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GOVERNOR



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**DEPARTMENT OF TRANSPORTATION**  
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IN REPLY REFER TO:

HWY-M 2.067-23

February 10, 2023

Mr. Scott Glenn  
Director  
State of Hawaii  
Office of Planning and Sustainable Development  
Environmental Review Program  
235 South Beretania Street, Suite 702  
Honolulu, Hawaii 96813

Dear Mr. Glenn:

Subject: Environmental Assessment for the Proposed Kahului Hawaii Department of Transportation (HDOT) Baseyard Project, Wailuku-Kahului District, Island of Maui, Tax Map Key (2) 3-8-079:018 (por.)

The HDOT, Highways Division hereby transmits the Final Environmental Assessment and Finding of No Significant Impact (FEA-FONSI) for the Proposed Kahului HDOT Baseyard Project. HDOT kindly requests publication of the notice of availability for the FEA-FONSI for this project in the next edition of the periodic bulletin.

HDOT will submit the required items for publication including a searchable PDF file of the FEA-FONSI via the online form.

Should you have any questions about this submittal, please feel free to contact Ty Fukuroku, Environmental Engineer, Highways Division, Maui District at (808) 873-3535 or via email to [ty.h.fukuroku@hawaii.gov](mailto:ty.h.fukuroku@hawaii.gov). You may also contact our consultant, Yvonne Turro of The Limtiaco Consulting Group at (808) 687-8738 or via email to [yvonne@tlcghawaii.com](mailto:yvonne@tlcghawaii.com).

Sincerely,

*Amatōnda*

ANNETTE D.H. MATSUDA  
District Engineer, Maui

**From:** [webmaster@hawaii.gov](mailto:webmaster@hawaii.gov)  
**To:** [DBEDT OPSD Environmental Review Program](#)  
**Subject:** New online submission for The Environmental Notice  
**Date:** Wednesday, February 15, 2023 12:44:12 PM

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**Action Name**

Kahului HDOT Baseyard Project

**Type of Document/Determination**

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

**HRS §343-5(a) Trigger(s)**

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

**Judicial district**

Wailuku, Maui

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

(2) 3-8-079:018 (por.)

**Action type**

Agency

**Other required permits and approvals**

Numerous, identified in Final Environmental Assessment

**Proposing/determining agency**

HDOT Highways Division, Maui District

**Agency contact name**

Ty Fukuroku

**Agency contact email (for info about the action)**

[ty.h.fukuroku@hawaii.gov](mailto:ty.h.fukuroku@hawaii.gov)

**Agency contact phone**

(808) 873-3535

**Agency address**

650 Palapala Drive  
Kahului, Hawaii 96732  
United States  
[Map It](#)

**Was this submittal prepared by a consultant?**

Yes

**Consultant**

The Limtiaco Consulting Group



**Consultant contact name**

Yvonne Turro

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(808) 687-8738

**Consultant address**

1622 Kananui Street  
Honolulu, Hawaii 96817  
United States  
[Map It](#)

**Action summary**

HDOT proposes to make various permanent site improvements at its existing Kahului Baseyard, which was constructed approximately 40 years ago. The facilities at the baseyard are approaching the end of their useful life and in need of refurbishment. Site improvements will include several upgrades to the existing fuel station along with associated equipment, concrete pavement, and traffic bollards. The electrical system throughout the baseyard will also be upgraded. Replacement of the aging fuel station canopy and vehicle wash rack, and the installation of photovoltaic systems may occur in future phases of the project. Completion of the project would allow HDOT to accommodate present and future operational needs by improving baseyard facilities and onsite infrastructure. The project represents the continued presence of HDOT in the Kahului Airport District. The baseyard facility will essentially retain all of the functions that currently occur at the transportation operations baseyard.

**Reasons supporting determination**

HRS 343 significance criteria is discussed in Section 6, Determination of the Final EA

**Attached documents (signed agency letter & EA/EIS)**

- [Final-EA-Kahului-Baseyard.pdf](#)
- [HWY-M-2.067-23-part-1-signed.pdf](#)

**Shapefile**

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

**Action location map**

- [Kahului-Baseyard.zip](#)

**Authorized individual**

Yvonne Turro

**Authorization**

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

**Final Environmental Assessment for the  
Proposed Kahului HDOT Baseyard Project  
in Wailuku Ahupuaa, Wailuku-Kahului District,  
Maui Island, Hawaii**

Prepared For:  
State of Hawaii  
Department of Transportation Highways

Prepared By:



February 2023

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**Final Environmental Assessment**

**for the**

**Proposed Kahului HDOT Baseyard Project  
in Wailuku Ahupuaa, Wailuku-Kahului District,  
Maui Island, Hawaii**

**Tax Map Key (2) 3-8-079:018 (por.)**

This environmental document has been prepared pursuant to  
Chapter 343, Hawaii Revised Statutes

Prepared For:

State of Hawaii  
Department of Transportation Highways

Prepared By:

The Limtiaco Consulting Group  
Civil Engineering and Environmental Consultants  
1622 Kananui Street  
Honolulu, Hawaii 96817

**February 2023**

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**TABLE OF CONTENTS**

	<u>page</u>
Table of Contents.....	i
List of Figures .....	ii
List of Appendices.....	ii
List of Abbreviations.....	iii
Project Summary .....	v
1. Setting and Project Description.....	1-1
1.1. Introduction and Background .....	1-1
1.2. Site Location and Description .....	1-3
1.3. Project Need and Objectives .....	1-6
1.4. Technical Considerations.....	1-6
1.5. Project Schedule and Cost .....	1-9
2. Description of Existing Environment, Project Impacts, and Mitigation .....	2-1
2.1. Climate, Air Quality and Airspace Considerations .....	2-1
2.2. Topography, Geology and Soils.....	2-2
2.3. Water Resources .....	2-4
2.4. Solid Waste and Hazardous Materials .....	2-5
2.5. Natural Hazards.....	2-6
2.6. Floral and Faunal Resources.....	2-9
2.7. Historic and Cultural Resources .....	2-10
2.8. Visual Resources .....	2-12
2.9. Noise.....	2-12
2.10. Site Access, Circulation and Traffic .....	2-14
2.11. Utilities (Water, Wastewater, Drainage).....	2-15
2.12. Power and Communications .....	2-16
2.13. Socio-Economic Characteristics .....	2-16
2.14. Public Services and Facilities .....	2-17
2.15. Recreational Resources.....	2-18
3. Relationship to Plans, Policies, and Controls.....	3-1
3.1. State Land Use District .....	3-1
3.2. Hawaii Coastal Zone Management Program .....	3-1
3.3. Hawaii State Plan .....	3-6
3.4. Maui County General Plan.....	3-7
3.5. Wailuku-Kahului Community Plan.....	3-9
3.6. Maui County Land Use Ordinance .....	3-11
3.7. Special Management Area.....	3-11
4. Possible Alternatives.....	4-1
4.1. No-Action .....	4-1
4.2. Delayed Action.....	4-1

**TABLE OF CONTENTS (continued)**

	<u>page</u>
4.3. Alternative Site Improvements .....	4-2
4.4. Improvements at the Existing Facility (Preferred Alternative) .....	4-3
5. Permits and Approvals .....	5-1
6. Determination .....	6-1
7. Public Agency Review and Consultation.....	7-1
7.1. Pre-Assessment Consultation.....	7-1
7.2. Public Review .....	7-3
8. References .....	8-1

**LIST OF FIGURES**

Figure 1 Project Location and Vicinity Map.....	1-2
Figure 2 State Land Use Districts .....	1-4
Figure 3 Maui County Zoning .....	1-5
Figure 4 Site Plan .....	1-7
Figure 5 Parking Analysis .....	1-10
Figure 6 Existing Topography and Soils .....	2-3
Figure 7 Flood Zones .....	2-8

**LIST OF APPENDICES**

Appendix A Site Photographs	
Appendix B Flood Hazard Assessment Report	
Appendix C Biological Survey Report	
Appendix D Archaeological Assessment Report	
Appendix E Cultural Impact Assessment Report	
Appendix F Consultation and Comments	

**LIST OF ABBREVIATIONS**

<u>Abbreviation</u>	<u>Definition</u>
AFONSI	Anticipated Finding of No Significant Impact
AIS	archaeological inventory survey
AST	above-ground storage tank
ASYA	Aquifer System Area
BMPs	Best Management Practices
CAB	State of Hawaii Department of Health, Clean Air Branch
CIA	cultural impact assessment
CZM	Coastal Zone Management
DFW	State of Hawaii Department of Land and Natural Resources, Division of Forestry and Wildlife
DHHL	State of Hawaii Department of Hawaiian Home Lands
DLNR	State of Hawaii Department of Land and Natural Resources
DOH	State of Hawaii Department of Health
DWS	Maui County Department of Water Supply
EA	Environmental Assessment
ENG	State of Hawaii Department of Land and Natural Resources, Engineering Division
FAA	Federal Aviation Administration
FIRM	Flood Insurance Rate Map
FONSI	Finding of No Significant Impact
HAR	Hawaii Administrative Rules
HDOT	State of Hawaii Department of Transportation
HRS	Hawaii Revised Statutes
IBC	International Building Code
IRHB	State of Hawaii Department of Health, Indoor and Radiological Health Branch
IWDP	Industrial Wastewater Discharge Permit



**LIST OF ABBREVIATIONS (continued)**

<u>Abbreviation</u>	<u>Definition</u>
LRFI	literature review and field inspection effort
MECO	Maui Electric Company, Inc.
MPD	County of Maui Police Department
MS4	Municipal Separate Storm Sewer System
NPDES	National Pollutant Discharge Elimination System
OP	State of Hawaii, Office of Planning and Sustainable Development
PV	photovoltaic
SCS	Scientific Consultant Services, Inc.
SHPD	Department of Land and Natural Resources, Historic Preservation Division
SMA	Special Management Area
TMK	Tax Map Key
UIC	Underground Injection Control
USFWS	U.S. Fish and Wildlife Service

**PROJECT SUMMARY**

<b>Proposing/Determination Agency:</b>	Hawaii Department of Transportation (HDOT), Highways Division
<b>Contact:</b>	Ty Fukuroku HDOT Highways Division, Maui District
<b>Location:</b>	Kahului, Wailuku Ahupuaa, Maui Island
<b>Tax Map Key:</b>	(2) 3-8-079:018 (por.)
<b>Land Area:</b>	Approximately 5.2 acres (project site) of the 22-acre parcel
<b>Recorded Fee Owner:</b>	State of Hawaii
<b>Existing Use:</b>	HDOT Baseyard.
<b>Proposed Use:</b>	HDOT Baseyard
<b>Community Plan Region:</b>	Wailuku-Kahului District
<b>Land Use Designations:</b>	
State Land Use Development Plan	Urban
County Zoning	Waikuku-Kahului Community Plan Airport District
<b>Action Requested:</b>	HDOT is proposing site improvements at the Kahului Baseyard to upgrade the facility and minimize the discharge of pollutants in storm water runoff from the site. Site improvements will include several upgrades to the existing fuel station along with associated equipment, concrete pavement, and traffic bollards. The electrical system throughout the baseyard will also be upgraded. Replacement of the aging fuel station canopy and vehicle wash rack, and the installation of photovoltaic (PV) systems may occur in subsequent phases of the project. The proposed project represents the continued presence of HDOT in the Kahului Airport District. The baseyard facility will essentially retain all of the functions that currently occur at the transportation operations baseyard.
<b>Agency Determination:</b>	Finding of No Significant Impact (FONSI)

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## **1. SETTING AND PROJECT DESCRIPTION**

### **1.1. Introduction and Background**

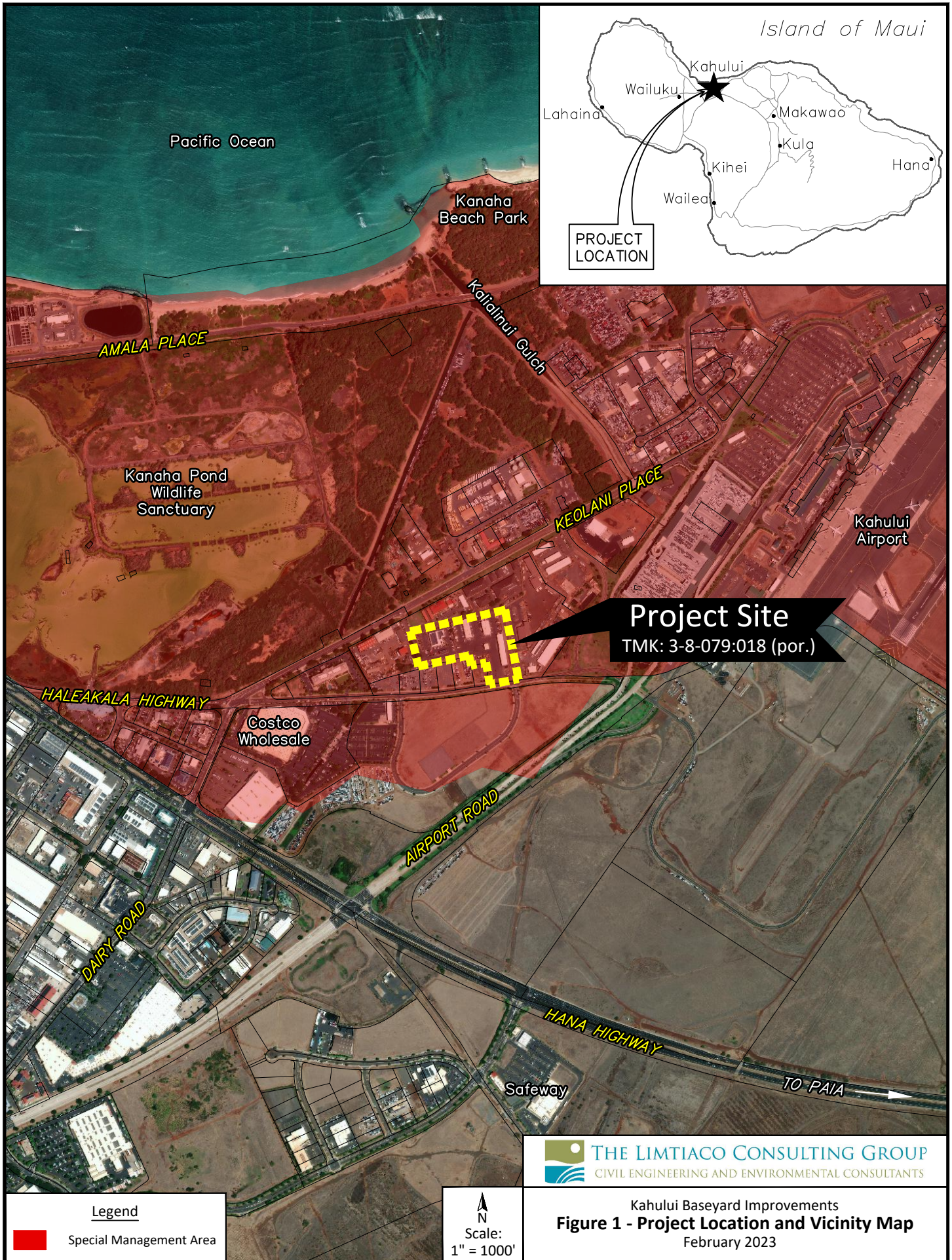
The State of Hawaii Department of Transportation (HDOT), Highways Division proposes to make various permanent site improvements at its existing Kahului Baseyard. The project site consists of a 5.2-acre portion of an approximately 22-acre parcel of State-owned land located within Tax Map Key (TMK) (2) 3-8-079:018 (por.). The project site address is 650 Palapala Drive in Kahului and is bordered to the north by Mua Street, to the east by Kuleana Street, and to the south by undeveloped land and Haleakela Highway (see Figure 1).

The existing HDOT baseyard was constructed approximately 40 years ago. Most of the project site is paved and contains several buildings including a district office, and maintenance, industrial repair, and industrial storage facilities. Some of the proposed improvements will be completed as part of the Maui District Municipal Separate Storm Sewer System (MS4) Program to upgrade the facility and minimize the discharge of pollutants in storm water runoff from the site. Site improvements will include several upgrades to the existing fuel station: replacement of two existing 2,000-gallon (gal.) above-ground fuel tanks with one new 5,000-gal. and one new 2,000-gal. above-ground fuel tanks along with associated equipment, concrete pavement, and traffic bollards. One of the new tanks will be for gasoline and the other tank will be for diesel fuel. The new tanks will be placed on relatively the same footprint as the originals, with secondary containment systems in place to provide protection in the case of any fuel spills. The electrical system in portions of the baseyard will also be upgraded.

Replacement of the aging fuel station canopy and vehicle wash rack, and the installation of photovoltaic (PV) systems may occur in subsequent phases of the project if funding is available. The proposed project represents the continued presence of HDOT in the Kahului Airport District. The baseyard facility will essentially retain all of the functions that currently occur at the transportation operations baseyard.

State of Hawaii lands and funds will be utilized for the project; therefore, the preparation of an Environmental Assessment (EA) pursuant to Chapter 343, Hawaii Revised Statutes (HRS) and associated Title 11, Chapter 200.1, Hawaii Administrative Rules (HAR) is required. This EA was prepared to examine potential project impacts and to provide for public participation as required and defined in the statutes. The project site is located within the limits of the Special Management Area (SMA). The proposed project may be exempt from the SMA rules per HRS §205A-22 (4) since "Development" does not include repair and maintenance of underground utility lines, including, but not limited to, water, sewer, power and telephone and minor appurtenant structures, such as pad mounted transformers and sewer pump stations. The County of Maui Department of Planning determines whether the proposed action qualifies as "Development."






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**Legend**

Special Management Area

  
 N  
 Scale:  
 1" = 1000'


**THE LIMTIACO CONSULTING GROUP**  
 CIVIL ENGINEERING AND ENVIRONMENTAL CONSULTANTS

Kahului Baseyard Improvements  
**Figure 1 - Project Location and Vicinity Map**  
 February 2023



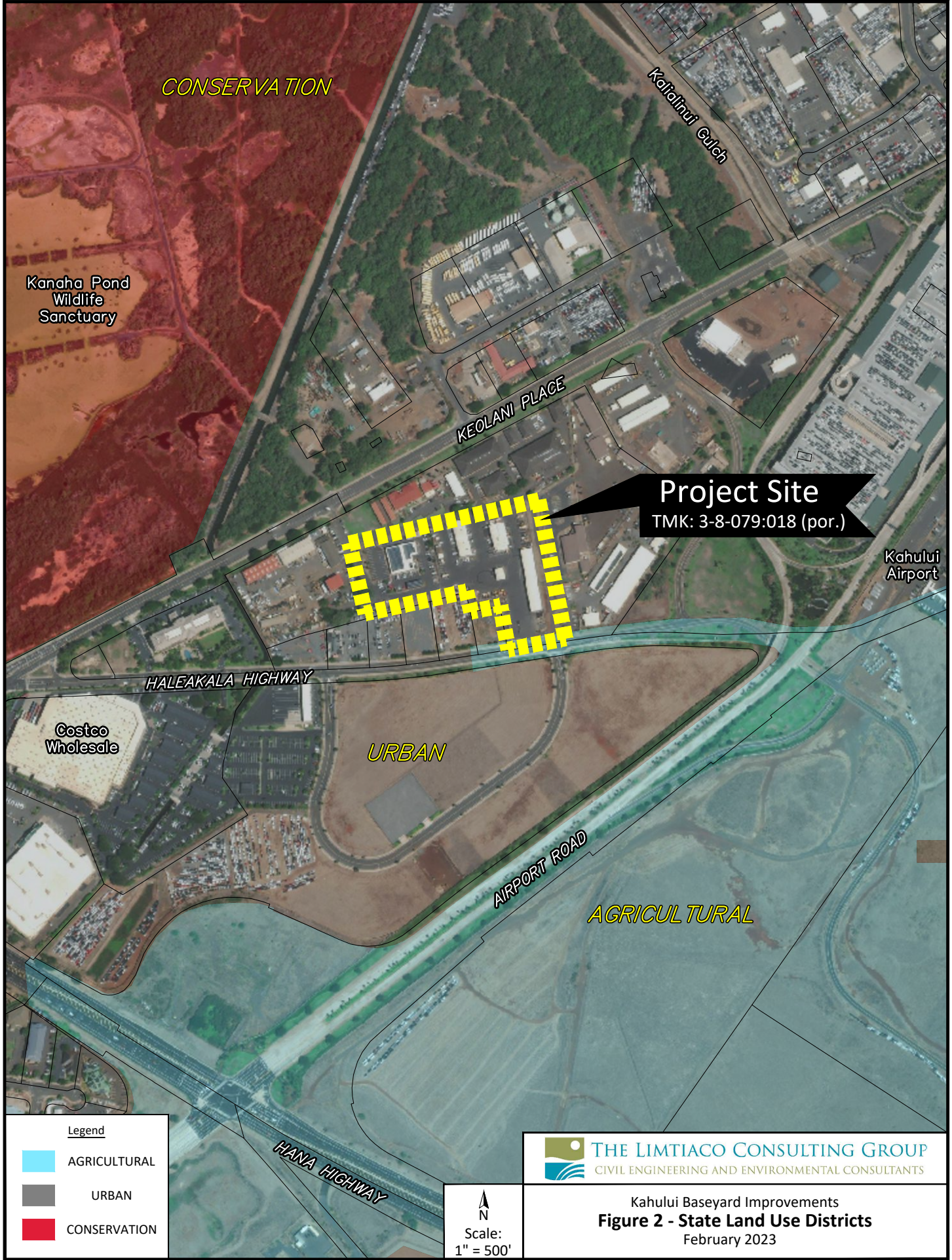
## 1.2. Site Location and Description

The existing Kahului Baseyard is located on the eastern end of Kahului in central Maui at 650 Palapala Drive. This 5.2-acre baseyard is located to the south of the Kanaha Pond State Wildlife Sanctuary and approximately 0.5 mile west of Kahului Airport. The project site is located in the Airport District, which is characterized by light industrial uses. The Kahului Baseyard is near facilities utilized by other State agencies including the Department of Agriculture and the Department of Accounting and General Services. The larger geographic area that contains the project site has experienced a long history of intensive land-disturbing activities including agricultural use for sugar cane production through the early 19th and 20th centuries. In recent years, the land surrounding the baseyard has largely been occupied by industrial use.

Vehicular access to the project site is via driveways along Palapala Drive, Mua Street and Haleakala Highway. The western portion of the Kahului Baseyard houses a main office building and parking lot, and is separated from the eastern side of the property by a chain link fence. The eastern segment of the facility contains an equipment baseyard, including a maintenance office and shop, industrial repair facility, industrial storage trailers, truck storage, and a fueling station.

The on-site operations of the baseyard includes industrial vehicle maintenance and repair, vehicle washing, equipment and vehicle fueling, sign painting, and other maintenance activities. The facility contains an aggregate storage area where three concrete cells contain sand, asphalt, and gravel. Liquid fuels, fluids, lubricants, solvents, and herbicides are stored at the baseyard. The uncovered vehicle wash area is asphalt and concrete paved; all of the wash water flows into a centrally-located sump with an oil/water separator. The fueling station contains two 2,000-gal. capacity above-ground tanks that are Convaults (i.e., steel tanks with polyethylene secondary containment enclosed in concrete).

The State land use designation for the project parcel is Urban (see Figure 2), which is characterized by residential neighborhoods, commercial enterprises, industrial development, and community facilities including public buildings. Urban land uses are subject to Maui County's land use policies and controls. The project site is designated for all commercial and general aviation airports and their accessory use according to the Wailuku-Kahului Community Plan. The Maui County zoning designation is Airport District (see Figure 3). Use of land within an airport district shall be subject to requirements pursuant to 19.20.020 of the Maui County Code.



CONSERVATION

Kanaha Pond  
Wildlife  
Sanctuary

Kaliaduni Gulch

KEOLANI PLACE

**Project Site**

TMK: 3-8-079:018 (por.)

Kahului  
Airport

HALEAKALA HIGHWAY

Costco  
Wholesale

URBAN

AIRPORT ROAD

AGRICULTURAL

HANA HIGHWAY

Legend

- AGRICULTURAL
- URBAN
- CONSERVATION

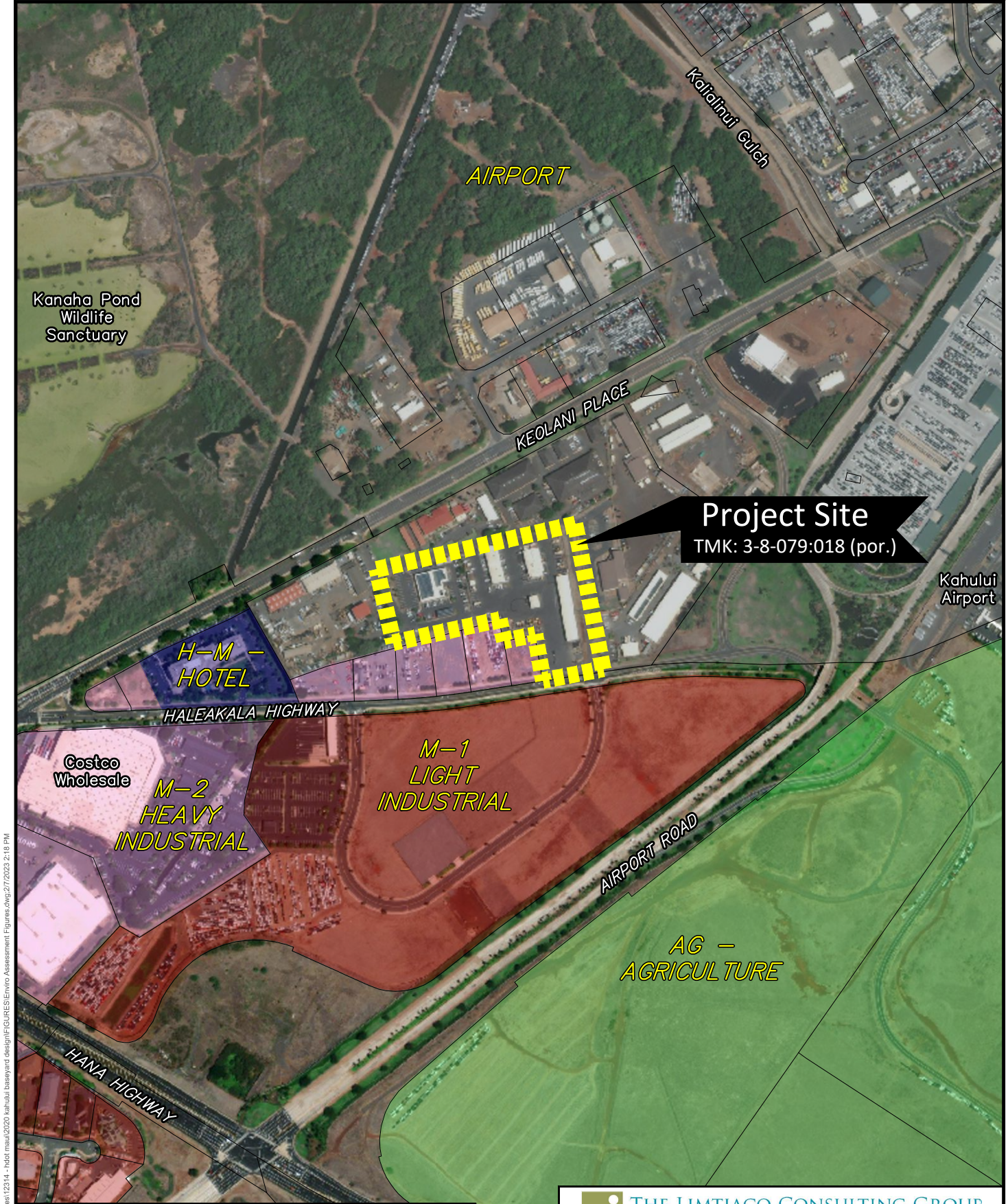
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CIVIL ENGINEERING AND ENVIRONMENTAL CONSULTANTS

N  
Scale:  
1" = 500'

Kahului Baseyard Improvements  
**Figure 2 - State Land Use Districts**  
February 2023

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**Project Site**  
 TMK: 3-8-079:018 (por.)

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Legend		
<span style="color: red;">■</span> M-1 LIGHT INDUSTRIAL	<span style="color: grey;">■</span> AIRPORT	<span style="color: purple;">■</span> H-M - HOTEL
<span style="color: pink;">■</span> M-2 HEAVY INDUSTRIAL	<span style="color: green;">■</span> AG - AGRICULTURE	

Scale:  
 1" = 500'

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Kahului Baseyard Improvements  
**Figure 3 - Maui County Zoning**  
 February 2023



### 1.3. Project Need and Objectives

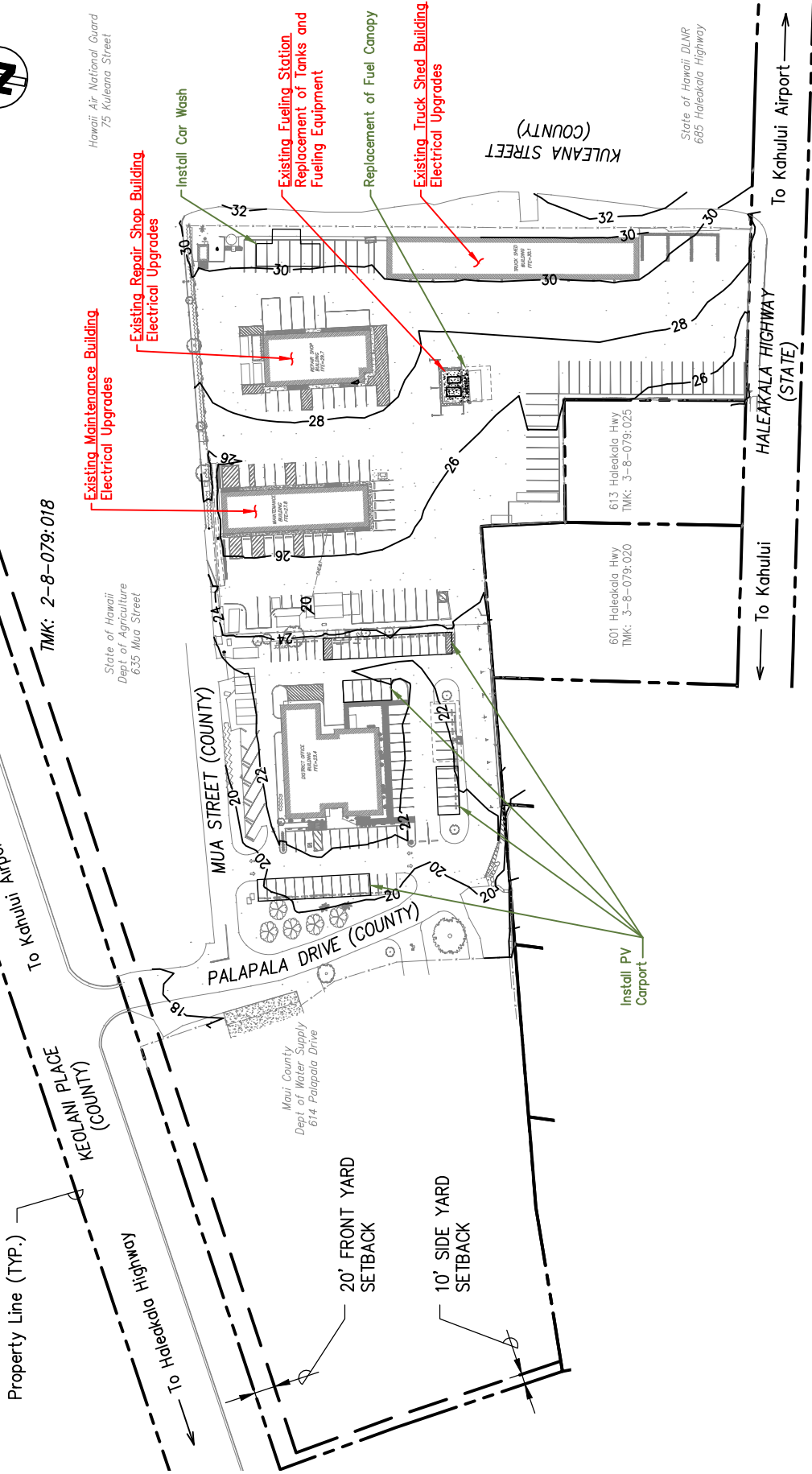
Existing facilities at the Kahului Baseyard are approaching the end of their useful life and in need of refurbishment. Structural deficiencies such as physical wear and corrosion of the electrical systems and fueling station are documented in site photographs (see Appendix A). Conditions that are hidden or concealed by floor, ceiling or wall panels and coverings are unknown. Water, electrical and telecommunication components are outdated, undersized based on current usage, and in need of replacement. The existing storage tanks are no longer passing the inspection for the Environmental Protection Agency's Spill Prevention, Control, and Countermeasure Regulation and need to be replaced as soon as possible.

