands, and clay soil which is wet during the winter but which dries out during the summer.
Delissea undulata ssp. undulata	No common name		0	E	E	Sources: https://ecos.fws.gov/ecp0/profile/speciesProfile?sId=1565; and http://www.iucnredlist.org/details/34040/0. Considered extinct. Occurred in montane mesic forest 1,600-8,800 ft. (488-2,682 m). Elevation and 48-100 in. (122-254 cm) of rain per year.
Eugenia koolauensis	Koolau Eugenia	Nioi	0	E	E	Sources: https://www.gpo.gov/fdsys/pkg/FR-2012-09-18/pdf/2012-19561.pdf; http://explorer.natureserve.org/servlet/NatureServe?searchName=Eugenia+koolauensis; and USFWS 1998 (https://ecos.fws.gov/docs/recovery_plan/980810.pdf). Found on Oahu & Molokai, with critical habitat designated on Molokai. Currently extremely rare and now found in the northern Koʻolau Mountains on the north fork of the Kamananui Stream, Waimea Valley and from Pūpūkea-Paumalū, Oʻahu. Terrestrial habitats: forest/hardwood, forest/woodland, moist lowland forests on gulch (Waianae) slopes, and dry-mesic shrubland/forest with rainfall 39-78 in. (99-198 cm) per year.

Scientific Name	Common Name	Hawaiian Name	LOC	ESA-listed	State-listed	Notes
Euphorbia celastroides var. kaenana (syn. *Chamaesyce c. var. k.*)	`Akoko (`Ekoko)	`Akoko (`Ekoko)	0	E	-	Sources: https://www.gpo.gov/fdsys/pkg/FR-2012-09-18/pdf/2012-19561.pdf; and http://www.iucnredlist.org/details/33600/0. Approximately 10 subpopulations, consisting of about 545 individuals in total, are located principally at Kaena Point but with small subpopulations in Alau Gulch, Waianae Kai and Keawaula. Coastal and lowland dry shrubland, and lowland mesic stands, arid talus slopes near the ocean, and sometimes inland and/or on vertical on cliffs on O'ahu.
Euphorbia kuwaleana (syn. *Chamaesyce k.*)	`Akoko (`Ekoko)	`Akoko (`Ekoko)	0	E	-	Sources: https://ecos.fws.gov/ecp0/profile/speciesProfile?sId=6308; and NFECP and HHFP 2011. Endemic to the island of O'ahu, with critical habitat designated at Kaena Point, Waianae Mtns and other coastal areas of Oahu. Dry cliff habitat and mesic ridges only (historically also coastal). The estimated 2,000 existing plants are all found in dry cliff habitat. They are threatened by alien plants and fire.
Euphorbia skottsbergii var. skottsbergii	Ewa Plains `akoko	`Akoko	0	E	-	Source: https://ecos.fws.gov/ecp0/profile/speciesProfile?sId=6793. Located on Eva Plains, Oahu in lowland dry ecosystem.
Flueggea neowawraea	Mehamehame	Mehamehame	0	E	E	Sources: https://www.gpo.gov/fdsys/pkg/FR-2012-09-18/pdf/2012-19561.pdf; NFECP and HHFP 2011; and http://explorer.natureserve.org/servlet/NatureServe?searchName=Flueggea+neowawraea+. Known from Kauai, Oahu, Molokai, Maui & Hawaii. Approximately 13 populations in north-west Kauai, the Waianae Mts. on Oahu, Molokai, where the one specimen known has died, the south-west slope of Haleakala on Maui and the Kona coast on Hawaii. Found in lowland mesic and dry cliff ecosystems on Oahu. Moist forests in gulch bottoms and on gulch slopes. On East Maui and Hawaii: growing on old, forested lava flows.
Gardenia brighamii	Hawaiian gardenia	Na`u	0	E	E	Sources: https://ecos.fws.gov/ecp0/profile/speciesProfile?sId=6853; http://explorer.natureserve.org/servlet/NatureServe?searchName=Gardenia+brighamii; and https://ecos.fws.gov/docs/five_year_review/doc4395.pdf. Found on Oahu and Lanai. Nānākuli Valley in the southern Wai'anae Mountains, where a single living tree is known in the northern branch of Nānākuli Valley which was found in 2001. Prefers dry forest, rocky gulches, or on plateau lands with deep soils.
Gouania meyenii	No common name		0	E	E	Sources: https://ecos.fws.gov/ecp0/profile/speciesProfile?sId=3893; https://www.gpo.gov/fdsys/pkg/FR-2012-09-18/pdf/2012-19561.pdf; and NFECP and HHFP 2011. Found on Kauai and Oahu, with critical habitat designated on Oahu in Waianae and Koolau mountains and coastal areas. On Oahu, this species was historically found in the lowland dry and lowland mesic ecosystems of the Waianae Mountains, and the lowland dry ecosystem at Diamond Head (HBMP 2008). At the time we designated critical habitat in 2003, the 4 known occurrences in the Waianae Mountains contained 63 individuals. Currently, this species is found in 3 occurrences totaling fewer than 70 individuals in the dry cliff ecosystem in the Waianae Mountains (U.S. Army 2006; TNC 2007; HBMP 2008).
Hedyotis fluviatilis	Water Bluet	Kamapua'a	0	E	C	Source: USFWS 1998; https://www.ctahr.hawaii.edu/hawnprop/plants/hed-fluv.htm (2001); and Wagner 1990. Endemic to the island of Kauai, and the Koolau Mountains of Oahu. It is a rare shrub that grows in moist to wet forests at elevations ranging from 160 ft. (49 m) to almost 4,000 ft. (1,219 m). It occurs on Kaua'i and on O'ahu in the Ko'olau Mountains from Pupukea to Manoa. This species is currently known from 11 locations, with fewer than 1,500 plants.

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Hesperomannia arbuscula	aster spp.		0	E	E	Source: https://dlnr.hawaii.gov/wildlife/files/2013/09/Fact-Sheet-Hesperomannia-arbuscula.pdf. This species is currently known to be extant on the Makaha-Waianae Kai Ridge on Oʻahu. The two known populations on Oʻahu are about 0.8 mi. (1 km) apart. Including the 3 populations from West Maui, this species numbers about 50 individuals. **T**ypically grows on slopes and ridges in mesic to wet forest dominated by koa and ʻōhiʻa at an elevation of 1,200-3,000 ft. (350-900 m). Associated native species include *Bidens* (koʻokoʻolau), *Alyxia oliviformis* (maile), and *Psychotria* (kopiko). Alien species that have invaded these habitats include blackberry, Christmas berry, Koster's curse, and strawberry guava.
Hibiscus brackenridgei ssp. Mokuleianus	Native yellow hibiscus	Maʻo hau hele	0	E	E	Sources: https://dlnr.hawaii.gov/wildlife/files/2013/09/Fact-Sheet-Hibiscus-brackenridgei-subsp-mokuleianus.pdf; https://ecos.fws.gov/ecp0/profile/speciesProfile?sId=4075; and https://www.gpo.gov/fdsys/pkg/FR-2012-09-18/pdf/2012-19561.pdf. On Oʻahu, scattered in the Waiʻanae Mountains from Puʻu Pane to Kealia-Kawaihapai, and Dillingham Military Reservation; prefers lowland dry-mesic forests. Approximately 100-300 individuals total are known to remain.
Isodendrion pyrifolium	Kula wahine noho	Kula wahine noho	0	E	E	Sources: https://ecos.fws.gov/docs/recovery_plan/960926a.pdf; https://ecos.fws.gov/roar/pub/planImplementationStatus.action?documentId=400308&entityId=741; and https://www.gpo.gov/fdsys/pkg/FR-2012-09-18/pdf/2012-19561.pdf. Found on Niihau, Oahu, Moloka, Maui, Lanai & Hawaii with designated critical habitat on Molokai and west Maui. No current known populations on Oahu, but previously known to occur in lowland dry (dry shrublands), and dry cliff ecosystems of Waianae mountains.
Kadua coriacea	Kio`ele	Kio`ele	0	E	-	Sources: https://ecos.fws.gov/ecp0/profile/speciesProfile?sId=5504; https://ecos.fws.gov/docs/recovery_plan/970729.pdf; and https://ecos.fws.gov/roar/pub/planImplementationStatus.action?documentId=400298&entityId=725. Found on west Oahu and west Maui, with critical habitat designated on west Maui. No known occurrences currently on Oahu, but historic range includes lowland mesic ecosystem in the Waianae and Koolau Mountains.
Joinvillea ascendens ssp. ascendens	ʻOhe	ʻOhe	0	E	C	Sources: https://ecos.fws.gov/ecp0/profile/speciesProfile?sId=2412; http://explorer.natureserve.org/servlet/NatureServe?searchName=Joinvillea+ascendens+ssp.+ascendens. Found on Kauai, Oahu, Molokai, Maui & Hawaii. Found in moist to mesic lowland and montane forests and along intermittent streams. This subspecies is known from 44 widely scattered populations totaling approximately 200 individuals. Plants are typically found as only one or two individuals, with miles between populations.
Labordia kaalae (syn. L. K. var. forsbergii*)*	No common name	Kāmakahala	0	E	-	Sources: https://ecos.fws.gov/ecp0/profile/speciesProfile?sId=7587; http://explorer.natureserve.org/servlet/NatureServe?searchName=Labordia+kaalae; and NFECP and HHFP 2011. Found on Oahu in the Waianae Mountains in mesic forests from 1,903-3,806 ft. (580-1,160 m) on ridge crests, gulch slopes and gulch bottoms.
Lepidium arbuscula	`Anaunau	`Anaunau	0	E	E	Sources: https://ecos.fws.gov/ecp0/profile/speciesProfile?sId=2670; and NFECP and HHFP 2011. Endemic to the Hawaiian Islands, between 1,083-1,706 ft. (330-520 m) elevation (or lower at Lualualei) on the island of O'ahu. The taxon is a shrub found in Hawaiian dry forest, dry cliff ecosystem in the Wai'anae Mountains on O'ahu. Occurs in dry to mesic habitats, in open shrubby or grassy areas, sparsely vegetated cliffs, and sometimes in scrubby forest.

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Lipochaeta lobata var. leptophylla	Shrubland Nehe	Nehe	0	E	E	Sources: https://ecos.fws.gov/ecp0/profile/speciesProfile?sId=5211; and NFECP and HHFP 2011. Coastal and montane dry shrublands, and in dry to mesic habitats on open grassy or shrubby ridges and cliffs.
Lobelia niihauensis	Niihau Lobelia		0	E	E	Sources: https://ecos.fws.gov/ecp0/profile/speciesProfile?sId=2278; https://www.gpo.gov/fdsys/pkg/FR-2012-09-18/pdf/2012-19561.pdf; and NFECP and HHFP 2011. Endemic to Niihau, Kauai, and Oahu. The restriction of most populations of *Lobelia niihauensis* to virtually inaccessible cliffs suggests that goat predation may have eliminated this species from more accessible locations and thus may have played a role in limiting its distribution. Elevation < 3,281 ft. (< 1,000 m), and 50-75 in. (127-191 cm) annual precipitation. Critical habitat in Waianae and Koolau mountains of Oahu.
Lobelia yuccoides			0	SOC	-	Sources: https://ecos.fws.gov/ecp0/profile/speciesProfile?sId=3229; NFECP and HHFP 2011; and http://explorer.natureserve.org/servlet/NatureServe?searchName=lobelia+yuccoides. Found on Oahu and Kauai in mesic forests and shrublands from 2,297-4,035 ft. (700-1,230 m) elevation.
Marsilea villosa	Ihi`ihi		0	E	E	Sources: https://ecos.fws.gov/docs/recovery_plan/960418.pdf; https://ecos.fws.gov/roar/pub/planImplementationStatus.action?documentId=400260&entityId=1200; https://www.gpo.gov/fdsys/pkg/FR-2012-09-18/pdf/2012-19561.pdf; and NFECP and HHFP 2011. Found on Niihau, Molokai, and Oahu in coastal and lowland dry ecosystems near the Waianae and Koolau mountains; are frequently found in seasonal wetlands. Prefers areas less than 984 ft. (300 m) in elevation and less than 20 in. (51 cm) precipitation.
Mariscus (Cyperus) pennatiformis ssp. pennatiformis	No common name		0	E	E	Sources: https://ecos.fws.gov/ecp0/profile/speciesProfile?sId=6868 https://www.gpo.gov/fdsys/pkg/FR-2012-09-18/pdf/2012-19561.pdf http://www.iucnredlist.org/details/78786326/0 Found on Kauai, Oahu Hawaii & east Maui. Rare, in open sites on coastal dunes, grasslands, and open sites in lowland mesic forest. Critical habitat on coastal Maui. Last observed on Oahu in 1930s.
Melanthera tenuifolia	Slender-leaf Nehe	Nehe	0	E	-	Sources: https://ecos.fws.gov/ecp0/profile/speciesProfile?sId=2407; https://www.gpo.gov/fdsys/pkg/FR-2012-09-18/pdf/2012-19561.pdf; and NFECP and HHFP 2011. Endemic to the northern Waianae Mountains of Oahu. It is estimated that there are fewer than 3,000 plants of this species in the 11 current occurrences. Terrestrial habitats: forest/hardwood, forest/woodland, shrubland/chaparral; dry and moist shrublands and forests, as well as ridge tops, sides of ridges, steep slopes, and cliffs. Typically occurs at elevation < 3281 ft. (< 1,000 m) and annual precipitation < 50 in. (< 127 cm).
Melicope christophersenii	No common name		0	E	-	Sources: https://ecos.fws.gov/ecp0/profile/speciesProfile?sId=4185; https://www.gpo.gov/fdsys/pkg/FR-2012-09-18/pdf/2012-19561.pdf; http://explorer.natureserve.org/servlet/NatureServe?searchName=Melicope+christophersenii; and NFECP and HHFP 2011. Endemic to the Waianae Mountains of Oahu in montane wet and wet cliff ecosystems. Habitat: wet forests and shrublands on ridgecrests and gulch slopes, and also on flat to gently sloped terrain on the summit plateau of Ka'ala (mountain); and northern Wai'anae Mountains in dry and mesic forests from 1,197-2,953 ft (365-900 m).
Melicope hiiakae	Alani	Alani	0	E	C	Sources: https://ecos.fws.gov/ecp0/profile/speciesProfile?sId=6577; and https://dlnr.hawaii.gov/wildlife/files/2013/09/Fact-Sheet-Melicope-hiiakae.pdf. Only 20 plants have been found in the Ko'olau mountans of Oahu.

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Mezoneuron kavaiense	Uhi uhi	Uhi uhi	0	E	-	Sources: https://ecos.fws.gov/ecp0/profile/speciesProfile?sId=7129; http://www.iucnredlist.org/details/33606/0; and https://dlnr.hawaii.gov/wildlife/files/2013/09/Fact-Sheet-Caesalpinia-kavaiensis.pdf. Is found only on O'ahu in the Wai'anae range, and on the island of Hawai'i on the slopes of Mt. Hualalai, and on Lana`i. Eight subpopulations are known, totaling approximately 50-60 individuals; however, many of these are probably non-reproductive due to various problems. Less than 10 individuals total remain in the two populations on O'ahu. Terrestrial habitat(s): forest/hardwood, forest/woodland, shrubland/chaparral; dry and moist forests and shrublands. On gulch slopes and, on Hawaii, on old lava flows. It occurred throughout dry forest ecosystems, ranging in elevation from 250-3,000 ft. (78-910 m).
Microlepia strigosa var. mauiensis (Microlepia mauiensis)	Maui fern		0	E	C	Sources: https://ecos.fws.gov/ecp0/profile/speciesProfile?sId=4737; http://nativeplants.hawaii.edu/plant/view/Microlepia_strigosa_strigosa; and areas mapped on ECOS, USDA and Nature Serve. Variable in family of bracken fern. Extremely hairy endemic that is uncommon to rare in mesic to wet forests. Hawai'i botanist Joel Lau notes of its range on O'ahu that he has seen it in three locations: West Makaleha, Mākaha, and Palikea.
Neraudia angulata	Angular-fruit Neraudia		0	E	E	Sources: https://ecos.fws.gov/ecp0/profile/speciesProfile?sId=2750; https://www.gpo.gov/fdsys/pkg/FR-2012-09-18/pdf/2012-19561.pdf; and NFECP and HHFP 2011. Endemic to the Waianae Mountains of Oahu. Currently about 15 occurrences are known, with a total of fewer than 150 plants. Occurs between 919-2,707 ft. (280-825 m) elevation on the island of O'ahu. This taxon is a short-lived shrub found in dry to mesic forest habitats, typically on or around cliffs. Found at sites with annual precipitation < 75 in. (< 191 cm) and < 3281 ft. (< 1,000 m) elevation.
Neraudia melastomifolia	No common name	Ma`aloa	0	SOC	-	Sources: https://ecos.fws.gov/ecp0/profile/speciesProfile?sId=7416; NFECP and HHFP 2011; https://ecos.fws.gov/docs/federal_register/fr2425.pdf; and http://explorer.natureserve.org/servlet/NatureServe?searchName=Neraudia+melastomifolia. Found on Oahu, Kauai, and west Maui. Occurs in mesic and sometimes wet forests at elevations ranging from 902-4,003 ft (275-1,220 m) on gulch slopes and gulch bottoms.
Nototrichium humile	Kulu`i		0	E	E	Sources: https://ecos.fws.gov/ecp0/profile/speciesProfile?sId=1001; https://www.gpo.gov/fdsys/pkg/FR-2012-09-18/pdf/2012-19561.pd; and NFECP and HHFP 2011. Current range: Waianae Mountains of Oahu and central to eastern Maui with critical habitat designated in south Maui. On Oahu, this species is now found almost exclusively on the leeward side of the Waianae Mountain range in lowland dry, lowland mesic and dry cliff ecosystems. It is thought that fewer than 2,000 plants remain. Terrestrial habitat(s): cliff, forest/hardwood, forest/woodland; open areas, remnant dry or mesic forest, on cliff faces, in gulches, or on steep slopes. Its area of occupancy is 90 km^2 and declining. Site conditions are found at < 3,281 ft. (< 1,000 m) elevation in areas with precipitation less than 50 in. (127 cm) annually.
Nothocestrum latifolium	`Aiea	`Aiea	0	E	C	Sources: https://ecos.fws.gov/ecp0/profile/speciesProfile?sId=1061; and http://explorer.natureserve.org/servlet/NatureServe?searchName=Nothocestrum+latifolium. Endemic to Oahu and Maui Lanai and Molokai; rare and declining. Prefers dry to mesic conditions above 1,000 ft. (305 m). On Oahu, Molokai and West Maui occurs on ridges and in gulches. On East Maui: old lava flows. On Lanai: mostly on plateau lands with deep soil.
Peucedanum sandwicense	Makou	Makou	0	T	T	Sources: https://ecos.fws.gov/ecp0/profile/speciesProfile?sId=5579; and http://www.nativeplants.hawaii.edu/plant/view/Peucedanum_sandwicense. Found from 3-820 ft. (0.91-250 m) on windward cliffs on Kaua'i, O'ahu (Wai'anae Mts.), Moloka'i (including Mōkapu and Huelo islets), West Maui, and Keōpuka and Makolaka islets off the coast of East Maui. Critical habitat on Molokai & Maui - dry cliff habitats.

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Plantago princeps	Kuahiwi laukahi	Kuahiwi laukahi	0	E	E	Sources: NFECP and HHFP 2011; https://ecos.fws.gov/ecp0/profile/speciesProfile?sId=4926; https://www.gpo.gov/fdsys/pkg/FR-2012-09-18/pdf/2012-19561.pdf; and http://manoa.hawaii.edu/hpicesu/DPW/RPP/plapri.pdf. Found in lowland mesic, lowland wet and dry cliff ecosystems and lowland wet and wet cliff ecosystems of Koolau Mountains.
Platydesma cornuta var. cornuta	No common name		0	C	C	Sources: https://ecos.fws.gov/ecp0/profile/speciesProfile?sId=8345; and https://www.gpo.gov/fdsys/pkg/FR-2012-09-18/pdf/2012-19561.pdf. Found in Koolau mountains of Oahu. It occurs in wet forest, shrubland, and gulches in the lowland wet ecosystem of the Koolau Mountains, at elevations between 1,903-2,493 ft. (580-760 m).
Platydesma cornuta var. decurrens	No common name		0	C	C	Sources: NFECP and HHFP 2011; https://ecos.fws.gov/ecp0/profile/speciesProfile?sId=8345; and https://www.gpo.gov/fdsys/pkg/FR-2012-09-18/pdf/2012-19561.pdf. It occurs in lowland mesic and dry cliff ecosystems, at elevations between 1,968-2,953 ft. (600-900 m).
Pleomele forbesii	Forbe's Dracaena	Hala pepe	0	E	C	Sources: NFECP and HHFP 2011; https://ecos.fws.gov/ecp0/profile/speciesProfile?sId=5965#rangeInfo; and https://www.gpo.gov/fdsys/pkg/FR-2012-09-18/pdf/2012-19561.pdf. The species total is under 350 plants in 20 known occurrences. There are 290 to 307 individuals in the Waianae Mountains and a few individuals in the Koolau Mountains. Found in mesic & dry forest and shrubland in the lowland dry, lowland mesic and dry cliff ecosystems between 787-2,953 ft. (240-900 m) elevation. The species' center of abundance is in drier native forests and shrublands.
Polyscias lydgatei (syn. P. oahuensis, Tetraplasandra l.)	ʻOhe mauka	ʻOhe mauka	0	E - Endemic		Sources: https://ecos.fws.gov/ecp0/profile/speciesProfile?sId=2751; https://www.gpo.gov/fdsys/pkg/FR-2012-09-18/pdf/2012-19561.pdf; http://www.dtic.mil/dtic/tr/fulltext/u2/a336412.pdf; and http://www.nativeplants.hawaii.edu/plant/view/Polyscias_oahuensis. Plant is widespread and variable from 785-5000 ft. (239-1,524 m) in mesic to wet forest, with critical habitat designated in the Waianae and Koolau mountains. Prefers mesic/wet habitats at their low-elevation ranges.
Portulaca villosa	Hairy Purslane	Ihi	1	E	-	Sources: https://www.gpo.gov/fdsys/pkg/FR-2015-09-30/pdf/2015-24305.pdf; https://ecos.fws.gov/ecp0/profile/speciesProfile?sId=4886; and http://explorer.natureserve.org/servlet/NatureServe?searchName=Portulaca+villosa+. Found on Kauai, Lehua, Oahu, Lanai, Kahoolawe, Maui, and Hawaii. Dry grasslands, shrublands, and (less often) in forests. Usually in coastal habitats; less frequently inland. Most sites are sparsely vegetated, exposed, and rocky. Found at elevations from sea level to 984 ft. (300 m) elevation, typically within 328 ft. (100 m) of the coast, with less than 40 in. (102 cm) of annual precipitation.
Pritchardia bakeri	Baker's Loulu	Loulu	0	E	-	Sources: https://ecos.fws.gov/ecp0/profile/speciesProfile?sId=9615; and https://www.gpo.gov/fdsys/pkg/FR-2015-09-30/pdf/2015-24305.pdf; and NFECP and HHFP 2011. Known from the northern end (Pupukea) and southern end (Kuliouou) of the Ko'olau Mountain range, Oahu. Total population is < 75 individuals. Terrestrial habitat is forest/woodland. Found in lowland mesic habitats below 3,281 ft. (1,000) m elevation, with precipitation of 50-75 in. (127-191 cm) annually. This species occurs in the lowland mesic ecosystem from 1,500-2,100 ft (457-640 m) in disturbed, windswept, and mostly exposed shrubby or grassy areas, and sometimes on steep slopes in these areas (Bacon et al. 2012, pp. 1–17; Hodel 2012, pp. 71–73).
Pseudognaphalium (=Gnaphalium) sandwicensium var. molokaiense	`Ena`ena	`Ena`ena	0	E	-	Sources: https://ecos.fws.gov/ecp0/profile/speciesProfile?sId=5993; https://www.gpo.gov/fdsys/pkg/FR-2016-09-30/pdf/2016-23112.pdf; and http://explorer.natureserve.org/servlet/NatureServe?searchName=Pseudognaphalium+sandwicensium+var.+molokaiense. Extinct on Oahu.

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Schenkia sebaeoides (syn. *Centaurium sebaeoides*)	Awiwi		0	E	-	Sources: https://ecos.fws.gov/ecp0/profile/speciesProfile?sId=7103; https://ecos.fws.gov/docs/recovery_plan/990710.pdf; https://ecos.fws.gov/roar/pub/planImplementationStatus.action?documentId=400380&entityId=1093; NFECP and HHFP 2011; and https://www.gpo.gov/fdsys/pkg/FR-2012-09-18/pdf/2012-19561.pdf. Found in coastal and near-coastal areas of Kauai, Oahu, Molokai, Lanai, and west Maui with critical habitat designated on Lanai. Currently occurs on Oahu in the coastal ecosystem at Kaena Point and Halona (Waianae and Koolau Mountains) in 2 occurrences totaling between 40 and 50 individuals (TNC 2007; HBMP 2008). Habitat includes coastal and lowland dry shrublands with coralline or basaltic substrates with < 20 in. (< 51 cm) of annual precipitation and < 984 ft. (< 300 m) elevation.
Schiedea hookeri	No common name		0	E	-	Sources: https://ecos.fws.gov/ecp0/profile/speciesProfile?sId=1705; and NFECP and HHFP 2011. Endemic to Oahu and Maui, occurs mainly in the central and northern Wai'anae Mountains in dry and mesic forests from 1,197-2,953 ft (365-900 m). Currently on Oahu, found in 17 occurrences totaling approximately the same number of individuals, in the lowland dry, lowland mesic, lowland wet, dry cliff, and wet cliff ecosystems in the Waianae Mountains (U.S. Army 2006; TNC 2007; HBMP 2008).
Schiedea kealiae	Ma`oli`oli		0	E	E	Sources: https://ecos.fws.gov/ecp0/profile/speciesProfile?sId=3679; https://ecos.fws.gov/docs/recovery_plan/980810.pdf; https://www.gpo.gov/fdsys/pkg/FR-2012-09-18/pdf/2012-19561.pdf; https://ecos.fws.gov/roar/pub/planImplementationStatus.action?documentId=400358&entityId=603. Found on Oahu in coastal foothills. Currently found in 1 occurrence totaling between 50-100 individuals in the coastal and lowland dry ecosystems in the Waianae Mountains (U.S. Army 2006; TNC 2007; HBMP 2008). Found at elevations < 984 ft. (< 300 m) and with annual precipitation < 20 in (< 51 cm).
Schiedea pentamera (syns. *S. pubescens var. purpurascens, S. pentandra*)	Ma`oli`oli	Ma`oli`oli	0	E	C	Source: NFECP and HHFP 2011; https://ecos.fws.gov/ecp0/profile/speciesProfile?sId=4030; and http://explorer.natureserve.org/servlet/NatureServe?searchName=Schiedea+pubescens. Found on Oahu where it is endemic to the Waianae Mountains. Found in hardwood mesic to wet forests from 535-975 m elevations.
Sesbania tomentosa	Oahu Riverhemp	`Ohai	0	E	E	Sources: https://ecos.fws.gov/ecp0/profile/speciesProfile?sId=8453; NFECP and HHFP 2011; and https://www.gpo.gov/fdsys/pkg/FR-2012-09-18/pdf/2012-19561.pdf. Found on Niihau, Kauai, Oahu, Maui, Kaho'olawe and Hawaii, with critical habitat designated on Molokai, Maui and Kaho'olawe. The number of individuals at any one location varies widely, depending on rainfall (TNC 2007; NTBG 2009k). Often coastal, less often inland. Found on calcareous beaches and sand dunes, rocky ridges and slopes, deep red soil, and on soil pockets on lava. Basaltic and calcareous substrates. Found in elevations of < 984 ft. (< 300 m) and annual precipitation < 20 in. Prefers plateau lands with deep soils. It used to grow in dry areas at elevations below 2,500 feet on all of the main islands. However, destruction of these habitats has greatly diminished its natural occurrence within its former range.
Silene lanceolata	Lanceolate Catchfly		0	E	E	Sources: https://ecos.fws.gov/ecp0/profile/speciesProfile?sId=5746; https://www.gpo.gov/fdsys/pkg/FR-2012-09-18/pdf/2012-19561.pdf; and http://explorer.natureserve.org/servlet/NatureServe?searchName=Silene+lanceolata. Found on Kauai, Oahu, Molokai, Lanai, and Hawaii with critical designated on Molokai. Found in lowland mesic and dry cliff ecotypes. Terrestrial habitats: cliff, forest/hardwood, forest/woodland, shrubland/chaparral; dry and moist forests and shrublands. Elevations < 3281 ft. (< 1,000 m) and annual precipitation < 75 in (< 191 cm).
Solanum nelsonii	Popolo		0	E	C	Sources: https://ecos.fws.gov/ecp0/profile/speciesProfile?sId=2281; NFECP and HHFP 2011; and https://www.gpo.gov/fdsys/pkg/FR-2016-09-30/pdf/2016-23112.pdf. Found in coastal areas of Niihau, Kauai, Oahu, Molokai, Maui, and Hawaii. Typical habitat is coral rubble or sand in coastal sites up to 492 ft. (150 m) from the shore. As

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						of 2016, known to occur in the coastal ecosystem on the islands of Hawaii and Molokai (approximately 50 individuals), and on the Northwest Hawaiian Islands of Kure (unknown number of individuals), Midway Atoll (approximately 260 individuals on Sand, Eastern, and Spit islands), Laysan (approximately 490 individuals), Pearl and Hermes (30-100 individuals), and Nihoa (8,000-15,000 individuals) (Aruch 2006, in litt.; Rehkemper 2006, in litt.; Tangalin 2006, in litt.; Bio 2008 a and 2008b, in litt.; Vanderlip 2011, in litt.; Conry 2012, in litt.; PEPP 2013, pp. 190–191).
Spermolepis hawaiiensis	No common name		0	E	E	Sources: NFECP and HHFP 2011; https://ecos.fws.gov/ecp0/profile/speciesProfile?sId=1670; https://www.gpo.gov/fdsys/pkg/FR-2012-09-18/pdf/2012-19561.pdf; and http://explorer.natureserve.org/servlet/NatureServe?searchName=Spermolepis+hawaiiensis. Found on Kauai, Oahu, Molokai, Lanai, Maui and Hawaii, with critical habitat designated on Molokai and Maui. On Oahu in 2003 there were 6 occurrences totaling between 110 and 910 individuals in the Waianae and Koolau Mountains (Diamond Head), in the lowland dry and dry cliff ecosystems. Currently found in 4 occurrences totaling several hundred to thousands of individuals, depending on annual weather conditions (U.S. Army 2006; TNC 2007; HBMP 2008). It grows in forest, woodland, shrubland, and chaparral. It is present at Diamond Head on Oahu and the Pohakuloa Training Area on Hawaii. Occurs in dry shrublands and forests from 1,000-6,398 ft (305-1,950 m).
Tetramolopium lepidotum ssp. lepidotum	No common name		0	E	E	Sources: https://ecos.fws.gov/ecp0/profile/speciesProfile?sId=2944; https://www.gpo.gov/fdsys/pkg/FR-2012-09-18/pdf/2012-19561.pdf; https://ecos.fws.gov/docs/recovery_plan/980810.pdf; NFECP and HHFP 2011; and https://ecos.fws.gov/roar/pub/planImplementationStatus.action?documentId=400358&entityId=848. Found on Oahu and Lanai, with critical habitat designated in the Waianae mountains of Oahu. At the time critical habitat was designated in 2003, there were 5 occurrences of approximately 15 individuals. Currently, this species is found in 3 occurrences totaling 65 individuals, in the lowland mesic and dry cliff ecosystems in the Waianae Mountains (U.S. Army 2006; TNC 2007; HBMP 2008). Lowland mesic habitat on Oahu is at elevations of < 3,281 ft. (< 1,000 m) and annual precipitation of 50-75 in. (127-191 cm).
Vigna o-wahuensis (V. owahuensis)	O'ahu cowpea		0	E	E	Sources: https://ecos.fws.gov/ecp0/profile/speciesProfile?sId=8445; https://www.gpo.gov/fdsys/pkg/FR-2012-09-18/pdf/2012-19561.pdf; and https://ecos.fws.gov/docs/five_year_review/doc4582.pdf. Found on Oahu, Molokai, Lanai, Kahoolawe, Maui & Hawaii. Endemic though a very rare and seldom seen vine known to grow primarily in dry grassland and shrubland from 30 ft. (9 m) to about 4500 ft. (1,372 m).

APPENDIX F

DLNR-DOFAW CORRESPONDENCE

DAVID Y. IGE
GOVERNOR OF HAWAII

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

ROBERT K. MASUDA
FIRST DEPUTY

M. KALEO MANUEL
DEPUTY DIRECTOR - WATER

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

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

September 20, 2022

Lori Ford, MS
Senior Project Manager
Ford & Associates, Inc.
928 Nuuanu Avenue, Suite 205
Honolulu, HI 96817
Attn: lford@fordassoc.com

Log no. 3791
FAI Project No. 22-2030

Dear Ms. Lori Ford,

The Department of Land and Natural Resources, Division of Forestry and Wildlife (DOFAW) has received your request for comments for the proposed Garg Residence Project (FAI Project No. 22-2030) located at 6973 Kalaniana'ole Highway, Honolulu, on the island of O'ahu; TMK: (1) 3-9-002: 031. The proposed project consists of demolishing the existing two-story single-family residential dwelling and constructing an approximately 4,756 square feet (s.f.) two-story residential dwelling with an approximate 515 s.f. garage, a pool, various paved/tiled lanais and walkways, and landscaping on a 10,106 s.f. parcel.

DOFAW concurs with the mitigation measures included in the request for comments letter intended to avoid construction and operational impacts to State-listed species including the Hawaiian Hoary bat or 'Ōpe'ape'a (*Lasiurus cinereus semotus*). DOFAW provides the following additional comments regarding the potential for the proposed work to affect listed species in the vicinity of the project area.

We concur with mitigation proposed for the Hawaiian stilt (*Himantopus mexicanus knudseni*). Other State-listed waterbirds such as the Hawaiian coot (*Fulica alai*) and Hawaiian Duck (*Anas wyvilliana*) could also potentially occur at or in the vicinity of the proposed project site. It is against State law to harm or harass these species. We would also recommend, that if any of these species are present during construction, then all activities within 100 feet (30 meters) should cease, and the bird or birds should not be approached. Work may continue after the bird or birds leave the area of their own accord. If a nest is discovered at any point, please contact the O'ahu Branch DOFAW Office at (808) 973-9778.

Artificial lighting can adversely impact seabirds that may pass through the area at night by causing them to become disoriented. This disorientation can result in their collision with manmade structures or the grounding of birds. For nighttime work that might be required, DOFAW recommends that all lights used to be fully shielded to minimize the attraction of seabirds. Nighttime work that requires outdoor lighting should be avoided during the seabird fledging season, from September 15 through December 15. This is the period when young seabirds take their maiden voyage to the open sea. Permanent lighting also poses a risk of seabird attraction, and as such should be minimized or eliminated to protect seabird flyways and preserve the night sky. For illustrations and guidance related to seabird-friendly light styles that also protect seabirds and the dark starry skies of Hawai'i please visit https://dlnr.hawaii.gov/wildlife/files/2016/03/DOC439.pdf.

The State threatened White Tern (*Gygis alba*) or Manu o Kū is known to nest in the vicinity of the proposed project. If tree trimming or removal is planned, DOFAW strongly recommends a qualified biologist survey for the presence of White Terns prior to any action that could disturb the trees. White Tern pairs typically lay their single egg on a tree branch with no nest. Eggs and chicks can be dislodged by construction equipment or workers that contact trees in which White Terns are nesting. As such, a tree protection program should be in place for any mature trees with nesting of roosting White Terns. If a nest is discovered, please notify DOFAW staff for assistance.

The State endangered Hawaiian Short-eared owl or pueo (*Asio flammeus sandwichensis*) could potentially occur in the project vicinity. Pueo are most active during dawn and dusk twilights. Before clearing any vegetation, DOFAW recommends twilight pre-construction surveys by a qualified biologist. If pueo nests are present, DOFAW staff should be notified and a buffer zone should be established in which no clearing occurs until nesting is completed.

The State endangered Hawaiian Monk Seal (*Monachus schauinslandi*) and threatened Green Sea Turtle (*Chelonia mydas*) could potentially occur or haul out onshore within the vicinity of the proposed project site. If either species is detected within 100 meters of the project area all nearby construction operations should cease and not continue until the focal animal has departed the area on its own accord.

DOFAW recommends using native plant species for landscaping that are appropriate for the area (i.e., climate conditions are suitable for the plants to thrive, historically occurred there, etc.). Please do not plant invasive species. DOFAW also recommends consulting the Hawai'i-Pacific Weed Risk Assessment website to determine the potential invasiveness of plants proposed for use in the project (https://sites.google.com/site/weedriskassessment/home). Please refer to www.plantpono.org for guidance on the selection and evaluation of landscaping plants.

DOFAW recommends minimizing the movement of plant or soil material between worksites. Soil and plant material may contain pathogens, pests such as Little Fire ants and/or Coconut Rhinoceros beetles, or invasive plant parts that could harm our native species and ecosystems. We recommend consulting the O'ahu Invasive Species Committee (OISC) at (808) 266-7994 to help plan, design, and construct the project, learn of any high-risk invasive species in the area, and ways to mitigate their spread. All equipment, materials, and personnel should be cleaned of excess soil and debris to minimize the risk of spreading invasive species.

We appreciate your efforts to work with our office for the conservation of our native species. These comments are general guidelines and should not be considered comprehensive for this site or project. It is the responsibility of the applicant to do their own due diligence to avoid any negative environmental impacts. Should the scope of the project change significantly, or should it become apparent that threatened or endangered species may be impacted, please contact our staff as soon as possible. If you have any questions, please contact Paul Radley, Protected Species Habitat Conservation Planning Coordinator at (808) 295-1123 or paul.m.radley@hawaii.gov.

Sincerely,

Lainie Berry

LAINIE BERRY
Wildlife Program Manager

APPENDIX G

SCIENTIFIC CONSULTANT SERVICES REPORT

Project 2802 LRFI-1.4

AN ARCHAEOLOGICAL FIELD INSPECTION AND LITERATURE REVIEW FOR A RESIDENTIAL PROJECT AT 6973 KALANIANA‘OLE HIGHWAY IN HONOLULU, MAUNALUA AHUPUA‘A, KONA MOKU, O‘AHU MOKUPUNI, HAWAI‘I [TMK: (1) 3-9-002:031]

Prepared by

Gloria C. A. Lee, B.A.,

Kaitlyn Lowrance, M.A.,

and

Robert L. Spear, Ph.D.,

SEPTEMBER 2022

DRAFT

Prepared for

Ford & Associates, Inc.