Completion of the project would allow HDOT to accommodate present and future operational needs by improving baseyard facilities and onsite infrastructure. The proposed project addresses observed deficiencies that may be attributed to physical wear and exposure (e.g., weathering). Improvements to the electrical system would address current baseyard operations and comply with current building codes. Site improvements such as the replacement of the wash rack would minimize the discharge of pollutants in storm water runoff from the site. PV carports would allow for the charging of electric vehicles. The proposed project would allow HDOT to continue its baseyard activities and operations that pertain to the agency's support functions. The operational costs for the Kahului Baseyard would be reduced through sustainable design concepts incorporated as part of the proposed project.

### 1.4. Technical Considerations

In the initial phase of the project, HDOT is proposing to increase the fuel storage volume at the existing fuel station, and improve the operational capabilities of the Kahului Baseyard by upgrading the electrical systems. Canopy replacement, wash rack replacement and the installation of PV carports would be accomplished in subsequent phases of the project as funding allows. The initial and future improvements are shown in Figure 4. Facility upgrades are described below.

- **Fueling Station.** The existing fueling station that is centrally located at the baseyard has a canopy that provides weather protection for the above-ground storage tanks (ASTs), dispensers, and fueling area. One new 5,000-gal. AST and one new 2,000-gal. AST will replace two existing 2,000-gal. ASTs. Available documentation indicates that the existing fiberglass tanks were constructed in 1992 and are approximately 30 years old. The exteriors of the two existing ASTs are in satisfactory condition; however, the nozzle connections to the tanks are corroded and the nozzle piping may fail. Since the tanks have rarely been serviced and drained, there may be severe corrosion on the inner walls. Baseyard personnel would not be aware of any leaks within the tanks because the interstitial monitoring system is not functional.



**Legend**

— Initial Improvements

— Future Improvements

Scale:  
 1" = 150'

**NOTES:**  
 Existing topographic data is from "TOPOGRAPHIC SURVEY MAP OF A PORTION OF LOT 1-B, KAHULUI AIRPORT CONSOLIDATION" dated March 24, 2014 prepared by R. T. Tanaka Engineers, Inc.

2. This drawing has been prepared for general planning purposes only.

Associated equipment at the fueling station will be replaced. New areas of concrete pavement will be installed as a supporting foundation to the new ASTs. Traffic bollards will also be replaced and will continue to protect existing equipment from inadvertent damage.

The existing canopy above the fueling equipment prevents stormwater from being contaminated with surface pollutants and provides covering for personnel as they utilize the fuel filling station. The new ASTs installed in phase 1 of the project will be installed under the existing canopy and will not extend beyond its edges such that the existing canopy will continue to provide protection from the elements at the fueling station. The replacement canopy, which would be installed in a subsequent phase of the project, would provide the same functions as the existing canopy.

- Electrical System. Existing electrical service for the Kahului Baseyard is provided by a pad mounted Maui Electric Company transformer located between the District Office and Maintenance Office and Shop Buildings. The existing site electrical distribution is undersized for current baseyard operations. Baseyard personnel often experience issues with power reliability. System-wide improvements are necessary to address the power disruptions that have the potential to affect workplace safety.

Main electrical distribution equipment and infrastructure, including feeders and panelboards will be replaced. Upgrades will include switchboards that can be used as a system point of interconnection for subsequent phases of the project.

- Wash Rack. An automatic drive through wash rack equipped with a recycled water system will replace the manual spray wash rack located on the north corner of the project site behind the Repair Shop Building. The existing wash rack comprises a concrete wash pad and a hose station. Vehicles must be maneuvered onto and off of the wash pad. Personnel at the baseyard manually wash down and remove debris from several types of vehicles such as street sweepers, water trucks, dump trucks, and large tractor trailers when they return from the field. Taller vehicles are more difficult to wash with personnel spraying water onto the top of the vehicle from ground level. It is reported that approximately 6 to 12 vehicles per day are washed depending on the condition of the vehicles. An existing recycled water system for cleaning the water at the wash rack is not utilized at this time due to maintenance concerns. The system is more than 20 years old and approaching the end of its useful life.

The new touchless drive through wash rack will function similar to an automatic car wash. Spray nozzles and rotating spray nozzles will provide full water spray coverage on the vehicles at a high pressure to remove debris. The touchless drive through wash rack will utilize a more efficient vehicle washing system to allow higher vehicle wash rates, improved wash quality, and a functioning recycled water system to meet County Industrial Wastewater discharge

requirements. The only anticipated discharge will occur during maintenance of the recycled water system. In order to properly dispose of the approximately 500 to 1,000 gallons of recycled water system backwash water, a new drywell or other subsurface infiltration system will be constructed near the wash rack.

The siting of the new wash rack, which will be designed to accommodate vehicles as large as a 26-foot-long truck cab, will affect a row of approximately 10 parking spaces within the Kahului Baseyard. Currently, there are 175 parking spaces at the baseyard. Based on Maui County Code Chapter 19.36B.020 for “general office” and “industrial and storage” uses, the required number of off-street parking spaces was tabulated to be 32 spaces which is well under the total provided. Figure 5 provides the parking analysis requested by the County of Maui Planning Department in its letter dated January 25, 2023. Traffic through the baseyard will be adjusted to allow ample space for the turning radius and queuing of vehicles. Associated utility services (e.g., water and power) will be improved as necessary to accommodate the new wash rack.

- PV Systems. HDOT plans to contribute to energy independence objectives by installing PV carports to provide charging for an electric vehicle fleet.

The excavation and grading quantity is estimated to be 72.1 cubic yards. No change in grades is anticipated. Demolition and construction activities associated with the proposed project would generate short-term effects such as fugitive dust, noise, intermittent traffic, and solid waste that would cease upon project completion. Anticipated short-term impacts associated with construction will be mitigated to the extent practical with the use of appropriate construction techniques and Best Management Practices (BMPs). For example, the construction contractor is expected to implement erosion prevention and sediment control. Measures to control erosion and other pollutants are expected to be in place before any earthwork is initiated, and all disturbed areas would be permanently stabilized prior to removing the erosion and pollutant control measures. All construction activities will comply with applicable Federal, State and County regulations and rules for erosion control.

## **1.5. Project Schedule and Cost**

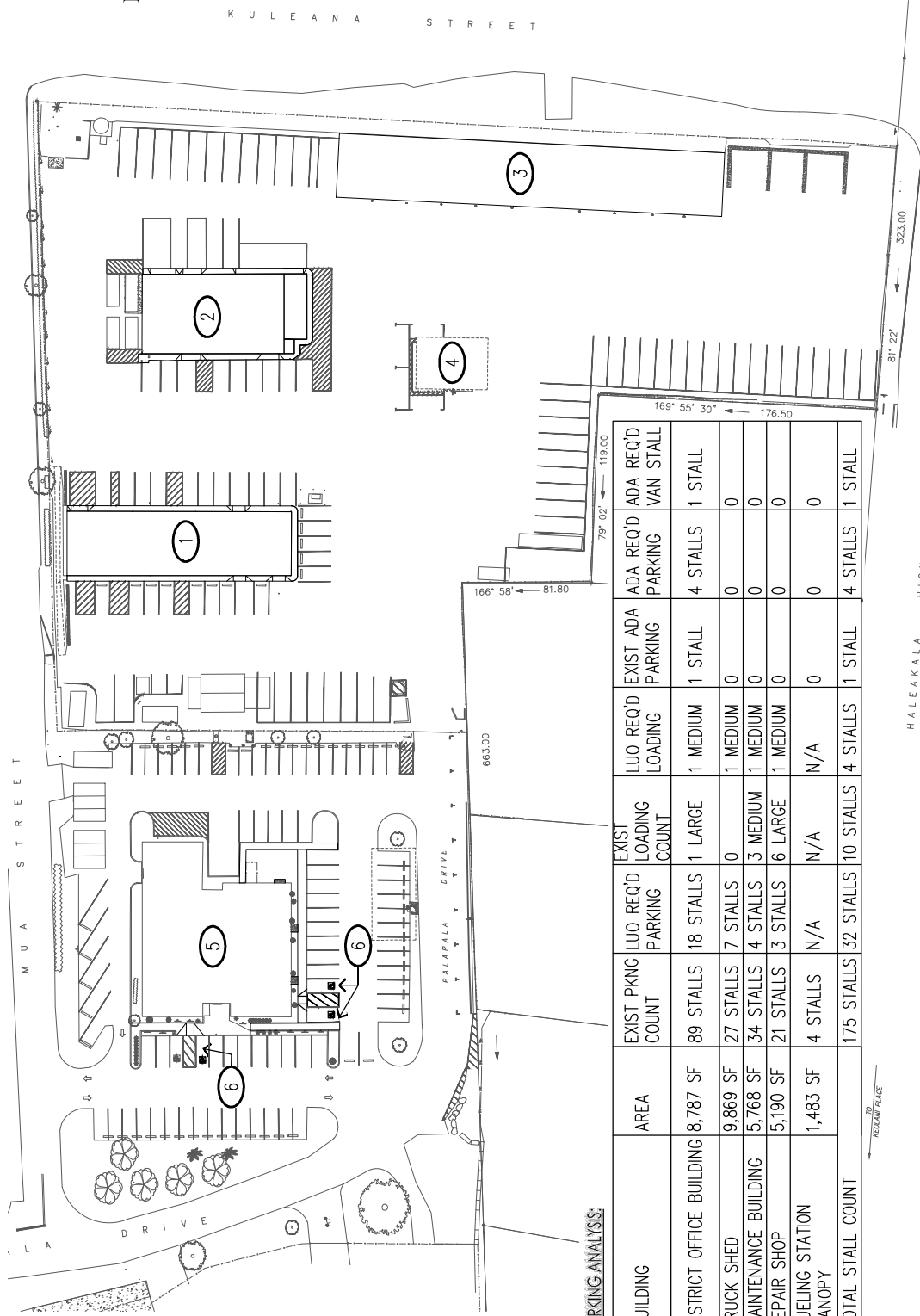
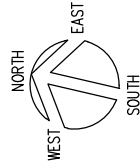
The environmental review process may be completed in 2023 along with the acquisition of necessary permits and approvals for the initial phase of the project. Construction may be authorized to begin before the end of calendar year 2023. The estimated cost for the initial phase of the project is \$1.9 million. Funding opportunities and constraints will influence the timing and costs for the later phases of the project.



Department of Transportation  
 Kahului Baseyard  
 650 Palapala Drive  
 Kahului, Maui 96732  
 TMK: (2) 3-8-79: 18

KEYNOTES:

- 1 MAINTENANCE BUILDING
- 2 REPAIR SHOP
- 3 TRUCK SHED
- 4 FUELING STATION CANOPY
- 5 DISTRICT MAIN OFFICE
- 6 RECOMMENDED ADDED ADA PARKING STALLS, ACCESS AISLE, & RAMP



PARKING ANALYSIS:

BUILDING	AREA	EXIST PKNG COUNT	LUO REQ'D PARKING	EXIS' LOADING COUNT	LUO REQ'D LOADING	EXIST ADA PARKING	ADA REQ'D PARKING	ADA REQ'D VAN STALL
DISTRICT OFFICE BUILDING	8,787 SF	89 STALLS	18 STALLS	1 LARGE	1 MEDIUM	1 STALL	4 STALLS	1 STALL
TRUCK SHED	9,869 SF	27 STALLS	7 STALLS	0	1 MEDIUM	0	0	0
MAINTENANCE BUILDING	5,768 SF	34 STALLS	4 STALLS	3 MEDIUM	1 MEDIUM	0	0	0
REPAIR SHOP	5,190 SF	21 STALLS	3 STALLS	6 LARGE	1 MEDIUM	0	0	0
FUELING STATION CANOPY	1,483 SF	4 STALLS	N/A	N/A	N/A	0	0	0
<b>TOTAL STALL COUNT</b>		<b>175 STALLS</b>	<b>32 STALLS</b>	<b>10 STALLS</b>	<b>4 STALLS</b>	<b>1 STALL</b>	<b>4 STALLS</b>	<b>1 STALL</b>

## **2. DESCRIPTION OF EXISTING ENVIRONMENT, PROJECT IMPACTS, AND MITIGATION**

### **2.1. Climate, Air Quality and Airspace Considerations**

The climate throughout the State of Hawaii is generally characterized by mild temperatures with low daily and monthly variability, moderate humidity, persistent trade winds, and abundant sunshine. The project site is in the Wailuku-Kahului region on the island of Maui, which is characterized by mild semi-tropical climate similar to the rest of the State of Hawaii. Between 1954 and 2013, the recorded monthly average temperatures in Kahului Airport ranged from 67 degrees to 84 degrees Fahrenheit and the average rainfall was 18 inches per year (Western Regional Climate Center, n.d.). The project site is within a region characterized by 33.1 to 48.0 inches of annual rainfall (Giambelluca, et. al, 2014). The wetter months of the year are from November to March and trade winds in the project vicinity are generally from the northeast. Strong winds are known to occur in the valley between Haleakela and the West Maui Mountain.

The ambient air quality at the project site may be affected by nearby activities, such as aviation and automobile traffic. HDOT states in the letter dated March 29, 2021 (Ref. AIR-EP 21.0028) that there is a potential for fumes, smoke, vibrations, odors, etc. from occasional aircraft flight operations over the project site. The DOH has one air quality monitoring station on Maui, located in Kahului, that measures particulates from agricultural activities (State of Hawaii, Department of Transportation, Highways Division, 2014).

HDOT's letter references the Technical Assistance Memorandum (TAM), which provides guidance about development and activities that occur within five miles from Hawaii State airports. The submittal of Federal Aviation Administration (FAA) Form 7460-1 Notice of Construction or Alteration may be required if certain criteria are met. Information pertaining to construction equipment and staging area heights, including heights of temporary construction cranes must be included in the submittal.

#### **Impacts and Mitigation Measures**

No measurable adverse effects on climatic conditions are anticipated from the project, which represents a continuation of the uses and activities that currently occur at the Kahului Baseyard. No mitigation is warranted or proposed.

Ambient air quality at the project site will be temporarily affected by construction-related vehicles, equipment and activities that would generate fugitive dust and emissions. Fugitive dust concerns fall within the purview of the DOH Clean Air Branch (CAB) Enforcement Section. Airborne, visible fugitive dust during construction of the baseyard improvements will be controlled at the project site by the contractor in accordance with Air Pollution

Control standards stated in HAR §11-60.1-33, “Fugitive dust.” Reasonable measures are required to control airborne, visible fugitive dust from the road areas and during the various phases of construction. Comments from the County of Maui Police Department dated March 23, 2021 and January 12, 2023 suggest efforts to minimize dust and debris “so not to inhibit those whose health and well-being may be affected.” Exhaust emissions can be reduced by keeping construction equipment and vehicles properly tuned and maintained, and minimizing unnecessary idle time. HDOT’s contractor will be required to develop and submit a dust control management plan that identifies all activities that may generate airborne, visible fugitive dust and proposed mitigative measures. No long-term adverse impacts to air quality are anticipated from site improvements that allow current uses and activities to continue.

HDOT will refer to the regulatory guidance provided in the TAM as the project proceeds. The determination from the FAA with regards to the submittal of FAA Form 7460-1 is expected to include recommended mitigation measures such as marking and lighting that would be necessary for aviation safety.

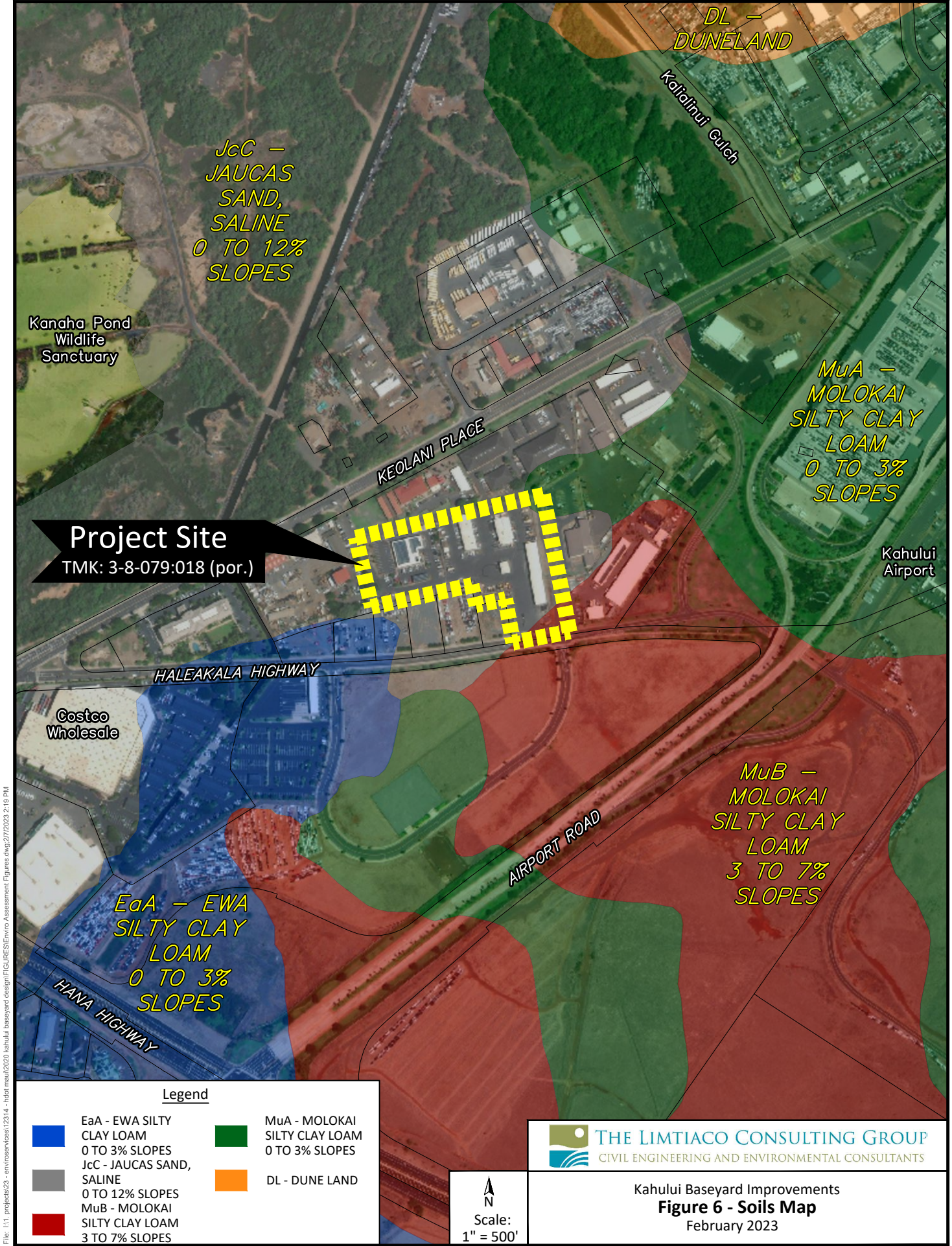
## **2.2. Topography, Geology and Soils**

The island of Maui was formed from the merging of the older West Maui volcano and Haleakala, which is a younger and larger volcano in East Maui. The Wailuku-Kahului region encompasses the northern portion of the central valley, or isthmus between the West Maui and Haleakala volcanoes. Soils underlying the entire valley area in Central Maui belong to the Pulehu-Ewa-Jaucus association, and are deep, well-drained and excessively-drained erosional deposits of clay, silt, sand and gravel derived from coral and seashells (U.S. Department of Agriculture, Soil Conservation Service, 1972).

The project site is situated approximately 18 to 30 feet above mean sea level (refer to Figure 4). According to the Web Soil Survey (U.S. Department of Agriculture, Natural Resources Conservation Service, n.d.) and the geotechnical report, the predominant soil type classification found within the project site is Jaucas sand, saline, 0 to 12 percent slopes (JcC). Soil classifications along the western to southern perimeter of the project site and into the surrounding area include Molokai Silty Clay Loam, 0 to 3 percent slopes (MuA) and Molokai Silty Clay Loam, 3 to 7 percent slopes (MuB). The soil classifications are shown in Figure 6.

The JcC classification is found near the ocean in areas where the water table is near the surface and salts have accumulated. JcC is described as somewhat poorly drained in depressions but excessively drained on knolls. Molokai series soil types such as MuA and MuB are characterized as well-drained soils on uplands that formed in material weathered from basalt. The runoff class for MuA is low and for MuB it is medium.





**Project Site**  
 TMK: 3-8-079:018 (por.)

*JcC –  
 JAUCAS  
 SAND,  
 SALINE  
 0 TO 12%  
 SLOPES*


*DL –  
 DUNELAND*

*MuA –  
 MOLOKAI  
 SILTY CLAY  
 LOAM  
 0 TO 3%  
 SLOPES*

*MuB –  
 MOLOKAI  
 SILTY CLAY  
 LOAM  
 3 TO 7%  
 SLOPES*

*EaA – EWA  
 SILTY CLAY  
 LOAM  
 0 TO 3%  
 SLOPES*

**Legend**

- |                                                                                                                                     |                                                                                                                                     |
|-------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
|  EaA - EWA SILTY CLAY LOAM<br>0 TO 3% SLOPES     |  MuA - MOLOKAI SILTY CLAY LOAM<br>0 TO 3% SLOPES |
|  JcC - JAUCAS SAND, SALINE<br>0 TO 12% SLOPES    |  DL - DUNE LAND                                  |
|  MuB - MOLOKAI SILTY CLAY LOAM<br>3 TO 7% SLOPES |                                                                                                                                     |

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Scale:  
 1" = 500'

Kahului Baseyard Improvements  
**Figure 6 - Soils Map**  
 February 2023

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### **Impacts and Mitigation Measures**

Proposed improvements will not alter the overall topographic profile of the project site, which is generally flat and mostly paved. No adverse impacts to the underlying geology and soils are anticipated because proposed improvements such as the replacement of existing ASTs with new ASTs in the same general footprint will require minimal subsurface disturbance. Earth disturbing activities during construction and site development may create exposed areas that are susceptible to erosion from wind and rain. The construction contractor is expected to comply with applicable Federal, State and County erosion control rules and regulations. Consequently, no mitigation is warranted or proposed with respect to topography, geology and soils.

### **2.3. Water Resources**

The project site is within the Kahului Aquifer System Area (ASYA) that is part of the Central Aquifer Sector Area within Maui County. The Underground Injection Control (UIC) line as determined by the DOH Safe Drinking Water Branch demarcates the boundary between non-drinking water aquifers and underground sources of drinking water. The project site is makai (or seaward) of the UIC line, which indicates that the underlying groundwater is not considered a potential source of drinking water.

There are no freshwater streams, rivers, ponds, or other open water bodies located within or immediately adjacent to the project site. There are also no wetlands (or marshes, swamps, bogs, etc.) located within or immediately adjacent to the project site. The nearest water resources are Kanaha Pond and Kalialinui Gulch, which are approximately 200 yards northwest and 880 yards north of the project site, respectively. Kanaha Pond is a wetland and waterfowl sanctuary that was designated as a State sanctuary in 1951 and as a National Landmark in 1971.

Nonpoint source pollution from agricultural and urban activities including runoff containing nitrogen, phosphorus, and/or sediments is considered to be a threat to coastal ecosystems. Discharges of sediments and pollutants from sewage injection wells and defunct septic tanks may contribute to the growth of macroalgal blooms that have occurred around more heavily populated areas of Kihei, Lahaina, and Kahului for several decades.

### **Impacts and Mitigation Measures**

Project actions are not expected to significantly impact water sources, especially since the baseyard improvements do not involve the development of new potable water sources. The long-term use of the project site represents a continuation of existing uses and activities, and is not anticipated to affect the water quality of any State waterbodies including surface water resources. No

significant impacts to surface water quality are anticipated since the project site does not contain and is not immediately adjacent to water resources.

DLNR's Division of Aquatic Resources (DAR) indicates in the letter dated January 4, 2023 that it has no objections and no comments on the proposed project. If there are any changes to the project plan, DAR requests the opportunity to review and comment on those changes.

A National Pollutant Discharge Elimination System (NPDES) Permit for discharges of pollutants, including storm water runoff is required for the disturbance of one acre or more of total land area pursuant to HAR §11-55, "Water Pollution Control" effective January 15, 2022. A Storm Water Pollution Prevention Plan must be submitted to the DOH Clean Water Branch in advance of a Notice of Intent (NOI) to be covered by the NPDES General Permit. The applicant is responsible for submitting the NOI at least 30 days before the commencement of construction activities.

Some of the proposed improvements at the Kahului Baseyard are expected to help reduce the discharge of storm water pollutants from the Maui District MS4 in order to satisfy the conditions of Maui District's NPDES Small MS4 General Permit for HDOT, Kahului, Maui. As indicated in the response to email correspondence from Alexander and Baldwin LLC on March 9, 2021, the project will not contribute stormwater runoff to the channel which is located just east of the Marriott Courtyard Hotel. Runoff from the project area will either be collected in onsite drywells or will be conveyed through a series of swales to Keolani Place (State Highway 380).

#### **2.4. Solid Waste and Hazardous Materials**

The Central Maui Landfill Refuse and Recycling Center is approximately 3.2 miles southwest of the project site. This facility accepts refuse from commercial and residential customers, used motor oil, household green waste and some consumer recyclable material (e.g., paper, cardboard, aluminum, glass and plastic). The disposal of agricultural wastes, commercial construction and demolition material, electronic waste, and household hazardous waste is not allowed at this facility. The County of Maui continues to explore waste reduction strategies including composting and waste-to-energy facilities to avoid further landfill development. Waste recyclers divert recoverable material from the waste stream.

##### **Impacts and Mitigation Measures**

Construction activities at the project site would temporarily increase solid waste volume. Two 2,000-gal. fuel tanks and construction waste material will be collected and transported off-site for proper disposal. Comments from the

County of Maui Police Department dated March 23, 2021 and January 12, 2023 suggest efforts to minimize possible dust and debris “so not to inhibit those whose health and well-being may be affected.” HDOT is expected to ensure that proper waste management and disposal practices are implemented by the construction contractor. No adverse impacts are anticipated.

If the presence of hazardous materials such as asbestos containing material is discovered, the DOH Indoor and Radiological Health Branch (IRHB) will be contacted. The exposure risks from hazardous materials such as asbestos-containing substances and lead-based paint are greatest when these materials are intentionally disturbed and handled. HDOT will refer to the regulatory guidance of the DOH IRHB and the contractor will be required to comply with all applicable State regulations regarding work with hazardous materials.

The proposed project involves site improvements that would not affect HDOT’s practices and procedures pertaining to solid waste and hazardous materials since existing activities and uses at Kahului Baseyard will continue. The replacement of two older fuel tanks that are approaching the end of their service life with two new tanks is a beneficial impact of the project. Site improvements such as spill containment features and the replacement of bollards to protect equipment from inadvertent damage are also beneficial features of the project.

## **2.5. Natural Hazards**

Natural hazards that pose potential island wide effects include tropical cyclones, earthquakes, floods, tsunami inundation, drought, wildfires, high wind and landslides. Many tropical cyclones have passed close enough to affect the State of Hawaii since the recording of such events began in the 1950s. Hurricane Iwa in 1982 and Hurricane Iniki in 1992 both brought destructive winds and torrential rains that resulted in significant property damage. Hurricane Iniki was connected to six deaths.

Recent earthquakes that had statewide impacts occurred on October 15, 2006. The earthquakes, which occurred off the Kona coast of Hawaii, had magnitudes of 6.7 and 6.0. The event caused property damage and triggered an island-wide electrical blackout on Oahu.

Tsunami Evacuation Zone maps for the State of Hawaii (Hawaii State Civil Defense, n.d.) identify low lying areas where excavation is recommended since extensive damage to life and property may occur from seismic sea waves. The project site is within the Tsunami Evacuation Zone, which requires evacuation during a tsunami event.

Climate change is expected to impact water resources. While acknowledging the uncertainty of future climate change scenarios, “researchers expect wet areas in

Hawaii to get wetter and dry areas to get drier” (Townscape, Inc., 2019). Long sustained periods of drought have the potential to affect ground and surface water resources. In addition to temperature and precipitation changes, the effects of climate change may include sea level rise, and wildfires that occur with more frequency or more intensity. Climate change may also affect the frequency and intensity of severe storms that cause flooding.