928 Nu‘uanu Avenue, Suite 505

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SCIENTIFIC CONSULTANT SERVICES, Inc.

HAWAII

1357 Kapiolani Blvd., Suite 850 Honolulu, Hawai‘i 96814

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INTRODUCTION

At the request of Ford & Associates, Inc., Scientific Consultant Services, Inc. (SCS) conducted a literature review for a residential project at 6973 Kalaniana‘ole Highway in Honolulu, Maunalua Ahupua‘a, Kona Moku, O‘ahu Mokupuni, Hawai‘i [TMK: (1) 3-9-002:031] (Figures 1 through 4). The 10,016 square foot (sq ft) property lies in the neighborhood of Portlock in a residential area known as Hawai‘i Kai or Maunalua. The structure in the property is a three-bedroom and three-bathroom home consisting of 2,760 sq ft (2,390 sq ft interior space and a 370 sq ft *lanai*, or patio). The building permit was issued in 1975 and closed as complete in 1979.

This project involves demolishing the existing two-story structure in order to build a three-story one atop the concrete base. The new building will be 4,756 sq ft and constructed primarily of wood and steel framing with a foundation of continuous and isolated reinforced concrete footings. A pulley style elevator will also be installed.

An archaeological field inspection of the project area was conducted through a pedestrian survey and ground surface inspection to assess the potential presence of historic properties including archaeological sites, buildings, structures, and cultural materials. No archaeological subsurface testing was conducted. The archaeological field inspection was conducted on July 26, 2022 by SCS archaeologist Kaitlyn Lowrance, M.A., under the supervision of Principal Investigator Robert L. Spear, Ph.D. No archaeological sites or features were identified during the field inspection.

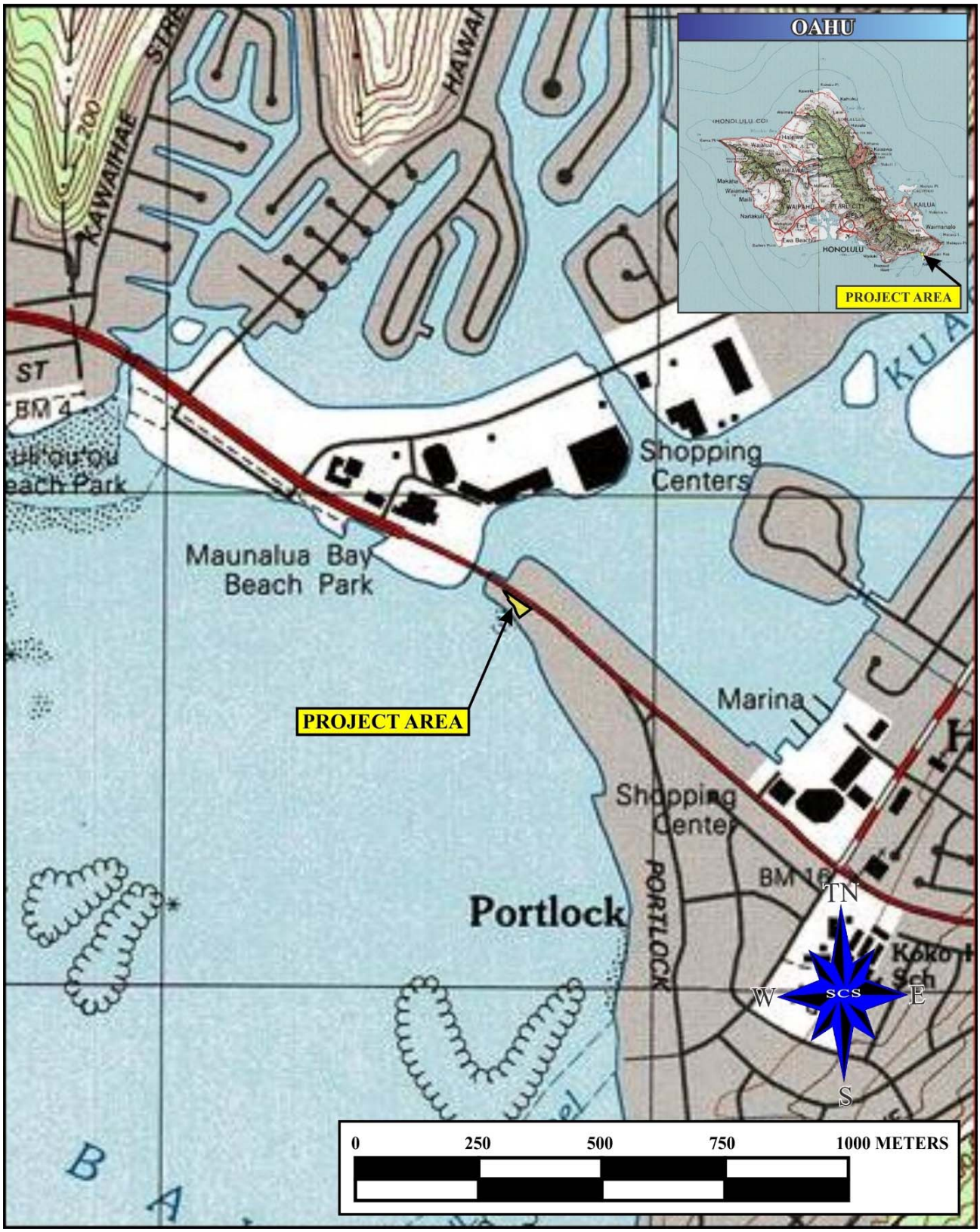

Figure 1: Portion of 1999 USGS topographic map (Koko Head HI quadrangle) showing the project area location

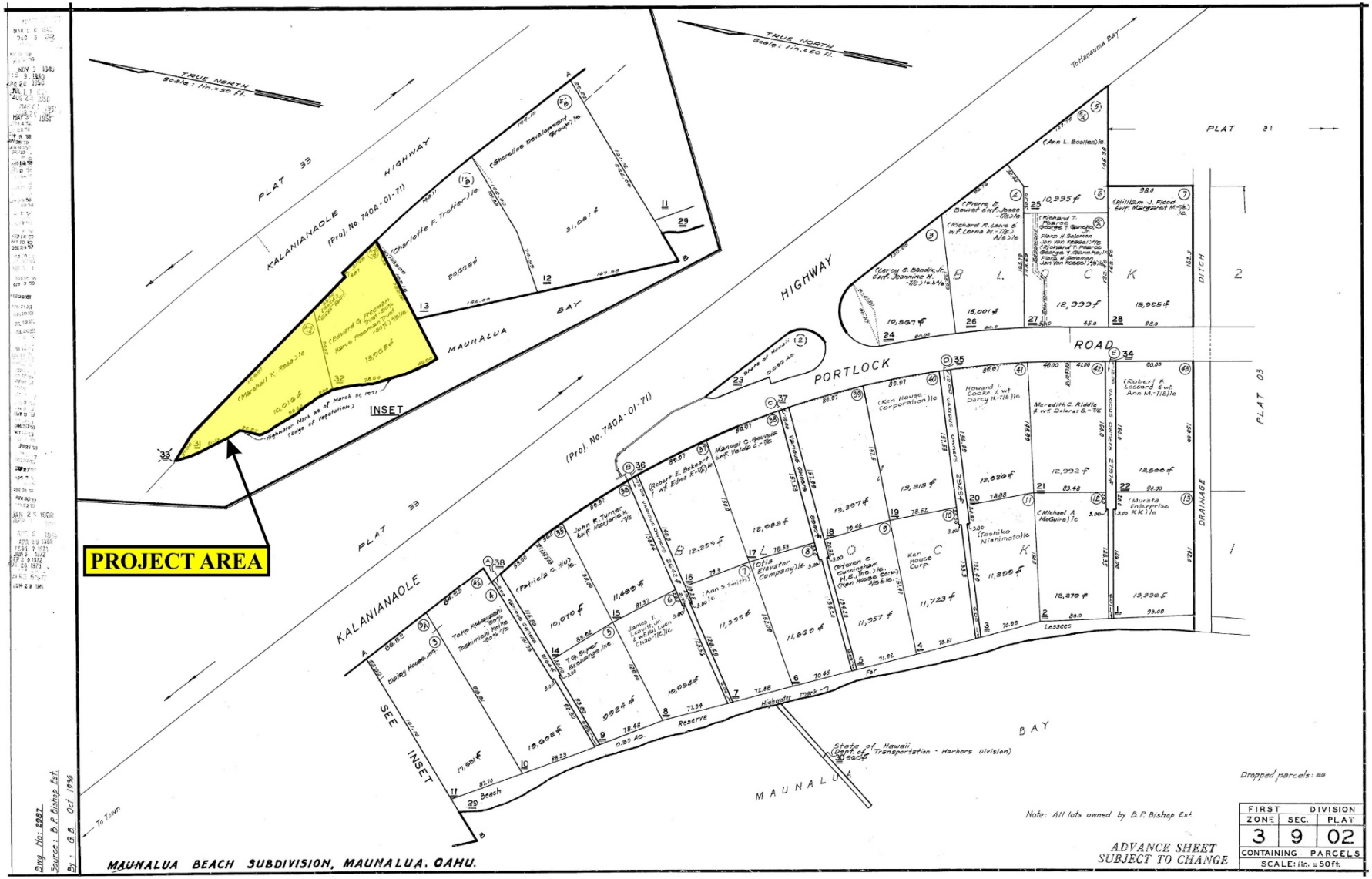

Figure 2: Tax Map Key [TMK (1) 3-9-002] showing the project area location

Figure 3: Google aerial photograph showing the project area location

Figure 4: The project area overlaid on an aerial photograph of East Honolulu (Tessmer 2019)

ENVIRONMENTAL SETTING

At 597 sq. miles (1,545 km^2), Oʻahu is the third largest Hawaiian island and the most populated in the archipelago. The name "Oʻahu" does not seem to have a meaning in Hawaiian (Pūkuʻi et al. 1974:168), but the island is commonly called "the Gathering Place" because of its geographically central location and both political and economic importance.

Oʻahu was formed by two ancient shield volcanoes: the older Waiʻanae, rising to 1,227 m (4,025 ft) above mean sea level (amsl) and located to the west, and the younger Koʻolau 960 m (3,150 ft amsl) to the east. The Central Oʻahu plain connects the two mountain ranges remaining from these prehistoric volcanoes. These orographic features determine the common geographic divisions of the island into a windward section, a leeward section, housing the population center Honolulu, and the central plain. Over millennia, the rain-bringing trade winds and the resultant constant water erosion have carved amphitheater-headed valleys and rugged passes (Macdonald et al. 1986:218-223), providing access from one side of the Koʻolau Range to the other. Numerous late volcanic eruptions created a number of today's well-known landmarks, including Mōkapu Peninsula on the windward side, and Kaʻau Crater, Pūowaina (Punchbowl), ʻUalakaʻa (Tantalus), Lēʻahi (Diamond Head), Hanauma Bay, Kohelepelepe (Koko Crater) and Koko Head on leeward Oʻahu (Stearns 1966:86-87; Macdonald et al. 1986:434).

LOCATION

The 0.23-acre project area is located in the southeast of Oʻahu, just south of Koʻolau Range, and on Portlock Peninsula, which separates the Pacific Ocean from the former marsh and fishpond Kuapā Pond, a central feature of Hawaiʻi Kai. Along with the crater of Kawaiahaʻo and Kalama Valley, the peninsula forms the eastern limits of residential development. The built environment in the vicinity of the project area is the residential neighborhood of Portlock. The project area is easily accessible via Kalanianaʻole Highway (Route 72). Elevation is 1 m (3 ft) amsl.

SOILS

According to Foote et al. (1972; Figure 5), the majority of the project area is located over Jaucas sand, specifically the phase of 0 to 15 percent slopes (JaC). The Jaucas series consists of excessively drained, calcareous soils adjacent to the ocean. The JaC variety features rapid permeability with very slow to slow runoff and slight erosion (Foote et al. 1972:48). A small portion of the project area is Fill land, mixed (FL). It is often present in areas filled with dredging material and also is mostly adjacent to the ocean (Foote et al. 1972:31). Sandy soil matrices such as these in the project area and its vicinity suggest the potential for encountering historic properties including human burials and cultural deposits in subsurface contexts (Kirch 1985:240).

In preparation for this project, JPB Engineering, Inc. conducted a geotechnical study of the project area in 2020 and recorded surficial soils identified as fill to a maximum of three feet deep. This fill was underlain by gray-brown and dark-gray poorly-graded sand with gravel inclusions to the maximum depth explored of 15 feet below surface (Tabuso 2020:3).

CLIMATE AND HYDROLOGY

Average annual air temperature in Portlock is 23.7 °C (74.6°F). January and February are the coldest months with an average air temperature around 21.7 °C (71 °F), and August is the hottest with an average temperature of 25.6° C (78.2 °F) (Giambelluca et al. 2014). Mean annual rainfall is estimated at around 746 mm (29.4 in.). Most of it occurs in the winter months of October through March. The wettest month is December with an average rainfall of about 115 mm (4.5 in.), while the driest is June, with an average of 21 mm (0.82 in.) (Giambelluca et al. 2014).

VEGETATION

As the project area is an entirely built over environment, the majority of the vegetation is introduced. Notable non-native species include the cultivated papaya (*Carica papaya*), foxtail palm (*Wodyetia bifurcata*), and fire croton (*Codiaeum variegatum*). Observed naturalized non-native species were Cook pine (*Araucaria columnaris*), snake plant (*Dracaena trifasciata*), and Spanish moss (*Tillandsia usneoides*). Polynesian-introduced were a number of *niu* (coconut, *Cocos nucifera*), while the only indigenous species was *milo* (portia tree, *Thespesia populnea*).

CULTURAL AND HISTORICAL CONTEXT

Archaeological data suggest that initial settlement of the Hawaiian Islands occurred on the windward shores between 850 and 1100 C.E., with populations eventually moving into the drier leeward areas in later periods (Kirch 2011:3, 22). According to Patrick Kirch, fertile windward areas were the concentration of early settlement, but because of the long history of agriculture and population expansion it is unlikely that initially settled sites will be recovered (Kirch 1985:67).

Traditionally, the division of Oʻahu into districts (*moku*) and sub-districts (*ahupuaʻa*) was understood to originate from the time of legendary king (*mōʻī*) Maʻilikūkahi, progenitor of the island's chiefly line (Fornander 1878:189-195; Kirch and Sahlins 1992, Vol. 1:21-23). He created the six Oʻahu districts (Kona, Koʻolauloa, Koʻolaupoko, Wahiawa, Waiʻanae, and ʻEwa) and instituted the district chiefs (*aliʻi ʻai moku*). Land was property of the king or *aliʻi ʻai moku*, which he held in trust for the gods. The title of *aliʻi ʻai moku* ensured rights and responsibilities, but did not confer absolute ownership because island rulers kept the parcels they wanted. Higher chiefs received large parcels from the *mōʻī* and in turn distributed smaller parcels to lesser chiefs. The *makaʻāinana* (commoners) worked individual plots of land.

Figure 5: Google aerial photograph showing soil series in project area location and its vicinity

The terms *moku*, *ahupua‘a*, *‘ili* or *‘ili‘ āina*, and *mo‘o* were used to delineate various land sections. A district (*moku*) contained smaller land divisions (*ahupua‘a*) that were meant to incorporate the natural resources relevant to traditional subsistence stretching from the ocean to the mountain peaks (Lyons 1875:111). These ancient divisions have remained the same and are still commonly used to locate and refer to geographical features of the islands, even though land tenure has gone through radical changes. The *‘ili* were smaller land divisions administered by the chief who controlled the corresponding *ahupua‘a* (Lyons 1875:33; Lucas 1995:40). Finally, the *mo‘o* were narrow strips of land within an *‘ili*. The land holding of a tenant (*hoa ‘āina*) was called a *kuleana* (right, privilege) (Lucas 1995:61).

The project area is located in the *ahupua‘a* of Maunalua, Kona District (Figure 6). According to Elspeth Sterling and Catherine Summers (1978:257), Maunalua was also an *‘ili* traditionally part of Waimānalo Ahupua‘a and originally belonged to Ko‘olaupoko Moku. Notably, Maunalua had a trail that connected with Waimānalo (McAllister 1933:59).