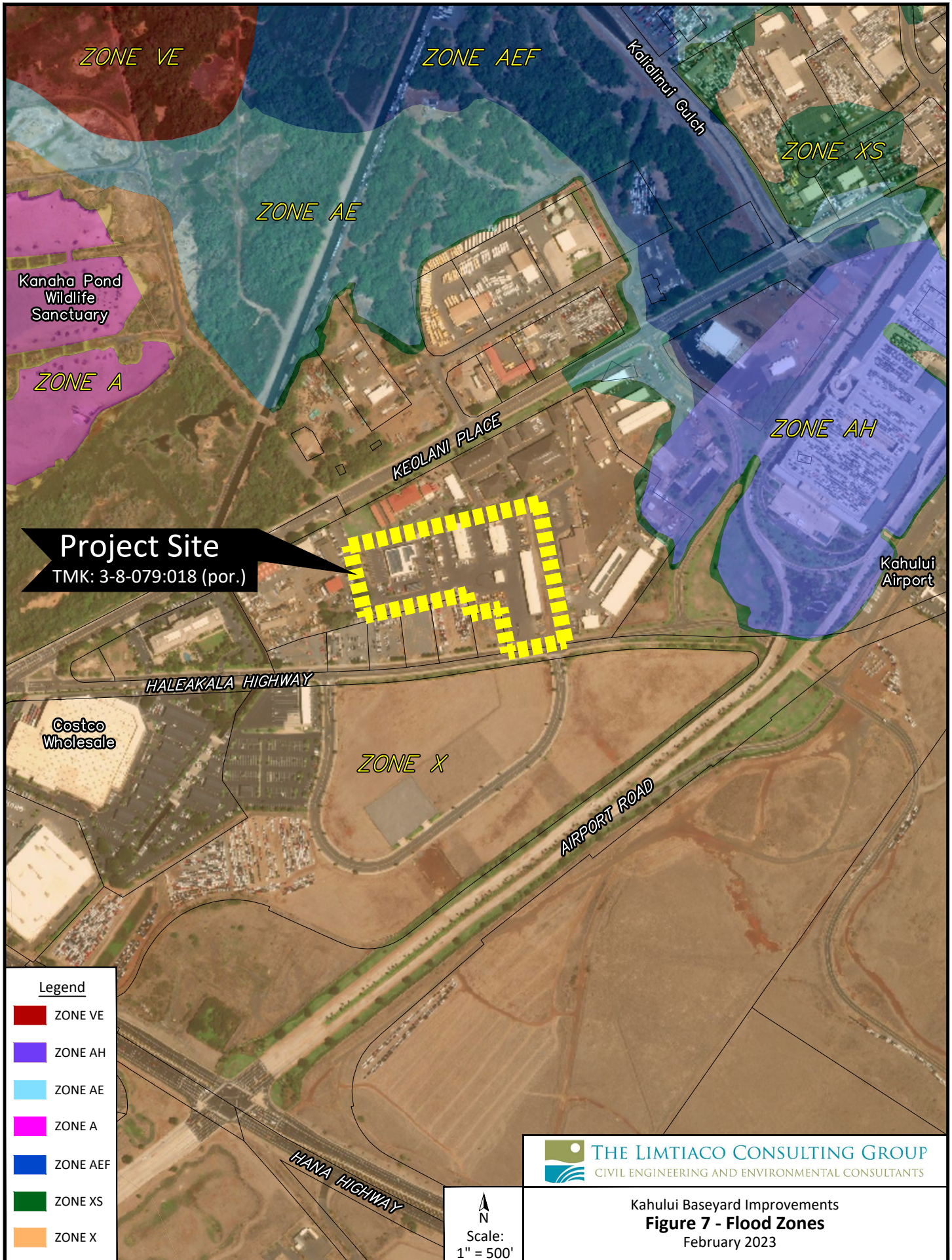
Models predict that sea level rise may eventually threaten properties in coastal and low elevation areas. The project site does not contain and is not located adjacent to sea level rise vulnerability zones, which are areas that may be impacted by 3.2 feet of sea level rise by the year 2100, according to the Hawaii Sea Level Rise Viewer (Hawaii Climate Change Mitigation and Adaptation Commission, 2021). Additionally, the project site would not be impacted by 3.8 feet of sea level rise (Ibid.).

The larger parcel that contains the project site covers multiple flood designations such as Zones AH, XS and X according to the Flood Insurance Rate Map (FIRM) prepared by the Federal Emergency Management Agency (see Appendix B and Figure 7). A small area on the eastern side of the site is within Zone AH, which is a designation for inundation areas of high-risk. Zones XS and X refer to inundation areas of low-to-moderate risk that are outside the 0.2 percent annual chance (or 500-year) floods. The project site is entirely within Zone X.

Steep cliffs and areas containing a build-up of dry vegetation may be more susceptible to rockfalls and wildfires, respectively. In general, the rockfalls on Maui that have caused loss of life or damage to property were localized hazards. There are no apparent rockfall hazards in the vicinity of the project site, which is far away from cliffs or steep slopes.

In 2018, the tropical storm force winds from Hurricane Lane caused a brush fire on Maui that burned 1,500 acres and “damaged or destroyed more than 20 structures” (Imada, 2018). Many wildfires, however, are caused by human actions of an intentional nature or as a result of negligence. A massive fire that started on July 11, 2019 and burned 9,000 acres from Waikapu to Kihei, and a second brush fire that occurred the next day and burned 200 acres in Puunene are both being investigated as arson (Cerizo, 2019). Farm equipment reportedly caused an accidental fire that started on August 1, 2019, burned approximately 5,300 acres of former sugar cane fields, and damaged 36 power poles and power lines (Ibid.). Although the threats from wildfires are unlikely, drought conditions and high winds could exacerbate any fire hazard.





**Project Site**  
 TMK: 3-8-079:018 (por.)

**Legend**

- ZONE VE
- ZONE AH
- ZONE AE
- ZONE A
- ZONE AEF
- ZONE XS
- ZONE X

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N  
 Scale:  
 1" = 500'

Kahului Baseyard Improvements  
**Figure 7 - Flood Zones**  
 February 2023

File: I:\11\_projects\23 - enviro\enviro\12314 - hdb\m\2020 kahului baseyard design\FIGURE 7 - Enviro Assessment\Figures.dwg, 2/7/2023 2:19 PM

### **Impacts and Mitigation Measures**

The threats to humans and property from unpredictable natural events will always be present. Proposed improvements at the project site are not expected to significantly increase risks to human health or property. The project represents the continuation of existing functions and activities at the Kahului Baseyard, and would not affect the probable occurrence of naturally occurring hazards.

#### **2.6. Floral and Faunal Resources**

The project site is within a larger geographic area that has experienced a long history of significant land-disturbing activities including large-scale agriculture, livestock and ranching activities that altered the natural environment. No species of plants or animals currently proposed for listing or listed under either the federal or State of Hawaii endangered species statutes were recorded by biologists from AECOS, Inc. during the survey of HDOT's parcel on May 12, 2020. The biological survey report is included as Appendix C. No plants of conservation concern or enjoying statutory concern (listed as threatened or endangered; HDLNR, 1998; USFWS, n.d.) were noted in the survey and, given the highly disturbed nature of the entire site and adjacent lands, would not be expected to occur.

The U.S. Fish and Wildlife Service (USFWS) states in its email correspondence dated March 16, 2021 that the federally protected species that should be considered based on the description of the project include listed Hawaiian waterbirds, the Hawaiian goose (*Branta sandvicensis*), and Hawaiian hoary bat (*Lasirus cinereus semotus*). If there is a lighting component or night work, listed Hawaiian seabirds should be considered. DLNR's Division of Forestry and Wildlife (DOFAW) states in the letter signed on January 19, 2023 that it is against State law to harm or harass State-listed Hawaiian waterbirds and geese.

According to the USFWS, the Blackburn's sphinx moth (*Manduca blackburnii*) should be considered if there is a vegetation manipulation component to the proposed project. The Blackburn's sphinx moth is a federally listed insect found in Hawaii (USFWS, 2000) and a known population occurs in the general area east of Kahului Airport. The correspondence from USFWS indicates that federally designated critical habitat for the Blackburn's sphinx moth is to the north and northwest of the project site within the Kanaha Pond Wildlife Sanctuary. The caterpillar of this moth feeds exclusively on plants in the Family Solanaceae (USFWS, 2003; HDLNER, 2005) and, where found, caterpillars are often associated with widely-distributed, non-native tree tobacco plant (*Nicotiana glauca*). The biologists from AECOS, Inc. observed no tree tobacco or plant species classified in the Family Solanaceae in the project area. Additionally, no avian species currently listed, or proposed for listing under either the federal or State of



Hawaii endangered species statutes were detected during the course of the AECOS, Inc. survey (HDLNR, 2015; USFWS, 2020a).

### **Impacts and Mitigation Measures**

Anticipated demolition and construction activities would affect the baseyard area, which is mostly paved and contains no trees. The proposed project is not expected to displace federal or State of Hawaii listed species of plants or insects since the affected site is devoid of these protected resources and does not contain any federal critical habitat. The proposed project is not expected to displace federal or State of Hawaii listed species such as Hawaiian waterbirds, the Hawaiian goose, Hawaiian Hoary Bat or Hawaiian seabirds from the project area.

The contractor is expected to abide by the measures listed below with regards to protecting Hawaiian seabirds.

- Fully shield all outdoor lights so the bulbs can only be seen from below;
- Install automatic motion sensor switches and controls on all outdoor lights or turn off lights when human activity is not occurring in the lighted area; and
- Avoid nighttime construction during the seabird fledging period, September 15 through December 15.

The project site does not contain nesting sites or resources of interest to several species of seabirds and shorebirds that are protected under the Migratory Bird Treaty Act; however, several species of seabirds that traverse Maui may fly over the area. Deleterious impacts to transiting seabirds can be avoided if construction occurs during daylight hours, or all outdoor lighting erected for night-time construction is fully “dark sky compliant” (HDLNR, 2015; USFWS, 2020a). All permanent lighting incorporated into the wash rack and fueling station should be dark sky compliant.

As stated in the letter from HDOT dated March 29, 2021 (Ref. AIR-EP 21.0028), standing water has the potential to become a wildlife hazard. The proposed project will not install any standing water features at the project site.

## **2.7. Historic and Cultural Resources**

The documented history of the project area indicates there were long periods of agricultural activity that have extensively altered the surface and subsurface conditions. Archaeologists from Scientific Consultant Services, Inc. (SCS) conducted an initial 100 percent pedestrian survey on June 11, 2020 and an archaeological

investigation of the project site on September 28, 2022, which involved 12 exploratory trenches that were mechanically excavated. The trenches were on average 2.6 feet (or 0.8 meters) wide and 5.9 feet (or 1.8 meters) deep and located in the parking lots. The archaeological investigation followed SCS's literature review and field inspection (LRFI) effort and a cultural impact assessment (Dagher, 2021). The State Historic Preservation Division (SHPD) requested the archeological inventory survey (AIS) with a subsurface component in its letter dated May 11, 2021 (Project No. 2021PR00447, Submittal No. 2021PR00447.001, Doc No. 2105AM09) because SHPD's records indicate there have been no previously conducted archeological surveys of the project site. The LRFI did not identify any properties of historic or cultural significance, and the 2022 archaeological investigation confirmed the negative results. The archaeological assessment is included as Appendix D.

The state-owned parcel that contains the project site has been previously developed. The investigations by SCS document both the surface of the project site and its subsurface contexts, which have been heavily modified by machinery in the recent past. A thirteenth exploratory trench was not excavated due to the presence of buried infrastructure such as optical fiber lines that provide Maui Electric Company and Hawaiian Telecom services. Other infrastructure that was encountered during the archaeological trenching included an electric conduit and a concrete kicker. The surface was devoid of any sites or artifact/midden scatters and the subsurface contexts were dominated by upper-level construction fill, with natural sediments beneath the fill. No cultural layers or other resources were discovered as a result of SCS's investigations.

The project site contains a developed HDOT baseyard facility that has supported highway and airport functions for approximately 40 years. The Kahului Baseyard has areas that are restricted to authorized HDOT personnel and secured with a locked entry gate. Traditional and cultural practices are not known to have occurred at the project site within recent times. A cultural impact assessment (CIA) was conducted by SCS to identify potential impacts of the project based on the cultural and historical background of the Kahului Baseyard area. During September 2020, SCS initiated consultation with Native Hawaiian Organizations, agencies, and community members, including descendants of the area. The CIA report (see Appendix E) documents the research and consultations conducted by CSH that involved outreach via letters, email, telephone calls, and video conference calls.

### **Impacts and Mitigation Measures**

There are no known historic or cultural resources at the project site that would be endangered by project actions. Buildings and structures within HDOT's parcels that would be affected by the project are less than 50 years old. Nonetheless, in the event that any historic remains or other potentially significant subsurface resources are encountered during the various phases of



construction (e.g., excavation and trenching), HDOT shall require its contractor to immediately halt construction activities and notify SHPD of the discovery. As stated in the archaeological assessment (2022), SCS recommends no further archaeological work. SCS submitted its report to SHPD in November 2022.

SCS also indicates that SHPD should be consulted regarding any future ground disturbance work or permits for the property because “the presence of sandy substrata associated with Pre- and Early Post-Contact burials, as well as previous archeological reports about Post-Contact historic properties in the vicinity of the project area, suggest that it is possible that culturally significant features may be identified during future subterranean work on the parcel and nearby environs” (Stankov and Dega, 2022).

Traditional gathering rights, access, or other customary activities by native Hawaiians or other ethnic groups would not be disrupted by the proposed project, which has been utilized for baseyard purposes for over 40 years. HDOT will continue to restrict access to some areas of the Kahului Baseyard.

## **2.8. Visual Resources**

The Kahului region is an urban community of residential, commercial, industrial and civic land uses. The visual character of Kahului is dominated by commercial, retail and industrial zones. Residential neighborhoods, parks and public use facilities are interspersed throughout the region.

HDOT’s existing baseyard facility contributes to a line of adjacent industrial style building elements along Keolani Place and Mua Road. Onsite vegetation that buffers or softens the visual impact of HDOT’s facility is sparse.

### **Impacts and Mitigation Measures**

The proposed project represents no substantial change to existing urban development and the visual character along Keolani Place. No impacts to scenic vistas or view planes are anticipated to occur from proposed improvements at the Kahului Baseyard.

## **2.9. Noise**

The project site is located in a developed urban area where the primary noise sources are related to vehicular traffic along Keolani and Haleakala Highway. As stated in the letter from HDOT dated March 29, 2021 (Ref. AIR-EP 21.0028), background noise at the project site may be influenced by regular noise from aircraft operations.

### **Impacts and Mitigation Measures**

Audible noise from construction vehicles, heavy equipment and impact tools is expected to be intermittent and unavoidable. The mitigation of noisy activities to inaudible levels will not be practical in all cases due to the intensity and exterior nature of the work. Ambient noise in the vicinity of the project may increase due to movement of construction vehicles and heavy equipment. Quieter construction activities may not be audible. Construction noise is temporary in nature and will cease upon completion of the project.

The maximum permissible day and night noise levels assigned to zoning districts are expressed in the Hawaii Administrative Rules Title 11, Chapter 46 “Community Noise Control.” The regulations require a permit for excessive noise (e.g., noise that exceeds allowable levels stated in the administrative rules for more than 10 percent of the time within any 20-minute period).

Project activities shall comply with the provisions of HAR §11-46, “Community Noise Control” which are administered by the DOH IRHB. Comments from the County of Maui Police Department dated January 12, 2023 suggest efforts to minimize noise. The construction contractor will be responsible for minimizing noise by properly maintaining noise mufflers and other noise-attenuating equipment and for maintaining noise levels within regulatory limits. If construction activities occur outside of the allowable timeframes designated for the noise permit (i.e., nighttime, Sunday, holiday) and exceed allowable noise levels, a noise variance must be obtained prior to commencement of construction activities, as required. The construction contractor will obtain the appropriate permit or approvals (e.g., Notice of Intent to Construct, Community Noise Permit, or Noise Variance). No nighttime construction work is anticipated.

Anticipated noise will be mitigated by performing the majority of construction work during daytime hours (as opposed to night work), thereby avoiding the creation of construction noise impacts during nighttime hours. Daytime work will ensure minimal impacts to existing users adjacent to and in the vicinity of the project site. The contractor will be required to follow BMPs to control noise levels at all times. Temporary noise reduction measures during construction may include but are not limited to the use of sound-walls, sound blankets and curtains, equipment mufflers and low-noise generators.

Proposed improvements represent a continuation of the functions and activities that currently occur at the project site. The project does not establish a new source of significant noise in the area.

## **2.10. Site Access, Circulation and Traffic**

Vehicular access to the project site is via driveways along Palapala Drive, Mua Street and Haleakala Highway. The areas in front of the Kahului Baseyard are unsecured and open to public access. A locked entry gate prevents unauthorized access to the secured area.

The County of Maui provides bus services in the Wailuku-Kahului region. Routes 35 and 40 run along Keolani Road in the vicinity of the Kahului Baseyard. Routes 5 and 6 run along Dairy Road, just south and west of the project site.

### **Impacts and Mitigation Measures**

Disruptions to vehicular, bicycle and pedestrian traffic during the various phases of construction will be intermittent and temporary in nature. Bus routes and bus stops are not expected to be impacted by project actions. In the letter dated March 23, 2021, the County of Maui Police Department (MPD) recommends measures to minimize any impacts of visibility and obstruction upon the surrounding roadway for pedestrians. MPD states in the letter dated January 12, 2023 that it has “no objections to the upcoming construction project if it meets minimal standards set for by county codes and state laws.” The 2023 letter also suggests minimizing the ingress/egress of heavy vehicles and equipment during construction.

Coordination with Maui County will be accomplished as necessary to ensure minimal inconvenience to motorists and to public transportation service. No traffic lane closures or traffic detours are expected in conjunction with project activities; however, a traffic control plan shall be prepared prior to the commencement of the proposed project if lane closures or traffic detours are deemed necessary. Appropriate traffic control devices and warning signs will be installed and the traffic flow will be directed by construction personnel or by law enforcement personnel, when necessary.

The majority of construction work will be scheduled during daytime hours (as opposed to night work) when traffic volumes are generally low. At night and when work is not occurring, all associated construction equipment will be secured and located within the project site to prevent obstructions to traffic.

It will be determined during the design phase whether the operation or transportation of any oversized and/or overweight vehicles and loads will be required during construction at HDOT’s facility.

The existing driveways for the site will remain in the same location. The HDOT facility will continue to provide the services that are currently provided. The

improvements at HDOT's baseyard facility will not change overall circulation patterns in the project area.

### **2.11. Utilities (Water, Wastewater, Drainage)**

The project site is located within an area served by existing municipal systems for potable water and wastewater disposal. Maui County owns and maintains a municipal stormwater drainage system within the vicinity of the project site. Most of the project site is covered in pervious surfaces like gravel or soil. Runoff during storm events infiltrates into the ground.

#### **Impacts and Mitigation Measures**

The construction contractor is expected to follow standard procedures to avoid the disruption of existing utility services. For example, the contractor shall utilize electromagnetic location, often referred to as toning, to locate existing underground utilities wherever excavation work will occur. Electromagnetic survey equipment is used to estimate approximate depths for utilities to avoid any damage during site work and construction. Any damaged utilities shall be promptly repaired by the contractor to the satisfaction of the utility owner.

A short-term and temporary impact of the project would occur from the generation of sediment-laden surface runoff during construction. BMPs will be incorporated into a storm water management plan. Appropriate erosion control BMPs will be used to minimize the amount of soil transported in storm water runoff during construction activities. All construction activities will comply with applicable Federal, State and County regulations and rules for erosion control as previously discussed in Section 2.3, Water Resource Considerations.

Proposed improvements will contribute to the continuation of existing uses at the Kahului Baseyard. The comments from DLNR Engineering Division dated March 25, 2021 indicate that all state projects requiring water service from their local Department/Board of Water Supply System will be required to pay a resource development charge, in addition to the Water Facilities Charges for transmission and daily storage. The letter also states that the applicant is required to provide water demands and calculations to the Engineering Division so it can be included in the State Water Project Plan Update projections. No changes to water and wastewater disposal systems are anticipated.

## **2.12. Power and Communications**

Electrical power in the project area is provided by Maui Electric Company (MECO), which is a subsidiary of the Hawaiian Electric Company, Inc. HDOT is under a Net Energy Metering agreement with MECO. Communication services are available from Hawaiian Telcom.

The Kahului Baseyard receives power and communications service from existing service providers. As previously mentioned in Section 1.4. Technical Considerations, the existing site electrical distribution is undersized for current baseyard operations, and baseyard personnel often experience issues with power reliability.

### **Impacts and Mitigation Measures**

The construction contractor is expected to follow standard procedures such as providing its own power for construction equipment and avoiding the disruption of existing MECO services to the project site and to the surrounding residential community. Greenhouse gas emissions from diesel-power construction equipment and generators would occur during the temporary period of construction and during a short-term data collection period. The contractor shall protect existing surface and subsurface utilities and poles within and abutting the project site, excavations, and other work areas. Disruptions to communications service during construction would also be avoided. Any damaged utilities shall be promptly repaired by the contractor to the satisfaction of the utility owner. No mitigation is proposed for short-term and temporary impacts.

The Kahului Baseyard already receives power and communications service for current operations. The proposed project will improve the electrical system in consideration of current and future baseyard operations. Proposed site improvements will not change the uses and activities that occur at the baseyard. The installation of PV systems would contribute to energy independence objectives, which is a beneficial impact of the project.

## **2.13. Socio-Economic Characteristics**

The County of Maui identifies the community plan regions of Wailuku-Kahului, Kihei-Makena and West Maui as areas for directed growth through 2030. In 2010, the Wailuku-Kahului region had a resident population of 54,433 inhabitants, which represented approximately 37 percent of Maui's population (State of Hawaii Department of Business, Economic Development and Tourism, 2013). The resident population for the zip code tabulation areas of Wailuku and Kahului for the years 2016 to 2020 was 62,859 inhabitants, which represented approximately 40 percent of Maui's population of 157,272 inhabitants (State of Hawaii Department of Business, Economic Development and Tourism, 2021).

The County of Maui anticipates that the Wailuku-Kahului region will continue to have the largest resident population on Maui. Schools that are approximately 2 to 3 miles from the project site include Maui High, Kahului Elementary, Maui Community School for Adults, Lihikai Elementary, Maui Waena Intermediate and Henry Perrine Baldwin High School.

### **Impacts and Mitigation Measures**

The various phases of construction will create short-term jobs for people in design and construction. The proposed project involves site improvements to an existing HDOT facility that will not affect population levels, housing or schools. No new long-term employment opportunities are anticipated from the project.

#### **2.14. Public Services and Facilities**

Law enforcement is provided by MPD. The nearest police station relative to the project area is the Wailuku District Station at 55 Mahalani Street, in Wailuku.

The County's fire protection services are provided by the Maui County Fire Department. The Kahului Fire Station is located along Dairy Road and approximately two miles from Maui High School, which is a designated hurricane evacuation shelter. People who have special health needs will be accommodated and provided limited support at active shelters during or in response to emergency situations. Maui Waena Intermediate School is also an evacuation shelter.

The County's Emergency Medical Services Division provides ambulance service from the Kahului Fire Station. The nearest emergency care facility relative to the project area is Maui Memorial Medical Center, which is located along Mahalani Street in Wailuku.

### **Impacts and Mitigation Measures**

No significant adverse impacts to police, fire, medical, or emergency shelter services will occur from the proposed site improvements at the Kahului Baseyard.

MPD provided the following comments in its letter dated March 23, 2021:

- minimize possible dust and debris so not to inhibit those whose health and well-being may be affected; and
- minimize any impacts of visibility and obstruction upon the surrounding roadway for pedestrians.

In the letter dated January 12, 2023, MPD indicates that it has no objections to the upcoming construction project if it meets minimal standards set for by county codes and state laws. The letter also suggests “efforts be made to minimize noise, dust and debris so not to inhibit those whose health and well-being may be affected, as well the ingress/egress of heavy vehicles and equipment during construction.” The relevant comments from MPD’s 2021 and 2023 letters are included in Sections 2.1. Climate, Air Quality and Airspace Considerations, 2.4. Solid Waste and Hazardous Materials, 2.9. Noise, and 2.10. Site Access, Circulation and Traffic.

### **2.15. Recreational Resources**

Notable recreational resources near the project site include the Keopuolani Regional Park, Maui Arts and Cultural Center, and the Maui Nui Botanical Garden. Other well-known recreational resources in the Wailuku-Kahului region include the Iao Valley State Monument, Kanaha Pond State Wildlife Sanctuary, and Kahului Bay and Harbor.

#### **Impacts and Mitigation Measures**

The proposed project involves site improvements at an existing HDOT facility, which creates no additional demand for recreational facilities. No mitigation is warranted or proposed.

### 3. RELATIONSHIP TO PLANS, POLICIES, AND CONTROLS

#### 3.1. State Land Use District

The State Land Use Law (Chapter 205, HRS) is intended to preserve, protect, and encourage the development of lands in the State for uses which are best suited to the public health and welfare for Hawaii's people. All lands in the State are classified by the State of Hawaii, Land Use Commission into four land use districts: Urban, Rural, Agricultural, and Conservation. The project site is entirely located within the Urban District which is regulated by county zoning (see Section 3.6. Maui County Land Use Ordinance). The proposed project is a permissible public use and structure within the Urban District, which has residential neighborhoods, commercial enterprises, industrial development, and community facilities such as public buildings.

#### 3.2. Hawaii Coastal Zone Management Program

Hawaii's Coastal Zone Management (CZM) Program, established pursuant to Chapter 205A, HRS, as amended, is administered by the State of Hawaii, Office of Planning and Sustainable Development. The CZM program provides for the beneficial use, protection, and development of the State's coastal zone. The CZM area consists of the entire State of Hawaii since there is no point of land more than 30 miles from the ocean. The CZM Act involves a system of permits, including the SMA use permit, to manage development within coastal areas and encourage public participation. Any significant development within the SMA requires a permit from the appropriate County. On the Island of Maui, the SMA permit process is administered by the Department of Planning. The project site is within the SMA and approximately 0.5 miles from the shoreline. As previously mentioned in Section 1.1. Introduction and Background, the Maui County Planning Department will determine whether the proposed project qualifies as development, and further discussion is provided in Section 3.7. Special Management Area. The proposed project is consistent with several policies and objectives of the CZM program from HRS §205A-2.

##### 1. Recreational Resources

*Objectives. Provide coastal recreational opportunities accessible to the public.*

*Policies. Improve coordination and funding of coastal recreational planning and management; and*

*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 project is located within the SMA, and HDOT will submit an application for an SMA use permit if required (i.e., the proposed project qualifies as development). Coastal water quality will be protected with appropriate erosion control BMPs that will minimize the amount of soil transported in stormwater runoff during construction activities.

## 2. *Historic Resources*

*Objectives.* *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.* *Identify and analyze significant archaeological resources;*

*Maximize information retention through preservation of remains and artifacts or salvage operations; and*

*Support state goals for protection, restoration, interpretation, and display of historic resources.*

No known historic resources would be endangered by the project. Concurrence from SHPD with regards to a “no historic properties affected” determination will be requested by HDOT. The construction contractor will be required by HDOT to comply with all State and County rules and laws pertaining to historic preservation. Construction activities will be halted and SHPD will be notified in the event any unanticipated archaeological or historic sites are encountered.

### 3. Scenic and Open Space Resources

*Objectives. Protect, preserve, and, where desirable, restore or improve the quality of coastal scenic and open space resources.*

*Policies. Identify valued scenic resources in the coastal zone management area; Ensure that new developments are compatible with their visual environment by designing and locating such developments to minimize the alteration of natural landforms and existing public views to and along the shoreline;*

*Preserve, maintain, and, where desirable, improve and restore shoreline open space and scenic resources; and*

*Encourage those developments that are not coastal dependent to locate in inland areas.*

The project site is located inland and approximately 0.5 miles from the shoreline. The proposed project is not expected to diminish coastal scenic view areas or open space resources.

### 4. Coastal Ecosystems

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

*Policies. Exercise an overall conservation ethic, and practice stewardship in the protection, use, and development of marine and coastal resources;*

*Improve the technical basis for natural resource management;*

*Preserve valuable coastal ecosystems, including reefs, of significant biological or economic importance;*

*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*

*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 project is sited away from the shoreline and is not expected to disrupt or degrade coastal water ecosystems. No stream diversions or channelization would occur from the project. HDOT's construction contractor will be responsible for implementing an erosion and sediment control plan and reducing runoff that can transport loose soil, excess nutrients and other pollutants. A NPDES permit will be required to ensure compliance with BMPs during construction.

## 5. Economic Uses

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

Policies. Concentrate coastal dependent development in appropriate areas;

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

Direct the location and expansion of coastal dependent developments to areas presently designated and used for such developments and permit reasonable long-term growth at such areas, and permit coastal dependent development outside of presently designated areas when:

- (i) Use of presently designated locations is not feasible;
- (ii) Adverse environmental effects are minimized; and
- (iii) The development is important to the State's economy.

The project does not involve coastal development; therefore, the policies pertaining to coastal economic development do not apply.

## 6. Coastal Hazards

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

Policies. Develop and communicate adequate information about storm wave, tsunami, flood, erosion, subsidence, and point and nonpoint source pollution hazards;

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

Ensure that developments comply with requirements of the Federal Flood Insurance Program; and

Prevent coastal flooding from inland projects.

Coastal hazards are not expected to be exacerbated by the project, which is located inland and away from the coastline. HDOT is expected to ensure that its construction contractor utilizes BMPs to address erosion prevention and sediment control. Storm water BMP strategies would also be implemented at the project site. The project includes the installation of new on-site drainage systems that address the quality and quantity of stormwater leaving the site, which would help to reduce nonpoint source pollution.

## 7. Managing Development

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

Policies. *Use, implement, and enforce existing law effectively to the maximum extent possible in managing present and future coastal zone development;*

*Facilitate timely processing of applications for development permits and resolve overlapping or conflicting permit requirements; and*

*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.*

The project does not impact or influence the development review process pertaining to the management of coastal resources and hazards. The environmental review process includes opportunities for public participation and comments pertaining to a variety of issues and topics including coastal resources and hazards.

## 8. Public Participation

Objectives. *Stimulate public awareness, education, and participation in coastal management.*

Policies. *Promote public involvement in coastal zone management processes; 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*

*Organize workshops, policy dialogues, and site-specific mediations to respond to coastal issues and conflicts.*

The environmental review process provides public participation opportunities. A description of the outreach and consultation for the proposed project is described in Section 7, Public Agency Review and Consultation.

## 9. Beach Protection

Objectives. *Protect beaches for public use and recreation.*

Policies. *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;*

*Prohibit construction of private erosion-protection structures seaward of the shoreline, except when they result in improved aesthetic and engineering solutions to*

*erosion at the sites and do not interfere with existing recreational and waterline activities; and*

*Minimize the construction of public erosion-protection structures seaward of the shoreline.*

Public access to beach areas will not be affected by the project, which is located inland and away from beaches and the shoreline. The project does not involve the construction of erosion-protection structures seaward of the shoreline.

## 10. Marine Resources

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

*Policies. Ensure that the use and development of marine and coastal resources are ecologically and environmentally sound and economically beneficial;*

*Coordinate the management of marine and coastal resources and activities to improve effectiveness and efficiency;*

*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;*

*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*

*Encourage research and development of new, innovative technologies for exploring, using, or protecting marine and coastal resources.*

The project is located inland and does not involve the use or development of marine and coastal resources.

### 3.3. Hawaii State Plan

The Hawaii State Plan (Chapter 226, HRS) outlines broad goals, policies and objectives to serve as guidelines for the future growth and development of the State. The excerpts below are pertinent Hawaii State Plan objectives, policies, and priority guidelines that pertain to HDOT's project.