PLACE NAMES AND MYTHOLOGY

Today’s Portlock neighborhood is named after British captain Nathaniel Portlock (c. 1748–1817) who along with George Dixon was among the first to describe the vicinity of the project area. Although Portlock unsuccessfully attempted to name Maunalua Bay “King George’s Bay,” the cape 2.26 km (1.41 miles) south of the project area which had been known by the native name “Lae o Kawaihoa” is now usually referred to as “Portlock Point” (Clark 1977:33). The name “*Maunalua*” translates as “two mountains” (Pūku‘i et al. 1974:149), likely referring to Koko Head and Koko Crater, whose original name is “Kohelepelepe” (“labia minor;” Pūku‘i et al. 1974:115; Clark 1977:32). The name of the district of Kona translates to “leeward” (Pūku‘i et al. 1974:117). John Clark associates the prevalence of the Hawaiian word “*koko*” (blood) in local names with a former canoe landing near what today is Portlock Road southeast of the project area:

> A Hawaiian legend tells how the ground there came to be red. A chief and chiefess of the nearby district of Wai‘alae had a daughter whom they gave up in adoption. When the girl reached maturity, she went one day to the home of her real parents to visit with them. They were not there when she arrived. While waiting for them to return, she picked a stalk of sugarcane and ate it. Then she went out to the point now called Koko Head and swam in the sea. The unfortunate maiden did not realize that her parents had a shark god whose duty was to kill anyone who molested [*sic*] the foodplants they had cultivated. While she was swimming, the shark attacked her, and the blood from her wounds spurted upon the land. From that time on, this place was called *koko*, or “blood.” [Clark 1977:32]

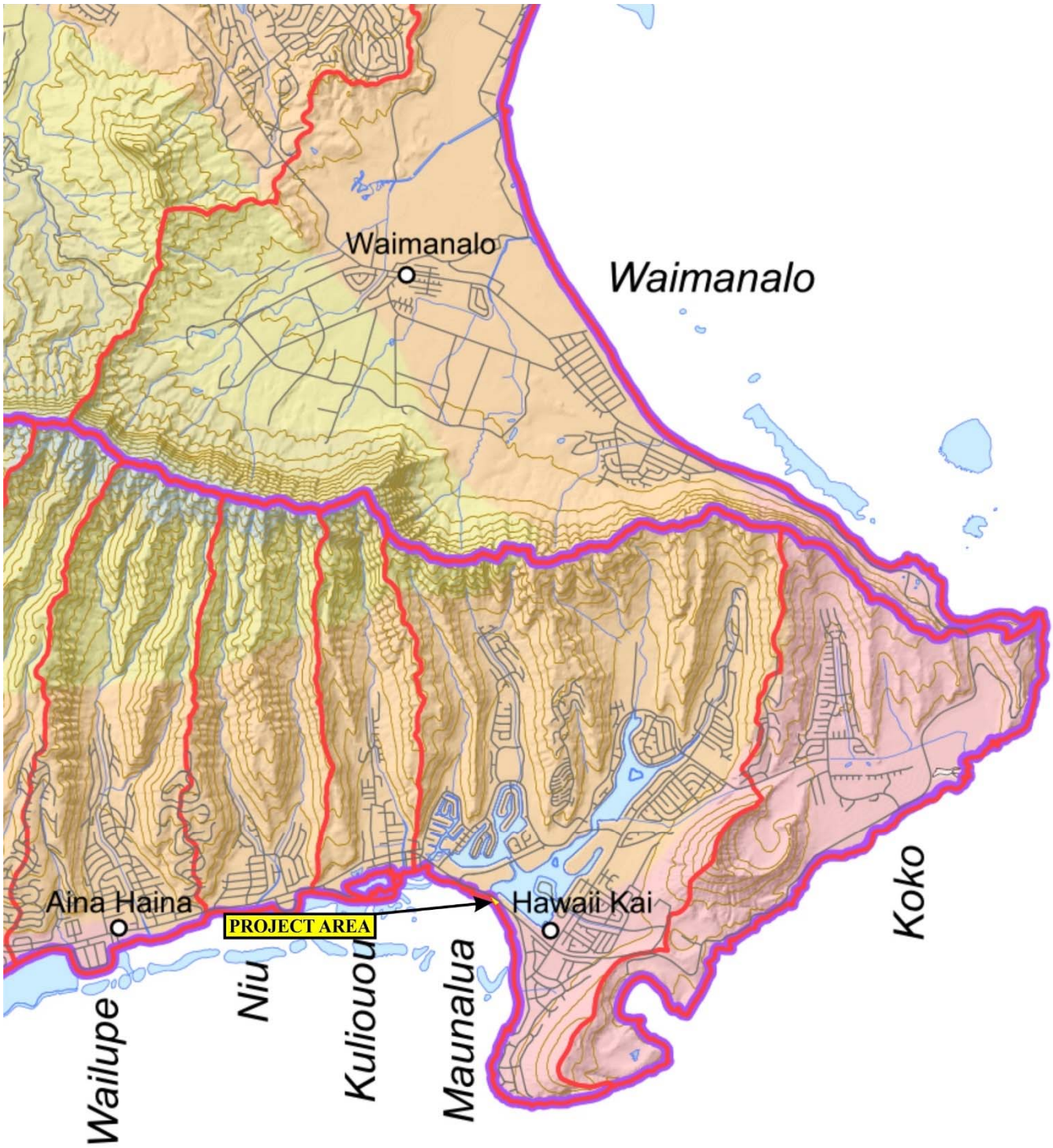

Figure 6: The project area in the context of Maunalua Ahupua‘a and eastern Kona District (Wilson 2017)

The prominent volcanic remnants of Koko Head dominate the landscape, and the mythology of the region accordingly contains references to the volcano goddess Pele. The activities of Pele and her sisters are a basis for many of the landmarks and place names in Maunalua (Takemoto et al. 1975:6). According to one tradition, Pele was in constant strife with Kamapuaʻa, the god of forests. Since Maunalua is an arid region and was believed to be a domain of Pele, the adjacent forested windward region of Koʻolau was considered Kamapuaʻa's realm (Kelly et al. 1984:23). After Pele attacked Kamapuaʻa near Kalapana on the island of Hawaiʻi, according to one legend her youngest sister, Hiʻiaka used a distraction to save Pele from a counter attack (Kelly et al. 1984:23). In her *Hawaiian Mythology*, Martha Beckwith narrates the same story explaining the name "Kohelepelepe" but associating it with another sister:

> Pele's sister Kapo, aware of Pele's peril, sends her own wandering vagina (kohe-lele) to light upon a tree and attract Kamapuaʻa from her sister. He follows it to Oahu, where its impression may be seen today on the Makapuʻu side of Koko head where it rested before Kapo withdrew it and hid it in Kalihi valley. [Beckwith 1970:212–213]

William Westervelt's account of the story may explain the discrepancy with the practice to name all of Pele's sisters as "Hiʻiaka" (1915:270). Westervelt adds that "there were at least six Hiiakas, and some legends give many more" (1915:270).

In another Hawaiian legend recorded by Abraham Fornander (1918–19:146), Maunalua is referred to as a place settled by fishermen. He writes, "that afternoon the men and women came along the shore in the pools to catch minnows [*nehu*, *Encrasicholina purpurea*] for bait, for aku [skipjack tuna, *Katsuwonus pelamis*] fishing for tomorrow" (1918–19:146).

PRE-CONTACT PERIOD

According to 19th century historian Samuel Kamakau, the chiefly line of Oʻahu is believed to originate in the mythical *mōʻī* Māweke (Kamakau 1992:449), whose reign is estimated to have been in the 11th century C.E. In his *The Rise and Fall of the Oʻahu Kingdom*, Ross Cordy traces the formation of district-based polities to the early 1300s. By 1320–1340 C.E. "the sons of Māweke were in control over three powerful polities – ʻEwa, Kona and Koʻolaupoko" (Cordy 2002:21). Kumuhonua of Māweke's line was a ruler approximately 1340–1360 C.E., by which time the separation between leadership and commoners had become complete and a more rigid caste system had appeared. By then "an *ʻaha aliʻi* council required proven ties to the ruler within 10 generations," and temple worship became more restricted to rulers and chiefs (Cordy 2002:21–22). Indications of this include the construction of major religious structures in ruling centers and economic-demographic hubs where rulers lived or visited (Cordy 2002:22–23).

In the 15th century Oʻahu was unified under ʻEwa District and its ruler Laʻakona (c. 1420–1440 C.E.), whose power first expanded to Waiʻanae and Wailua before he was recognized in the east. Successive rulers came from the senior Māweke-Kumuhonua line until the reign of Haka (c. 1520–1540 C.E.), who according to oral history was a greedy and cruel chief (Fornander 1880:88). The council killed him and replaced him with Māʻilikūkahi who controlled Kona District and established Waikīkī as his capital (Fornander 1880:89). Along with the *ahupuaʻa* system, Māʻilikūkahi's reign likely introduced at least three levels of administration: an island-wide ruler, high chiefs over one or more districts or communities, and local chiefs (Cordy 2002:24). Over the next centuries, the leadership of Maui, Kauaʻi, and Oʻahu intermarried and further isolated the ruling class from commoners (Cordy 2002:26), as Oʻahu was becoming prosperous and its population was increasing (Fornander 1880:89). Wet taro agriculture in Koʻolaupoko in particular was expanding in the 16th century to keep up with the population boom (Cordy 2002:28–29).

At the beginning of the 17th century, ruler of Oʻahu became Queen Kalaʻimanuia, who resided in ʻEwa District. It was remembered that "peace prevailed in her time, and she traveled around the island inspecting her lands and rebuilding *heiau* … particularly noted for having built fishponds" (Cordy 2002:30). Her son was the "poorly-liked" Kūamanuia (c. 1620–1640) who ruled out of Waikīkī and controlled only the districts of Kona and Koʻolaupoko (Cordy 2002:31). Dissension among his siblings briefly split the kingdom until Kākuhihewa gained power around 1640 to 1660 and reunified the kingdom (Cordy 2002:31). Rulers over the next three generations gradually lost power to the districts. According to the oral record, the high chiefs of Kona and ʻEwa–Waiʻanae operated "fairly independently," while the *mōʻī* of Oʻahu retained a nominal power over the island out of their seat at Koʻolaupoko (Fornander 1880:278; Cordy 2002:31–32).

The Kingdom of Oʻahu may have reached the height of its political power in the early 1700s with chief Kualiʻi (ruling c. 1720). Having defeated the chiefs of Kona and then those of ʻEwa, Kualiʻi reestablished his power and even managed to expand it to Kauaʻi, Molokaʻi, and Hawaiʻi (Cordy 2002:32).

Kualiʻi's heir Kapiohoʻokalani continued the aggressive, expansionary policy, leading to his invasion of Molokaʻi in 1736. Hawaiʻi chief Alapaʻinui, however, came to defend Molokaʻi which was ruled by his relatives. In the bloody Battle of Kawela Alapaʻinui defeated the Oʻahu invaders and killed Kapiohoʻokalani. In retaliation Alapaʻi landed his forces on Oʻahu. The remaining chiefs of Oʻahu asked Peleʻioholani of Kauaʻi (1740–1779) to assist Kapiohoʻokalani's son, the six-year-old Kanahaokalani. Peleʻioholani and Alapaʻi struck a peace treaty negotiated by chief Naʻili of Waiʻanae (Kamakau 1992:71–73). According to Kamakau, the Hawaiian chief Alapaʻi hosted the chiefs on Mōkapu Peninsula:

> So it was that Pele-oi-holani and Alapaʻi met at Naonealaʻa in Kaneʻohe, Koʻolaupoko, on Kaʻelo 13, 1737, corresponding to our January. The two hosts met, splendidly dressed in cloaks of bird feathers and in helmet-shaped head coverings beautifully decorated with feathers of birds. Red feather cloaks were to be seen on all sides. Both chiefs were attired in a way to aspire admiration and awe, and they day was one of rejoicing for the end of a dreadful conflict. The canoes were lined up from Kiʻi to Mokapu to Naoealaʻa, and there on the shore line they remained, Alapaʻi going ashore alone. [Kamakau 1992:72]

The 18th century was marked by rivalries, especially between the chiefdoms of Maui and Hawaiʻi. Oʻahu was not immune to external aggression: in 1783, the ambitious and ruthless Maui chief Kahekili II (c. 1737–1794) landed in Waikīkī with the intention to invade and conquer. Kahekili's struggle to take Oʻahu from his nephew Kahahana took a few years, but resulted in the chief's brief rule over Molokaʻi, Maui, and Oʻahu. While the center of chiefly power on Oʻahu was traditionally Waikīkī, Kahahana occasionally preferred to rule from the resource-rich Kāneʻohe and the sacred Mōkapu Peninsula, which had the function of a second capital.

EARLY POST-CONTACT PERIOD

The first Europeans landed at Maunalua during the last years of Kahekili's reign. Under the commands of Nathaniel Portlock and George Dixon, the *King George* and *Queen Charlotte*, anchored in Maunalua Bay in May 1786. When the two captains were searching for freshwater sources ashore, they came upon a salt water river, which was likely the waterway between Kuapā Fishpond and Maunalua Bay (Takemoto et al. 1975:13-15), also known as "Kuʻi Channel." Portlock described the Maunalua landing site in the vicinity of the project area as:

> the low land and vallies being in a high state of cultivation, and crowded with plantation of taro, sweet potatoes, sugar cane & interspersed with great number of cocoa-nut trees. [Takemoto et al. 1975:14]

American Protestant missionary Levi Chamberlain (1792–1849) made two tours of Oʻahu in 1826 and in 1828 to inspect and reinforce newly founded mission schools. On his first tour, he approached the settlement at Kuapā Fishpond (Keawaʻawa) where he addressed 30 people (Handy and Handy 1972:483). On his second tour, he indicated that Maunalua was undergoing steady depopulation. As Maunalua is rather arid and *kalo* (taro, *Colocasia esculenta*) is difficult to grow, traditional subsistence in both the Pre-Contact and the Early Post-Contact periods seems to have depended on marine exploitation and *ʻuala* (sweet potato, *Ipomoea batatas*) cultivation (Handy and Handy 1972:483–84).

After Contact, economic activities focused on cultivating crops that could be exchanged with foreign vessels, specifically those of the whaling industry which flourished between 1820 and 1850. The nearby Hawaiian village of Keawaʻawa was also involved in the trading industry because of the abundance of sweet potatoes. In *The Hawaiian Planter*, Edward Handy notes:

> According to the last surviving *kamaaina* of Maunalua, sweet potatoes were grown in the small valleys, such as Kamilonui, as well as on the coastal plain. The plain below Kamiloiki and Kealakipapa was known as Ki-kula-o-Kamauwai. This was the famous potato-planting place from which came the potatoes traded to ships that anchored off Hahaione in whaling days. The village at this place, traces of which may still be seen, was called Wawamalu. [Handy 1940:155]

The trade maintained Hawaiian settlements and populations during the epidemics and relocation of inhabitants to growing towns such as Honolulu. By 1852, the Hawaiian government passed legislation requiring taxes from all foreign vessels, which reduced the number of ships that anchored at smaller landing sites such as Maunalua. This resulted in a depopulation of Maunalua and a decline in its economic independence (Jones 1996:21; Takemoto et al. 1975:20).

THE MĀHELE

In the 1840s, traditional land tenure shifted drastically with the introduction of private land ownership based on Western legal practices. The transition from communal land use to private ownership is commonly called the "Māhele" ("division"). It set the stage for consequential changes to property possession in Hawaiʻi. Prior to the changes, a *konohiki* was a superintendent of an *ahupuaʻa* under a chief and was responsible for the management of resources. After the Māhele, the *konohiki* (*ahupuaʻa* headmen) and his or her lands were distributed, and the position was replaced by a land commissioner, or *komikina hoʻonʻāina* (Lucas 1995:56).

As early as 1841, the legislature allowed island governors to lease lands to foreigners for up to fifty years. These leases were then to be registered "in writing so that there be no misunderstandings about terms and rents" (Daws 1974:125). The question of land reform was set aside in 1843 because of the five-month occupation of the islands by British naval officer George Paulet, but once the kingdom was stable again and Kauikeaouli felt secure at its helm it was brought back. By 1844, many chiefs were warming up to the proposal for a formal land division, and, in 1845, the Board of Commissioners to Quiet Land Titles (the Land Commission), was established for "the investigation and final ascertainment or rejection of all claims of private individuals, whether natives or foreigners, to any land property" (Chinen 1961:8). The Commission had no authority to divide lands or change their tenure but was created solely for approval of land claims (Kuykendall 1938:280).

The Māhele of 1848 instituted private land ownership through awarded parcels called Land Commission Awards (LCAs). Once lands were made available, the *maka'āinana* (commoners) were able to claim the plots on which they had been living and cultivating through the Kuleana Act of 1850. These claims did not include any previously cultivated fallow land, stream fisheries, or many other resources necessary for traditional survival strategies (Kame'eleihiwa 1992:295). If occupation could be established through the testimony of two witnesses, the petitioners were awarded the claimed LCA and issued a Royal Patent after which they could take legal possession of the property (Chinen 1961:16). Foreigners could acquire land through the Alien Landownership Act of 1850, and many took advantage of the opportunity: by 1900, "white men owned four acres of land for every one owned by a native" (Daws 1974:125). Hawaiians could only make claims if they were aware of foreign procedures such as the awarding of *kuleana* lands and LCAs. These procedures were found lengthy and cumbersome by many. Between 1850 and 1893, Hawaiians still were able to purchase an estimated 167,290 acres of land (Beamer and Tong 2016).

According to the Kipuka database (Office of Hawaiian Affairs n.d.) one LCA lies in the project area. In 1861, Victoria Kamāmalu (1838–1866), a great-granddaughter of Ke'eamoku and a granddaughter of Kamehameha I, was awarded the entire *'ili* of Maunalua via LCA 7713:30 under Patent Grant #4475. This information was also confirmed in Hawaiian Government survey maps by Lyons in 1875 and Wall in 1902. No *kuleana* land grants were granted within the *'ili*.

LATE POST-CONTACT PERIOD TO TODAY

In 1856, Kamāmalu leased all of her Maunalua lands to rancher William Webster for 30 years. After Kamāmalu's death in 1866, the lands were transferred to philanthropist and noble Bernice Pauahi Bishop (1831–1884). The fishing rights to the Kuapā Fishpond and Maunalua's offshore were leased out and sold to various individuals until 1900. The high lease rates suggest that they were productive and highly valued (Takemoto et al. 1975). Anne Takemoto et al. note:

> By 1900, Maunalua Ranch and Yit Lee Company, who owned a big fishing complex, employed most of the inhabitants. Maunalua Ranch had over 1500 head of cattle, ten oxen, sixty-four horses, thirteen mules and six pigs roaming throughout Maunalua. Five Chinese families were working for the Damons [who held the lease for Maunalua at the time], probably as ranch hands. Five other Chinese families worked for Yit Lee. There existed only one independent Chinese family not under Damon or Yit Lee. The eight Hawaiian families on the land, including one blind man, were truck farmers of some sort since all but two owned carts used for bringing goods to Honolulu…. Thus by the turn of the century most families in the *ili* were ranch hands, fishermen, or truck farmers living a relatively quiet life in an area which would be considered the country. [Takemoto et al. 1975:25]

After 1900, Maunalua was modernizing as the expansion of ranching demanded new infrastructure. The construction of Kalaniana‘ole Highway started in the late 1920s and was completed by 1932 when it connected Waimānalo and Wawamalu. Following its completion bridges, coastal, and access roads to Hanauma Bay and Koko Crater were constructed. Road infrastructure provided easy access for marine exploitation and facilitated ranching. In addition, there was a growth in the population due to the job opportunities associated with agriculture.

The development of Hawaii Kai is associated with American industrialist Henry J. Kaiser (1882–1967). In the late 1950s and early 1960s, Kaiser transformed the natural landscape of Kuapā Pond and its surroundings (Figure 7), infilling parts of it and building retaining walls and bridges to create the communities of Hawaii Kai, Hawaii Kai Marina, and Koko Marina (Young 2020). Kaiser also developed Maunalua Bay Beach Park located northwest from the project area and across Ku‘i Channel out of materials dredged from the bottom of the bay (Clark 1977:33). Along with the rest of Hawaii Kai, Portlock is a highly developed and urbanized residential area.

PREVIOUS ARCHAEOLOGY

Early archaeological investigations on O‘ahu were conducted by Thomas Thrum and John F.G. Stokes, whose focus was on *heiau* (traditional temples) and the walled fish-traps of Pearl Harbor. The first archaeological work in Maunalua was conducted by J. Gilbert McAllister (1933) during his island-wide survey in 1930. He located and mapped 45 archaeological sites consisting mostly of features typical to coastal settlements and Post-Contact ranching and road construction (McAllister 1933:57–69). Near Kuapā Fishpond in the west of Maunalua McAllister’s recorded *heiau*, burial caves, rock shelters, petroglyphs, and agricultural fields (Sites 39 through 49). Intensive archaeological investigations in East Honolulu did not begin in earnest until the 1950s urbanization. Figure 8 shows previous archaeological work in the vicinity of the project area.

KULI‘OU‘OU

In the 1950s, Kenneth Emory and his students at University of Hawai‘i at Mānoa (Emory and Sinoto 1961) excavated the Kuli‘ou‘ou rock shelter (Site O1) as part of an archaeological methods course. Described as a remnant lava tube that formed a spacious shelter, the feature measured 15.5 m long. Field notes and profile sketches also indicate numerous ash lenses in addition to pit and fire features. The only profile represents four layers consisting of Post-Contact materials in the upper portion and a darker matrix (compact dark brown sediments) where both indigenous Hawaiian and European-American artifacts were recovered. Emory and Sinoto (1961) described the numerous artifacts as hand tools (broken handle of a shark-tooth knife, stone tools, etc.) and items utilized for fishing (fishhooks, coral files, etc.).