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

*(a) Planning for the State's physical environment with regard to land, air, and water quality shall be directed towards achievement of the following objectives:*

*(1) Maintenance and pursuit of improved quality in Hawaii's land, air, and water resources.*

- (b) To achieve the land, air, and water quality objectives, it shall be the policy of this State to:*
- (7) Encourage urban developments in close proximity to existing services and facilities.*

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

- (a) Planning for the State's facility systems in general shall be directed towards achievement of the objective of water, transportation, waste disposal, and energy and telecommunication systems that support statewide social, economic, and physical objectives.*
- (b) To achieve the general facility systems objective, it shall be the policy of this State to:*
  - (1) Accommodate the needs of Hawaii's people through coordination of facility systems and capital improvement priorities in consonance with state and county plans.*
  - (3) Ensure that required facility systems can be supported within resource capacities and at reasonable cost to the user.*

*§226-27 Objectives and policies for socio cultural advancement – government.*

- (a) Planning the State's socio-cultural advancement with regard to government shall be directed towards the achievement of the following objectives:*
  - (1) Efficient, effective, and responsive government services at all levels in the State.*
  - (b) To achieve the government objectives, it shall be the policy of this State to:*
    - (1) Provide for necessary public goods and services not assumed by the private sector.*
    - (5) Assure that government attitudes, actions, and services are sensitive to community needs and concerns.*

### **3.4. Maui County General Plan**

The Maui County general plan is a strategic planning document which guides government action and decision making. The Maui County General Plan was first adopted in 1980 and updated since then to set goals, directions, and strategies for meeting long-term social, economic, environmental, land use, and cultural needs of the County.

The County of Maui utilizes a Countywide Policy Plan and a Maui Island Plan pursuant to Chapter 2.80B of the Maui County Code. The *County of Maui 2030 General Plan: Countywide Policy Plan* was adopted on March 24, 2010. The proposed project conforms to the broad goals, objectives and policies in the Countywide Policy Plan.

*A. Protect the Natural Environment*

*Goal:*

*Maui County's natural environment and distinctive open spaces will be preserved, managed, and cared for in perpetuity.*

*Objective:*

- 3. Improve the stewardship of the natural environment.*

*Policies:*

- c. Evaluate development to assess potential short-term and long-term impacts on land, air, aquatic, and marine environments.*
- f. Reduce air, noise, light, land, and water pollution, and reduce Maui County's contribution to global climate change.*
- i. Educate the construction and landscape industries and property owners about the use of best management practices to prevent erosion and nonpoint source pollution.*

*H. Diversify Transportation Options*

*Goal:*

*Maui County will have efficient, economical, and environmentally sensitive means of moving people and goods.*

*Objective:*

- 1. Provide an effective, affordable, and convenient ground-transportation system that is environmentally sustainable.*

*Policies:*

- e. Ensure that roadway systems are safe, efficient, and maintained in good condition.*
- n. Support the development of carbon-emission standards and an incentive program aimed at achieving County carbon-emission goals.*

*I. Improve Physical Infrastructure*

*Goal:*

*Maui County's physical infrastructure will be maintained in optimum condition and will provide for and effectively serve the needs of the County through clean and sustainable technologies.*

*Objective:*

1. *Improve water systems to assure access to sustainable, clean, reliable, and affordable sources of water.*

*Policies:*

- f. *Improve the management of water systems so that surface-water and groundwater resources are not degraded by overuse or pollution.*

*Objective:*

2. *Improve waste-disposal practices and systems to be efficient, safe, and as environmentally sound as possible.*

*Policies:*

- b. *Support innovative and alternative practices in recycling solid waste and wastewater and disposing of hazardous waste.*
- e. *Pursue improvements and upgrades to existing wastewater and solid-waste systems consistent with current and future plans and the County's Capital Improvements Program*

### **3.5. Wailuku-Kahului Community Plan**

Nine community-oriented plans for the County are intended to help guide government action and decision-making. The *Wailuku-Kahului Community Plan*, reflects current anticipated conditions in the region. The Plan advances planning goals, objectives, policies, and implementation considerations to guide decision-making. The Wailuku-Kahului Community Plan provides specific recommendations that address the goals, objectives, and policies recommended in the Maui County General Plan while recognizing the unique spiritual significance of island cultures of Wailuku-Kahului in order to enhance the region's overall living environment.

Implementation of the goals, objectives, and policies contained in the *Wailuku-Kahului Community Plan* are defined through specific implementing actions. Implementing actions as well as broader policy recommendations are effectuated through various processes, including zoning, capital improvements program, and the County budgeting process. Below are the policy recommendations, implementing actions and standards for the Wailuku-Kahului Region that are relevant to the proposed project.

#### **III.C. Environment**

*Goal:*

*A clean and attractive physical and natural environment in which man-made developments or alterations to the natural environment relate to sound environmental and ecological practices, and important scenic*



and open space resources are maintained for public use and enjoyment.

*Objectives and Policies:*

2. *Protect nearshore waters by ensuring that discharges from waste disposal meet water quality standards. Continuous monitoring of existing and future waste disposal systems necessary to ensure their efficient operation.*
6. *Encourage the use of siltation basins and other erosion control features in the design of drainage systems.*
7. *Mitigate potential hazards associated with oil storage tanks and the bulk containment of other toxic, corrosive, or combustible substances.*
13. *Support energy conservation measures, including the use of solar heating and photovoltaic systems, in conjunction with urban uses.*

*III.C. Infrastructure*

*Goal:*

*Timely and environmentally sound planning, development and maintenance of infrastructure systems which serve to protect and preserve the safety and health of the region's residents, commuters, and visitors through the provision of clean water, effective waste disposal and drainage systems, and efficient transportation systems which meet the needs of the community.*

*Objectives and Policies:*

*Water and Utilities*

2. *Improve the quality of domestic water.*

*Energy*

1. *Promote the use of alternative energy resources, such as biomass, wind, and solar.*
7. *Support energy conservation measures, including the use of solar heating voltaic systems, in conjunction with urban uses.*

### 3.6. Maui County Land Use Ordinance

The County's LUO regulates land use in accordance with adopted land use policies, including the General Plan and the Wailuku-Kahului Community Plans. The zoning for the project site is AP Airport District. Use of land within an airport district shall be subject to requirements pursuant to 19.20.020 of the Maui County Code. Area regulations require that, "no building shall exceed the height limitation established by the state airport zoning board for the area in question."

### 3.7. Special Management Area

Through the CZM program and pursuant to the Hawaii Coastal Zone Management Act (Chapter 205A, HRS, as amended), all counties have enacted ordinances establishing SMAs. Development within the SMA, including most development proposed by the State, requires a SMA permit from the appropriate County. On Maui, the SMA permit is administered by the Department of Planning and acted upon by the Maui Planning Commission.

The proposed project is limited to a State-owned property that is within the SMA. The project site is not along the shoreline and does not affect access to the shoreline. Existing uses and activities at the project site will not change as a result of proposed site improvements that do not affect the use of or access to coastal or other public recreational opportunities. The proposed project is consistent with SMA guidelines pursuant to HRS §205A-26:

*(1) All development in the special management area shall be subject to reasonable terms and conditions proposed in the special management area (C)Provisions are made for solid and liquid waste treatment, disposition, and management which will minimize adverse effects upon special management area resources.*

*(2) No development shall be approved unless the authority has first found:*

*(B) That the development is consistent with the objectives, policies, and special management area guidelines of this chapter and any guidelines enacted by the legislature.*

*(C)That the development is consistent with the county general plan and zoning. Such finding of consistency does not preclude concurrent processing where a general plan or zoning amendment may also be required.*

*(3) The Authority shall seek to minimize, where reasonable:*

*(E)Any development which would adversely affect water quality, existing areas of open water free of visible structures, existing and potential fisheries and fishing grounds, wildlife habitats, or potential or existing agricultural use of land.*

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## **4. POSSIBLE ALTERNATIVES**

### **4.1. No-Action**

The “No Action” alternative implies that the existing facilities at the Kahului Baseyard, which are currently in use, would continue to be utilized by HDOT. There would be no improvements to the facilities that are outdated and in need of replacement. No construction-related activities would occur at the project site as a result of maintaining status quo.

No action also implies that there would be no commitment of funding or capital expenditures for upgrades of the existing facilities at the project site. In the long term, the no action alternative will still result in the need for funding and financial expenditures as the facilities continue to deteriorate. Financial resources that are used for increased repair and maintenance costs may reduce the overall availability of funds for other purposes and may ultimately cause a disruption to the delivery of HDOT’s services. The prolonged use of structurally deficient facilities with substandard utility systems may jeopardize the safety of occupants and the public; therefore, no action is an unacceptable alternative from the perspective of HDOT.

### **4.2. Delayed Action**

A delayed action implies that a project of similar scope and size to the proposed action would occur at an unspecified future date. The environmental impacts associated with delayed improvements that occur at an unspecified future date are generally expected to be the same as the proposed action so long as the background environmental conditions remain similar to the evaluated conditions described in this EA. The delay of the proposed project would postpone and does not avoid anticipated environmental impacts associated with improvements to the baseyard facilities.

A delayed action may necessitate a greater funding commitment if construction costs increase due to inflation, changes in economic conditions, or the labor supply. Building materials and labor costs tend to increase with time. The facilities at the Kahului Baseyard will continue to deteriorate in the interim, which will result in the need for funding and financial expenditures for repair and maintenance costs and may jeopardize the safety of building occupants and the public. Hence, a delayed action is not favorable from the perspective of HDOT and other options that address project needs must be pursued.

### 4.3. Alternative Site Improvements

HDOT considered site improvements consisting of different design alternatives for the replacement of the existing wash rack system, which is manually operated. In other words, vehicle washing is currently accomplished with one or two staff that utilize hoses to spray pressurized wash water on vehicles in the wash pad area. Replacement of the existing manual wash rack with a new manual wash rack is described below along with the installation of new ground-mount or rooftop PV systems.

- Manual open bay wash system. This alternative would include new wash equipment, a water recycling system, and site utility improvements to support the new wash system. A new, manual open bay wash rack would be relatively similar to the existing arrangement, and would require one or two staff that utilize hoses to spray pressurized wash water on vehicles that are maneuvered into and out of the wash pad area. Debris and waste water would be collected and recycled through a wash water recycling system consisting of settling tanks, industrial grade media filters, and polishing filter. The recycled (or cleaned) wash water would be stored in an exterior tank. An enclosure would house and provide weather protection for the associated pumps and water recycling equipment.

A new manual wash rack has reduced controls and complexity, and could be located in the same location as the existing wash rack, which would require minimal change from the current practice of maneuvering vehicles onto and off of the wash pad. The maintenance cost for a new manual wash rack is expected to be lower as compared to an automated system; however, the manual washing of vehicles is more labor intensive and dependent on the skills of each person. Taller vehicles are more difficult to wash as compared to an automated system that is designed to spray water onto vehicles from above. For all of these reasons, HDOT prefers a touchless drive through system that would provide higher vehicle wash rates, improved wash quality, and reduces labor cost.

- Ground-mount or rooftop PV systems. A ground-mount PV system was considered but cannot be accommodated at the Kahului Baseyard. The secured, gated area is full when all of the vehicles return from normal activities; therefore, a ground-mount PV system would interfere with daily operations. PV arrays installed in unsecured areas of the baseyard would be susceptible to vandalism. To support rooftop PV, affected building elements must be structurally retrofit to sustain minimum wind and seismic loads for life safety requirements. Additional building improvements such as new roofs; replacement of corroded materials; repainting/recoating exterior surfaces; and replacing gutters, downspouts and flashings may also be required before rooftop PV can be installed. Consequently, the installation of new ground-

mount PV or rooftop PV on buildings that have been subject to decades of wear and weathering effects is possible but less desirable than the preferred alternative from the standpoint of HDOT.

#### **4.4. Improvements at the Existing Facility (Preferred Alternative)**

The proposed action represents the commitment by HDOT to improve its facilities and minimize the discharge of pollutants in storm water runoff from the project site. HDOT's Kahului Baseyard of approximately 5 acres has aging infrastructure that limits operational capacity and safety. The proposed improvements at the Kahului Baseyard would address fuel storage deficiencies and substandard electrical systems. The existing baseyard facility is owned and operated by the State. There are no land ownership, easement or access concerns. The project site has the infrastructure and space to accommodate proposed improvements.

The proposed project includes necessary repairs and/or replacement of existing ASTs with new ASTs and appurtenant piping and nozzles to address visible corrosion and deterioration. Electrical system components would also be replaced or retrofitted as necessary. Obsolete mechanical and electrical equipment would be replaced. Additional upgrades such as a replacement fuel canopy, new PV systems and a new wash rack are anticipated to occur in a later phase of the project.

At project completion, the existing fuel station at HDOT's baseyard would provide more volume and operational capabilities. The baseyard would have upgraded electrical systems that meet modern standards. The improved facilities would better protect staff as they conduct routine activities at the baseyard. For all these reasons, the proposed action is the preferred alternative at this time from the perspective of HDOT.

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## **5. PERMITS AND APPROVALS**

The exact permitting and approval requirements will be determined during the design phase, and the following list contains permits and approvals that may be required for the proposed project.

### State of Hawaii

- Community Noise Permit
- Community Noise Variance
- Non-Covered and/or Covered Source Permit (Air Quality)
- Lane Use Permit for Construction Work
- Oversized and Overweight Vehicles on State Highways Permit
- State Historic Preservation Division Review

### County of Maui

- Building Permit
- Grubbing, Grading, and Stockpiling Permit
- Erosion Control Plan/Best Management Practices
- Industrial Wastewater Discharge Permit
- Special Management Area Assessment



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## 6. DETERMINATION

The proposed project is not likely to have a significant impact on the physical or human environment based on the analysis presented in this document. In consideration of the potential environmental effects and consultations with governmental agencies and interested parties, a Finding of No Significant Impact (FONSI) has been determined for the proposed project by HDOT. The supporting rationale for this finding as set forth in HAR §11-200.1-13 is discussed below.

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

The renovation of HDOT's current baseyard facilities will not endanger any natural or cultural resources. The construction contractor shall stop work and contact SHPD immediately in the event any unanticipated buried archaeological or cultural resources are encountered.

*(2) Curtail the range of beneficial uses of the environment;*

No beneficial uses of the environment will be curtailed as a result of the proposed project, which represents the continued presence of HDOT in the Wailuku-Kahului region. Completion of the HDOT baseyard Improvements ensures the beneficial use of the project site for a public purpose.

*(3) Conflict with the State's environmental policies or long-term environmental goals established by law;*

The proposed project would be in conformance with State Environmental Policy, inclusive of its individual policies, goals, and guidelines for population growth; natural resources; biological resources; transportation; energy; and culture, as discussed in the individual resource categories throughout this EA.

*(4) Have a substantial adverse effect on the economic welfare, social welfare, or cultural practices of the community or State;*

The proposed project does not substantially or negatively affect the economic or social welfare and cultural practices of the community or State. Short-term jobs for people in design and construction are expected to be created as a result of the project. Completion of the improvements at the baseyard facility would allow HDOT to fulfill its mission. The proposed project will improve spaces utilized for baseyard operations, and improve storm water quality.

*(5) Have a substantial adverse effect on public health;*

Public health will not be adversely affected by the proposed project. Short-term and temporary effects such as surface runoff, fugitive dust, noise, intermittent

traffic, and solid waste are expected to cease upon project completion. The implementation of construction BMPs will minimize temporary impacts. Completion of the project would provide on-site infrastructure and provide HDOT staff with improved baseyard facility spaces.

*(6) Involve adverse secondary impacts, such as population changes or effects on public facilities;*

No secondary impacts such as population shifts are anticipated from the completion of the proposed project, which represents a continuation of HDOT's current functions. Utility demands for potable water, wastewater disposal, solid waste disposal and power will be coordinated with the State, County or service provider and are not expected to increase. Upgrades to HDOT's baseyard facility are expected to conserve water and energy use.

*(7) Involves a substantial degradation of environmental quality;*

The proposed project is not expected to degrade environmental quality. Environmental impacts that may occur during the various phases of construction will be mitigated through the implementation of mitigation measures, as appropriate. Appropriate mitigation measures have been identified throughout this EA.

*(8) Be individually limited but cumulatively have substantial adverse effect upon the environment or involves a commitment for larger actions;*

The proposed project represents a long-term commitment to provide transportation services to the community. The proposed project is not part of or associated with supplemental future actions.

*(9) Have a substantial adverse effect on a rare, threatened, or endangered species, or its habitat;*

There is no federally designated critical habitat within the immediate vicinity of the project site. The proposed project is not anticipated to displace or have a substantial effect on protected federal or State of Hawaii listed species.

*(10) Have a substantial adverse effect on air or water quality or ambient noise levels;*

Short-term impacts to air quality, water quality or ambient noise levels may occur during construction. The implementation of mitigation measures is expected to avoid the exceedance of Federal or State air quality, noise and water quality standards. Environmental impacts will be mitigated through proper construction techniques and compliance with permits and applicable administrative rules and

regulations. The proposed project is not expected to negatively impact ambient air quality and background noise levels.

*(11) Have a substantial adverse effect on or be likely to suffer damage by being located in an environmentally sensitive area such as a flood plain, tsunami zone, sea level rise exposure area, beach, erosion-prone area, geologically hazardous land, estuary, fresh water, or coastal waters;*

The project site is not situated within an environmentally sensitive area and is not anticipated to affect such areas.

*(12) Have a substantial adverse effect on scenic vistas and view planes, during day or night, identified in county or state plans or studies; or*

The proposed project will not obstruct or affect scenic vistas and view planes in the project area.

*(13) Require substantial energy consumption or emit substantial greenhouse gases.*

Greenhouse gas emissions from diesel-power construction equipment and generators would occur during the temporary period of construction. No mitigation is proposed for temporary impacts. HDOT's improved baseyard facility is not anticipated to cause a substantial increase in energy consumption since it represents a continuation of current operations that already receive power and communications service. The upgraded facility will incorporate energy saving measures.

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## 7. PUBLIC AGENCY REVIEW AND CONSULTATION

### 7.1. Pre-Assessment Consultation

The consulted agencies, organizations, and individuals are listed below. Ten (10) interested parties including government agencies provided formal correspondence in response to the pre-assessment consultation effort, as indicated by the ✓ below. Information and regulatory guidance from the formal comments has been incorporated in this EA.

#### ***Federal Agencies***

- ✓ U.S. Department of the Interior, Fish and Wildlife Service

#### ***State of Hawaii***

- Department of Accounting and General Services, Public Works Division
  - Public Works Division, Planning Branch
  - Maui District Office
- ✓ Department of Agriculture,
  - Plant Industry Division
  - Administrative Services Office
  - Animal Industry Division
  - Quality Assurance Division
- Department of Land and Natural Resources
  - Division of Water Resource Management
  - Division of Aquatic Resources
  - Division of Forestry and Wildlife
- ✓ Engineering Division
- ✓ Land Division
  - Office of Conservation and Coastal Lands
  - State Historic Preservation Division
  - Maui Office
- Department of Health
  - Safe Drinking Water Branch
- ✓ Indoor and Radiological Health Branch
- Solid and Hazardous Waste Branch
- Maui District Health Office (Clean Air, Clean Water, Wastewater Branches)
- ✓ Department of Transportation
  - Statewide Transportation Planning Office
- Department of Business, Economic Development and Tourism
  - Office of Planning and Sustainable Development

**State of Hawaii (continued)**

Department of Education  
Maui Office (Baldwin-Kekaulike-Maui)  
Department of Hawaiian Home Lands  
Office of Hawaiian Affairs, Office of the Administrator  
Island of Maui

**County of Maui**

Office of the Mayor  
Civil Defense Agency  
Department of Environmental Management  
Department of Fire and Public Safety  
✓ Department of Parks and Recreation  
Department of Planning  
Department of Public Works  
✓ Department of Transportation  
Department of Water Supply  
✓ Police Department

**Utilities, Community Groups and Associations**

Maui Electric Company  
Oceanic Time Warner Cable (or Charter Communications)  
Hawaiian Telcom  
The Gas Company, LLC (dba Hawaii Gas)

**Property Owners, Recorded Lessees and Other Interested Parties**

3-8-001:121 (State of Hawaii)  
3-8-001:181 (State of Hawaii)  
3-8-001:101 (Enterprise Rent-A-Car Company of Hawaii dba Enterprise Rent-A-Car)  
3-8-079:016 (SPMH Maui LLC)  
3-8-079:020 (Hui Iwa LLC)  
3-8-079:025 (Hui Hee LLC)  
3-8-079:026 through 029 (Kaplan Group LLC)  
✓ 3-8-103:016 through 019 and 030 (Alexander and Baldwin LLC)

## 7.2. Public Review

A notice of availability for the Draft EA and Anticipated Finding of No Significant Impact (DEA-AFONSI) was published by the Environmental Review Program in the December 8, 2022 issue of *The Environmental Notice*. The published notice initiated the statutory 30-day public review and comment period. Copies of the DEA-AFONSI were available at the Wailuku and Hawaii State public libraries during the review and comment period, which ended on January 9, 2023 since January 7, 2023 was a Saturday and the deadline is therefore the next working day.

DLNR's Land Division distributed the DEA notification and collected comments from the other divisions, which are summarized below.

### Division of Aquatic Resources

No objections, no comments, and the division requests the opportunity to review and comment on any changes to the project plan.

### Engineering Division

No additional comments.

### Office of Conservation and Coastal Lands

The project is not in the Conservation District and no comments.

### Division of Forestry and Wildlife

Concurs with the measures included in the Draft EA for avoiding impacts to State-listed species. Additional comments include: (1) guidance to protect the dark, starry skies of Hawaii; (2) a recommendation to have a qualified biologist present during nighttime construction; (3) it is against State law to harm or harass State-listed Hawaiian waterbirds and geese; (4) measures to minimize the movement of plant or soil material between worksites; and (5) considerations pertaining to tree tobacco, which is a host plant for the State-listed Blackburn's Sphinx Moth larvae. The recommendation to conduct another vegetation survey was considered by HDOT but is not warranted.

Three (3) County of Maui departments provided comments that are summarized below.

### Department of Parks and Recreation

No comment at this time.



Police Department

No objections to the project if it meets minimal standards set for by county codes and state laws, and suggests efforts to minimize noise, dust, debris, and the ingress/egress of heavy vehicles and equipment during construction.

Department of Planning

Acknowledges proposed site improvements will address observed deficiencies, address current baseyard operations, and comply with current building codes.

Additional comments include: (1) add the Special Management Area Assessment to Section 5. Permits and Approvals; (2) provide excavation and grading amounts; (3) indicate the status of SHPD's review of the archeological inventory survey; (4) elaborate on the placement of new tanks (i.e., will the existing canopy protect them from the elements); (5) provide an analysis of parking requirements; (6) depict setbacks that conform to existing codes on site plans; (7) update population information in Section 2.13. Socio-Economic Characteristics; and (8) provide a project phasing timeline. As indicated in HDOT's response letter, the timing for site improvements beyond the initial phase is undetermined at this time since funding has not yet been allocated.

Substantive comments were reviewed, evaluated, and incorporated into this Final EA. For example, the excavation and grading estimate requested by the Maui County Planning Department is in Section 1.4. Technical Considerations, comments from DAR are in Section 2.3. Water Resources, and all of the comments from MPD are in Section 2.14. Public Service and Facilities. Relevant comments from MPD also appear in Sections 2.1. Climate, Air Quality and Airspace Considerations, 2.4. Solid Waste and Hazardous Materials, 2.9. Noise, and 2.10. Site Access, Circulation and Traffic. The 20' front yard and 10' side yard setbacks as requested by the Maui County Planning Department are shown in Figure 4 (Site Plan), which also has improved labels for the initial and future improvements. Figure 5 (Parking Analysis) and the Special Management Area Assessment are new additions to Sections 1.4. Technical Considerations and 5. Permits and Approvals, respectively, to address the comments from the Maui County Planning Department. The received comments from all comment periods and responses are included in Appendix F.

Minor revisions and/or clarifications that do not change the discussions of existing conditions appear in Sections 1.2. Site Location and Description, 1.3. Project Need and Objectives, 2.1. Climate, Air Quality and Airspace Considerations, 2.2. Topography, Geology and Soils, 2.5. Natural Hazards, 2.7. Historic and Cultural Resources, and 2.10. Site Access, Circulation and Traffic, 2.11. Utilities (Water, Wastewater, Drainage). For example, the statement in Section 1.2 Site Location and Description about vehicular access to the project now includes the driveway along Mua Street, and Section 1.3. Project Need and Objectives contains additional information pertaining to the inspection of existing storage tanks. Section 2.11. Utilities (Water,

Wastewater, Drainage), Impacts and Mitigation Measures contains additional information about electro-magnetic location (or toning). Section 2.13. Socio-Economic Characteristics contains revised information about schools and updated population data. There are minor revisions in Section 8.0 References, which also has two new entries: the citation for rainfall data in Section 2.1. Climate, Air Quality and Airspace Considerations was inadvertently omitted in the Draft EA, and Section 2.13. Socio-Economic Characteristics now includes population data for 2016 to 2020.

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## 8. REFERENCES

- Cerizo, Kehaulani. 2019, August 3. "Accidental' fire below Pukalani sparks fear, \$1M in MECO damage: 5,300-acre blaze nears containment." *The Maui News*. Retrieved from <https://www.mauinews.com/news/local-news/2019/08/accidental-fire-below-pukalani-sparks-fear-1m-in-meco-damage/>.
- County of Maui Planning Department, Long Range Division. 2010. *County of Maui 2030 General Plan: Countywide Policy Plan*. Downloadable files. Available from <http://co.maui.hi.us/index.aspx?NID=420>.
- County of Maui Planning Department, Long Range Division. 2012. *Maui Island Plan: General Plan 2030*. Downloadable files. Available from <http://co.maui.hi.us/index.aspx?nid=1503>.
- Dagher, Cathleen A. 2021. *A Cultural Impact Assessment Report in Advance of the Proposed Department of Transportation (DOT) Kahului Baseyard Improvements Project, Wailuku (Puali Komohana) Ahupuaa, Wailuku District, Island of Maui, Hawaii [TMK: (2) 3-8-079:018 por.; Formerly TMK: (2) 3-8-001:075]*. (Draft report.). January.
- Giambelluca, T.W., X. Shuai, M.L. Barnes, R.J. Alliss, R.J. Longman, T. Miura, Q. Chen, A.G. Frazier, R.G. Mudd, L. Cuo, and A.D. Businger. 2014. *Evapotranspiration of Hawaii*. Final report submitted to the U.S. Army Corps of Engineers - Honolulu District, and the Commission on Water Resource Management, State of Hawaii. "Interactive Map." Accessed October 20, 2022. Available from <http://evapotranspiration.geography.hawaii.edu/>.
- Guinther, Eric. B, Susan Burr and Bryson Luke. 2020. *A natural resources assessment for proposed facility improvements at the Kahului HDOT Base Yard, Kahului, Maui*. Prepared for EnviroServices and Training Center, LLC. May.
- Hawaii Climate Change Mitigation and Adaptation Commission. 2021. "State of Hawaii Sea Level Rise Viewer." Version 1.07. Prepared by the Pacific Islands Ocean Observing System (PacIOOS) for the University of Hawaii Sea Grant College Program and the State of Hawaii Department of Land and Natural Resources, Office of Conservation and Coastal Lands, with funding from National Oceanic and Atmospheric Administration Office for Coastal Management Award No. NA16NOS4730016 and under the State of Hawaii Department of Land and Natural Resources Contract No. 64064. Accessed October 19, 2022. Available from <http://hawaiisealevelriseviewer.org>.

Hawaii - National Flood Insurance Program. n.d. "Flood Hazard Assessment Tool." Accessed October 20, 2022. Available from <http://gis.hawaiinfip.org/fhat/>.

Hawaii State Civil Defense. n.d. "Tsunami Evacuation Zone Mapping Tool." Accessed October 20, 2022. Available from <https://dod.hawaii.gov/hiema/public-resources/tsunami-evacuation-zone/>.

Imade, Lee. 2018, September 25. "Hurricane Lane impacted August tourism on Maui: Occupancies dipped as storm whipped up wind." *The Maui News*. Retrieved from <https://www.mauinews.com/news/local-news/2018/09/hurricane-lane-impacted-august-tourism-on-maui/>.

Kokua Geotech LLC. 2020. *Geotechnical Engineering Exploration for Site Improvements at DOT Kahului Baseyard, 650 Palapala Drive, TMK: (2) 3-8-079:018 (por.), Kahului, Maui, Hawaii*. Prepared for EnviroServices and Training Center, LLC. August.

PBR Hawaii and Associates, Inc. 2013. *Stormwater Impact Assessments: Connecting primary, secondary and cumulative impacts to Hawaii's Environmental Review Process*. Prepared for the State of Hawaii Office of Planning, Coastal Zone Management Program. Downloadable files. Available from <http://planning.hawaii.gov/czm/initiatives/cumulative-secondary-impact-csi-stormwater-impact-assessment/>.

Schmitt, Robert C. 1977. *Historical Statistics of Hawaii*. Downloadable file. Available from <http://dbedt.hawaii.gov/economic/statistics-data/>.

Stankov, Pavel and Michael Dega. 2022. *Archaeological Assessment for the Storm Water Improvement Project at the Kahului Baseyard, Wailuku Ahupuaa, Puuli Komohana District, Island of Maui [TMK: (2) 3-8-079:018 por.]*. (Draft report.) Prepared for EnviroServices and Training Center, LLC. November.

State of Hawaii, Department of Business, Economic Development and Tourism. 2013. *2012 State of Hawaii Databook*. Downloadable files. Available from <https://dbedt.hawaii.gov/economic/databook/db2012/>.

State of Hawaii, Department of Business, Economic Development and Tourism. 2022. *2021 State of Hawaii Databook*. Downloadable files. Available from <https://dbedt.hawaii.gov/economic/databook/db2021/>.

- State of Hawaii, Department of Health, Clean Water Branch. 2014. "Water Quality Standards Maps." Accessed October 20, 2022. Available from <http://health.hawaii.gov/cwb/site-map/clean-water-branch-home-page/water-quality-standards/>.
- State of Hawaii, Department of Health, Safe Drinking Water Branch. 2013. "UIC Map for the Island of Maui." Accessed October 20, 2022. Available from <http://health.hawaii.gov/sdwb/uicprogram/>.
- State of Hawaii, Department of Land and Natural Resources, Commission on Water Resource Management. 2008. *Ground Water Hydrologic Unit Map - Island of Maui*. Accessed October 20, 2022. Available from [http://www.state.hi.us/dlnr/cwrm/resources\\_mapsillustrations.htm](http://www.state.hi.us/dlnr/cwrm/resources_mapsillustrations.htm).
- State of Hawaii, Department of Transportation, Airports Division. n.d. "Hawaii Aviation: An Archive of Historic Photos and Facts." Accessed October 20, 2022. Available from <http://hawaii.gov/hawaiiaviation/hawaii-airfields-airports/maui/maui-airport-puunene>.
- State of Hawaii, Department of Transportation, Highways Division. 2014. *Draft Environmental Assessment for Kahului Bay Shoreline Protection Project, Kahului, Maui, Hawaii*. January.
- U.S. Department of Agriculture, Natural Resources Conservation Service. n.d. "Web Soil Survey." Accessed October 20, 2022. Available from <http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>.
- U.S. Department of Agriculture, Soil Conservation Service, in cooperation with the University of Hawaii Agricultural Experiment Station. 1972. *Soil Survey of the Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii*. August.
- Western Regional Climate Center. n.d. *Cooperative Climatological Data Summaries (Temperature and Precipitation), Western US Cooperative Observer Program Station Map*. "Kahului WSO AP 398, COOP ID: 512572 (4/1/1954 to 3/31/2013)." Accessed October 20, 2022. Available from <http://www.wrcc.dri.edu/summary/Climsmhi.html>.

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## **APPENDIX A**

Site Photographs



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HDOT Kahului Baseyard Improvements Project – Project Photos



Photo 1: Palapala Drive (West) entrance



Photo 2: Palapala street looking west from Baseyard entrance

HDOT Kahului Baseyard Improvements Project – Project Photos



Photo 3: Mua Street (North) entrance



Photo 4: Fueling station. Looking southwest.



HDOT Kahului Baseyard Improvements Project – Project Photos



Photo 5: Fueling Station pumps.



Photo 6: Existing corroded fuel pump.

HDOT Kahului Baseyard Improvements Project – Project Photos



Photo 7: Tank remote fill connection.



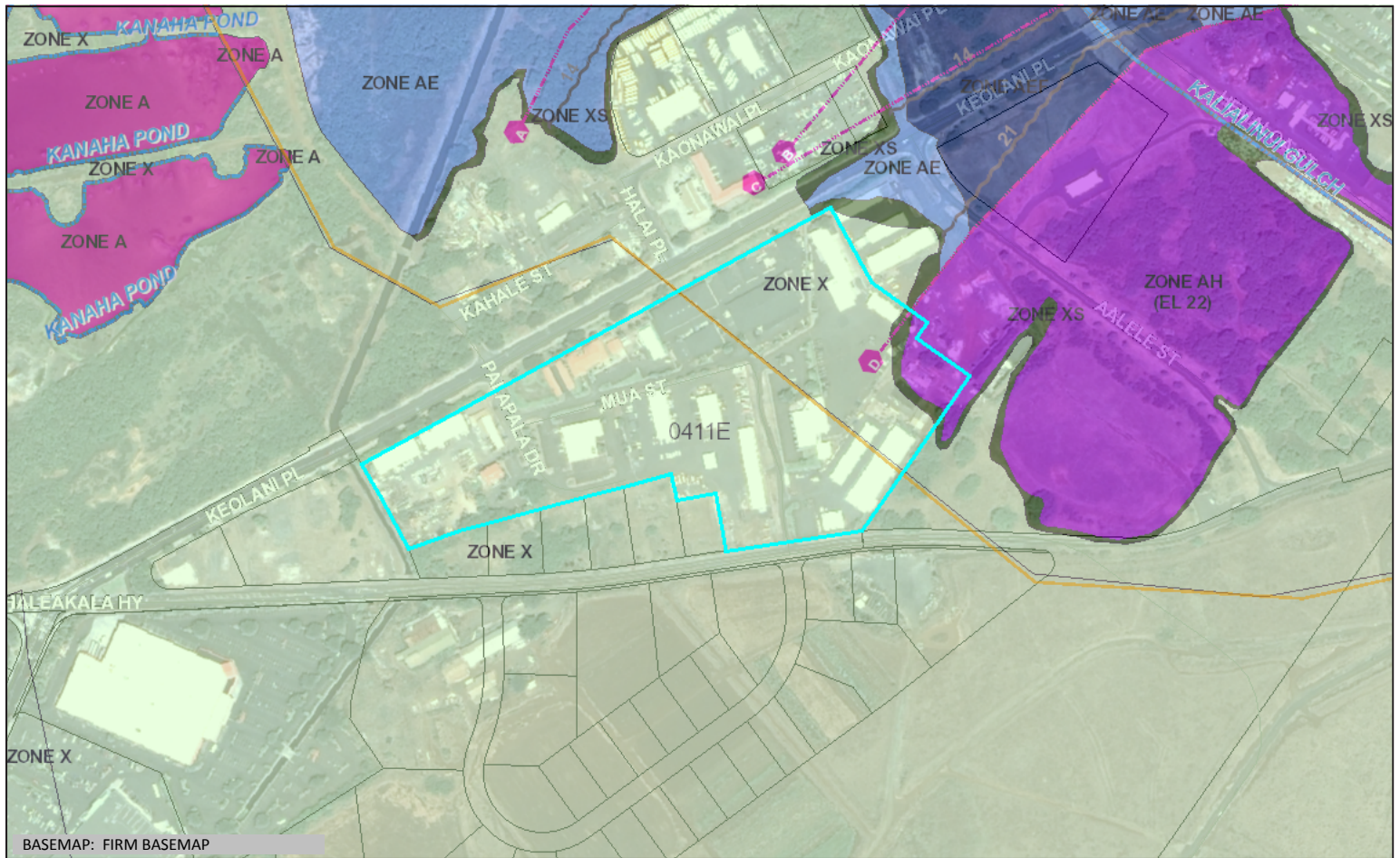
Photo 8: Electrical panels 'D(1)' 'D(2)' and 'C.' Examples of electrical panels in need of replacing.

## **APPENDIX B**

Flood Hazard Assessment Report

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# Flood Hazard Assessment Report

www.hawaiiinfo.org

## Property Information

COUNTY: MAUI  
 TMK NO: (2) 3-8-079:018  
 WATERSHED: KALIALINUI  
 PARCEL ADDRESS: 614 PALAPALA DR  
 KAHULUI, HI 96732

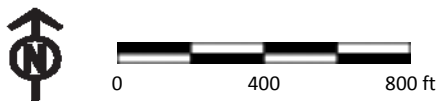
## Notes:

## Flood Hazard Information

FIRM INDEX DATE: NOVEMBER 04, 2015  
 LETTER OF MAP CHANGE(S): 14-09-2279P, 20-09-0429P  
 FEMA FIRM PANEL: 1500030411E  
 PANEL EFFECTIVE DATE: SEPTEMBER 25, 2009

THIS PROPERTY IS WITHIN A TSUNAMI EVACUATION ZONE: YES  
 FOR MORE INFO, VISIT: <http://www.scd.hawaii.gov/>

THIS PROPERTY IS WITHIN A DAM EVACUATION ZONE: YES (MA-0077; MA-0078; MA-0082)  
 FOR MORE INFO, VISIT: <http://dlnreg.hawaii.gov/dam/>



*Disclaimer: The Hawaii Department of Land and Natural Resources (DLNR) assumes no responsibility arising from the use, accuracy, completeness, and timeliness of any information contained in this report. Viewers/Users are responsible for verifying the accuracy of the information and agree to indemnify the DLNR, its officers, and employees from any liability which may arise from its use of its data or information.*

*If this map has been identified as 'PRELIMINARY', please note that it is being provided for informational purposes and is not to be used for flood insurance rating. Contact your county floodplain manager for flood zone determinations to be used for compliance with local floodplain management regulations.*

## FLOOD HAZARD ASSESSMENT TOOL LAYER LEGEND

(Note: legend does not correspond with NFHL)

**SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD** - The 1% annual chance flood (100-year), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. SFHAs include Zone A, AE, AH, AO, V, and VE. The Base Flood Elevation (BFE) is the water surface elevation of the 1% annual chance flood. Mandatory flood insurance purchase applies in these zones:

	<b>Zone A:</b> No BFE determined.
	<b>Zone AE:</b> BFE determined.
	<b>Zone AH:</b> Flood depths of 1 to 3 feet (usually areas of ponding); BFE determined.
	<b>Zone AO:</b> Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined.
	<b>Zone V:</b> Coastal flood zone with velocity hazard (wave action); no BFE determined.
	<b>Zone VE:</b> Coastal flood zone with velocity hazard (wave action); BFE determined.
	<b>Zone AEF:</b> Floodway areas in Zone AE. The floodway is the channel of stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without increasing the BFE.

**NON-SPECIAL FLOOD HAZARD AREA** - An area in a low-to-moderate risk flood zone. No mandatory flood insurance purchase requirements apply, but coverage is available in participating communities.

	<b>Zone XS (X shaded):</b> Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.
	<b>Zone X:</b> Areas determined to be outside the 0.2% annual chance floodplain.

## OTHER FLOOD AREAS

	<b>Zone D:</b> Unstudied areas where flood hazards are undetermined, but flooding is possible. No mandatory flood insurance purchase applies, but coverage is available in participating communities.
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## **APPENDIX C**

Biological Survey Report by AECOS, Inc.

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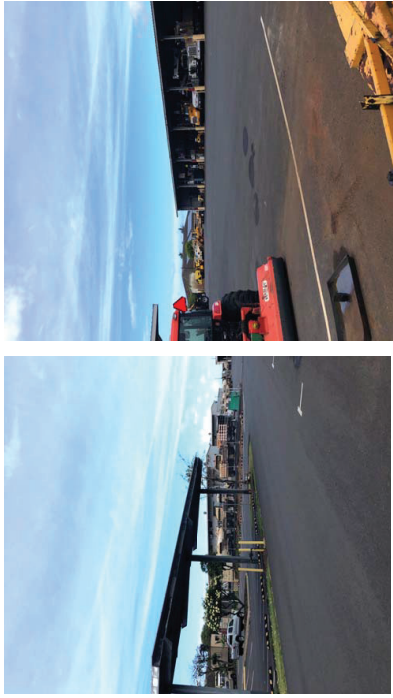


Figure 3. Two views of the HDOT Kahului Base Yard showing typical conditions in a well-maintained, light industrial setting.

AECOS biologists established two avian point-count stations on the Project site. An eight-minute count was conducted at each station in the early morning hours when birds are most active. Birds were identified to species by visual observation, aided by Leica 8X42 binoculars, and by listening for vocalizations.

The avian phylogenetic order and nomenclature used in this report follow the AOS *Check-List of North and Middle American Birds* 2018 (Chesser et al., 2019) and VanderWerf, et al. (2018).

## Results

### Vegetation and flora

Overall, vegetation is sparse on the site, limited to ornamental plantings and weedy growth in unpaved strips of ground, such as found along the security fencing (Figures 4 and 5).



Figure 4. Unpaved ground between a building and the security fence along Kuleana Street.

A checklist of all the vascular plants observed on the property is provided as Table 1. A total of 71 taxa was recorded. Aside from several (4%) Polynesian introduced plants (*ti* or *Cordyline fruticosa*, coconut, and banana), two (3%) indigenous species (*uhaloa* or *Waltheria indica* and *kīpūkai* or *Heliotropium curassavicum*) were recorded. No native endemic species occur on the property. The remaining species (93%) on the list are all nonnative, naturalized or ornamental plants.

Table 1. Checklist of plants recorded for Hawai'i Department of Transportation Kahului Base Yard, Maui.

Family Species	Common name	STATUS	ABUNDANCE	NOTES
<b>PTERIDOPHYTES - FERNS &amp; FERN ALLIES</b>				
NEPHROLEPIDACEAE				
<i>Nephrolepis cf. multiflora</i> F.M. Jarrett ex C.V. Morton	---	Nat	R	<1>
PTERIDACEAE				
<i>Pityrogramma austroamericana</i> Domin	gold fern	Nat	R	
<i>Pteris vittata</i> L.	ladder brake	Nat	R	
<b>FLOWERING PLANTS - DICOTS</b>				
AMARANTHACEAE				
<i>Alternanthera pungens</i> Kunth	khaki weed	Nat	U	
<i>Amaranthus spinosus</i> L.	spiny amaranth	Nat	C	
<i>Amaranthus viridus</i> L.	slender amaranth	Nat	R	
APOCYNACEAE				
<i>Plumeria rubra</i> L.	graveyard flower	Orn	R	
ASTERACEAE				
<i>Ageratum conyzoides</i> L.	<i>maile ho hono</i>	Nat	O	
<i>Bidens pilosa</i> L.	Spanish needle	Nat	U	
<i>Calyptocarpus vialis</i> Less.	---	Nat	O	
<i>Conyza canadensis</i> (L.) Cronq.	horseweed	Nat	U	
<i>Crassocephalum crepidioides</i> (Benth.) S. Moore	---	Nat	R	
<i>Emilia fosbergii</i> Nicolson	Flora's paintbrush	Nat	U	
<i>Pluchea indica</i> (L.) Less.	Indian fleabane	Nat	R	
<i>Senecio madagascariensis</i> Poir.	fireweed	Nat	R	
<i>Sphagneticola trilobata</i> L.	wedelia	Nat	R	
<i>Synedrella nodiflora</i> (L.) Gaertn.	node weed	Nat	R	
<i>Tridax procumbens</i> L.	coat buttons	Nat	O	
<i>Verbesina encelioides</i> (Cav.) Benth. & Hook.	golden crown-beard	Nat	A	
<i>Youngia japonica</i> (L.) DC.	Oriental hawksbrd	Nat	R	
BIGNONIACEAE				
<i>Tabebuia heterophylla</i> (A.P. de Candolle) Britton	pink-tecoma	Orn	R	

Table 1 (continued).

Family Species	Common name	STATUS	ABUNDANCE	NOTES
BORAGINACEAE				
<i>Heliotropium curassavicum</i> L.	<i>kipikai</i>	Ind	R	
<i>Heliotropium procumbens</i> Mill.	---	Nat	O	
BRASSICACEAE				
<i>Lepidium virginicum</i> L.	---	Nat	O	
CAPPARACEAE				
<i>Cleome gynandra</i> L.	wild spider flower	Nat	A	
CHENOPODIACEAE				
<i>Chenopodium carinatum</i> R. Br.	Mexican tea	Nat	A	
CLUSIACEAE				
<i>Clusia rosea</i> Jacq.	autograph tree	Nat	U	
CONVOLVULACEAE				
<i>Ipomoea triloba</i> L.	little bell	Nat	U	
CUCURBITACEAE				
<i>Momordica charantia</i> L.	balsam pear	Nat	O	
EUPHORBIACEAE				
<i>Euphorbia hirta</i> L.	garden spurge	Nat	C	
<i>Euphorbia hypericifolia</i> L.	graceful spurge	Nat	C	
<i>Euphorbia hyssopifolia</i> L.	---	Nat	O	
FABACEAE				
<i>Bauhinia</i> sp.	orchid tree	Orn	R	
<i>Chamaecrista nictitans</i> (L.) Moench	partridge pea	Nat	R	
<i>Delonix regia</i> (Bojer ex Hook.) Raf.	royal poinciana	Nat	R	
<i>Desmodium incanum</i> DC.	Spanish clover	Nat	R	
<i>Indigofera hendecaphylla</i> Jacq.	creeping indigo	Nat	U	
<i>Indigofera suffruticosa</i> Mill.	indigo	Nat	R	
<i>Leucaena leucocephala</i> (Lam.) deWit	<i>koa haole</i>	Nat	R	
<i>Macrotidium atropurpureum</i> (DC.) Urb.	---	Nat	U	
LAMIACEAE				
<i>Leonotis nepetifolia</i> (L.) R. Br.	lion's ear	Nat	U	
MALVACEAE				
<i>Hibiscus rosa-sinensis</i> L.	Chinese hibiscus	Orn	R	
<i>Malva parviflora</i> L.	cheese weed	Nat	A	
<i>Malvastrum coromandelianum</i> (L.) Garcke	false mallow	Nat	A	
<i>Waltheria indica</i>	'uhaloa	Ind?	R	
MORNINGACEAE				
<i>Morningia oleifera</i> Lam.	horseradish tree	Orn	R	

Table 1 (continued).

Family	Species	Common name	STATUS	ABUNDANCE	NOTES
NYCTAGINACEAE	<i>Boerhavia coccinea</i> Mill.	false <i>alena</i>	Nat	C	
PAPAVERACEAE	<i>Argemone mexicana</i> L.	Mexican poppy	Nat	O	
PHYLLANTHACEAE	<i>Phyllanthus debilis</i> Klein ex Willd.	niruri	Nat	C	
PLANTAGINACEAE	<i>Plantago lanceolata</i> L.	nrv-leaved plantain	Nat	R	
PORTULACAEAE	<i>Portulaca oleracea</i> L.	pigweed	Nat	C	
RUBIACEAE	<i>Ixora</i> sp.	ixora	Orn	R	
RUTACEAE	<i>Otalenandia coymbosa</i> L.	---	Nat	U	
SAPINDACEAE	<i>Citrus</i> sp.	---	Orn	R	<1>
SAPINDACEAE	<i>Filicium decipiens</i> (Wight & Arnott) Thwaites	fern tree	Orn	R	
ZYGOPHYLLACEAE	<i>Tribulus terrestris</i> L.	puncture vine	Nat	O	
<b>FLOWERING PLANTS – MONOCOTS</b>					
AGAVACEAE	<i>Cordylone fruticosa</i> (L.) A. Chev.	ki, ti	Pol	U	
ALOEACEAE	<i>Dracaena marginata</i> Lam.	money tree	Orn	U	
ARECACEAE	<i>Aloë vera</i> (L.) N.L. Burm.	aloe vera	Orn	R	
CYPERACEAE	<i>Cocos nucifera</i> L.	coconut palm; <i>niu</i>	Pol	R	
MUSACEAE	<i>Cyperus rotundus</i> L.	purple nut sedge	Nat	O	
POACEAE (GRAMINEAE)	<i>Musa acuminata</i> Colla hybrid	banana	Pol	U	
	<i>Cenchrus echinatus</i> L.	sandbur	Nat	O	
	<i>Chloris barbata</i> (L.) Sw.	swollen fingergrass	Nat	C	
	<i>Gynodon dactylon</i> (L.) Pers.	Bermuda grass	Nat	C	
	<i>Eileusine indica</i> (L.) Gaertn.	wiregrass	Nat	U	
	<i>Eragrostis pectinacea</i> (Michx.) Nees	Carolina lovegrass	Nat	C	
	<i>Megathyrsus maximus</i> (Jacq.) B.K. Simon & W.L. Jacobs	Guinea grass	Nat	C	
	<i>Melinis repens</i> (Willd.) Zizka	Natal redtop	Nat	O	

Table 1 (continued).

Family	Species	Common name	STATUS	ABUNDANCE	NOTES
POACEAE (cont.)	<i>Setaria verticillata</i> (L.) P. Beauv.	bristly foxtail	Nat	O	
Key to Table 1.					
Status = distributional status					
Ind = Indigenous; native to Hawaii, but not unique to the Hawaiian Islands.					
Nat = Naturalized, exotic, plant introduced to the Hawaiian Islands since 1778 and well-established.					
Orn. = exotic, ornamental or cultivated; plant not naturalized (not well-established outside of cultivation).					
Pol. = Early Polynesian introduction ("canoe plant").					
Abundance = occurrence ratings for plants in the Project area on May 12, 2020					
R - Rare - only one or two plants seen.					
U - Uncommon - several to a dozen plants observed.					
O - Occasional - found regularly, but not abundant anywhere.					
C - Common - considered an important part of the vegetation and observed numerous times.					
A - Abundant - found in large numbers; may be locally dominant.					
Notes:					
<1> - Plant without clearly identifying feature; identification uncertain.					



Figure 5. An area of ornamental plantings at the entrance to the District Office building.



Avian Survey

A total of 74 individual birds representing 12 species was recorded from two point-count stations at the Project site (see Table 2). Of the species counted, all are common non-native (alien) species established in the Hawaiian Islands.

The avian diversity and densities observed from the survey are consistent with the disturbed lowland and developed environments present at the Project site. Common Myna (*Acridotheres tristis*), House Sparrow (*Passer domesticus*), and House Finch (*Haemorhous mexicanus*) were the most common species observed from the point-counts, and consisted of nearly two-thirds (64%) of the total birds counted.

Table 2. Avian species detected on May 12, 2020 survey of the HDOT base yard in Kahului, Maui.

ORDER FAMILY Species	Common Name	Status	Relative Abundance
<b>GALLIFORMES</b>			
<b>PHASIANIDAE</b>			
<i>Francolinus pondicerianus</i>	Gray Francolin	NN	1.0
<i>Francolinus francolinus</i>	Black Francolin	NN	0.5
<i>Gallus gallus</i>	Domestic Chicken	NN	5.0
<b>COLUMBIFORMES</b>			
<b>COLUMBIDAE</b>			
<i>Streptopelia chinensis</i>	Spotted Dove	NN	0.5
<i>Geopelia striata</i>	Zebra Dove	NN	0.5
<b>PELECANIFORMES</b>			
<b>ARDEIDAE</b>			
<i>Bubulcus ibis</i>	Cattle Egret	NN	1.0
<b>PASSERIFORMES</b>			
<b>ZOSTEROPIDAE</b>			
<i>Zosterops japonicus</i>	Japanese White-eye	NN	1.5
<b>STURNIDAE</b>			
<i>Acridotheres tristis</i>	Common Myna	NN	9.5
<b>CARDINALIDAE</b>			
<i>Cardinalis cardinalis</i>	Northern Cardinal	NN	1.5
<b>FRINGILLIDAE</b>			
<i>Haemorhous mexicanus</i>	House Finch	NN	5.5
<b>PASSERIDAE</b>			
<i>Passer domesticus</i>	House Sparrow	NN	8.5

Table 2 (continued).

ORDER FAMILY Species	Common Name	Status	Relative Abundance
<b>ESTRILDIDAE</b>			
<i>Lonchura atricapilla</i>	Chestnut Munia	NN	2.0
Legend to Table 2.			
Status: NN = Naturalized, non-native species (introduced)			
Relative Abundance: Species count / number of point-count stations (n=2)			

Discussion

The entire site is one that fits the light industrial use of the area, and only limited weedy plant growth and landscaping constitute the “natural” environments present. No wetlands or streams occur on or near the site. Given the limited structural (construction) changes anticipated on an already fully developed site, the upgrades to the fueling station and replacement of a vehicle wash rack will have no impact on natural resources in the project area. Proximity to Kanahā Pond State Wildlife Sanctuary<sup>1</sup> is not a concern as the proposed changes to the HDOT site will not alter Project site conditions from those obtaining at present and not constitute an attraction for wildlife from the sanctuary or from the nearby Kaliainui Canal.

Floral Resources

No plants of conservation concern or enjoying statutory protection (that is, listed as threatened or endangered; HDLNR, 1998; USFWS, nd) were noted in the survey and, given the highly disturbed nature of the entire site and adjacent lands, would not be expected to occur here.

<sup>1</sup> Closest distances from the wash rack to the shore of Observation Pond at Kanahā Pond Wildlife Refuge is 450 m (1480 ft); to the fueling dock, 460 m (1510 ft). Ephemeral ponds at the Sanctuary are a little closer: around 380 m (1250 ft) from the Project structures to Waiikiki Ponds. The Kaliainui Canal, at its closest point, is 300 m (980 ft) from the fueling station and 320 m (1050 ft) from the wash rack.



### Invertebrate Resources

Blackburn's sphinx moth (*Manduca blackburnii*) is a federally listed insect found in Hawai'i (USFWS, 2000) and a known population occurs in the general area east of Kahului Airport. The caterpillar of this moth feeds exclusively on plants in the Family Solanaceae (USFWS, 2003; HDLNR, 2005) and, where found, caterpillars are often associated with the widely-distributed, non-native tree tobacco plant (*Nicotiana glauca*). Tree tobacco was not observed in our survey of the HDOT property, nor were any plant species classified in the Family Solanaceae (see Table 1). Therefore, no threat to this species is anticipated.

### Avian Resources

No avian species currently listed, or proposed for listing under either the federal or State of Hawai'i endangered species statutes was detected during the course of this survey (HDLNR, 2015; USFWS, nd). The only design concern that might deserve attention relates to outdoor lighting incorporated into the structural changes proposed. The following recommendations should be followed:

- Deleterious impacts to transiting seabirds can be avoided if construction occurs during daylight hours, or all outdoor lighting erected for night-time construction is fully "dark sky compliant" (HDLNR-DOFAW, 2016). All permanent lighting incorporated into the wash rack and fueling station should be dark sky compliant.

### References

- Chesser, R. T., K. J. Burns, C. Cicero, J. L. Dunn, A. W. Kratter, I. J. Lovette, P. C. Rasmussen, J. V. Remsen, Jr., D. F. Stoltz, and K. Winker. 2019. Check-list of North American Birds (online). American Ornithological Society. Available online at URL: <http://checklist.aou.org/taxa>; last accessed on April 23, 2020.
- Hawaii Department of Land and Natural Resources (HDLNR). 1998. Indigenous Wildlife, Endangered And Threatened Wildlife And Plants, And Introduced Wild Birds. Department of Land and Natural Resources. State of Hawaii. Administrative Rule §13-134-1 through §13-134-10, dated March 02, 1998.

Hawaii Department of Land and Natural Resources (HDLNR). 2005. Terrestrial Invertebrates. Blackburn's Sphinx Moth, *Manduca blackburnii*. Hawai'i's Comprehensive Wildlife Conservation Strategy, October 1, 2005. Available online at URL: <https://dlnr.hawaii.gov/wildlife/files/2013/09/Fact-Sheet-Blackburns-Sphinx-Moth.pdf>. Last visited on April 2, 2020.

\_\_\_\_\_. 2015. Hawai'i Administrative Rules, Title 13, Department of Land and Natural Resources, Subtitle 5 Forestry and Wildlife, Part 2 Wildlife, Chapter 124, Indigenous Wildlife, Endangered and Threatened Wildlife, Injurious Wildlife, Introduced Wild Birds, and Introduced Wildlife. February 27, 2015. 16 pp.

Hawai'i Department of Land and Natural Resources-Division of Forestry and Wildlife (HDLNR-DOFAW). 2016. Wildlife Lighting. PDF available at URL: <http://dlnr.hawaii.gov/wildlife/files/2016/03/DOC439.pdf>; last accessed on April 2, 2020.

Imada, C. T. 2012. Hawaiian Native and Naturalized Vascular Plants Checklist (December 2012 update). *Bishop Museum Tech. Rept.* 60. 380 pp.

Palmer, D. D. 2003. *Hawai'i's ferns and fern allies*. University of Hawaii Press, Honolulu. 324 pp.

U.S. Fish and Wildlife Service (USFWS). 2000. Endangered and Threatened Wildlife and Plants; Determination of Endangered Status for Blackburn's Sphinx Moth from the Hawaiian Islands, *Federal Register*, 65 (21; February 1, 2000): 4770-4779.

\_\_\_\_\_. 2003. Draft recovery plan for the Blackburn's Sphinx Moth (*Manduca blackburnii*). USFWS, Portland, Oregon. September 2005.

\_\_\_\_\_. undated (nd). USFWS Endangered Species. Available online at URL: <https://www.fws.gov/endangered/>; Last visited on December 13, 2019.

VanderWerf, E. A., R. E. David, P. Donaldson, R. May, H. D. Pratt, P. Pyle, and L. Tanino. 2018. First report of the Hawaii Bird Records Committee: records reviewed 2014–2016. *Western Birds*, 49(1):2-23.

Wagner, W. L., D. R. Herbst and S. H. Sohmer. 1990. *Manual of the Flowering Plants of Hawai'i: Volume I and II*. Bishop Museum Special Publication 83. University of Hawai'i Press. 1853 pp.

Wagner, W. L., and D. R. Herbst. 1999. *Supplement to the Manual of the flowering plants of Hawaii*; pp. 1855-1918. *In*: Wagner, W. L., D. R. Herbst, and S. H. Sohmer, *Manual of the flowering plants of Hawaii*. Revised edition. 2 vols. University of Hawaii Press and B.P. Bishop Museum.

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## **APPENDIX D**

Archaeological Assessment Report by Scientific Consultant Services, Inc.

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**ARCHAEOLOGICAL ASSESSMENT FOR THE  
STORM WATER IMPROVEMENT PROJECT AT THE  
KAHULUI BASEYARD,  
WAILUKU AHUPUA‘A, PU‘ALI KOMOHANA DISTRICT,  
ISLAND OF MAUI [TMK: (2) 3-8-079:018 por.]**

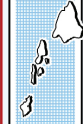
Prepared by  
**Pavel Stankov, M.A.**  
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**Michael Dega, Ph.D.**

NOVEMBER 2022

**DRAFT**

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**ABSTRACT**

Scientific Consulting Services, Inc. conducted an archaeological inventory survey of a previously developed 5-acre property in the industrial district south of Kanahā Pond [TMK: (2) 3-8-002:051]. The work follows a previous literature review and field inspection (Peralta and Dega, in review) and a cultural impact assessment (Dagher 2021). The LRFI did not identify any properties of cultural significance, and the current survey confirmed the negative results. The project area is a built environment. Ground testing consisted of the excavation of 12 exploratory trenches whose stratigraphy has been documented in this report. Because of the lack of findings, SCS does not recommend any further archaeological work for the scheduled replacement of two 2,000-gallon above-ground fuel tanks.