Figure 7: A USGS aerial photograph (imagery date: May 26, 1952) showing the state of the environment before the development of Hawaii Kai in the following decade

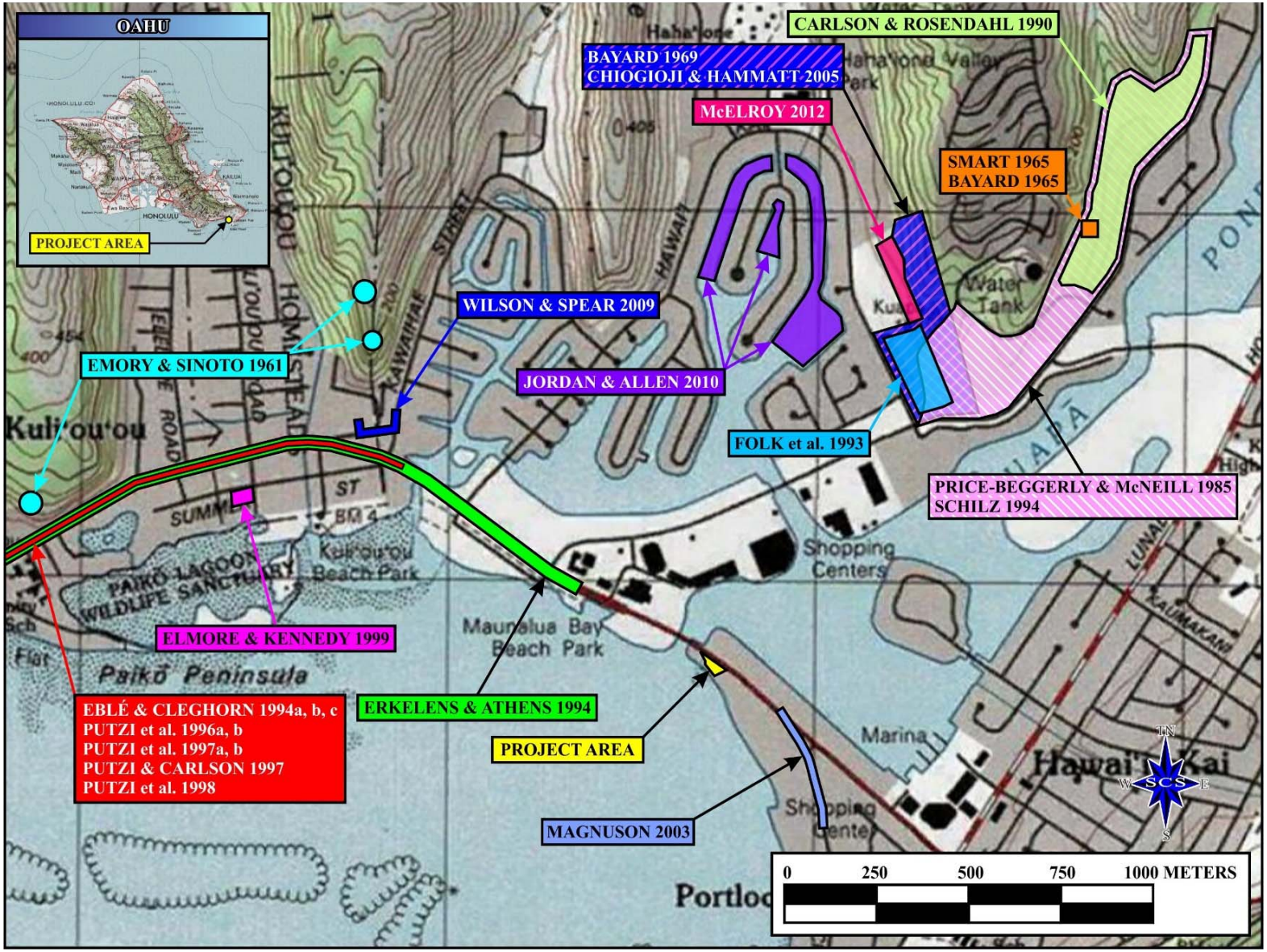

Figure 8: Portion of a 1999 USGS topographic map (Koko Head HI quadrangle) showing previous archaeology in the vicinity of the project area

Following the initial identification by State Historic Preservation Division (SHPD), archaeologists (Collins 1999), Archaeological Consultants of the Pacific, Inc. (Elmore and Kennedy 1999) prepared a burial treatment for a disturbed burial. The human remains were inadvertently encountered during the excavation of a foundation pit for the Gedatsu Church of Hawaii. The remains collected from the back dirt were combined with the disinterred *in situ* remains, re-buried, and designated as a State Inventory of Historic Places (SIHP) Site 50-80-15-05774. The remains were determined to represent a single individual of Native Hawaiian ancestry and to date to the Pre-Contact Period because of the provenience of the burial in a sand matrix.

In 2009, Scientific Consultant Services, Inc. (SCS) conducted a program of archaeological monitoring during the Kuliʻouʻou Wastewater Pump Station Modifications and Force Main Replacement project on May Way and Kawaihae Street in Kuliʻouʻou Ahupuaʻa (Wilson and Spear 2009). No historic properties were identified.

KALUANUI RIDGE & HAHAIʻONE VALLEY

In the early 1960s, the University of Hawaiʻi at Mānoa (Smart 1965; Bayard 1965) conducted excavations at a site known as O-5 (SIHP Site 50-80-15-02908), a cave at the foot of Kaluanui Ridge. A number of cultural materials were identified and dated. The earliest samples were determined to date to before the 14th century C.E. The most recent of the five occupation periods was found to extend into Post-Contact times.

Donn Bayard (1969) conducted a field school including surveying at Site O-16, located on the western and southern portions of Kaluanui Range at the mouth of Hahaiʻone Valley. The findings revealed an abundance of archaeological features, including rock shelters, a house platform, stone cairns, and a wall identified as a part of the site. Bayard noted that the identified features dated from the Late Pre-Contact Period up to the late 1990s, making it difficult to provide definitive conclusions.

In 1985, an archaeological reconnaissance survey in Kaluanui Ridge was conducted by International Archaeological Research Institute, Inc. (Price-Beggerly and McNeill 1985). A total of 36 acres were surveyed for the proposed Marina Zoning Project, and 12 archaeological sites were identified. Findings included five caves, two platforms, a terraced platform with petroglyphs, a set of low terraces believed to be part of Hāwea Heiau (SIHP Site 50-80-15-00042), six stone cavities, and a historical house site. It is not clear if the identified stone cavities were utilized. One of the caves recorded during this survey was Site O-5, which had previously been identified by Bayard (1965).

In 1990, Paul H. Rosendahl, Inc. (Carlson and Rosendahl 1990) conducted a supplemental archaeological inventory survey for the Kaluanui-1 subdivision. They reevaluated sites identified by Price-Beggerly and McNeill (1985) and found some of them no longer culturally significant.

In 1993, Cultural Surveys Hawai‘i, Inc. (Folk et. al 1993), performed an archaeological survey on five acres at the mouth of Haha‘ione Valley south of Kaluanui Ridge for the proposed Kaluanui Park Development. No new sites were recorded, and a number of sites identified by Price-Beggerly and McNeill (1985), Bayard (1969), and McAllister (1933) were relocated. Subsurface testing revealed them as a multi-use site including traditional stone tool production. SIHP Site 50-80-15-02900 (U-shape enclosure) yielded a radiocarbon date of 1800-1940, revealing the site's Post-Contact use, reflective of Maunalua's prominence in the victualing trade.

Ogden Environmental and Energy Services Company, Inc. (Schilz 1994) conducted an archaeological assessment and evaluation of Kaluanui Parcels 1, 2, and 3, areas previously studied by Price-Beggerly and McNeill (1985). This assessment aimed to identify whether or not grubbing had an impact on archaeological sites located in Kaluanui Parcel 3. The survey found that some sites remained intact while others were partially or fully destroyed because of grubbing.

In 2005, Cultural Surveys Hawai‘i, Inc. (Chiogioji and Hammatt 2005) conducted an archaeological literature review and field inspection on a portion of Kalaniana‘ole Highway. The area between Keāhole Street and Hawai‘i Kai Drive was determined to not need further work, although it was recommended that improvements report cultural material to SHPD.

Keala Pono Archaeological Consulting, LLC (McElroy 2012) performed an archaeological inventory survey for an expansion of Oahu Club. The surveyed 1.8 acres revealed five sites. A complex of three traditional habitation terraces (SIHP Site 50-80-15-07317) and a possible Post-Contact water control feature were identified. Three sites were recorded outside of the project area: a stone stack, another complex of terraces and enclosures, and an L-shaped stone wall.

KALANIANA‘OLE HIGHWAY WIDENING PROJECT

International Archaeological Research Institute, Inc., (Erkelens and Athens 1994) conducted a site visit for the Kalaniana‘ole Highway Widening project from ‘Āina Haina to Niu Valley. The skeletal remains of at least 14 people were documented (SIHP Site 50-80-15-04497). Four burials were also documented in Wailupe Ahupua‘a, specifically one individual at the *makai* (oceanward) end of Nenue Street and the remains of three people at East Hind Drive. Ten burials were documented in Niu Vally, including seven coffin burials and two pit burials. The coffin burials were part of a family cemetery for the Adams, Cassiday, and Pflueger families.

Between 1994 and 1998, the Phase II widening of Kalaniana‘ole Highway between East Halema‘uma‘u Road and Keāhole Street was monitored by BioSystems Analysis and Garcia and Associates (Eblè and Cleghorn 1994a, 1994b, 1994c; Putzi et al. 1996a, Putzi et al. 1996b; Putzi et al. 1997a, and Putzi et al. 1997b; Putzi and Carlson 1997; Putzi et al. 1998). The project extended through the *‘ili* of Niu, Kuli‘ou‘ou, and Maunalua. A total of 29 (MNI=29) inadvertent findings of human skeletal remains were discovered during the project (Eblè and Cleghorn 1994a, 1994b, 1994c; Putzi et al. 1996a, 1996b; Putzi et al. 1997a, 1997b; Putzi and Carlson 1997). The findings were interpreted as a cemetery extending 110 meters east from Kuli‘ou‘ou Stream and bounded on the northern and southern edges of Kalaniana‘ole Highway. The cemetery appears to have been used from the Pre-Contact into the Post-Contact Period and contains groups of burials and isolated individuals throughout. The site has been subsequently designated as SIHP Site 50-80-15-04841.

HAWAI‘I KAI MARINA

In 2010, International Archaeological Research Institute, Inc. (Jordan and Allen 2010) conducted an archaeological assessment in various locations of the Hawai‘i Kai Marina. It was determined that three historic sites might be affected: Kuapā Fishpond (SIHP Site 50-80-15-00049), a traditional habitation site (SIHP Site 50-80-15-00043), and an undesignated fish trap. Their preservation was recommended.

PORTLOCK

In 2003, an archaeological survey and monitoring was conducted by International Archaeological Research, Inc. (Magnuson 2003) for a residential property in the vicinity of the project area at 251 Portlock Road. Human remains and possible cultural layer were encountered. A total of two skeletal fragments were identified.

FIELD INSPECTION METHODOLOGY AND RESULTS

The field inspection was conducted on July 26, 2022, by SCS archaeologist Kaitlyn Lowrance, M.A., under the supervision of principal investigator Robert L. Spear, Ph.D. The purpose of the archaeological field inspection was to identify and locate potential historic properties (archaeological sites, buildings, structures, and other cultural materials), in association with a residential project at Portlock in Hawai‘i Kai. The field inspection consisted of a 100% pedestrian survey of the project area. Field notes were recorded on SCS standard field forms (i.e., photo log, site description forms, site feature forms, etc.). Digital photographs from ground level were captured during the survey.

The project area consists of an irregularly-shaped, 10,016 sq ft residential property lot located on the *makai* side of Kalaniana‘ole Highway. The property is wedged between Kalaniana‘ole Highway on the northeast and the Pacific Ocean on the west.

The inspection identified several modern construction elements: a two-story, masonry-framed structure, an attached milled-wood pergola covering a concrete patio, and a small milled-wood deck located approximately three meters west of the patio edge (Figures 9 to 14). There is also a wall along the *mauka* (mountainward) side of the property that is constructed of cinder-blocks and plywood boards with small, rounded basalt cobbles piled at its base (Figure 15).

DISCUSSION AND RECOMMENDATIONS

As a result of residential development and expansion, Maunalua has undergone many fill events to stabilize the ground and has experienced several archaeological investigations that show evidence of both Pre- and Post-Contact land use. Nonetheless, no archaeological sites or features have been previously identified in the project area and its immediate vicinity. This field inspection likewise did not encounter evidence of any historic properties on the surface.

No further archaeological work is recommended for this project. It should be noted, however, that historic properties—such as traditional Hawaiian and historic artifacts and human remains—are occasionally encountered in landfill materials. As a precautionary measure, personnel involved in the renovations and improvement activities in the project area should be informed that SHPD must be notified about any potential historic properties encountered during work for this project.

Figure 9: Overview of the project area from its southwest corner (view to northeast)

Figure 10: Overview of the project area from its northwest corner (view to southeast)

Figure 11: Overview of the project area from the north showing the two-story structure, patio, and yard (view to south)

Figure 12: View of the project area from the northeastern corner of the concrete patio (view to northwest)

Figure 13: Milled-wood pergola attached to the two-story, masonry framed structure covering the concrete patio (view to south)

Figure 14: Small, milled-wood deck on the western boundary of the property (view to northwest)

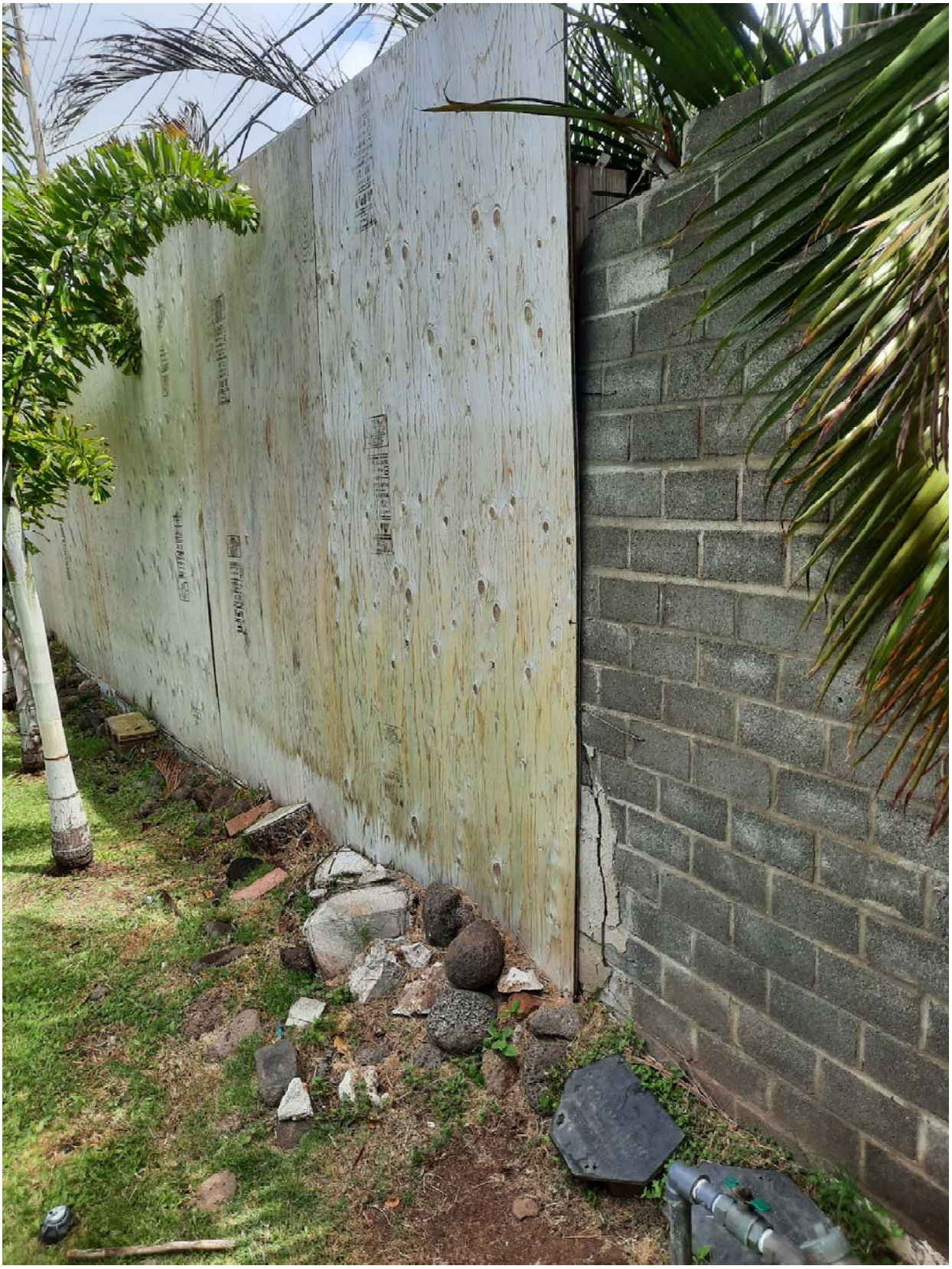

Figure 15: *Mauka* side wall constructed of cinder blocks and plywood boards, with small, rounded basalt cobbles piled at base (view to northeast)

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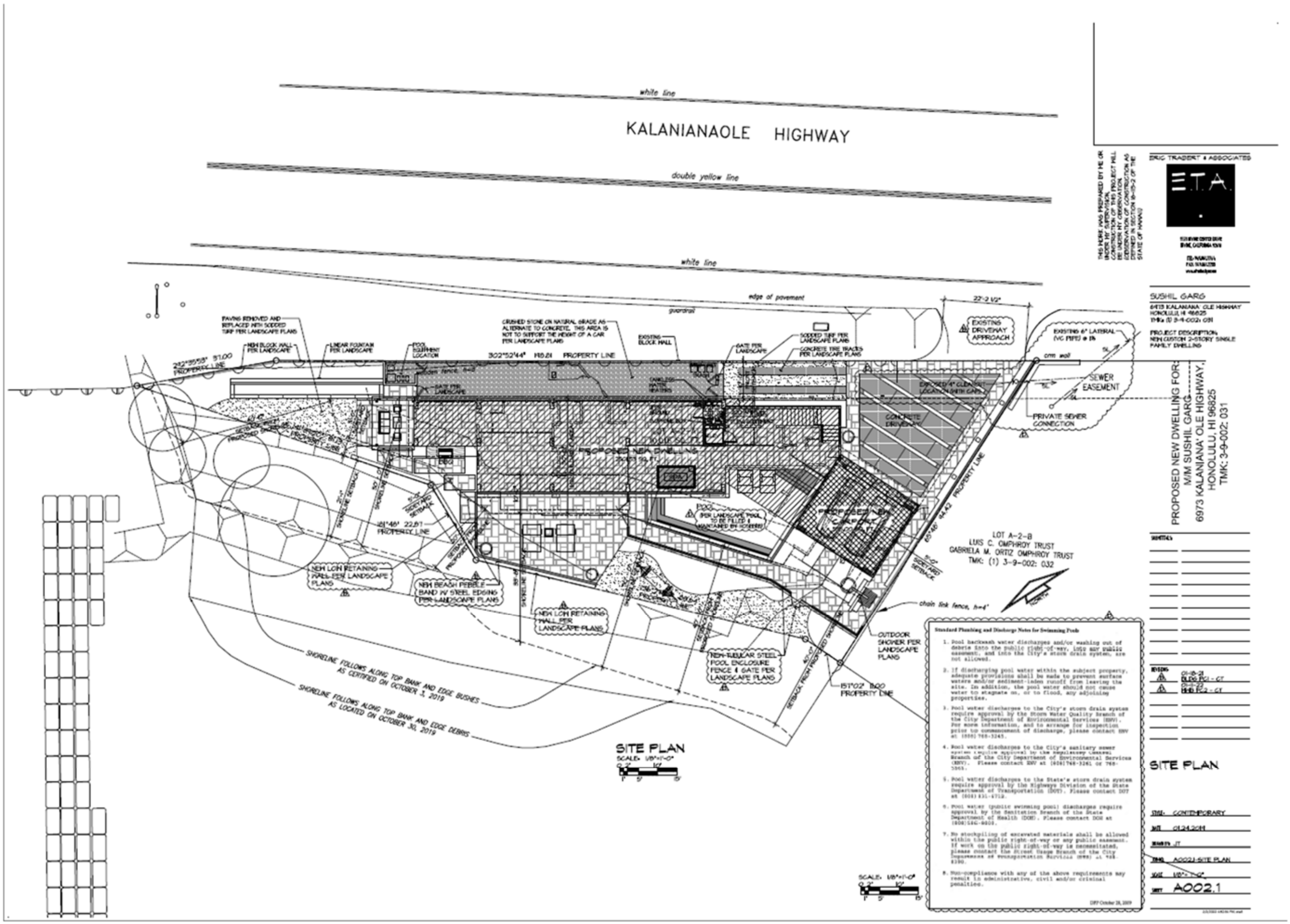
APPENDIX A: PORTION OF THE CONSTRUCTION PLANS