**TABLE OF CONTENTS**

INTRODUCTION ..... 1

ENVIRONMENTAL SETTING ..... 5

LOCATION ..... 5

GEOLOGY AND TOPOGRAPHY ..... 6

CLIMATE AND HYDROLOGY ..... 6

SOILS AND VEGETATION ..... 7

HISTORICAL CONTEXT ..... 10

PRE-CONTACT SETTLEMENT AND ECONOMY ..... 10

PRE-CONTACT POLITICAL HISTORY ..... 11

EARLY POST-CONTACT HISTORY ..... 12

THE MĀHELE ..... 13

LATE POST-CONTACT HISTORY ..... 14

MODERN PERIOD TO PRESENT ..... 15

PREVIOUS ARCHAEOLOGY ..... 19

CONNOLLY (1981) ..... 19

COASTAL STUDIES (KEAU 1981, WELCH 1988A, FREDERICKSEN 2003) ..... 19

HC&S SUGARCANE LANDS (FREDERICKSEN AND FREDERICKSEN 1988, 1989) ..... 25

WELCH (1988B) ..... 25

FOLK AND HAMMATT (1991) ..... 25

GOODFELLOW (1991) ..... 25

SINOTO & PANTALEO (1992) ..... 26

KENNEDY ET AL. (1993) ..... 26

TOMONARI-TUGGLE & WELCH (1995) ..... 26

BURGESS & SPEAR (1997) ..... 26

MCINTOSH & CLEGHORN (2003) ..... 26

DEGA & RISEDORF (2004) ..... 26

SHEFCHICK & DEGA (2007) ..... 27

FREDERICKSEN 2008 ..... 27

MADEUS & FREDERICKSEN (2008) ..... 27

MEDRANO & DEGA (2012) ..... 27

BASSFORD & DEGA (2012) ..... 27

FREY & FREDERICKSEN (2014) ..... 28

PERZINSKI & DEGA (2014) ..... 28

MEDRANO & DEGA (2015) ..... 28

DAGHER & DEGA (2018) ..... 28

KINGSBURY & DEGA (2019) ..... 28

KANAHĀ HOTEL (KEHAJIT & DEGA 2020, RUBERTI ET AL. 2021, IN REVIEW) ..... 29

PERALTA & DEGA (2020) ..... 29

LEE & DEGA (2021) ..... 29

LEE & DEGA (2022, IN REVIEW) ..... 29

ARCHAEOLOGICAL METHODOLOGY ..... 29

FIELD METHODS ..... 29

LABORATORY METHODS ..... 30

RESULTS ..... 33

STRATIGRAPHIC TRENCH 1 ..... 33

STRATIGRAPHIC TRENCH 2 ..... 42

STRATIGRAPHIC TRENCH 3 ..... 42

STRATIGRAPHIC TRENCH 4 ..... 47

STRATIGRAPHIC TRENCH 5 ..... 47

STRATIGRAPHIC TRENCH 6 ..... 52

STRATIGRAPHIC TRENCH 7 ..... 52

STRATIGRAPHIC TRENCH 8 ..... 58

STRATIGRAPHIC TRENCH 9 ..... 58

STRATIGRAPHIC TRENCH 10 ..... 64

STRATIGRAPHIC TRENCH 12 ..... 64

STRATIGRAPHIC TRENCH 13 ..... 69

CONCLUSIONS AND RECOMMENDATIONS ..... 69

REFERENCES ..... 72

APPENDIX A: CORRESPONDENCE WITH THE STATE HISTORIC PRESERVATION DIVISION REGARDING PROJECT NO. 2021PR00447 ..... A

APPENDIX B: ELECTRICAL SITE PLAN ..... B

**LIST OF FIGURES**

Figure 1: A portion of a composite 1997 USGS topographic map (Waituku, Paia III quadrangles) showing the location of the project area ..... 2

Figure 2: Map of Tax Map Key (2) 3-8-079 showing the location of the project area in context ..... 3

Figure 3: A Google Earth aerial photograph (imagery date: June 15, 2019) showing the project area in relation to Kahului to the west, Kanahā Pond to the northwest, and Kahului Airport to the northeast ..... 4

Figure 4: A Google Earth aerial photograph (imagery date: June 15, 2019) showing soil series in the vicinity of the project area ..... 8

Figure 5: A 2005 aerial view of Kanahā Pond and Kahului Bay with the project area superimposed in yellow, view to northwest (Starr and Starr 2005) ..... 9

Figure 6: *Japanese Laborers on Spreckelsville Plantation* by Joseph Dwight Strong (oil on canvas, 1885) ..... 16

Figure 7: Bird's eye view of sugar mill, Spreckelsville (photograph, 1890) ..... 17

Figure 8: A portion of a 1905 Aerial photograph of Kanahā Pond and a part of Kahului Airport including the project area ..... 18

Figure 9: A portion of a 2017 USGS topographic map showing previous archaeology in the vicinity of the project area ..... 20

Figure 10: Previously identified SHIP Sites in the vicinity of the project area (superimposed in yellow) ..... 21

Figure 11: Proposed trench locations according to the accepted by SHPD AIS Consult Letter (Dega 2021) ..... 31

Figure 12: Actual trench locations excavated on September 28, 2022 (image courtesy of HDOT) ..... 32

Figure 13: Photograph of the Kahului Baseyard lot taken on June 11, 2020 (view to North) ..... 34

Figure 14: Photograph of the existing fuel tank of Kahului Baseyard taken on June 11, 2020 (view to East) ..... 35

Figure 15: Photograph of Kahului Baseyard lot taken on June 11, 2020 (view to Southeast) ..... 36

Figure 16: Photograph of the warehouse building taken on June 11, 2020 (view to Northeast) ..... 37

Figure 17: Photograph of equipment located in the Kahului Baseyard lot taken on June 11, 2020 (view to Northeast) ..... 38

Figure 18: Photograph overview of the project area taken on June 11, 2020 (view to Southeast) ..... 39

## INTRODUCTION

At the request of Brant Tanaka of EnviroServices & Training Center, LLC, Scientific Consulting Services, Inc. (SCS) conducted an archaeological inventory survey (AIS) of a previously developed 5-acre property in the industrial district between Kahului and Maui Airport (Kahului Airport) in Wailuku Ahupua'a, Pūhāi, Komohana District, Maui [TMK: (2) 3-8-002:051] (Figures 1 to 3). SCS also completed a literature review and field inspection (LRFI; Peralta and Dega, July 2020, in review) and a cultural impact assessment (Dagher, February 2021). The LRFI did not identify any properties of cultural significance.

The Hawai'i Department of Transportation (HDOT) proposes that the existing facility be upgraded. The Storm Water Improvement project drafted by Limitaco Consulting include the replacement of the two 2,000-gallon (7571-liter) above-ground fuel tanks with one 5,000-gallon (18, 927-liter) tank for diesel fuel and another 2,000-gallon tank for gasoline. The secondary containment system will remain in place. Future upgrades include replacement of the fuel station canopy, replacement of the vehicle washing system, and installation of associated utility improvements including a waterline connection, subsurface drainage, and electrical service connection. The existing 1.3-centimeter (½-inch) water supply line will be capped and replaced by a 5 cm (2-in) line for a drive-through wash rack. This requires trenching to establish connection with an existing 20.3 cm (8-in) water line that runs along the southern side of the fueling station. In addition, as the County of Maui requires that vehicle washing drainage is not disposed of in the municipal sewer system, the project proposes the use of a recycled water system. The estimated 500 to 1000 gallons (1,892 to 3,785 liters) of backwash water will be disposed of in a new drywell or another subsurface infiltration system near the wash rack.

The project requires excavation for the fuel station canopy and concrete pad, wash rack, and utilities. The maximum depth of disturbance for the fuel canopy support columns will be 6 m (20 ft), and the wash rack will require excavation of 10 feet for the underground wastewater collection system. More specifically, the wash area will entail excavation of a pad measuring 22.9 m by 13.7 m, or 313 m<sup>2</sup> (75 ft by 45 ft; 1,028 ft). The fueling area will require drilling to 6 m (20 ft) below surface in the center where foundations for a cantilevered canopy will be constructed. Additional electrical work will be conducted throughout the project area.

By a letter dated May 11, 2021 (Project No: 2021PR00447, Submittal No: 2021PR00447.001, Doc No: 2105AM09; Appendix A), the State Historic Preservation Division (SHPD) requested archeological work because of the lack of a previous AIS in the project area. According to SHPD,

Figure 19: ST-1 stratigraphic profile of the east wall.....	40
Figure 20: Photograph of the ST-1 east wall taken on September 28, 2022.....	41
Figure 21: ST-2 stratigraphic profile of the south wall.....	43
Figure 22: Photograph of the ST-2 south wall taken on September 28, 2022.....	44
Figure 23: ST-3 stratigraphic profile of the south wall.....	45
Figure 24: Photograph of the ST-3 south wall taken on September 28, 2022.....	46
Figure 25: ST-4 stratigraphic profile of the south wall.....	48
Figure 26: Photograph of the ST-4 south wall taken on September 28, 2022.....	49
Figure 27: ST-5 stratigraphic profile of the south wall.....	50
Figure 28: Photograph of the ST-5 south wall taken on September 28, 2022.....	51
Figure 29: ST-6 stratigraphic profile of the south wall.....	53
Figure 30: Photograph of the ST-6 south wall taken on September 28, 2022.....	54
Figure 31: ST-7 stratigraphic profile of the south wall.....	55
Figure 32: Plan view photograph of ST-7 taken on September 28, 2022 with the electric conduit visible in the foreground.....	56
Figure 33: Photograph of the ST-7 south wall taken on September 28, 2022.....	57
Figure 34: ST-8 stratigraphic profile of the east wall.....	59
Figure 35: Plan view photograph of ST-8 taken on September 28, 2022 with the concrete kicker visible in the foreground.....	60
Figure 36: Photograph of the ST-8 east wall taken on September 28, 2022 with the concrete kicker visible in the foreground.....	61
Figure 37: ST-9 stratigraphic profile of the east wall.....	62
Figure 38: Photograph of the ST-9 east wall taken on September 28, 2022.....	63
Figure 39: ST-10 stratigraphic profile of the east wall.....	65
Figure 40: Photograph of the ST-10 east wall taken on September 28, 2022.....	66
Figure 41: ST-12 stratigraphic profile of the south wall.....	67
Figure 42: Photograph of the ST-12 south wall taken on September 28, 2022.....	68
Figure 43: ST-12 stratigraphic profile of the west wall.....	70
Figure 44: Photograph of the ST-12 west wall taken on September 28, 2022.....	71

## LIST OF TABLES

Table 1: Previous archaeology conducted in the project area and its vicinity.....	22
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Figure 1: A portion of a composite 1997 USGS topographic map (Wailuku, Paia III quadrangles) showing the location of the project area

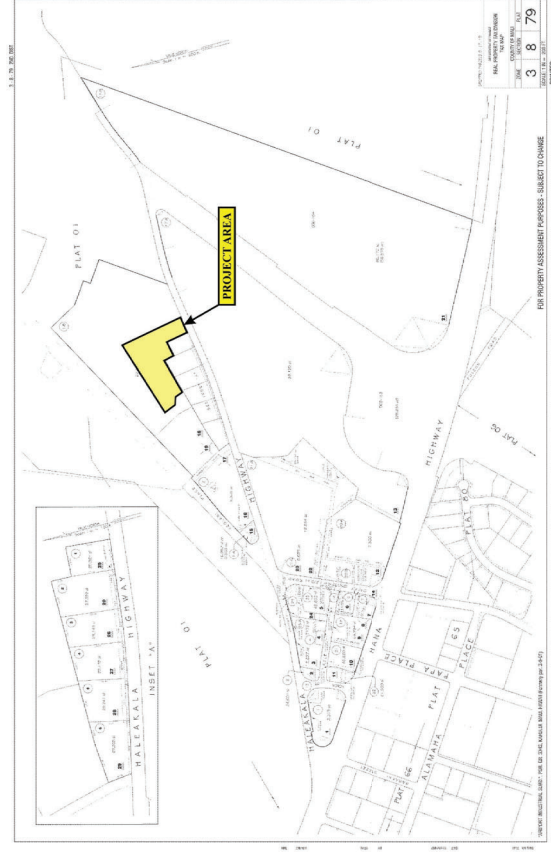


Figure 2: Map of Tax Map Key (2) 3-8-079 showing the location of the project area in context

Several significant historic properties have been identified in the area including historic structures: Central Power Plant (Site 50-50-09-078570), WWII Naval Air Station (Site 50-50-09-01783), concert flume (Site 50-50-04-07347), and generator building (50-50-04-07348). Also identified in the coastal dune area are traditional Hawaiian sites and features including a burial (Site 50-50-05-01798) and a habitation site (Site 50-50-05-01799), and to the west of the project area is Kanahā Pond (Site 50-50-04-01783). [Appendix A]

Archaeological work for this project was carried out by SCS archaeologists under the supervision of Principal Investigator Michael F. Dega, Ph.D. in two stages: a field observation on June 11, 2020, and ground testing consisting of the excavation of 12 exploratory trenches conducted on September 28, 2022. The AIS was also done in accordance with SHPD recommendations and after an acceptance of an Archaeological Consult Letter (Dega, August 2021). The AIS was meant to assess the presence of historic properties during excavation work. No federal funding or federal permits are involved with the current undertaking. As no historic properties were identified, this report is written as an archaeological assessment (AA) pursuant to HAR 13-284-5 (5)(A).

## ENVIRONMENTAL SETTING

### LOCATION

The project area is located on the north shore of Maui between Kahului Airport to the east and the town of Kahului to the west. The physical address of the Department of Transportation Kahului Baseyard is 650 Palapala Drive, Kahului, Pū‘ali Komohana District, Wailuku Ahupua‘a, Maui [TMK: (2) 3-8-079:018 por.]. The project area is located about 850 m (0.53 miles) from the coastline. Some well-known landmarks in the vicinity include Kahului Airport (OGG), whose runway starts from a point located about 630 m (0.39 miles) east of the project area, the Courtyard by Marriott Maui, located 185 m (607 feet) west of the project area, and the Kanahā Pond Wildlife Sanctuary, located 325 m (0.20 miles) to the northwest. The parcel is serviced by Haleakalā Highway, Mua Street, and Kuleama Street. Hāna Highway passes 650 m (0.40 miles) southwest of the project area.

The property has been previously developed. Because of this, both the surface of the project area and its subsurface contexts have been heavily modified by machinery in the recent past. According to SHPD records, there have been no previously conducted archeological surveys on the project area.



Figure 3: A Google Earth aerial photograph (imagery date: June 15, 2019) showing the project area in relation Kahului to the west, Kanahā Pond to the northwest, and Kahului Airport to the northeast

## GEOLOGY AND TOPOGRAPHY

Maui is the second largest island of the Hawaiian Archipelago. It was formed by two volcanoes, the older and extinct Pu'u Kukui in the west and the younger dormant Haleakalā in the east, joined together by an isthmus of dry, open country.

Pu'u Kukui (from Hawaiian, "candlelit peak"), rising to 1,764 m (5,788 ft) amsl, is surrounded by large, heavily eroded amphitheater valleys that support permanent streams watering the fertile agricultural lands along the coasts. The deep valleys of Mauna Kahālawai (the West Maui Mountains) and their coastal regions have been contested and coveted lands remarkable for their productivity.

Haleakalā (from Hawaiian, "house of the Sun") is the larger of the two volcanoes, as it dominates the larger southeastern section of the island soaring 3,055 m (10,023 ft) amsl. Unlike the amphitheater valleys of West Maui, the flanks of Haleakalā are distinguished by their gentle slopes toward the isthmus. The lands in between the two orographically most prominent features of Maui are formed by erosional deposits, and are noticeably drier than their higher elevation counterparts.

The project area is located in the northernmost portion of the isthmus connecting the two parts of Maui. Geologically, the isthmus was created as a result of lava flow from Haleakalā against Mauna Kahālawai. The project area occupies its northern portion, which has developed over lithified dunes (Macdonald et al. 1983:383). Its landscape is transitional between the isthmus plains and the narrow coastal strip to the north. The elevation ranges from 4 to 10 m (13 ft to 34 ft) above mean sea level (amsl), with the highest section located along the southern boundary.

## CLIMATE AND HYDROLOGY

Characteristically of the isthmus and the open country to the east of it, the climate of Wailuku Ahupua'a is hot and dry. The average annual temperature in the project area is 23.7 °C (74.7 °F). There is little variation between months: August is the warmest time of the year with an average air temperature of 25.7°C (78.2°F), and January and February are the coldest with an average temperature of 21.7 °C (71 °F) (Giambelluca et al. 2014).

Mean annual rainfall over the project area is 419 mm (16.5 in). Most of it occurs from November through March, with mean monthly rainfall peaking at 82.6 mm (3.2 in) in January. The months from April through October are much drier, with average monthly rainfall at a low of 6.3 mm (0.25 in) in September (Giambelluca et al. 2014).

The state Division of Aquatic Resources (Parham et al. 2008) places the project area in the watershed of Kaliaimui Gulch, #62029, which covers an area of about 62 sq km and stretches from the Haleakalā Crater to a mouth between Kanahā Pond and Kahului Airport. Even though Kaliaimui is a non-perennial stream, it is the longest water course on Maui (Welch 1988a).

## SOILS AND VEGETATION

Both the U.S. Natural Resources Conservation Service (NCRS) and Foote et al. (1972) identify the soils in the project area as belonging to the Jaucas Series, specifically Jaucas sand, saline, 0 to 12 percent slopes (JcC), transitioning into the Molokai Series (Figure 4).

The Jaucas Series are typical of dry, well-drained terrains, especially on coastal plains. They usually develop over sandy deposits on slight slopes close to the ocean (Foote et al. 1972:48). JcC in particular are associated with higher salt content and the presence of the water table sometimes within 30 inches of the surface (Foote et al. 1972:49). In depressions, such as that around Kanahā Pond near the project area, JcC soils usually form "a layer of silty alluvial material flocculated by the high concentration of soluble salts" (Foote et al. 1972:49). Hence, soils of the Jaucas Series are typically of limited economic value and are usually dominated by wildlife habitat. Nonetheless, sandy sediments in the coastal regions of Hawai'i in general are known to contain both isolated and clustered human burials and/or significant cultural deposits (Kirch 1985:240). This pattern is often disrupted by contemporary developments associated with urbanization, as the case is in the project area and its vicinity. Thus, what was once simply Jaucas soils today might be characterized as a mixture of sand and imported fill.

The Molokai Series consists of well-drained soils formed on material weathered from basic igneous rock. Molokai silty clay loam, 0 to 3 percent slopes (MuA), and 3 to 7 percent slopes (MuB) may touch on the project area on the east and south, respectively. These dark reddish-brown soils have been historically used for sugarcane cultivation, and are characterized by moderate permeability and slight erosion hazard (Foote et al. 1972:96).

The project area is a built environment with no vegetation. It is in the immediate vicinity, however, of Kanahā Pond State Wildlife Sanctuary (Figure 5). Robert Hobby's 2006 survey of TMK (2) 3-7-011:028 to the west of the project area reports that in recent decades vegetation has been dominated by non-native species such as the Indian fleabane shrub (*Pluchea indica*) and seashore saltgrass (*Distichlis spicata*), along with some *kiawe* trees (American carob, *Prosopis pallida*) and date palms (*Phoenix dactylifera*). It is possible that these species were present in the project area before its clearing for the development of Kanahā Industrial Subdivision.





Figure 4: A Google Earth aerial photograph (imagery date: June 15, 2019) showing soil series in the vicinity of the project area



Figure 5: A 2005 aerial view of Kanaha Pond and Kahului Bay with the project area superimposed in yellow, view to northwest (Starr and Starr 2005)

## HISTORICAL CONTEXT

Traditionally, Maui's division into *moku* (districts) and *ahupua'a* (subdistricts) was established by a *kahuna* (priest) named Kalaiha'ōhia during the time of *ali'i* (chief) Kaka'alānoko (Beckwith 1940:383). Abraham Fomander places Kaka'alānoko at the end of the 15<sup>th</sup> or the beginning of the 16<sup>th</sup> century (Fomander 1916/17, Vol. 6:248). The *ahupua'a* subdivisions were meant to incorporate the natural resources relevant to traditional subsistence stretching from the ocean to the mountain peaks. 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 (Sterling 1998:3).

The project area is located in the *ahupua'a* of Wailuku, district of Pt'ali Komohana. The very name "*pū'ali komohana*" translates as "west isthmus" while the name of the *ahupua'a* "*wailuku*" means "water of destruction" (Pukui et al. 1974:225). As suggested in the previous section, the coastal section of the district is characterized by comparatively dry conditions and paucity of perennial streams. Nonetheless, because of its strategic location between the two Maui mountains on the one hand, and the convenience of the Kahului harbor on the other, the district was important in Maui's history, and it contains substantial archeological and historical record. Wailuku Ahupua'a was traditionally under the jurisdiction of the West Maui chiefs, and the struggle for control over the entire island, as well as the rivalry with the Hawai'i Island chiefs, has left a profound mark on its history. This section outlines in short the historical context of the project area, the settlement patterns before and after contact with the West, the agricultural practices, and the historical record associated with land ownership.

### **PRE-CONTACT SETTLEMENT AND ECONOMY**

Archaeological data indicate that the settlement of the Hawaiian Islands by Polynesians occurred on the windward shores around the 10<sup>th</sup> century, with populations extending into leeward areas in later periods (Kirch 2011:22). Thus, the 10<sup>th</sup> century would be the earliest date to which human presence can be expected in the vicinity of the project area. Despite its strategic political and military importance, the isthmus was not especially productive economically until the large-scale irrigation projects of the 19<sup>th</sup> century (Kirch 1985:135).

Wailuku Ahupua'a offers favorable conditions for aqua- and agricultural activity and once supported a substantial population. Wailuku and Kahului were among the few Pre-Contact population centers on Maui (Cordy 1981:198-199). The *ahupua'a* was once known as "*nā wai 'eha*" (the four waters), referring to Wailuku, Waikapū, Waiehu, and Waie'e, the four main streams that drain the eastern slopes of Mauna Kahālewai (Handy and Handy 1972:496).

Traditional Hawaiian economy was based on agricultural production, marine exploitation, and raising livestock, in addition to collecting wild plants and birds. Settlements were concentrated in river valleys most amenable to wet *kalo* (taro, *Colocasia esculenta*) cultivation which also incorporated pond fields and irrigation canals. The Kanahā and Maui'oni fishponds north of the project area reportedly furnished fresh fish to the chiefs and their entourage. Both were built by Maui chief Kiha-a-Pi'ilani in the 17<sup>th</sup> century (Kamakau 1961:42).

Despite the dry summers, Wailuku District offers favorable conditions for aqua- and agricultural activity, and once supported a substantial population: the settlements of Wailuku and Kahului west of the project area represented one of the only two or three Pre-Contact population centers on Maui (Cordy 1981:198-199). The greater Wailuku area is frequently mentioned in historical texts and in the oral tradition as politically and ceremonially important (Cordy 1981, Kirch 1985). Wailuku was considered a "chiefly center" with many of the *ali'i* and much of the district's population residing near 'Iao Valley and lower Wailuku (Sterling 1998:90). Oral histories and ethnohistoric accounts indicate that while primary economic activities occurred in the Wailuku area, coastal areas like Pā'ia supported smaller-scale agricultural endeavors such as sweet potato cultivation, and were a source of a variety of readily available marine resources.

### **PRE-CONTACT POLITICAL HISTORY**

Before the unification accomplished by the *ali'i* Pi'ilani in the late 1500s, Maui was ruled by two separate kingdoms – one centered in Hāna on the windward coast and one in Wailuku to the west of the project area. Along with consolidating power on the island, Wailuku's chief Pi'ilani also raised Maui's political status by ruling judiciously and using his connections with the reigning chiefly families of O'ahu and Hawai'i (Fomander 1916/1917, Vol. 2:87).

Pi'ilani's possessions were inherited by his firstborn son Lono-a-Pi'ilani. According to the oral tradition, after a rift between Lono-a-Pi'ilani and his younger brother Kiha-a-Pi'ilani (born c. 1626), the latter took refuge in the Kula District. Subsequently, he traveled to Hawai'i, which was the kingdom of their brother-in-law 'Umi-a-Lihoa, and convinced him to send an army to Maui in order to avenge Kiha and dethrone Lono (Fomander 1919, Vol. 5:178-180). The invasion was known in the oral tradition as the "expedition of numberless canoes" because, according to legend, the canoes stretched across the Maui channel from Kohala on Hawai'i Island, and 'Umi's army was able to march on them as on a bridge. According to one version, Lono was eventually captured and killed by 'Umi's troops in Waie'e, northwest of Kahului. According to Kamakau (1961:31), however, the Wailuku-based chief died of terror before the invading army reached his residence. In any case, after the successful invasion Kiha-a-Pi'ilani became Maui's sole ruler.

Kiĥa-a-Pi'ilani also became famous as a builder, especially for the construction of a stone-lined path, the Ala Loa (long road), or "Kiĥa-a-Pi'ilani Trail," which finished his father's road building project and for a first time connected all parts of Maui. The chief also moved the royal residence from Wailuku to eastern Maui (Kirch 2011:102). According to Kirch, Kiĥa-a-Pi'ilani's coming to power signifies a transition in the political tradition, as the *ali'i nui* (great chiefs) acquired "direct control over economic production" (Kirch 2010:102).

The 18<sup>th</sup> century was marked by the rivalry between Maui and Hawai'i Island. At the end of his reign, the ambitious but ruthless Kekaulike (c. 1700–1736) launched an expedition from his seat at Kaupō to Hawai'i. Fearful of retaliation, Kekaulike withdrew to Wailuku, but developed an acute and fatal case of what Kamakau describes as possible epilepsy (1961:69, "*ka maka huki lani*" or "eyes drawn heavenward"). His heir was Kamehameha-nui, the son of a half-sister of the Hawai'i Island chief Alapa'i. With the help of his uncle, in 1738 Kamehameha-nui defeated his older half-brother Kā'uhī and secured his rule over Maui (Kamakau 1961:74).

Maui enjoyed some time of relative peace and prosperity before the conflict returned with the wars between another of Kekaulike's sons named Kahekili II (c. 1737–1794) and Hawai'i chief Kalani'ōpu'u. Shortly before Cook's arrival, Kalani'ōpu'u's armies from Hawai'i island had landed and plundered the district of Honua'ula, and then moved to Ma'alaea Bay from where the chief planned to invade Wailuku (Formander 1916/1917, Vol. 2:147-157). After losing two battles to Kahekili II, Kalani'ōpu'u welcomed a truce, concentrating his efforts on the eastern side of Maui, protecting Hāna and Kīpahulu, which were his spoils from an earlier battle in 1759 (Formander 1916/1917, Vol. 2:147). It was said that on the day of Kalani'ōpu'u's departure from Maui, his war canoes covered the sands from Kahului to Pā'ia (T̄T̄ 1959:11).

#### EARLY POST-CONTACT HISTORY

The Post-Contact Period in Maui begins on November 26, 1778, with British Explorer Captain James Cook's passing by the island on his way back from the extreme Northern Pacific (Daws 1974:8; Beaglehole 1967: Part I, Vol. III). David Samwell, a surgeon on the *Discovery*, reported, "the Ships lay to all day about 3 miles off Shore, trading with the Natives who came off in their Canoes in great Numbers with a few Hogs & Fowls, Plantains, breadfruit, sweet Potatoes, Taroo root & Sugar Canes" (Samwell 1967:1151). At the time of Cook's visit the war between Kalani'ōpu'u and Kahekili II had been over, and the latter chief had by then become the ruler of both Maui and Moloka'i. Samwell recorded his impressions of Maui's northern coast: "The Island is mountainous, the sides of the Hills are covered with Trees, from thence to the Water side are large open Plains on which stand their Houses & where they have their Plantations of sweet Potatoes, Taroo &c." (Samwell 1967:1151).

For a while the internal affairs of Maui proceeded independently of significant Western influence. In fact, the height of Maui's political power in the archipelago was reached in 1783, just five years after the encounter with Captain Cook (Kolb et al., 1997:3). Yet, the moment proved ephemeral. After Kahekili's death in Waikōi in 1794, his inherently unstable realm succumbed to fratricidal conflicts and the mounting pressure from Hawai'i's Kamehameha I (1758–1819). In the following years, the descendants of Pi'ilani and the chiefly Maui families were for the most part robbed of their possessions unless they surrendered to the conquerors (Formander 1916/1917, Vol. 6:310).

In the following decades the traditional way of life was changed by commercial activities (such as the sandalwood trade and whaling) on the one hand, and the introduction of Christianity on the other. Maui's north shore also took a hit from a natural disaster when on November 7, 1837, a catastrophic earthquake near Chile generated a tsunami (*kai e'e*) that nearly wiped out Kahului. The wave "carried the entire village of 26 grass houses, complete with their inhabitants, canoes, and livestock some 800 feet inland, dumping them into a small lake," which might have been the Kanahā-Māu'ont complex north of the project area (Dudley and Lee 1998:53).

#### THE MĀHELE

In the 1840s, traditional land tenure shifted drastically with the introduction of private use based on Western practices as King Kamehameha III, r. 1825–1854 put forward laws aiming to change the traditional Hawaiian subsistence-based economy. The transition from communal to private land use is commonly called the "Māhele" (division). That name may refer to the separation between Hawaiians and the *ʻāina* (land) – by the end of the 19<sup>th</sup> century, "white men owned four acres of land for every one owned by a native" (Daws 1974:128).

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 Kamehameha III 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 Vol. 1, 1938:280). The awarded parcels were called Land Commission Awards (LCAs).



Once lands were made available, the maka ānana (commoners) were able to claim the plots on which they had been living and which they had been 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'eleihewa 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. Commoners, however, could only make claims if they had first been made aware of foreign procedures such as the awarding of kuleana lands ("right; privilege") and LCAs, procedures that many found lengthy and confusing.

The Kipuka database (Office of Hawaiian Affairs n.d.) indicates that no LCAs overlap with the project area. There were over 400 kuleana lands in the district of Wailuku, but none were identified in the project area, and there are no other trust lands close to it. There are also no historical records that the project area and its adjacent properties contained Pre-Contact house sites or cultivation.

The project area is a part of a 24,000-acre Land Grant No. 3343 comprising the majority of Wailuku Ahupua'a, handed over to German-born sugar tycoon Claus Spreckels in 1882 (Waihona 'Aina n.d.). Spreckels had come to be known as "His Royal Saccharinity" because of his ability to influence Hawaiian governments to do his bidding, sometimes to the detriment of democracy and transparency. After donating a generous gift of \$10,000 to King David Kalākaua (r. 1874–1891), Spreckels was allowed a lease of Wailuku Commons on July 8, 1878 (Adler 1966:37; Daws 1974:226–227). With the help of high chiefess Princess Ruth Ke'elikōlani, who did not have clear legal right to the lands at the time, he managed to secure a fee simple title to the same land for just \$10,000, a profitable return on what Ralph Kuykendall (1967:61) calls "investment in blackmail."

#### LATE POST-CONTACT HISTORY

Whaling declined in the late 19<sup>th</sup> century, and commercial agriculture and ranching came to the forefront of Hawaiian economy, in part because the Māhele had allowed the consolidation of lands into vast and now privately owned properties. The boom in sugarcane production specifically was made possible by the Reciprocity Treaty of 1875, which granted a duty-free market for Hawaiian sugar in the U.S. in exchange of trade privileges for American products. The treaty turned sugar into an immensely profitable commodity and the economic mainstay of the economy for the rest of the century (Kuykendall 1967, Vol 3:46–48). As a result, "between 1876 and 1898, sugar exports increased from 13,000 to 229,000 tons a year" (Adler 1966:12).

As the sugar industry developed and Western influence grew, a number of warehouses and stores opened in the neighboring Kahului, while wheelwright and blacksmith shops operated close to the harbor. A small landing was constructed in 1879 to serve Spreckels's Hawaiian Commercial Company and its complex at what came to be known as "Spreckelsville" to the east of the project area (Conté and Best 1973:208). The plantation's internal railroad was connected with the Kahului Railroad, opened by Thomas Hobron also in 1879. Spreckelsville was likewise connected with Kahului to the west and Pā'ia to the east by telephone, and its sugar mills pioneered the use of electric light on the islands in 1881, five years before the electrification of 'Iolani Palace (Adler 1966:72, 74).

The new industry quickly attracted more foreign settlers: according to Alder (1966:7), between 1887 and 1890 55,000 immigrant laborers came to the islands. Imported foreign labor led to the incorporation of 13 camp communities at Spreckelsville and Pu'unēnē east and south of the project area (Figure 6). Remnants of these camps remain in the form of small, scattered cemeteries that occur along the coastline near Pā'ia and Ku'au. Post-Contact Period artifacts, including ceramics, bottle glass, metal objects, square nails, marbles, and other objects relating to daily activities, have been documented in nearby sugarcane fields (Clark and Toenjes 1987:10). The perpetual shortage of labor had been caused by the ever-expanding operations. With its 40,000 acres, by 1892, Spreckelsville had become the largest sugar plantation in the world and had in effect monopolized the market in Hawai'i (Adler 1966:72, 99–100) (Figure 7).

#### MODERN PERIOD TO PRESENT

Spreckels had incorporated his property as Hawaiian Commercial & Sugar Company (HC&S) in 1882. In 1898 Alexander and Baldwin gained a controlling interest in HC&S, which continued to operate as a separate plantation until 1948 when it merged with the neighboring Maui Agricultural Company, also owned by Alexander and Baldwin (Conté and Best 1973:213). With that merger the company became the largest sugar producer in the U.S. In 1962, HC&S merged with Alexander and Baldwin, though it discontinued sugarcane cultivation in 2016.