KALANIANAOLE HIGHWAY
white line
double yellow line
edge of pavement
guardrail
PROPERTY LINE
EXISTING DRIVEWAY APPROACH
SEWER EASEMENT
PRIVATE SEWER CONNECTION
CONCRETE DRIVEWAY
POOL
LOT A-2-B
LUIS C. OMPHROY TRUST
GABRIELA M. ORTIZ OMPHROY TRUST
TMK: (1) 3-9-002: 032
chain link fence, h=4'
OUTDOOR SHOWER PER LANDSCAPE PLANS
SHORELINE FOLLOWS ALONG TOP BANK AND EDGE BUSHES AS CERTIFIED ON OCTOBER 3, 2019
SHORELINE FOLLOWS ALONG TOP BANK AND EDGE DEBRIS AS LOCATED ON OCTOBER 30, 2019
SITE PLAN
ERIC TRABERT + ASSOCIATES
E.T.A.
SUSHIL GARG
PROPOSED NEW DWELLING FOR:
M/M SUSHIL GARG
6973 KALANIANA'OLE HIGHWAY,
HONOLULU, HI 96825
TMK: 3-9-002: 031
Standard Plumbing and Discharge Notes for Swimming Pools
SITE PLAN
CONTEMPORARY
A002.1

A2

APPENDIX H

DRAFT EA COMMENTS AND RESPONSES

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

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

April 15, 2024

TO: DAWN TAKEUCHI APUNA, DIRECTOR
DEPARTMENT OF PLANNING AND PERMITTING

ATTN: MICHAEL KAT

FROM: ERNEST Y. W. LAU, P.E., MANAGER AND CHIEF ENGINEER

SUBJECT: YOUR MEMORANDUM DATED MARCH 22, 2024 REQUESTING COMMENTS ON THE SPECIAL MANAGEMENT AREA USE PERMIT FOR THE NEW TWO-STORY SINGLE-FAMILY DWELLING AT 6973 KALANIANA'OLE HIGHWAY – TAX MAP KEY: 3-9-002: 031

The existing water system is currently adequate to accommodate the proposed development. However, please be advised that the existing Honolulu water system capacity has been reduced due to the shut-down of the Hālawa Shaft pumping station as a proactive measure to prevent fuel contamination from the Navy's Red Hill Bulk Storage Tank fuel releases. The final decision on the availability of water will be confirmed when the building permit application is submitted for approval, pending evaluation of the water system conditions at that time on a first-come, first-served basis. The Board of Water Supply (BWS) reserves the right to change any position or information stated herein up until the final approval of the building permit application.

We continue to request 10% voluntary water conservation of all customers until new sources are completed and require water conservation measures in all new developments. If water consumption significantly increases, progressively restrictive conservation measures may be required to avoid low water pressures and disruptions of water service.

Presently, there is no moratorium on the issuance of new and additional water services. Water distributed via the BWS water systems remains safe for consumption. The BWS is closely monitoring water usage and will keep the public informed with the latest findings. Please visit our website at www.boardofwatersupply.com and www.protectoahuwater.org for the latest updates and water conservation tips.

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

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

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

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

If you have any questions, please contact Barry Usagawa of our Water Resources Division, at (808) 748-5900.

HAWAII
ENGINEERING
GROUP, INC.

Ref. 21-028

Consulting Civil Engineers, Structural Engineers, Land Surveyors, & Land Use Planning
US (SBA) SDB & DBE Certified

April 23, 2024

Ernest Y.W. Lau, P.E., Manager and Chief Engineer
Board of Water Supply
City and County of Honolulu
630 South Beretania Street
Honolulu, Hawaii 96813

Subject: Draft Environmental Assessment and Environmental
TMK No. (1) 3-9-002:031 Honolulu, O'ahu, Hawai'i

Attention Mr. Barry Usagawa;

I appreciate your response letter dated April 15, 2024, and the resources you provided on water conservation.

Currently, there is an existing dwelling on the property that is slated for demolition to make way for a new proposed dwelling that is currently serviced by the Board of Water Supply. The construction drawings will be submitted for approval to the Board of Water Supply, as an irrigation drip system will service the planter area. All new fixtures will utilize Water Sense labeled ultra-flow water fixtures and toilets, promoting water conservation.

The Honolulu Fire Department maintains an existing fire hydrant located on the southeast side of the subject property on Kalaniana'ole Highway. Hydrant #4488 is approximately 10 feet east from the northeast corner of the subject property.

Should you have any further questions or require additional information on the proposed project, please feel free to contact me at 808 533-2092 ext. 118 or by email at roy@hawaiiengineering.net."

Please let me know if you need further assistance.

Sincerely,

Roy Irei
Vice President, Telecom Div

Cc: Dawn Takeuchi Apuna, Director
Michael Kat, Planner
Lori Ford, Ford & Associates

1088 Bishop Street, Suite 2506 • Honolulu, Hawaii 96813
Tel: 808.533.2092 • Fax: 808.533.2059
Email: heg@hawaiiengineering.net • Web: www.hawaiiengineering.net

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

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

RICK BLANGIARDI
MAYOR
MEIA

DAWN TAKEUCHI APUNA
DIRECTOR
PO'O

April 18, 2024

2024/ED-1 (MAK)

Mr. Roy Irei
Hawaii Engineering Group, Inc.
1088 Bishop Street, Suite 2506
Honolulu, Hawai'i 96813

Dear Mr. Irei:

SUBJECT: Draft Environmental Assessment (EA)
Garg Residence (Project)
6973 Kalanianaole Highway - Hawai'i Kai
Tax Map Key (TMK) 3-9-002: 031

This is in response to submittal of the above-referenced Draft EA as required under Hawai'i Revised Statutes (HRS), Chapter 343. The Project involves the demolition of an existing single-family dwelling, and the construction of a new single-family dwelling that is within the 40-foot (ft.) shoreline setback and Special Management Area (SMA). Following completion of the EA phase, the Applicant will be submitting applications for a Shoreline Setback Variance (SSV) and SMA Use Permit for the Project. The Department of Planning and Permitting (DPP) comments are listed below.

1. Regarding the Executive Summary, please address the following comments in the Final EA:

   - Under the Purpose and Need, please clarify that the Project is required pursuant to HRS Chapter 343 and Hawai'i Administrative Rules (HAR) 11-200.1, because development within the shoreline area is the trigger of the EA.

   - Under Purpose and Need, please clarify that in the City and County of Honolulu, development within the shoreline area requires a SSV pursuant to Revised Ordinances of Honolulu (ROH) Chapter 26 and SMA compliance pursuant to ROH Chapter 25. The processing of the SSV is a two-phase process. The first phase involves the acceptance of the Chapter 343 HRS EA. After the environmental review process, the SSV and SMA Permit

applications will be processed by the DPP, which will require approval by the Honolulu City Council.

- Under Proposed Action, please clarify that the Project will encroach into the shoreline setback area and the approximate square footage under the current regulations.

- Under Proposed Action, please clarify that 1) the dwelling is situated on a shoreline lot; 2) what the base flood elevation (BFE) is being referenced, and where the drawings can be found (i.e. Appendix B).

- Under Environmental Consequences, please summarize why no impacts are expected as they relate to the encroachment into the shoreline setback area, given that the proposed dwelling will be closer to the shoreline and situated in Flood Zones VE and AE.

2. Regarding the Project Summary, please address the following comments in the Final EA:

   - Add the Agent to the listed information.

   - Add Flood Zones to the listed information.

   - Add East Honolulu Sustainable Communities Plan land use designation (i.e. residential and low-density apartment) to the listed information.

   - Add Anticipated Determination to the listed information.

   - Reference the corresponding figures for any site specific information that is listed (i.e. TMK, SMA, Flood Zones, etc.)

3. Under Section 1.0 Introduction, please incorporate all of the information provided under Comment 1 into this section for the Final EA.

4. Under Section 2.2 Current Use of Subject Property, please describe the relevant building permit history for the site and what the existing development standards are for the site (i.e. floor area, building area, height, etc.). Also, illustrate and describe whether the existing dwelling is currently encroaching into the shoreline setback area.

5. Regarding Section 3.1. Technical Characteristics, please address the following comments in the Final EA:

- Figures and architectural drawings could be formatted into this section for better reference instead of just citing them.

- A table comparing the development standards of the existing and the proposed dwelling would allow for better comparison and reference.

- More emphasis on the encroachment into the shoreline setback should be illustrated and included in narrative.

6. Under Section 3.2 Alternatives and No Action Alternative, please address the following comments in the Final EA:

    - Please provide further explanation describing each of these options, the merits of them, and why the proposed Project was ultimately selected.

    - Additionally, another alternative that should be discussed is demolishing the existing dwelling and rebuilding to not encroach within the shoreline setback area.

    - Further, on July 1, 2024, the shoreline setback is scheduled to change to an erosion based setback, which will be 60 ft. plus 70 times the annual erosion rate, up to a maximum of 130 ft. The Draft EA should also discuss how this change in the shoreline setback will impact the subject site.

7. Regarding Appendix B Architectural Drawings of the Draft EA, please address the following comments in the Final EA:

    - The drawings show the Project having a floor area ratio (FAR) of 0.59 and a maximum density of 5,904 square (sq.) ft. This is not correct. Pursuant to ROH Section 21-3.70-1(c)(3)(A), the maximum density of the residential districts is a FAR of 0.7. Therefore, a 10,016 sq.-ft. lot would have a maximum density of 7,011.2 sq. ft.

    - The floor area should be highlighted/shaded on the drawings to clearly indicate which spaces were included or excluded from calculations.

    - According to our calculations, the amount of floor area being proposed would require a total of five required parking spaces (4,747.51 sq. ft. / 1,000 sq. ft. per parking space = five parking spaces). The drawings show only four spaces will be provided. Please revise the drawings to ensure compliance with the minimum required parking standards.

    - The drawings show the height limit being 35 ft. That is not correct. The governing height limit is 25 ft. Pursuant to ROH Section 21-9.10(b) dwellings

in residential districts may exceed the maximum height in the district by no more than five ft. if required to have its lowest floor elevated to or above the BFE; provided that such additional height shall not be greater than 25 ft. above the BFE. The site is located in Flood Zone VE with a BFE of 12 ft. Therefore, the proposed dwelling can be elevated an additional five ft. Please revise the drawings to show compliance with ROH Chapter 21 development standards. Also, please be sure to differentiate elevations when referencing the site's topography (i.e. Mean Sea Level) versus ROH Chapter 21 development standards.

8. The Project must be designed to be fully compliant with the Coastal High Hazard Area standards, ROH Section 21A-1.9. Please clarify the Project's compliance with ROH Chapter 21A regarding the following items in the Final EA.

   - The area below the BFE, including the garage, should be enclosed only with breakaway walls, and used only for parking, storage and building access. The elevator shaft may be permitted below the BFE, but the electrical/mechanical room must be located on a floor above the BFE.

   - The enclosed paved floor below the BFE must be independent from the columns and foundation supporting the building and made to be breakaway and not supported by structural fill.

   - The new swimming pool and spa must be adequately anchored to resist flotation or displacement and prevent damage to the building's foundation.

9. It is unclear if the archaeological field inspection and literature review prepared for the EA was submitted to the State Historic Preservation Division (SHPD) for their review and approval. Under Section 6.6.2 of the Draft EA, SHPD's approval is anticipated, but the narrative does not say when the report was submitted, and when approval is expected to be received. Please clarify in the Final EA if the report was sent to the SHPD and when their approval is expected to be received.

10. Under Section 7.4 City and County of Honolulu General Plan (GP), please include a discussion section on how the private residential development adhere to the principles stated in the O'ahu GP, key focus area III Natural Environment and Resource Stewardship, and the applicable policies under Objective A, as well as key focus area VII Physical Development and Urban Design, Objective B.

11. Under Section 7.5 SMA Review, the narrative is using an old version of the SMA Ordinance, ROH Chapter 25, review guidelines. On March 9, 2023, Mayor Blangiardi signed Bills 41 and 42 (2022), now Ordinances 23-3 and 23-4, into law, which amended ROH Chapters 25 and 26. Please revise this section by using the

current version of the SMA regulations. Additionally, please check that all references to ROH Chapter 25 are correct throughout the entirety of the EA.

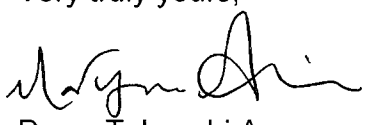
12. The Draft EA does not appear to have any section discussing the Projects consistency or compliance with the Shoreline Setback Ordinance, ROH Chapter 26. Given that this EA is in preparation of an upcoming SSV, it is paramount that the EA include a section discussing how the Project intends to meet the objectives, criteria, and guidelines of ROH Chapter 26, specifically ROH Section 26-1.8(b)(3) regarding the SSV hardship standard. This analysis must be included in the Final EA.

13. Under Section 7.6 East Honolulu Sustainable Communities Plan (SCP), please elaborate on how the Project conforms to key focus areas, objectives and policies mentioned in the East Honolulu SCP, specifically on the Climate Change Adaptation and the related policies and regulations applied to mitigate and adapt to the anticipated impacts of SLR for the safety of the proposed residential development.

14. The Project is serviced by the East Honolulu Wastewater Treatment Plant, which is owned and maintained by Hawai'i American Water. Please revise Section 6.5 Utilities of the Draft EA, which says the Board of Water Supply owns and maintains the water/sewer system in the area.

Thank you for the opportunity to comment on this proposal. Should you have any questions, please contact Michael Kat, of our Zoning Regulations and Permits Branch, at (808) 768-8013 or via email at michael.kat@honolulu.gov.

Very truly yours,



FOR Dawn Takeuchi Apuna
Director

HAWAII
ENGINEERING
GROUP, INC.

Consulting Civil Engineers, Structural Engineers, Land Surveyors, & Land Use Planning
US (SBA) SDB & DBE Certified

Ref. 21-028

May 2, 2024

Dawn Takeuchi Apuna
Department of Planning & Permitting
City and County of Honolulu
650 South King Street, 7th Floor
Honolulu, Hawaii 96813

Subject:
Draft Environmental Assessment and Environmental
Garg Residence (Project)
6973 Kalaniana'ole Highway, Hawaii Kai, O'ahu
TMK No. (1) 3-9-002:031 Honolulu, O'ahu, Hawai'i

Dear Mr. Michael Kat,

We have received the response letter from the Department of Planning & Permitting (DPP) dated April 18, 2024. The applicant will be submitting applications for a Shoreline Setback Variance (SSV) and Special Management Area (SMA) Use Permit for the Project. In response to your comments:

1. This Draft Environmental Assessment (EA) for the Garg Residence Property, located at 6973 Kalaniana'ole Highway (Tax Map Key [TMK] Number [1] 3-9-002: Parcel 031), Honolulu, Honolulu County, Hawaii 96825 (the "subject property"), has been prepared in accordance with Chapter 343, Hawaii Revised Statutes (HRS), and Hawaii Administrative Rules (HAR) Title 11, State of Hawaii, Department of Health (DOH), Chapter 200, Environmental Impact Rules. The proposed project encroaches within the 40-foot setback from the certified shoreline, which triggered the requirement of the EA.

   The proposed project will encroach within the 40-foot shoreline setback, necessitating a Shoreline Setback Variance pursuant to the Revised Ordinances of Honolulu (ROH) Chapter 26 and SMA compliance pursuant to ROH Chapter 25. This process will require acceptance of the Chapter 343 HRS EA and submission of the applications for the SSV and SMA permits, which will require the approval of the City Council of Honolulu.

   This shoreline lot is shaped triangular, narrowing at the north end, which influences the design of the structure to be similar in shape. As a result, the northwest side of the dwelling will encroach approximately 442.74 square feet into the shoreline setback (see Figure 5). In accordance with the FEMA map, the subject property is rated as VE with a Base Flood Elevation (BFE) of 12 feet (see Figure 7).

   No adverse impacts are expected from the Proposed Action regarding encroachment into the shoreline setback area. The request for the variance will not impact public access to the beach and there will be no detrimental effect to public interest. The public rights to navigate the use of the shorelines will not be adversely affected; in fact, the size of the beach in the vicinity of the proposed project has increased following the construction of the nearby jetty for the Hawaii Kai Marina Entrance Groin Replacement Project in 2023.

2. The Agent for the owner is listed under Applicant, Hawaii Engineering Group, Inc.

   Flood Zones have been added to the Project Summary list as AE and VE.

   Though there is no specific land use designation within the East Honolulu Sustainable Communities Plan (EHSCP) a general description of land use character has been added.

   A Determination for the Final EA has been added as "Finding of No Significant Impact".

   Corresponding figures for any site-specific information that is listed has been added to the Project Summary list.

3. Information from Comment 1 has been incorporated into Section 1.0 Introduction and Section 3.1 Technical Characteristics (as appropriate) of the Final EA.

4. In accordance with the City records the previous owner demolished the existing dwelling in 1974 and applied for a building permit to construct a new dwelling in February 1975 that was eventually completed in September 1979. The existing dwelling is approximately 2,308 square feet of living area and 1,624 square feet of building footprint that is not up to current building standards that currently is outside of the 40 feet shoreline setback. The existing 2-story dwelling is approximately 25 high with the main living area at grade level that is within the designated BFE of 12 feet.

   In August 2020, The Gargs (the current owners) applied for a building permit and discovered that a SMA permit was required, thus cancelling the permit.

5. Figures and architectural drawings will remain as Figures and Appendix at the end of the Final EA.

   Discussion of encroachment of the proposed project has been added to Section 3.1 Technical Characteristics.

   In reference to the table below, Project Compliance between the existing and proposed dwelling. The proposed dwelling follows the current building codes including the flood elevation requirements. The existing dwelling is at 5 feet AMSL and the proposed dwelling will be at or above the 12 feet AMSL. Additionally, the currently dwelling structural post and lanai deck has approximately 20 SF encroaching into the required shoreline setback.