In the wake of the Pearl Harbor attack, Kahului came under fire on January 1, 1942, as Japanese submarines shelled the harbor (Clark 1989:7). With the outbreak of World War II, 3,800 acres of land at Pu'unēnē and Kahului were annexed by the military for use as the Kahului Naval Air Station, today's Kahului Airport. In preparation for the construction of runways, several marshy areas were filled with sand from nearby beaches (Welch 1991). In addition to training structures, support facilities were built along the coast. In the following decades, construction activities have impacted the project area and its adjacent lands through grading and sediment removal (Figure 8).



Figure 6: *Japanese Laborers on Spreckelsville Plantation* by Joseph Dwight Strong (oil on canvas, 1885)



Figure 7: Bird's eye view of sugar mill, Spreckelsville (photograph, 1890)



## PREVIOUS ARCHAEOLOGY

This section presents the past archaeological research in the project area and its vicinity. Before the current work, the parcel [TMK: (2) 3-8-079:018 por.] had not been subject to an AIS, and no historic properties have been identified on it. Figure 9 and Table 1 show the location and results of the archaeological projects, which are also briefly summarized in the following. Figure 10 shows the historic sites in the immediate vicinity of the project area.

### **CONNOLLY (1981)**

In 1981, Robert Connolly (1981) conducted an archaeological reconnaissance survey of Kahalui Airport [TMK: (2) 3-8-001, various] and its vicinity. A mix of vehicular and pedestrian surface survey was conducted, identifying two archaeological sites north of the runway, which would later be designated with State Inventory of Historic Places (SIHP) Sites 50-50-09-01798 and 50-50-09-01799. SIHP Site -01798 had been reported to Connolly (1981:67) by the airport superintendent. It consists of an unspecified number of burials that had previously been found during development at the airport, some of which were left in place (Feature B) while others were reinterred at a new location (Feature A). Site -01799 consists of two boulder alignments on a small mound interpreted as the remains of a Pre-Contact house foundation, along with a large grindstone found nearby.

### **COASTAL STUDIES (KEAU 1981, WELCH 1988a, FREDERICKSEN 2003)**

In 1981, Charles Keau (1981) conducted a reconnaissance survey over the area surrounding the Kahului-Wailuku wastewater treatment plant and Kanahā Beach Park. No archaeological properties were observed, though Keau noted that a recent sea storm had deposited sand on the wastewater treatment facility.

In 1988, David Welch (1988a) of the International Archaeological Research Institute, Inc. (IARI) conducted a reconnaissance survey with a subsurface component (coring and shovel tests) at the mouth of Kaliainui Gulch north of the project area in advance of channel improvements. Welch recorded that most of the area surrounding the river mouth consisted of fill, “probably modified during channel cutting and airport construction” (Welch 1988a:3).

In 2003, Xamanek Researches (Fredericksen 2003) conducted an AIS over c. 75 acres coextensive with Kanahā Beach Park [TMK: (2) 3-8-001:19 por.], north of the project area. Fredericksen identified four small buildings and two concrete bunkers, all dated to World War II, but no Pre-Contact or Early Post-Contact burials or other cultural features were documented. No SIHP Site numbers were assigned, although a subsequent AIS was recommended in the case of subsequent development in the park (Fredericksen 2003:10).



Figure 8: A portion of a 1965 Aerial photograph of Kanahā Pond and a part of Kahului Airport including the project area

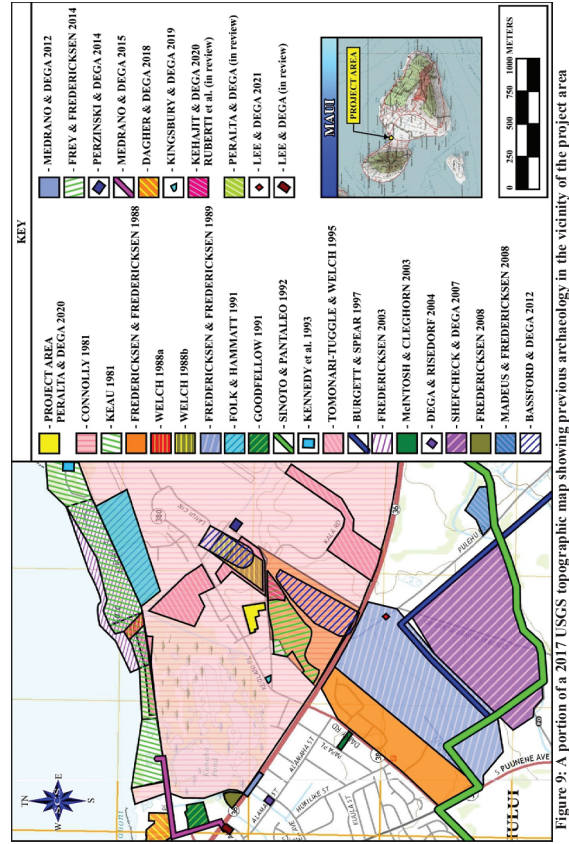


Figure 9: A portion of a 2017 USGS topographic map showing previous archaeology in the vicinity of the project area

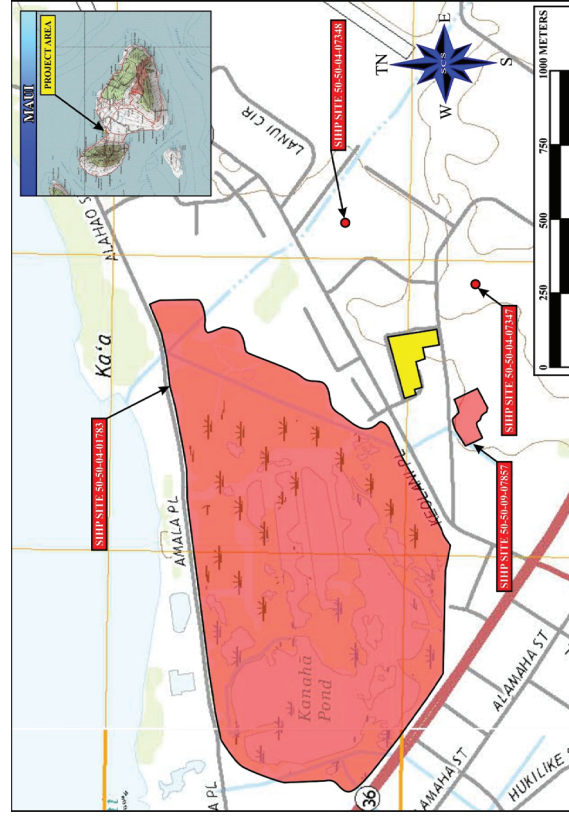


Figure 10: Previously identified SHP Sites in the vicinity of the project area (superimposed in yellow)

**Table 1: Previous archaeology conducted in the project area and its vicinity**

Author, Date	Research Type	Location	Results
Connolly, 1981	Archaeological Reconnaissance Survey	Kahului Airport and adjacent areas [TMK: (2) 3-8-001:019 and 122, -002: 15, 16, 17, 53, 54, 55, and 56]	SIHP Sites 50-50-05-01798 (burials) and 50-05-01799 (boulder alignments)
Keau, 1981	Archaeological Reconnaissance Survey	Kahului-Wailuku wastewater treatment plant and Kanahā Beach Park [TMK: (2) 3-8-001:188, 189]	No cultural resources
Welch, 1988a	Archaeological Reconnaissance Survey with a subsurface component	Kaliāimui Gulch [TMK: (2) 3-8-001:019 por.]	No cultural resources
Fredericksen and Fredericksen, 1988	Archaeological Reconnaissance Survey with a subsurface component	Sugarcane fields near Kahului [TMK: (2) 3-8-001:999, (2) 3-8-080: various, (2) 3-8-103: various]	A concentration of what was believed to be volcanic glass (no SIHP Site number)
Welch, 1988b	Archaeological Reconnaissance Survey	Parts of Kahului Airport [TMK: (2) 3-8-001:019]	SIHP Sites -01798 and -01799 were reidentified.
Fredericksen and Fredericksen, 1989	Archaeological Inventory Survey	Sugarcane fields near Kahului [TMK: (2) 3-8-06:38]	A concentration of what was believed to be volcanic glass (no SIHP Site number)
Folk and Hammatt, 1991	Archaeological Inventory Survey	Parts of Kahului Airport [TMK: (2) 3-8-001: various]	No cultural resources
Goodfellow, 1991	Archaeological Inventory Survey	Kanahā Industrial Subdivision [TMK: (2) 3-7-011:006]	No cultural resources
Sinoto and Pantaleo, 1992	Archaeological Inventory Survey	A 42-km corridor [TMKs: (2) 2-5-003 through -005; (2) 2-7-003; (2) 2-7-007 through -011; (2) 2-7-013; (2) 2-7-016 through -020; (2) 3-8-001; (2) 3-8-006 through -007; (2) 3-8-051; (2) 3-8-059; (2) 3-8-061; (2) 3-8-070; and (2) 3-8-071]	No cultural resources

Kennedy et al., 1993	Archaeological Reconnaissance Survey	Parking lot at Kanahā Beach Park [now TMK: (2) 3-8-001:119]	No cultural resources
Tomonari-Tuggle and Welch, 1995	Archaeological Reconnaissance Survey	Parts of Kahului Airport [TMK: (2) 3-8-001: various]	WWII-associated buildings 101, 244, and the foundations of 411 (no SIHP Site numbers)
Burgett and Spear, 1997	Archaeological Inventory Survey	The site of the proposed Waena Generating Station [now TMK: (2) 3-8-003:023 & 024] and a 16-km- long corridor for alternative transmission routes [TMKs: (2) 2-5 and (2) 3-8].	No cultural resources
Fredericksen, 2003	Archaeological Inventory Survey	Kanahā Beach Park [TMK: (2) 3-8-001:119, 19 por.]	No cultural resources
McIntosh and Cleghorn, 2003	Archaeological Monitoring	The proposed site for a Verizon Wireless Telecommunications facility at 291 Dairy Road, Kahului [TMK: (2) 3-8-065:011]	No cultural resources
Dega and Risedorf, 2004	Archaeological Monitoring	A parcel at 335 East Wākea Avenue [TMK: (2) 3-7-012:017]	No cultural resources
Shefcheck and Dega 2007	Archaeological Inventory Survey	A 10-acre sugarcane land parcel [TMK: (2) 3-8-006:004 por.]	No cultural resources
Fredericksen, 2008	Archaeological Inventory Survey	Lot 8, Kanaha Industrial Subdivision 11 [TMK (2) 3-7-011:028]	No cultural resources
Madeus and Fredericksen, 2008	Archaeological Inventory Survey	A 12.778-acre sugarcane land parcel [TMK: (2) 3-8-001:002 por.]	SIHP Site 50-50-05-06360 (the remnants of the former Pu'unēnē Hospital)
Medrano and Dega, 2012	Archaeological Monitoring	Hāna Highway and Wākea Street intersection [TMKs: (2) 3-7-012 and 3-8-066]	No cultural resources

**HC&S SUGARCANE LANDS (FREDERICKSEN AND FREDERICKSEN 1988, 1989)**

In 1988, Xamanek Researches (Fredericksen and Fredericksen 1988) conducted a reconnaissance survey with limited subsurface testing (probes, auger tests, and small test excavations) over 232 acres of agricultural land planted with sugarcane between Kahului and Kahului Airport. Fredericksen and Fredericksen recorded a concentration of volcanic glass at Dairy Road and what now is Ohokani Street. As further research was needed to determine if the glass had been altered by humans, no SIHP site numbers were assigned. After a laboratory analysis, the “volcanic glass” was interpreted as slag associated with the sugarcane industry or the Kahului Railroad (Madeus and Fredericksen 2008:17). No subsurface deposits were identified (Fredericksen and Fredericksen 1988:21).

Subsequently, in 1989 Xamanek Researches (Fredericksen and Fredericksen 1989a), conducted another AIS on approximately 130 acres of land in Kahului [then TMK: (2) 3-8-006-001 por.], just southeast of the prior survey area. Again, no historic properties were found, only material later interpreted as slag (Madeus and Fredericksen 2008:17).

**WELCH (1988b)**

In 1988, IARH (Welch 1988b) also conducted reconnaissance survey at Kahului Airport with the aim to reidentify the sites first recorded by Connolly (1981) and inspect the ground in preparation for the planned construction of new airport facilities and a roadway (now Mayor Elmer F. Cravalho Way). SIHP Sites -01798 and -01799 were found, and their preservation was recommended. The latter site was interpreted as a possible house foundation. As the planned airport buildings were to be located in an area where sand dunes were present, Welch recommended monitoring. No monitoring was recommended for the road construction as the corridor consisted of lands heavily disturbed by agriculture (Welch 1988b:9).

**FOLK AND HAMMATT (1991)**

In 1990, Cultural Surveys Hawai'i (CSH) conducted an AIS in advance of an expansion of Kahului Airport (Folk and Hammatt 1991). Folk and Hammatt identified no historic properties or cultural layers. The lack of findings was attributed to the construction of Kahului Railroad in the late 1800s and the use of the lands for sugarcane cultivation.

**GOODFELLOW (1991)**

In 1991, Paul H. Rosendahl, Ph.D., Inc. (Goodfellow 1991), conducted an AIS of a 4-acre warehouse site for VIP Foodservice [TMK: (2) 3-7-011:006]. A total of 25 backhoe trenches were excavated, but no historic properties or cultural remains were identified. Black beach sand was identified at around 1 mbs.

Bassford and Dega, 2012	Archaeological Inventory Survey	Parts of Kahului Airport [TMK: (2) 3-8-001:123 & 239; (2) 3-8-079:021]	SIHP Site 50-50-04-07347 (concrete flume) and SIHP Site 50-50-04-07348 (small generator building)
Frey and Fredericksen, 2014	Archaeological Monitoring	A 38.19-acre lot [then TMK parcel: (2) 3-8-079:013; now TMK plat: (2) 3-8-103] for the Maui Business Park Phase II North project	SIHP Site 50-50-09-07857 (the HC&S power plant warehouse complex)
Perzinski and Dega, 2014 (draft)	Archaeological Monitoring	A part of Kahului Airport [TMK: (2) 3-8-001:019 por.]	No cultural resources
Dagher and Dega, 2018	Archaeological Inventory Survey	A 9.83-acre parcel in the vicinity of Kahului Harbor [TMK: (2) 3-7-011:017, 019 por., and 023]	No cultural resources
Kingsbury and Dega, 2019	Archaeological Inventory Survey	A 0.779-acre lot at 520 Keolani Place [TMK: (2) 3-8-079:015]	No cultural resources
Kehajit and Dega, 2020	Archaeological Inventory Survey	A 5.17-acre parcel between Haleakala Highway and Kahului Airport Access Road (now Mayor Elmer F. Cravalho Way) [TMK: (2) 3-8-103:014 por., 015 por., 016, 017, 018]	No cultural resources
Ruberti et al. 2021, in review	Supplemental Archaeological Assessment	Current project area [TMK: (2) 3-8-079:018 por.]	No cultural resources
Peralta and Dega 2020, in review	Literature Review and Field Inspection	The intersection of Pulehu Place [TMK (2) 3-8-001:268], Ho'okele Street [TMK (2) 3-8-006:080], and Pulehu Road [TMK (2) 3-8-101:037]	No cultural resources
Lee and Dega 2022, in review	Archaeological Monitoring	A 139 sq m (1500 sq ft) parcel at the intersection of East Kamehameha Avenue and Hana Highway [TMK: (2) 3-7-009:029 por. and 999 (Kamehameha Avenue ROW)]	No cultural resources



#### **SINOTO & PANTALEO (1992)**

In 1992, Aki Sinoto Consulting, LLC (Sinoto and Pantaleo 1992), conducted an AIS of an approximately 42-km- (26-mile)-long corridor for a transmission line for the East Maui Waterline project [TMKs: (2) 2-5-003 through -005; (2) 2-7-003; (2) 2-7-007 through -011; (2) 2-7-013; (2) 2-7-016 through -020; (2) 3-8-001; (2) 3-8-006 through -007; (2) 3-8-051; (2) 3-8-059; (2) 3-8-061; (2) 3-8-070; and (2) 3-8-071]. No historic properties were identified.

#### **KENNEDY et al. (1993)**

In 1992, Archaeological Consultants of Hawaii (Kennedy et al. 1993) conducted a surface survey in advance of a parking lot extension at Kanahā Beach Park. Evidence of considerable contemporary disturbance was encountered, but no cultural properties.

#### **TOMONARI-TUGGLE & WELCH (1995)**

In 1994, IARII (Tomonari-Tuggle and Welch 1995:iii) conducted an “assessment of cultural resources at Kahului Airport” [TMK: (2) 3-8-001: various], which included a pedestrian survey of parcels planned for development that had not already been. The remnants of three military structures associated with WWII (a warehouse, a beach club, and the officers’ club) were recommended for preservation, although no SHIP Site numbers were assigned (Tomonari-Tuggle and Welch 1995:57).

#### **BURGETT & SPEAR (1997)**

In 1997, SCS (Burgett and Spear 1997) conducted an AIS of 67 acres for the proposed Maui Electric Company, Ltd. Waena Generating Station [now TMK: (2) 3-8-003:023 & 024], as well as an approximately 16-km- (10-mile)-long corridor for alternative transmission routes [TMKs: (2) 2-5 and (2) 3-8]. Although a full (100%) pedestrian survey of the alternative transmission routes was conducted, only the perimeter of the proposed generating station site and a cane haul road through it were walkable because of dense sugarcane growth (Burgett and Spear 1997:8). No historic properties were identified. No further archaeological work was recommended because the construction work was not expected to impact any historic properties (Burgett and Spear 1997:8).

#### **McINTOSH & CLEGHORN (2003)**

Pacific Legacy, Inc. (McIntosh and Cleghorn 2003) conducted archaeological monitoring for a proposed Verizon Wireless Telecommunications facility at 291 Dairy Road, Kahului [TMK: (2) 3-8-065:011]. Two trenches were excavated for electrical utilities and one for shed footing. No historic properties were identified.

#### **DEGA & RISEDORF (2004)**

In 2004, SCS (Dega and Risedorf 2004) conducted archaeological monitoring on a 0.688-acre (29,989-sq.-ft.) parcel at 335 East Wākea Avenue [TMK: (2) 3-7-012:017]. Five trenches

were excavated, but no cultural deposits were identified. The strata suggested previous disturbance and varied from mostly fill layers to natural, sandy sediment sterile of organic material (Dega and Risedorf 2004:9-10).

#### **SHEFCHICK & DEGA (2007)**

In 2006, SCS (Shefcheck and Dega 2007:1) conducted an AIS of an approximately 10-acre portion [TMK: (2) 3-8-006:004 por.] of a parcel of sugarcane land which was “the planned location for the Maui Economic Opportunity (MEO) Transportation Center, a mass transit facility located adjacent to the Kahului Airport, the Maui Business Park, and the Kahului metropolitan area.” The full (100%) pedestrian survey and excavation of three trenches did not result in the identification of any historic properties. The lack of findings is attributed to the long use of the project area for sugarcane cultivation in Post-Contact times. The report was accordingly written as an AA (Shefcheck and Dega 2007:9).

#### **FREDERICKSEN 2008**

In 2006, Xamanek Researches (Fredericksen 2008) conducted an AIS of an approximately 2.5-acre parcel at Lot 8, Kanaha Industrial Subdivision 11 [TMK (2) 3-7-011:028] for the proposed Maui Medical Plaza. The pedestrian survey and excavation of ten trenches did not identify any historic properties, and the report was accordingly written as an AA (Fredericksen 2007:14). The negative findings are likely due to previous ground disturbance associated with construction and grading. The proposed development of Maui Medical Plaza has never been started.

#### **MADEUS & FREDERICKSEN (2008)**

In 2007, Xamanek Researches (Madeus and Fredericksen 2008) conducted an AIS of a 12.778-acre portion [TMK: (2) 3-8-001:002 por.] of a 173.744-acre parcel. The full (100%) pedestrian survey and excavation of 15 trenches identified one historic property, SHIP Site 50-50-05-06360, consisting of remnants of the former Pu’unenē Hospital (Madeus and Fredericksen 2008:19, 61).

#### **MEDRANO & DEGA (2012)**

In 2011, SCS (Medrano and Dega 2012) conducted archaeological monitoring during the Traffic Operational Improvements project along Hāna Highway at Wākea Street in Kahului [TMKs: (2) 3-7-012 and 3-8-066]. No historic properties were identified.

#### **BASSFORD & DEGA (2012)**

In 2012, SCS (Bassford and Dega 2012) conducted an AIS of approximately 41 acres of mostly undeveloped state-owned land adjacent to Kahului Airport for a proposed consolidated rental car facility at Kahului Airport [TMK: (2) 3-8-001:123 & 239; (2) 3-8-079:021]. The full (100%) pedestrian survey and excavation of 36 trenches resulted in the identification of two

Post-Contact surface features: a concrete flume (SIHP Site 50-50-04-07347) and a small generator building likely associated with former U.S. Navy use of the land (SIHP Site 50-50-04-07348) (Bassford and Dega 2012:29).

#### **FREY & FREDERICKSEN (2014)**

In 2011-13, Xamanek Researches (Frey and Fredericksen 2014) conducted archaeological monitoring on a 38.19-acre lot [then TMK parcel: (2) 3-8-079:013; now TMK plat: (2) 3-8-103] for the Maui Business Park Phase II North project. During monitoring, several features, including a water well, pipeline segments, and a water ditch, were discovered. These structures were remnant ancillary structures of the previously demolished HC&S central power plant building. They were collectively designated as SIHP Site 50-50-09-07857, “the HC&S power plant warehouse complex” (Frey and Fredericksen 2014:1, 4).

#### **PERZINSKI & DEGA (2014)**

In 2014, SCS (Perzinski and Dega 2014, Draft) conducted archaeological monitoring for construction of and improvements to a new UPS structure near the Kahului Airport [TMK: (2) 3-8-001:019 por.]. No historic properties were identified.

#### **MEDRANO & DEGA (2015)**

In 2014, SCS (Medrano and Dega 2015) also conducted archaeological monitoring during ground altering activities associated with the Kahului Force Main and the Wailuku Force Main project [TMK: (2) 3-7-009:002 and 999; 3-7-011:999; and 3-8-001:188 and 999]. Multiple Post-Contact properties belonging to an additional segment of the previously documented SIHP Site 50-50-04-03112 were identified. These properties included components of the Kahului Railroad rail, such as fragments of wheels, timber crossie, and spikes. Isolated finds were also observed, consisting of a fragmented animal bone, Post-Contact bottles, and recent debris.

#### **DAGHER & DEGA (2018)**

In 2016, SCS conducted an AIS (Dagher and Dega 2018) on a 9.83-acre parcel owned by Maui Electric Company, Ltd, in the vicinity of Kahului Harbor [TMK: (2) 3-7-011:017, 019 por., and 023]. Five stratigraphic trenches were excavated and the soil profiles were recorded, but no archaeological features were encountered. Dagher and Dega accordingly published the report as an AA and recommended no further work (Dagher and Dega 2018:41).

#### **KINGSBURY & DEGA (2019)**

In 2017, SCS (Kingsbury and Dega 2019) completed an AIS of a 0.779-acre lot at 520 Keolani Place [TMK: (2) 3-8-079:015]. The full 100% pedestrian survey and excavation of five trenches for subsurface testing did not identify any historic properties, and the report was accordingly written as an AA (Kingsbury and Dega 2019:24, 48).

#### **KANAHĀ HOTEL (KEHAJIT & DEGA 2020, RUBERTI et al. 2021, in review)**

In 2017, SCS (Kehajit and Dega 2020) conducted an AIS on 5.17 acres of land between Haleakalā Highway and Kahului Airport Access Road (now Mayor Elmer F. Cravalho Way) [TMK: (2) 3-8-103:014 por., 015 por., 016, 017, 018] for the Windward Hotel project. The project area comprised the easternmost portion of the project area of Frey and Fredericksen (2014). The full 100% pedestrian survey and the excavation of 11 trenches for subsurface testing did not result in the identification of any historic properties, and the report was accordingly written as an AA (Kehajit and Dega 2020:16-17, 38).

In 2020, Āina Archaeology (Ruberti et al. 2021, in review) conducted a supplemental archaeological assessment for the same project, now named Kanahā Hotel. The AA was requested by SHPD because of concerns regarding transect spacing and subsurface testing coverage for the earlier study (Ruberti et al. 2021:5). The follow-up surface survey was conducted via 5-meter transects and the excavation of additional nine trenches. No historic properties were identified (Ruberti et al. 2021:54, 90)

#### **PERALTA & DEGA (2020)**

In 2020, SCS (Peralta and Dega 2020, in review) performed an LRFI of the current project area for the Department of Transportation Kahului Baseyard Improvements [TMK: (2) 3-8-079:018 por.]. The full 100% pedestrian survey showed that the project area is entirely a built environment, and no historic properties were identified (Peralta and Dega 2020:16).

#### **LEE & DEGA (2021)**

In 2020, SCS (Lee and Dega 2021) monitored the curb ramp improvements at the Maui Business Park Phase II project at the intersection of Pūlehu Place [TMK (2) 3-8-001:268], Ho‘okele Street [TMK (2) 3-8-006:080], and Pūlehu Road [TMK (2) 3-8-101:037]. No historic properties were identified.

#### **LEE & DEGA (2022, in review)**

In 2021, SCS (Lee and Dega 2022, in review) monitored the installation of a new fire line at 80 Hāna Highway [TMK: (2) 3-7-009:029 por. and 999 (Kamehameha Avenue ROW)]. While no cultural features or deposits were identified, three artifacts, a blue glass jar, amber glass bottle, and a blue and white painted ceramic rim sherd, were recovered from the backfill.

### **ARCHAEOLOGICAL METHODOLOGY**

#### **FIELD METHODS**

Initial archaeological fieldwork for this project consisted in a 100% pedestrian survey conducted on June 11, 2020, by Ian Bassford, B.A., followed by subsurface work conducted on September 28, 2022, by SCS archaeologist Derek Butler, B.A., both under the supervision of

Principal Investigator Michael F. Dega, Ph.D. The 2022 fieldwork was done as a result of SHPD's request for an AIS with a subsurface component (Appendix A).

The approved AIS Consultation Letter (Dega 2021) outlines 13 proposed locations for 5-m-long trenches (Figure 11). Because of the danger of impacting lines, including optical fiber ones, belonging to Maui Electric Company and Hawaiian Telcom (Appendix B), SCS requested that Trench 11 is not excavated. That request was accepted by SHPD Maui (Appendix A). Thus, the total number of excavated trenches is 12 (Figure 12). Trench 7 also encountered an electric conduit at 75 cmbs, the excavation of 1.4 m in the immediate vicinity of the pipe was avoided, and the trench was instead continued with an extra meter in the north to ensure that it reaches the agreed upon length. In addition, Trench 8 was excavated to 4 m long because of encountering a concrete kicker at 45 cmbs in the northern end of the excavation. All trenches were on average 0.8 m wide and 1.8 m deep and located in the parking lots. All were also backfilled after the end of the excavations.

#### LABORATORY METHODS

All field notes were recorded on SCS standard field forms (photo log, soil description forms, feature forms, etc.). Scaled representative profiles of at least one long-axis sidewall per excavation were drawn on standardized metric graph paper, and GPS coordinates were recorded for each profiled section. Photographs of each excavation were also taken and their coordinates were ascertained with sub-meter accuracy via a Trimble GPS device. All stratigraphy was documented using standard USDA Soil Survey Manual (2000) terminology, descriptions, and attributes. These included Munsell (2009) color (hue, chroma, and value for each soil), texture, structure (form, size, dominance), mottles (color, size, shape), consistency (humidity, viscosity, plasticity, cementation), lower boundary topography and thickness, and inclusions. The presence or absence of subsurface deposits was noted along with an assessment of their depth. Laboratory work was focused on drafting/illustrating stratigraphic profiles, cataloguing the field notes and photographs, and reporting. All notes, photographs, profiles, and plan maps for this project are being curated at the SCS laboratory at 1357 Kapiolani Boulevard, Suite 850, Honolulu, HI 96814-4533.

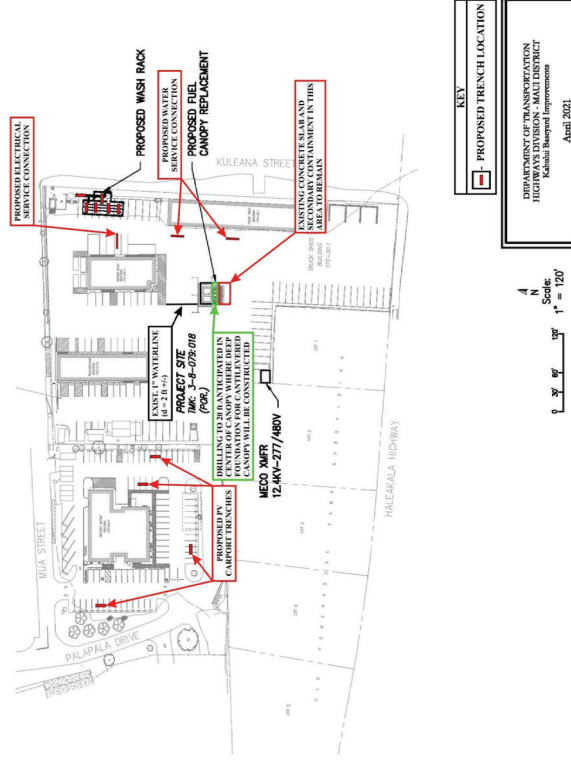


Figure 11: Proposed trench locations according to the accepted by SHPD AIS Consult Letter (Dega 2021)

## RESULTS

The archaeological inventory survey (AIS) for the c. 5-acre land parcel at 650 Palapala Drive, Kahului [TMK: (2) 3-8-079:018 por.], did not yield evidence for any historic properties. The AIS was conducted in two phases: (1) 100% pedestrian field inspection, which took place on June 11, 2020, and (2) the excavation of 12 exploratory trenches on September 28, 2022, and the recording of the stratigraphy they revealed.

The field inspection found that the project area consists entirely of a built environment with existing buildings and infrastructure, and no historic properties were identified on the surface (Figures 13 through 18). The subsurface component confirmed the findings of the field inspection. Soil profiles were recorded and represented along with photographs in Figures 19 to 44 below. The concrete kicker in the northern end of Trench 8 was not removed. No cultural resources were identified.

### STRATIGRAPHIC TRENCH I

Stratigraphic Trench I (220 cm deep) was located on a northwest/southeast axis and contained six stratigraphic layers. Figures 19 and 20 are respectively a schematic representation and a photograph of the soil profile. The stratigraphic layers were the following:

Layer I (0-25 cmbs) consisted of brown (10YR 5/3) single-grain, crumbly, coarse, slightly hard, friable, non-sticky, and non-plastic terrigenous sandy loam. Few roots were present, and the lower boundary was abrupt.

Layer II (20-90 cmbs) consisted of light yellowish brown (10YR 6/4) single-grain, crumbly, coarse, slightly hard, friable, non-sticky, and non-plastic marine sand. No roots were present, and the lower boundary was abrupt.

Layer III (60-90 cmbs) consisted of pale brown (10YR 6/3) single-grain, granular, fine, weakly coherent, very friable, non-sticky, and non-plastic marine sand. No roots were present, and the lower boundary was abrupt.