Project Compliance with Development Standards				
Project Compliance				
R-10 Zoning District Development Standard - Parcel Parcel 031			Existing	Proposed
Minimum Lot Area (SF)	One-family dwelling, detached, and other uses	n/a	10,007 SF	10,007 SF
Minimum Lot Width/ Depth (FT)	65 for dwellings, 100 for other uses		Triangular shaped lot. Width: 198.81 FT Depth: 94.42 FT	Triangular shaped lot. Width: 198.81 FT Depth: 94.42 FT
Yards (FT):	Front	10 FT for dwellings 30 FT for other uses	10 FT	10 FT
	Side and rear	5 FT for dwellings 15 FT for other uses	Side: 15 FT Rear: 15 FT	Side: 5 FT Rear: 5 FT
Maximum Building Area	50% of the zoning lot = 5,004 SF		1,624 SF » 16%	3,017 SF » 30%
Maximum Height (FT)1	25-30 FT 30 FT in VE		25 FT	30 FT
Maximum Floor Area Ratio (FAR)	FAR 0.7		0.24 FAR	0.48 FAR
Maximum Floor Area (SF) Per §21-3.70-1(c)(3)(H)	7,011.20		2,390 SF	4,756 SF
Garage (SF)	n/a		480 SF	515 SF
Shoreline Setback encroachment	40 feet		10 SF	443 SF
Base Flood Elevation (AMSL)	12 feet		5 FT AMSL	14 FT AMSL

The Proposed Action encroaches approximately 442.74 square feet into the shoreline setback, ROH Chapter 23, Article 1 – Establishment of the Shoreline Setback Line on shallow lots, of 40 feet, thereby a Shoreline Setback Variance is required.

6. Further explanation of alternatives has been included in the Final EA. In addition, a second alternative has been added discussing demolishing the existing dwelling and rebuilding to not encroach within the shoreline setback area, as follows:

A second alternative considered was to demolish the existing dwelling and construct a new dwelling to not encroach within the shoreline setback area. However, the narrow, triangular-shaped shoreline lot influences the design of the structure to be similar in shape which would not be practical. The space needs of the current owners large family would not be accommodated.

Further, on July 1, 2024, the shoreline setback is scheduled to change to an erosion based setback, which will be 60 ft. plus 70 times the annual erosion rate, up to a maximum of 130 ft. This increase setback to 60 feet will tremendously reduce the building area to approximately 1,200 square feet due to the shape of the irregular lot.

7. Drawings are being revised.

8. Drawings are being revised

9. On September 22, 2022, the archaeological field inspection and literature review report was submitted to the Department of Land and Natural Resources, State Historic Preservation Division (DLNR-SHPD) for their review.

   Based on the results of the archaeological field inspection and literature review, and anticipated clearance from the DLNR-SHPD, the Proposed Action is not expected to impact historic and cultural resources. As of this writing, DLNR-SHPD approval has not been received.

10. Specifically, the Proposed Action will occur on a previously disturbed land parcel and therefore, will not adversely affect the natural environment. In addition, the Proposed Action has considered coastal erosion, flood hazards, as well as to plan for coastal hazards that threaten life and property.

    The proposed project will encroach within the 40-foot shoreline setback (see Executive Summary and Section 1.0 Introduction). However, 442.74 square feet on the northwest side of the dwelling will encroach. The location and design of the proposed dwelling negate the need for future protective structures.

    The Proposed Action has integrated climate change adaptation into the planning, design, and construction, as well as prepared for the anticipated impacts of climate change and sea level rise as discussed in Sections 3.1 Technical Characteristics and 6.0 Affected Environment (specifically 6.1.3.1 and 6.1.3.2).

11. Section 7.5 SMA Review has been revised to reflect the current version of SMA regulations.

12. A new section has been added to the Final EA discussing Shoreline Setback Ordinance, specifically Shoreline Setback Variance hardship standard.

13. Section 7.6 EHSCP has been revised to include the following:
    The proposed Project will replace an existing residential dwelling with a new single-family residence. The proposed residential dwelling will result in a portion of the structure (the northwest corners of the dwelling) to be located within the shoreline setback area.

    This shoreline lot is shaped triangular, narrowing at the north end, which influences the design of the structure to be similar in shape. As a result, the northwest side of the dwelling will encroach approximately 442.74 square feet into the shoreline setback (see Figure 5). In accordance with the FEMA map, the subject property is rated as VE with a BFE of 12 feet (see Figure 7).

    Construction activities will be confined within the subject property and will not affect public shoreline access or public lateral shoreline access.

    BMPs will be followed to minimize and control the generation of construction-related wastewater and pollutants that could be discharged in storm water runoff. Construction will not result in a disruption of solid waste collection services to neighboring parcels.

To adapt to climate change and sea level rise, the proposed project would meet the current building code and be flood compliant.

The proposed Project will be elevated so that the living area is above the BFE. The ground level is not considered living space and will have break-away walls. The ground level will comprise the mechanical room, the elevator pit, and garage.

The potential impacts of SLR (SLR-XA) of 0.5 feet, 1.1 feet, 2.0 feet and 3.2 feet on the subject property is shown in Figures 8 to 11 and depends on factors discussed in Section 6.1.3.1 that affect sea level.

The projections of 0.5 feet and 1.1 feet are not expected to occur until approximately 2050 but should not adversely affect the Proposed Action.

The projections of 2.0 feet and 3.2 feet are not expected to occur until approximately 2100 (not anticipated for approximately 80 years) and may exceed the lifespan for the Proposed Action.

14. Section 6.5 Utilities has been revised to reflect that the area is connected to water and sewer services from East Honolulu Wastewater Treatment Plant (which is owned and maintained by Hawaii American Water).

Should you have any further questions or require additional information on the proposed project, please feel free to contact me at 808 533-2092 ext. 118 or by email at roy@hawaiiengineering.net."

Please let me know if you need further assistance.

Sincerely,

Roy Irei
Vice President

Cc: Dawn Takeuchi Apuna, Director
Michael Kat, Planner
Lori Ford, Ford & Associates

MK

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

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

2024 APR -1 PM 1:49

DEPT OF PLANNING AND PERMITTING
CITY & COUNTY OF HONOLULU

RICK BLANGIARDI
MAYOR
MEA

SHELDON K. HAO
FIRE CHIEF
LUNA NUI KINAI AHI

JASON SAMALA
DEPUTY FIRE CHIEF
HOPE LUNA NUI KINAI AHI

March 28, 2024

TO: DAWN TAKEUCHI APUNA, DIRECTOR
DEPARTMENT OF PLANNING AND PERMITTING

FROM: SHELDON K. HAO, FIRE CHIEF

SUBJECT: SHORELINE SETBACK VARIANCE AND SPECIAL MANAGEMENT AREA USE PERMIT
GARG RESIDENCE
6973 KALANIANA'OLE HIGHWAY - HAWAI'I KAI
TAX MAP KEY: 3-9-002: 031

In response to your letter dated March 22, 2024, regarding the abovementioned subject, the Honolulu Fire Department (HFD) reviewed the submitted information and requires that the following be complied with:

1. Fire department access roads shall be in accordance with National Fire Protection Association (NFPA) 1; 2018 Edition, Section 18.2.3.

2. A fire department access road shall extend to within 50 feet (15 meters) of at least one exterior door that can be opened from the outside and that provides access to the interior of the building. (NFPA 1; 2018 Edition, Section 18.2.3.2.1.)

3. Fire department access roads shall be provided such that any portion of the facility or any portion of an exterior wall of the first story of the building is located not more than 150 feet (46 meters) from fire department access roads as measured by an approved route around the exterior of the building or facility. (NFPA 1; 2018 Edition, Sections 18.2.3.2.2 and 18.2.3.2.2.1, as amended.)

4. An approved water supply capable of supplying the required fire flow for fire protection shall be provided to all premises upon which facilities, buildings, or portions of buildings are hereafter constructed or moved into the jurisdiction. The approved water supply shall be in accordance with NFPA 1; 2018 Edition, Sections 18.3 and 18.4.

5. Civil drawings submitted to your department shall be routed to the HFD for review and approval.

The abovementioned provisions are required by the HFD. This project may necessitate that additional requirements be met as determined by other agencies.

Should you have questions, please contact Battalion Chief Jean-Claude Bisch of our Fire Prevention Bureau at 808-723-7151 or jbisch@honolulu.gov.

Sheldon K. Hao

SHELDON K. HAO
Fire Chief

SKH/MD:jl

HAWAII
ENGINEERING
GROUP, INC.

Consulting Civil Engineers, Structural Engineers, Land Surveyors, & Land Use Planning
US (SBA) SDB & DBE Certified

Ref. 21-028

April 24, 2024

Sheldon K. Hao, Fire Chief
Honolulu Fire Department
City & County of Honolulu
636 South Street
Honolulu, Hawaii 96813

Subject: Draft Environmental Assessment and Environmental
Shoreline Setback Variance and Special Management Area Use Permit
6973 Kalaniana'ole Highway, Hawaii Kai
TMK No. (1) 3-9-002:031 Honolulu, O'ahu, Hawai'i

Dear Battalion Chief Jean-Claude Bisch;

We have received the response letter from the Honolulu Fire Department (HFD) dated March 28, 2024. Your review of the proposed project is accurate, with one exception.

In response to your comments:

1. The subject property abuts Kalanianaole Highway with a driveway of the proposed project is approximately 22 feet wide and 30 feet length. The proposed single family dwelling will be setback 10 feet from Kalanianaole Highway. The access to the proposed dwelling meets NFPA 1, 2018 Edition, Section 18.2.3

2. The proposed driveway extends 30 feet into the property from Kalanianaole Hwy with an exterior door that can opened from the outside and providing access to the interior of the building which meets the NFPA 1, Edition 2018, Section 18.2.3.2.1.

3. The exterior building wall will be approximately 10 feet from Kalanianaole Highway and 5 feet from the proposed driveway, meeting NFPA 1, Edition 2018, Sections 18.2.3.2.2 and 18.2.3.2.2.1.

4. HFD currently maintains an existing fire hydrant No. 4488 which is approximately 40 feet from the proposed single family dwelling entrance, which meets Sections 18.3 and 18.4 of the NFPA 1, 2018 Edition.

5. The Construction Drawing set will be routed to the HFD for review and approval during the building permit process.

Should you have any further questions or require additional information on the proposed project, please feel free to contact me at 808 533-2092 ext. 118 or by email at roy@hawaiiengineering.net."

1088 Bishop Street, Suite 2506 • Honolulu, Hawaii 96813
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Email: heg@hawaiiengineering.net • Web: www.hawaiiengineering.net

Please let me know if you need further assistance.

Sincerely,

Roy Irei
Vice President, Telecom Div

Cc: Dawn Takeuchi Apuna, Director
Michael Kat, Planner
Lori Ford, Ford & Associates

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

RICK BLANGIARDI
MAYOR
MEIA

ARTHUR J. LOGAN
CHIEF
KAHU MĀKA'I

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

OUR REFERENCE EO-SH

April 8, 2024

SENT VIA EMAIL

Mr. Roy Irei
roy@hawaiiengineering.net

Dear Mr. Irei:

This is in response to the correspondence received from the Department of Planning and Permitting on March 25, 2024, requesting comments relating to the Draft Environmental Assessment and the environmental impacts of the proposed demolition and construction of a new single-family dwelling at 6973 Kalaniana'ole Highway in Hawai'i Kai.

Based on the information provided, the Honolulu Police Department recommends providing adequate notice to area residents and businesses prior to any road closures, as any impact to pedestrian and/or vehicular traffic or construction-related debris could lead to complaints.

If there are any questions, please call Major Brian Lynch of District 7 (East Honolulu) at (808) 723-3369.

Sincerely,

GLENN HAYASHI
Assistant Chief of Police
Support Services Bureau

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Consulting Civil Engineers, Structural Engineers, Land Surveyors, & Land Use Permitting
US (SBA) SDB & DBE Certified

April 19, 2024

Mr. Glenn Hayashi, Assistant Chief of Police
Honolulu Police Department
801 South Beretania Street
Honolulu, Hawaii 96813

Subject: Draft Environmental Assessment
TMK No. (1) 3-9-002:031
HPD Ref EO-SH

Attn: Glenn Hayashi, Assistant Chief of Police

Thank you for your letter date April 8, 2024, in response to the Draft Environmental Assessment of the proposed demolition and construction of a new single-family dwelling at 6973 Kalaniana'ole Highway in Hawaii Kai.

We notified the Hawaii Kai Neighborhood Board at their meeting on July 26. 2022 and the surrounding neighbors to the subject property of the proposed project. The State Department of Transportation was also consulted.

The Draft Environmental Assessment section 6.11.2 addresses the traffic potential impacts and mitigation. Though the Proposed Action is not expected to have a significant impact on traffic operations the Contractor will implement a Traffic Management Plan and Construction Management Plan to minimize construction-related traffic in the surrounding area. The Construction Management Plan will identify the type, frequency and routing of heavy trucks and construction-related vehicles, off-street parking areas for employees, and mitigation measures related to any potential traffic and neighborhood impacts.

In addition, the following mitigation measures are recommended:
(1) deliveries and removals from the subject property will be scheduled during weekday, non-peak commuter periods (9:00 am to 3:00 pm),
(2) a street usage permit will be obtained from the State Department of Transportation for any construction-related work that may require the temporary closure of the State-owned highway,
(3) update on temporary construction related disruptions on the local street network with:
a) the State Department of Transportation, b) the Hawaii Kai Neighborhood Board No, 01 area residents and businesses, c) emergency personnel (fire, ambulance, and police), and d) the Oahu Transit Services, inc. (TheBus and The Handi-Van).

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Should you have any further questions or response on the proposed project please feel free to contact me at 808-533-2092 ext. 118 or by email at roy@hawaiiengineering.net.

Sincerely,

Roy Irei
Vice President, Telcom Div.

Cc: Major Brian Lynch, District 7 (East Honolulu)
Lori Ford (Ford & Associates)
Michael Kat, Department of Planning & Permitting

STATE OF HAWAIʻI
OFFICE OF PLANNING
& SUSTAINABLE DEVELOPMENT

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

JOSH GREEN, M.D.
GOVERNOR

SYLVIA LUKE
LT. GOVERNOR

MARY ALICE EVANS
DIRECTOR

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

DTS 202403221620NA

Coastal Zone Management Program

Environmental Review Program

Land Use Commission

Land Use Division

Special Plans Branch

State Transit-Oriented Development

Statewide Geographic Information System

Statewide Sustainability Branch

April 22, 2024

Ms. Dawn Takeuchi Apuna, Director
Department of Planning and Permitting
City and County of Honolulu
650 South King Street, 7th Floor
Honolulu, Hawaii 96813

Attn: Mr. Michael Kat

Dear Ms. Apuna:

Subject: Chapter 343, Hawaiʻi Revised Statutes
Draft Environmental Assessment for Construction of a New Two-Story Single-Family Dwelling that Encroaches within the 40-foot Shoreline Setback at 6973 Kalanianaole Highway, Hawaiʻi Kai, Oʻahu; Tax Map Key: (1) 3-9-002: 031

The Office of Planning and Sustainable Development (OPSD) is in receipt of your review request, dated March 22, 2024, on the Draft Environmental Assessment (EA) for the proposed construction of a new single-family dwelling on a shoreline parcel along Kalanianaole Highway, Hawaiʻi Kai, Oʻahu.

According to the Draft EA, the subject property with approximately 10,016 square feet of land is currently zoned "R-10 Residential", and under State Land Use designation "Urban". The applicant NMG HI Properties LLC seeks a Shoreline Setback Variance and a Special Management Area (SMA) Use Permit to demolish an existing two-story single-family dwelling, and construct approximately 4,748-square-foot, two-story, single-family dwelling as follows:

- The ground level of the proposed dwelling will comprise the electrical and mechanical room, the elevator pit, and garage.
- The main level will consist of the kitchen and dining room, a living room and bar, two guest bedrooms (each with a bathroom) and the main bedroom suite.
- The upper level will consist of four guest bedrooms (each with a bathroom) and an activity room.

The new dwelling structure will encroach approximately 443 square feet into the 40-foot shoreline setback area.

According to Federal Emergency Management Agency Flood Insurance Rate Map, the northern, eastern, and southeastern portions of the subject property and the southeastern adjoining properties are located in Zone AE, which denotes special flood hazard areas, with a base flood elevation of 9 feet above mean sea level (amsl), and within the 1 percent annual chance floodplain. The northwestern, western, and southern portions of the subject property are located in Zone VE, which denotes special flood hazard areas, with a base flood elevation of 12 feet amsl, and a coastal flood zone.

The OPSD has reviewed the subject Draft EA, and has the following comments to offer:

1. Please note that Hawaii Administrative Rules (HAR) Chapter 11-200.1, Environmental Impact Statement Rules, has taken effect since August 9, 2019, and HAR Chapter 11-200 has been repealed. The Final EA should correct the error that the Draft EA has been prepared in accordance with HAR Chapter 11-200, Environmental Impact Rules.

2. The subject EA shall discuss and present whether the existing dwelling structure, which will be demolished, is located within the 40-foot shoreline setback area, and whether the proposed residence development will result in or enlarge the portion of structure within the shoreline area. Note that the shoreline setback line may be more than a minimum of 40 feet inland from the certified shoreline as determined by the Department of Planning and Permitting, City and County of Honolulu, pursuant to Revised Ordinances of Honolulu (ROH) Chapter 26, as amended.

3. As required by HAR Chapter 11-200.1, an EA shall contain "identification and analysis of impacts and alternatives considered." Except for "No Action", the subject Draft EA did not provide other alternatives to the proposed action to assess and compare their impacts for a preferred alternative.

4. On page 8, the Draft EA states that the potential impacts of sea level rise of 3.2 feet on the subject property is shown in Figure 8, which is not expected to occur until 2100, and these projections are not anticipated for approximately 80 years and may exceed the lifespan for the proposed action. The OPSD recommends that the EA present and assess the impacts of sea level rise, in particular, coastal erosion and high wave flooding at 0.5 feet, 1.1 feet, 2.0 feet, and 3.2 feet, respectively on the subject property by referring to Hawaii Sea Level Rise Viewer at https://www.pacioos.hawaii.edu/shoreline/slr-hawaii/.

5. The subject site is under high risk of shoreline erosion, high wave flooding and sea level rise. The applicant should be aware that construction of shoreline hardening structures including seawalls and revetments at the site with sand beaches is prohibited pursuant to Hawaii Revised Statutes (HRS) Chapter 205A, as amended.

6. In enacting Act 224, Session Laws of Hawaii 2005, the legislature found that light pollution in Hawaii's coastal areas and artificial lighting illuminating the shoreline and ocean waters can be disruptive to avian and marine life. Pursuant to HRS § 205A-30.5, no artificial light from the proposed residence development shall be directed to travel across the property boundary toward the shoreline and ocean waters.

If you respond to this comment letter, please include DTS 202403221620NA in the subject line. For any questions regarding this letter, please contact Shichao Li of our office at (808) 587-2841 or by email at shichao.li@hawaii.gov.

Sincerely,

Mary Alice Evans

Mary Alice Evans
Director

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US (SBA) SDB & DBE Certified

Ref. 21-028

April 24, 2024

Mary Alice Evans, Director
State of Hawaii Office of Planning & Sustainable Development
P.O. Box 2359
Honolulu, Hawaii 96804

Subject: Chapter 343, Hawai'i Revised Statutes
Draft Environmental Assessment and Environmental
Setback at 6973 Kalaniana'ole Highway, Hawaii Kai, O'ahu
TMK No. (1) 3-9-002:031 Honolulu, O'ahu, Hawai'i

Dear Mr. Shichao Li;

We have received the response letter from The Office of Planning and Sustainable Development (OPSD) dated April 22, 2024. Your review of the proposed project is accurate, with one exception. To comply with flood zone requirements, the electrical room will be relocated from the ground level to the main level.

In response to your comments:

1. HAR Chapter 11-200 has been replaced with HAR Chapter 11-200.1, Environmental Impact Statement Rules.

2. In Section 3.1, Technical Characteristics, it is stated that the existing dwelling is not within the shoreline setback area. However, the proposed dwelling will result in a portion of the structure (specifically, the western corners) being located within this area..

3. In Section 3.2, Alternatives and No Action Alternative, the considered alternative was the renovation of the existing dwelling to meet the owner's needs, excluding the No Action Alternative. However, updating the existing dwelling to current code and expanding its size would be more expensive. Additionally, the existing dwelling does not comply with flood regulations.

4. Under Section 6.1.3.2 Proposed Action Impacts and Mitigation (for Flood Zones and Sea Level Rise), the 0.5 feet, 1.1 feet and 2.0 feet projections have been included. Presentation of impacts of sea level rise, in particular, coastal erosion and high wave flooding was discussed in Section 6.1.3.1 Baseline Conditions. The SLR discussed is the "SLR Exposure Area (SLR-XA) which includes passive flooding, annual high wave flooding, and coastal erosion.

5. No construction of shoreline hardening structures is included in the Proposed Action.

6. Under Section 6.2.4.2 Proposed Action Impacts and Mitigation (for Listed or Proposed Threatened or Endangered Species and Designated or Proposed Critical Habitats), it is stated that lighting used/needed for nighttime illumination will follow guidance related to seabird-friendly light styles to avoid negative impacts. This also applies to marine life.

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Should you have any further questions or require additional information on the proposed project, please feel free to contact me at 808 533-2092 ext. 118 or by email at roy@hawaiiengineering.net."

Please let me know if you need further assistance.

Sincerely,

Roy Irei
Vice President, Telecom Div

Cc: Dawn Takeuchi Apuna, Director
Michael Kat, Planner
Lori Ford, Ford & Associates

From: Dang, Charmian I <charmian_dang@fws.gov>
Sent: Monday, April 1, 2024 6:08 AM
To: Kat, Michael A <michael.kat@honolulu.gov>
Cc: Duyvejonck, Jana <jana.duyvejonck@honolulu.gov>; Shoji, Joyce M. <jshoji@honolulu.gov>
Subject: Draft EA for Garg Residence at 6973 Kalanianaole Highway in Hawaii Kai

Dear Mr. Kat,

Our office received your letter dated March 22 requesting the U.S. Fish and Wildlife Service's input on the Draft Environmental Assessment for the Garg Residence Project at 6973 Kalanianaole Highway in Hawaii Kai on Oahu.

Upon reviewing the Draft EA the Service agrees with the additional species that may be affected by the proposed project that were addressed in the DLNR-DOFAW letter (Appendix F) . These include the Hawaiian seabirds, the Hawaiian green sea turtle, and other waterbirds besides the Hawaiian stilt, such as the Hawaiian coot, Hawaiian duck and Hawaiian gallinule. Below are conservation measures which should be implemented in the project design for these species.

Hawaiian Seabirds

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

To avoid and minimize potential project impacts to Hawaiian seabirds, the following measures will be implemented:

- All outdoor lights will be fully shielded so the bulb can only be seen from below.
- Automatic motion sensor switches and controls will be installed on all outdoor lights or lights will be turned off when human activity is not occurring in the lighted area.
- Nighttime construction will not occur during the seabird fledging period, September 15 through December 15.

Hawaiian Waterbirds

Hawaiian waterbirds are currently found in a variety of wetland habitats including freshwater marshes and ponds, coastal estuaries and ponds, artificial reservoirs, kalo or taro (*Colocasia esculenta*) lo'i or patches, irrigation ditches, sewage treatment ponds, and in the case of the Hawaiian duck, montane streams and marshlands. The Hawaiian stilt may also be found wherever ephemeral or persistent standing water may occur.

To avoid and minimize potential project impacts to Hawaiian waterbirds, the following measures will be implemented:

- In areas where waterbirds are known to be present, reduced speed limits will be posted and implemented; project personnel and contractors will be informed about the presence of endangered species on-site.
- Applicable best management practices regarding work in aquatic environments will be incorporated if water resources are located within or adjacent to the project site (see Attchment).
- A biological monitor that is familiar with the species' biology will conduct Hawaiian waterbird nest surveys where appropriate habitat occurs within the vicinity of the project site prior to project initiation. Surveys will be repeated within 3 days of project initiation and after any subsequent delay of work of 3 or more days (during which the birds may attempt to nest). If a nest or active brood is found:

- The Service will be contacted within 48 hours for further guidance.
- A 100-foot buffer will be established and maintained around all active nests and/or broods until the chicks/ducklings have fledged. No potentially disruptive activities or habitat alteration will be conducted within this buffer.
- A biological monitor that is familiar with the species' biology will be present on the project site during all construction or earth moving activities until the chicks/ducklings fledge to ensure that Hawaiian waterbirds and nests are not adversely impacted.

Green sea turtle

The Service consults on sea turtles and their use of terrestrial habitats (beaches where nesting and/or basking is known to occur), whereas the National Marine Fisheries Service (NMFS) consults on sea turtles and their use of off-shore and open ocean habitats. We recommend that you consult with NMFS regarding the potential impacts from the proposed project to sea turtles in off-shore and open ocean habitats.

Green sea turtles may nest on any sandy beach area in the Pacific Islands. Nesting occurs on beaches from May through September, peaking in June and July, with hatchlings emerging through November and December. Construction on, or in the vicinity of, beaches can result in sand and sediment compaction, sea turtle nest destruction, beach erosion, contaminant and nutrient runoff, and an increase in direct and ambient light pollution which may disorient hatchlings or deter nesting females. Off-road vehicle traffic may result in direct impacts to sea turtles and nests, and also contributes to habitat degradation through erosion and compaction.

Projects that alter the natural beach profile, such as nourishment and hardening, including the placement of seawalls, jetties, sandbags, and other structures, are known to reduce the suitability of on-shore habitat for sea turtles. These types of projects often result in sand compaction, erosion, and additional sedimentation in nearshore habitats, resulting in adverse effects to the ecological community and future sea turtle nests. The hardening of a shoreline increases the potential for erosion in adjacent areas, resulting in subsequent requests to install stabilization structures or conduct beach nourishment in adjacent areas. Given projected sea level rise estimates, the likelihood of increase in storm surge intensity, and other factors associated with climate change, we anticipate that beach erosion will continue and likely increase.

Where possible, projects should consider alternatives that avoid the modification or hardening of coastlines. Beach nourishment or beach hardening projects should evaluate the long-term effect to sea turtle nesting habitat and consider the cumulative effects.

To avoid and minimize project impacts to green sea turtles and their nests the following measures will be implemented into your project design:

- No vehicle use on or modification of the beach/dune environment during the sea turtle nesting or hatching season (May to December).
- Do not remove native dune vegetation.
- Incorporate applicable best management practices regarding Work in Aquatic Environments (see enclosed) into the project design.
- Have a biologist familiar with sea turtles conduct a visual survey of the project site to ensure no basking sea turtles are present.
    - If a basking sea turtle is found within the project area, cease all mechanical or construction activities within 100 feet until the animal voluntarily leaves the area.
    - Cease all activities between the basking turtle and the ocean.
- Remove any project-related debris, trash, or equipment from the beach if not actively being used.
- Do not stockpile project-related materials in the intertidal zone, reef flats, or stream channels.

Lighting: Optimal nesting habitat is a dark beach free of barriers that restrict sea turtle movement. Nesting turtles may be deterred from approaching or laying successful nests on lighted or disturbed beaches. They may become disoriented by artificial lighting, leading to exhaustion and placement of a nest in an inappropriate location (such as at or below the high tide line). Hatchlings that emerge from nests may also be disoriented by artificial lighting. Inland areas visible from the beach should be sufficiently dark to allow for successful navigation to the ocean.

To avoid and minimize project impacts to green sea turtles from lighting the following measures will be implemented into your project description:

- Avoid nighttime work during the nesting and hatching season (May to December).
- Minimize the use of lighting and shield all project-related lights so the light is not visible from any beach.
    - If lights can't be fully shielded or if headlights must be used, fully enclose the light source with light filtering tape or filters.
- Incorporate design measures into the construction or operation of buildings adjacent to the beach to reduce ambient outdoor lighting such as:
    - tinting or using automatic window shades for exterior windows that face the beach;
    - reducing the height of exterior lighting to below 3 feet and pointed downward or away from the beach; and
    - minimize light intensity to the lowest level feasible and, when possible, include timers and motion sensors.

Please contact NOAA for conservation measures for the Hawaiian monk seal.

We appreciate your efforts to conserve protected species. If you have questions regarding this response, please feel free in contacting me.

Aloha,
Charmian

~~~~~~

Charmian Dang

U. S. Fish and Wildlife Biologist

Pacific Islands Fish and Wildlife Office

300 Ala Moana Boulevard, Room 3-122

Honolulu, Hawaii 96850

808-792-9400
~~~~~~

U.S. Fish and Wildlife Service
Recommended Standard Best Management Practices

The U.S. Fish and Wildlife Service (USFWS) recommends the following measures to be incorporated into project planning to avoid or minimize impacts to fish and wildlife resources. Best Management Practices (BMPs) include the incorporation of procedures or materials that may be used to reduce either direct or indirect negative impacts to aquatic habitats that result from project construction-related activities. These BMPs are recommended in addition to, and do not over-ride any terms, conditions, or other recommendations prepared by the USFWS, other federal, state or local agencies. If you have questions concerning these BMPs, please contact the USFWS Aquatic Ecosystems Conservation Program at 808-792-9400.

1. Authorized dredging and filling-related activities that may result in the temporary or permanent loss of aquatic habitats should be designed to avoid indirect, negative impacts to aquatic habitats beyond the planned project area.

2. Dredging/filling in the marine environment should be scheduled to avoid coral spawning and recruitment periods, and sea turtle nesting and hatching periods. Because these periods are variable throughout the Pacific islands, we recommend contacting the relevant local, state, or federal fish and wildlife resource agency for site specific guidance.

3. Turbidity and siltation from project-related work should be minimized and contained within the project area by silt containment devices and curtailing work during flooding or adverse tidal and weather conditions. BMPs should be maintained for the life of the construction period until turbidity and siltation within the project area is stabilized. All project construction-related debris and sediment containment devices should be removed and disposed of at an approved site.

4. All project construction-related materials and equipment (dredges, vessels, backhoes, silt curtains, etc.) to be placed in an aquatic environment should be inspected for pollutants including, but not limited to; marine fouling organisms, grease, oil, etc., and cleaned to remove pollutants prior to use. Project related activities should not result in any debris disposal, non-native species introductions, or attraction of non-native pests to the affected or adjacent aquatic or terrestrial habitats. Implementing both a litter-control plan and a Hazard Analysis and Critical Control Point plan (HACCP – see http://www.haccp-nrm.org/Wizard/default.asp) can help to prevent attraction and introduction of non-native species.

5. Project construction-related materials (fill, revetment rock, pipe, etc.) should not be stockpiled in, or in close proximity to aquatic habitats and should be protected from erosion (*e.g.*, with filter fabric, etc.), to prevent materials from being carried into waters by wind, rain, or high surf.

6. Fueling of project-related vehicles and equipment should take place away from the aquatic environment and a contingency plan to control petroleum products accidentally spilled during the project should be developed. The plan should be retained on site with the person responsible for compliance with the plan. Absorbent pads and containment booms should be stored on-site to facilitate the clean-up of accidental petroleum releases.

7. All deliberately exposed soil or under-layer materials used in the project near water should be protected from erosion and stabilized as soon as possible with geotextile, filter fabric or native or non-invasive vegetation matting, hydro-seeding, etc.

HAWAII
ENGINEERING
GROUP, INC.

Consulting Civil Engineers, Structural Engineers, Land Surveyors, & Land Use Permitting
US (SBA) SDB & DBE Certified

Via Email

April 15, 2024

Ms. Charmian Dang
U.S Fish & Wildlife Service
300 Ala Moana Boulevard, Room 3-122
Honolulu, Hawaii 96813

Subject: Draft Environmental Assessment
TMK No. (1) 3-9-002:031

Attn: Ms. Charmian Dang

Thank you for your email with attached Recommended Standard Best Management Practices (BMPs) information sheet dated April 1, 2024, in response to the Draft Environmental Assessment of the proposed demolition and construction of a new single-family dwelling at 6973 Kalaniana'ole Highway in Hawaii Kai.

The Draft Environmental Assessment section 6.2.4 addressed the Proposed Threatened or Endanger Species and Designated or Proposed Critical Habitats. Section 6.2.4.2 listed the Proposed Action Impacts and Mitigation which included addressing the outdoor lighting impacts to Hawaiian Seabirds and Waterbirds. In addition the project construction footprint will be focused on the previously disturbed/developed areas and will avoid work and development within any shoreline buffers and setback areas. BMPs for stormwater control will be used throughout construction. If the endangered Hawaiian Monk Seal and threatened Green Sea Turtle should haul out onshore near the project site, construction activities should cease until they have departed.

Should you have any further questions or response on the proposed project please feel free to contact me at 808-533-2092 ext. 118 or by email at roy@hawaiiengineering.net.

Sincerely,

Roy Irei
Vice President, Telcom Div.

1088 Bishop Street, Suite 2506 • Honolulu, Hawaii 96813
Tel: 808.533.2092 • Fax: 808.533.2059
Email: heg@hawaiiengineering.net • Web: www.hawaiiengineering.net

Cc: Lori Ford (Ford & Associates)
Michael Kat, Department of Planning & Permitting
Jana Duyvejonck, Department of Planning & Permitting
Joyce M. Shoji, Department of Planning & Permitting

Lori Ford

From: Roy Irei <roy@hawaiiengineering.net>
Sent: Wednesday, May 1, 2024 6:43 PM
To: Kamakana Ferreira
Cc: Kat, Michael A; Lori Ford
Subject: RE: OHA Comment Re: DEA for Garg Residence

Aloha Kamakana Ferreira,

We do not concur that archaeological monitoring during construction of the proposed new dwelling necessary for the following reasons:

- The subject property has undergone previous disturbances, notably in 1974 and 1979.
    - In 1974, the previous property owner demolished an existing dwelling, and in 1979 completed construction of another dwelling on the site. Historic resources were not discovered at the subject property.

- The archaeological literature review and field inspection report notes that human remains and a possible cultural layer was found approximately ¼ mile south of the subject property. In addition, human remains were encountered during highway widening (over ¼ mile north of the subject property).
    - These discoveries are not located adjacent or in close proximity to the subject property.
    - However, in the case that historic and/or cultural resources are found during construction activities, effects will be mitigated by ceasing work and notifying DLNR-SHPD. All work will cease in the immediate vicinity of the find until additional consultation with the DLNR-SHPD is conducted and appropriate evaluation of the resources has been completed.

- Though sandy soil matrices such as Jaucas Sand suggest the potential for encountering historic properties including human burials and cultural deposits in subsurface contexts, past land development and urbanization diminish the possible presence of historic resources.

The archaeological literature review and field inspection report was submitted to SHPD on September 22, 2022 for their review and comments.

Furthermore, on August 30, 2022, a site visit by cultural historian Ms. Ann Marie Kirk and Chris Cramer of Maunalua Fishpond Heritage Center concluded with an agreement that the project poses no significant impact on cultural resources.

Should you have any questions or further comments, please feel free to contact me.

Roy Irei
Vice-President – Telecom Division
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Email: roy@hawaiiengineering.net
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From: Kamakana Ferreira <kamakanaf@oha.org>
Sent: Monday, April 29, 2024 9:41 AM
To: Roy Irei <roy@hawaiiengineering.net>
Cc: Kat, Michael A <michael.kat@honolulu.gov>
Subject: OHA Comment Re: DEA for Garg Residence

Aloha,

The Office of Hawaiian Affairs (OHA) is in receipt of your letter dated March 22, 2024, regarding the release of the draft environmental assessment (DEA) for the Garg Residence at 6973 Kalanianaole Highway, Oahu. Ford & Associates Inc has prepared this DEA on behalf of the private applicant pursuant to Hawaii Revised Statutes (HRS) Chapter 343. Demolition of an existing dwelling will take place, folloed by construction of a new 4748 sq. ft. two-story single-family home. Amenities will include a garage, pool, and landscaping. OHA offers the following comments on archaeological and cultural resources

Archaeological Resources

The DEA indicates that an archaeological literature review and field inspection report was done for this project as part of the DEA. The report notes that in 2003, human remains and a possible cultural layer were found during monitoring .25 miles south of the project area. Between 1994 and 1998, human remains were also encountered during widening of the highway. No surface features or previously identified sites were noted in the actual project area. The report concludes that no further archaeological work is needed, they concede that human remains could still be found.

OHA notes that the northeast part of the parcel is underlain with fill land, but that the remainder of the parcel is jaucas sand – a common soil medium where Native Hawaiian burials can be found. Given the presence of jaucas sands and the previous human remains find in the report, OHA would minimally support archaeological monitoring in this case. However, we defer to the State Historic Preservation Division (SHPD) on appropriate identification methods, that may or may not include subsurface testing. As the DEA indicates that SHPD has yet to occur, OHA requests to be provided with SHPD comments on the project.

Cultural Resources

OHA observes that cultural resources are discussed within the context of historic resources. While historic properties can in fact be considered cultural resources and valuable information can be gleaned from archaeological studies, different methodologies should be used to assess archaeological and cultural resources as part of the HRS 343 process. The process for documenting cultural practices involves a greater degree of consultation and outreach, whereas an archaeological study or report may not always require consultation and often solely relies on material findings.

Guidelines for assessing cultural impacts are provided by the Office of Environmental Quality Control (OEQC) in the *Guide to Implementation and Practice of the Hawaii Environmental Policy Act*, Exhibit 1-1, 2012 Edition. The process should involve an attempt to consult with community folks and cultural practitioners to ascertain ethnographic information on cultural resources and practices that occur on the site or in the broader area. As the DEA only mentions consultation with the Hawaii kai Neighborhood Board and the Maunalua Cultural Center in another section (see page 3 of the DEA), it is unclear if the project will affect cultural practices occurring within the project area or nearby based on

the limited details provided. We thus encourage the applicant to include a distinct cultural analysis section (with an emphasis on the consultation) or cultural impact assessment (CIA) that is compliant with the OEQC guidelines, and to also consider including consultation with individuals, residents, and other cultural interest groups (like Malama Maunalua).

Closing Remarks

Mahalo for the opportunity to comment. We look forward to seeing our comments considered and an opportunity to review SHPD comments. Please let me know if you have any questions.

Mahalo,

Kamakana C. Ferreira, M.A.
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Office of Hawaiian Affairs
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(808)594-0227