Layer IV (90-130 cmbs) consisted of light reddish brown (5YR 6/4) single-grain, granular, fine, weakly coherent, very friable, non-sticky, and non-plastic terrigenous sandy loam. No roots were present, and the lower boundary was abrupt.

Layer V (108-140 cmbs) was the same as Layer III.

Layer VI (118-220 cmbs) consisted of brown (7.5YR 4/3) massive, granular, slightly hard, firm, fine, sticky, and slightly plastic terrigenous sandy clay loam. No roots were present, and the lower boundary was the base of excavation.

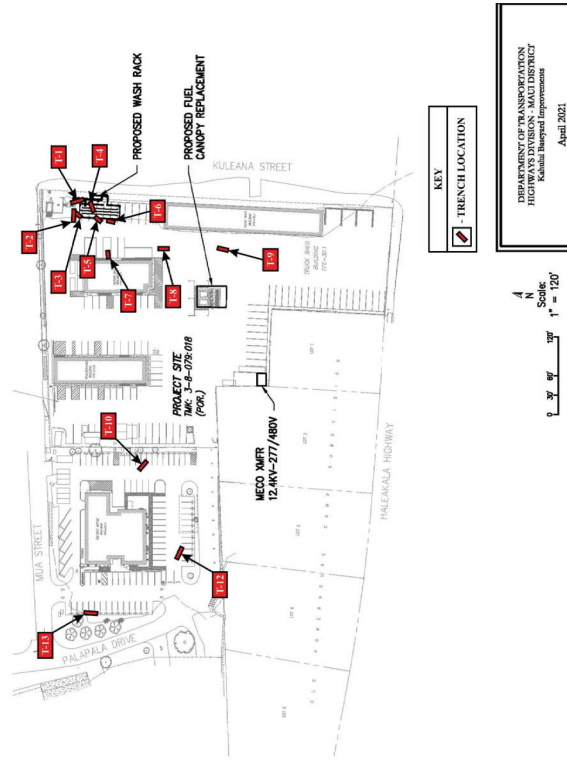


Figure 12: Actual trench locations excavated on September 28, 2022 (image courtesy of HDOT)





Figure 13: Photograph of the Kahului Baseyard lot taken on June 11, 2020 (view to North)



Figure 14: Photograph of the existing fuel tank of Kahului Baseyard taken on June 11, 2020 (view to East)



Figure 15: Photograph of Kahului Baseyard lot taken on June 11, 2020 (view to Southeast)



Figure 16: Photograph of the warehouse building taken on June 11, 2020 (view to Northeast)



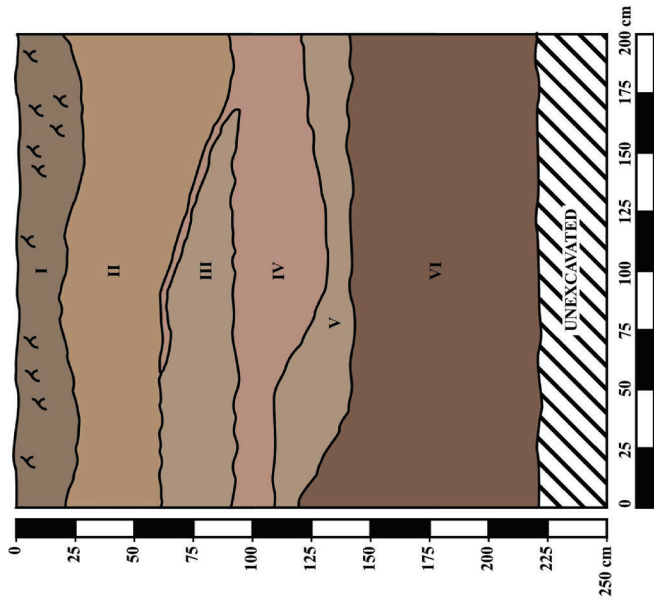


Figure 17: Photograph of equipment located in the Kahului Baseyard lot taken on June 11, 2020 (view to Northeast)



Figure 18: Photograph overview of the project area taken on June 11, 2020 (view to Southeast)

T-1 EAST PROFILE



KEY	
I	- LAYER I: BROWN (10YR 5/3) SANDY LOAM
II	- LAYER II: LIGHT YELLOWISH BROWN (10YR 6/4) SAND
III	- LAYER III: PALE BROWN (10YR 6/3) SAND
IV	- LAYER IV: LIGHT REDDISH BROWN (5YR 6/4) SANDY LOAM
V	- LAYER V: PALE BROWN (10YR 6/3) SAND
VI	- LAYER VI: BROWN (7.5YR 4/3) SANDY CLAY LOAM
A	- ROOTS

Figure 19: ST-1 stratigraphic profile of the east wall



Figure 20: Photograph of the ST-1 east wall taken on September 28, 2022

### STRATIGRAPHIC TRENCH 2

Stratigraphic Trench 2 (210 cm deep) was located on a west/east axis and contained seven stratigraphic layers. Figures 21 and 22 are respectively a schematic representation and a photograph of the soil profile. The stratigraphic layers were the following:

- Layer I (0-10 cmbs) consisted of asphalt.
- Layer II (10-30 cmbs) consisted of very dark gray (10YR 3/1) very hard road gravel. No roots were present, and the lower boundary was abrupt.
- Layer III (30-40 cmbs) consisted of reddish brown (5YR 5/4) single-grain, granular, fine, slightly hard, slightly sticky, and non-plastic sandy loam. No roots were present, and the lower boundary was abrupt.
- Layer IV (40-60 cmbs) consisted of very pale brown (10YR 7/3) single-grain, granular, fine, loose, non-sticky, and non-plastic marine sand. No roots were present, and the lower boundary was abrupt.
- Layer V (60-65 cmbs) was the same as Layer III.
- Layer VI (65-110 cmbs) consisted of brownish yellow (10YR 6/6) single-grain, granular, fine, loose, non-sticky, and non-plastic marine sand. No roots were present, and the lower boundary was abrupt.
- Layer VII (110-210 cmbs) consisted of dark reddish brown (5YR 3/3) massive, granular, slightly hard, sticky, and plastic terrigenous sandy clay loam. No roots were present, and the lower boundary was the base of excavation.

### STRATIGRAPHIC TRENCH 3

Stratigraphic Trench 3 (210 cm deep) was located on a northeast/southwest axis and contained five stratigraphic layers. Figures 23 and 24 are respectively a schematic representation and a photograph of the soil profile. The stratigraphic layers were the following:

- Layer I (0-10 cmbs) consisted of asphalt.
- Layer II (10-36 cmbs) consisted of very dark gray (10YR 3/1) very hard road gravel. No roots were present, and the lower boundary was abrupt.
- Layer III (35-60 cmbs) consisted of reddish brown (5YR 5/4) single-grain, granular, fine, slightly hard, slightly sticky, and non-plastic sandy loam. No roots were present, and the lower boundary was abrupt.
- Layer IV (46-105 cmbs) consisted of very pale brown (10YR 7/3) single-grain, granular, fine, loose, non-sticky, and non-plastic marine sand. No roots were present, and the lower boundary was abrupt.
- Layer V (105-205 cmbs) consisted of dark reddish brown (5YR 3/3) massive, granular, slightly hard, sticky, and plastic terrigenous sandy clay loam. No roots were present, and the lower boundary was the base of excavation.

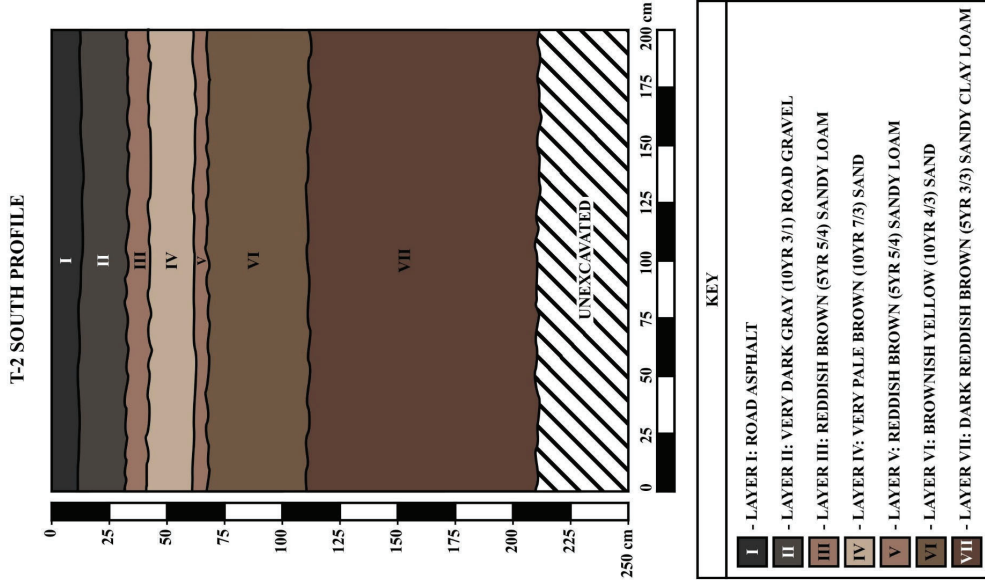


Figure 21: ST-2 stratigraphic profile of the south wall



T-3 SOUTH PROFILE

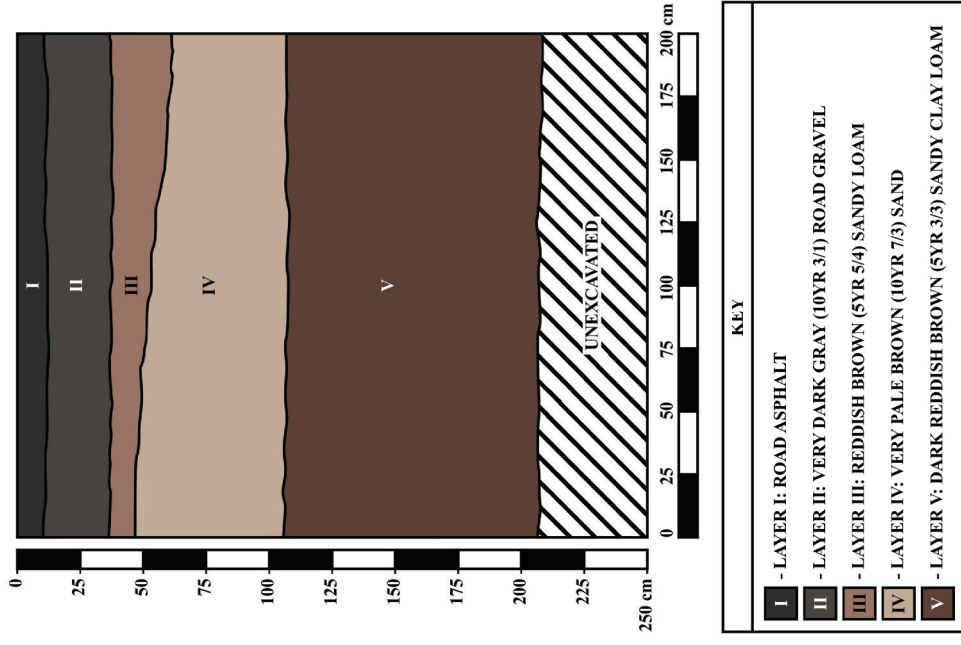


Figure 23: ST-3 stratigraphic profile of the south wall

45



Figure 22: Photograph of the ST-2 south wall taken on September 28, 2022

44

#### STRATIGRAPHIC TRENCH 4

Stratigraphic Trench 4 (200 cm deep) was located on a northeast/southwest axis and contained five stratigraphic layers. Figures 25 and 26 are respectively a schematic representation and a photograph of the soil profile. The stratigraphic layers were the following:

Layer I (0-10 cmbs) consisted of asphalt.

Layer II (10-30 cmbs) consisted of very dark gray (10YR 3/1) very hard road gravel. No roots were present, and the lower boundary was abrupt.

Layer III (30-42 cmbs) consisted of reddish brown (5YR 5/4) single-grain, granular, fine, slightly hard, slightly sticky, and non-plastic sandy loam. No roots were present, and the lower boundary was abrupt.

Layer IV (35-100 cmbs) consisted of very pale brown (10YR 7/3) single-grain, granular, fine, loose, non-sticky, and non-plastic marine sand. No roots were present, and the lower boundary was abrupt.

Layer V (100-200 cmbs) consisted of dark reddish brown (5YR 3/3) massive, granular, slightly hard, sticky, and plastic terrigenous sandy clay loam. No roots were present, and the lower boundary was the base of excavation.

#### STRATIGRAPHIC TRENCH 5

Stratigraphic Trench 5 (210 cm deep) was located on a northeast/southwest axis and contained five stratigraphic layers. Figures 27 and 28 are respectively a schematic representation and a photograph of the soil profile. The stratigraphic layers were the following:

Layer I (0-10 cmbs) consisted of asphalt.

Layer II (10-36 cmbs) consisted of very dark gray (10YR 3/1) very hard road gravel. No roots were present, and the lower boundary was abrupt.

Layer III (36-56 cmbs) consisted of reddish brown (5YR 5/4) single-grain, granular, fine, slightly hard, slightly sticky, and non-plastic sandy loam. No roots were present, and the lower boundary was abrupt.

Layer IV (36-110 cmbs) consisted of very pale brown (10YR 7/3) single-grain, granular, fine, loose, non-sticky, and non-plastic marine sand. No roots were present, and the lower boundary was abrupt.

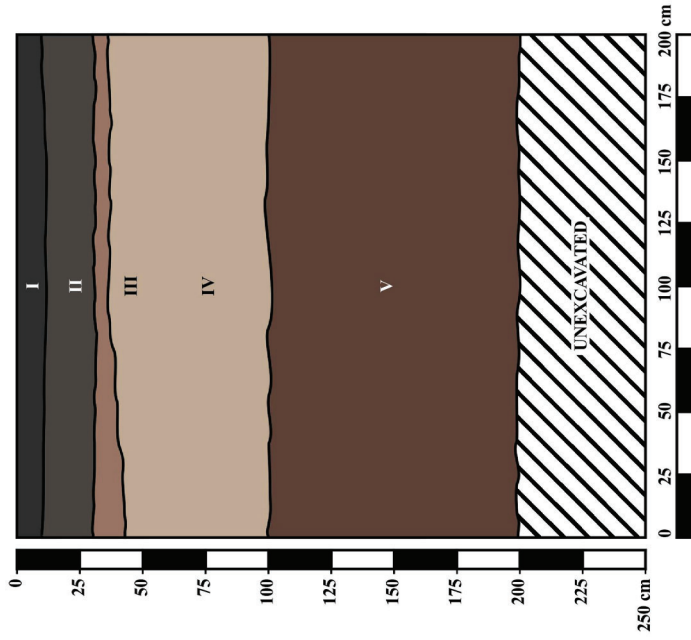
Layer V (110-210 cmbs) consisted of dark reddish brown (5YR 3/3) massive, granular, slightly hard, sticky, and plastic terrigenous sandy clay loam. No roots were present, and the lower boundary was the base of excavation.



Figure 24: Photograph of the ST-3 south wall taken on September 28, 2022



T-4 SOUTH PROFILE



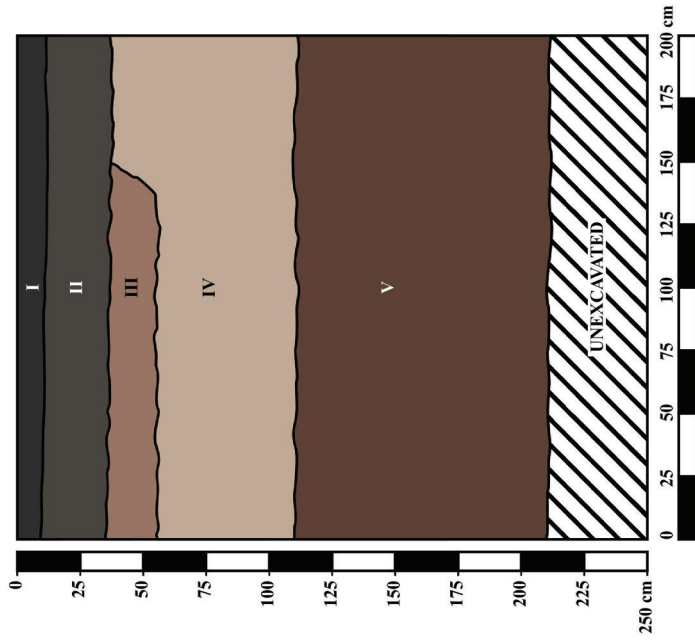
KEY	
I	- LAYER I: ROAD ASPHALT
II	- LAYER II: VERY DARK GRAY (10YR 3/1) ROAD GRAVEL
III	- LAYER III: REDDISH BROWN (5YR 5/4) SANDY LOAM
IV	- LAYER IV: VERY PALE BROWN (10YR 7/3) SAND
V	- LAYER V: DARK REDDISH BROWN (5YR 3/3) SANDY CLAY LOAM

Figure 25: ST-4 stratigraphic profile of the south wall



Figure 26: Photograph of the ST-4 south wall taken on September 28, 2022

T-5 SOUTH PROFILE



KEY	
I	- LAYER I: ROAD ASPHALT
II	- LAYER II: VERY DARK GRAY (10YR 3/1) ROAD GRAVEL
III	- LAYER III: REDDISH BROWN (5YR 5/4) SANDY LOAM
IV	- LAYER IV: VERY PALE BROWN (10YR 7/3) SAND
V	- LAYER V: DARK REDDISH BROWN (5YR 3/3) SANDY CLAY LOAM

Figure 27: ST-5 stratigraphic profile of the south wall



Figure 28: Photograph of the ST-5 south wall taken on September 28, 2022

### STRATIGRAPHIC TRENCH 6

Stratigraphic Trench 6 (190 cm deep) was located on a northeast/southwest axis and contained four stratigraphic layers. Figures 29 and 30 are respectively a schematic representation and a photograph of the soil profile. The stratigraphic layers were the following:

Layer I (0-10 cmbs) consisted of asphalt.

Layer II (10-36 cmbs) consisted of brown (7.5YR 5/4) single-grain, granular, coarse, hard, non-sticky, and non-plastic terrigenous gravelly sand with road gravels. No roots were present, and the lower boundary was abrupt.

Layer III (35-62 cmbs) consisted of yellowish red (5YR 5/6) single-grain, granular, fine, slightly hard, slightly sticky, and non-plastic sandy loam. No roots were present, and the lower boundary was diffuse.

Layer IV (62-190 cmbs) consisted of dark reddish brown (5YR 3/3) massive, granular, slightly hard, fine, sticky, and slightly plastic terrigenous sandy clay loam mottled with 10YR 7/3 very pale brown sand. No roots were present, and the lower boundary was the base of excavation.

### STRATIGRAPHIC TRENCH 7

Stratigraphic Trench 7 (200 cm deep) was located on an east/west axis and contained four stratigraphic layers. The trench was split in two by a 1.4 m long stretch left to preserve an electric line. Figure 31 is a schematic representation of the soil profile, while Figures 32 and 33 are photographs of the trench respectively in plan view and in profile. The stratigraphic layers were the following:

Layer I (0-10 cmbs) consisted of asphalt.

Layer II (10-46 cmbs) consisted of very dark gray (10YR 3/1) very hard road gravel. No roots were present, and the lower boundary was abrupt.

Layer III (46-180 cmbs) consisted of dark reddish brown (5YR 3/3) mottled with very pale brown (10YR 7/3) massive, granular, hard, firm, sticky, and plastic terrigenous sandy clay loam. No roots were present, and the lower boundary was diffuse.

Layer IV (180-200 cmbs) consisted of dark gray (7.5YR 4/1) massive, granular, slightly hard, firm, fine, sticky, and slightly plastic terrigenous sandy clay loam. No roots were present, and the lower boundary was the base of excavation.

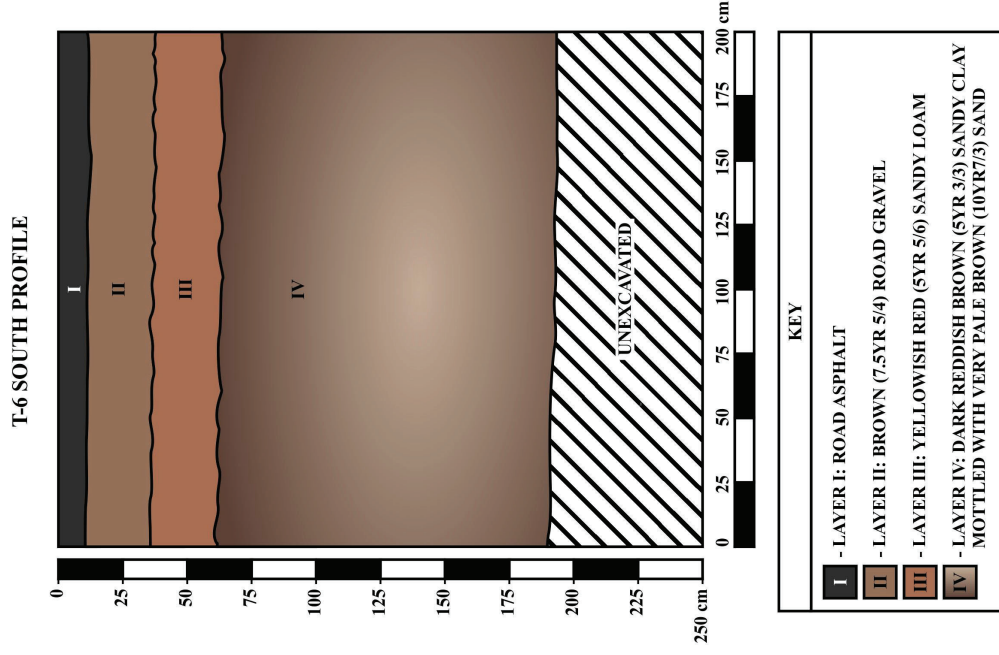


Figure 29: ST-6 stratigraphic profile of the south wall



T-7 SOUTH PROFILE

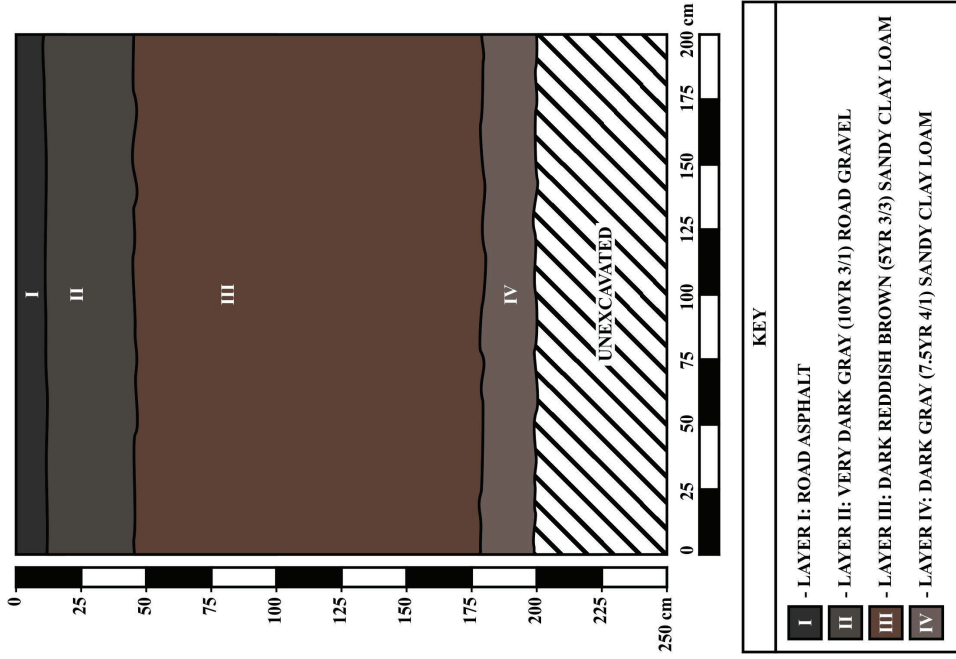


Figure 31: ST-7 stratigraphic profile of the south wall



Figure 30: Photograph of the ST-6 south wall taken on September 28, 2022



Figure 32: Plan view photograph of ST-7 taken on September 28, 2022 with the electric conduit visible in the foreground



Figure 33: Photograph of the ST-7 south wall taken on September 28, 2022



### STRATIGRAPHIC TRENCH 8

Stratigraphic Trench 8 (200 cm deep) was located on a north/south axis and contained four stratigraphic layers. The trench was excavated to 4 m long as a result of encountering a concrete kicker. Figures 34 is a schematic representation of the soil profile, while Figures 35 and 36 are photographs of the trench respectively in plan view and in profile. The stratigraphic layers were the following:

Layer I (0-10 cmbs) consisted of asphalt.

Layer II (10-38 cmbs) consisted of very dark gray (10YR 3/1) very hard road gravel. No roots were present, and the lower boundary was abrupt.

Layer III (36-200 cmbs) consisted of dark reddish brown (5YR 3/3) massive, granular, hard, sticky, and plastic terrigenous sandy clay loam. No roots were present, and the lower boundary was abrupt.

Layer IV (75-90 cmbs) consisted of reddish yellow (5YR 6/6) single-grain, granular, fine, slightly hard, slightly sticky, and non-plastic terrigenous sandy loam. No roots were present, and the lower boundary was the base of excavation.

### STRATIGRAPHIC TRENCH 9

Stratigraphic Trench 9 (200 cm deep) was located on a northeast/southwest axis and contained five stratigraphic layers. Figures 37 and 38 are respectively a schematic representation and a photograph of the soil profile. The stratigraphic layers were the following:

Layer I (0-10 cmbs) consisted of asphalt.

Layer II (10-36 cmbs) consisted of very dark gray (10YR 3/1) very hard road gravel. No roots were present, and the lower boundary was abrupt.

Layer III (35-80 cmbs) consisted of reddish yellow (5YR 6/6) single-grain, granular, fine, slightly hard, slightly sticky, and non-plastic terrigenous sandy loam. No roots were present, and the lower boundary was abrupt.

Layer IV (66-160 cmbs) consisted of dark reddish brown (5YR 3/3) massive, granular, slightly hard, firm, sticky, and plastic terrigenous sandy clay loam. No roots were present, and the lower boundary was abrupt.

Layer V (160-200 cmbs) consisted of dark gray (7.5YR 4/1) massive, granular, slightly hard, firm, fine, sticky, and slightly plastic terrigenous sandy clay loam. No roots were present, and the lower boundary was the base of excavation.

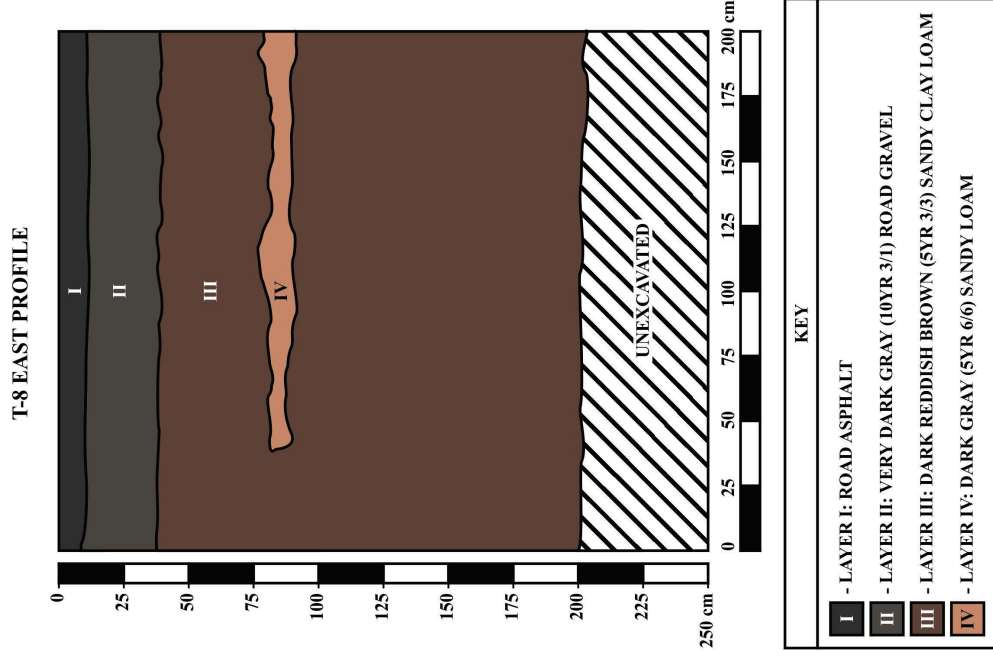


Figure 34: ST-8 stratigraphic profile of the east wall



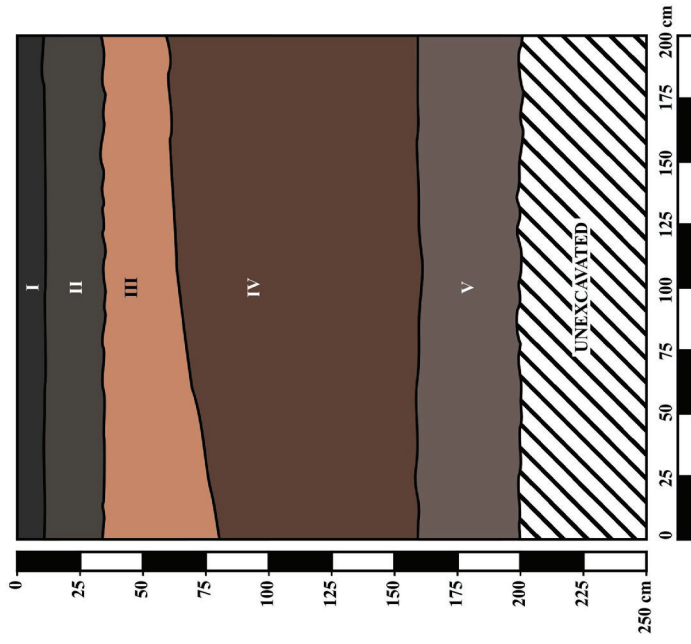


Figure 35: Plan view photograph of ST-8 taken on September 28, 2022 with the concrete kicker visible in the foreground



Figure 36: Photograph of the ST-8 east wall taken on September 28, 2022 with the concrete kicker visible in the foreground

T-9 EAST PROFILE



KEY	
I	- LAYER I: ROAD ASPHALT
II	- LAYER II: VERY DARK GRAY (10YR 3/1) ROAD GRAVEL
III	- LAYER III: REDDISH YELLOW (5YR 6/6) SANDY LOAM
IV	- LAYER IV: DARK REDDISH BROWN (5YR 3/3) SANDY CLAY LOAM
V	- LAYER V: DARK GRAY (7.5YR 4/1) SANDY CLAY LOAM

Figure 37: ST-9 stratigraphic profile of the east wall



Figure 38: Photograph of the ST-9 east wall taken on September 28, 2022



### STRATIGRAPHIC TRENCH 10

Stratigraphic Trench 10 (200 cm deep) was located on a northwest/southeast axis and contained six stratigraphic layers. Figures 39 and 40 are respectively a schematic representation and a photograph of the soil profile. The stratigraphic layers were the following:

Layer I (0-10 cmbs) consisted of asphalt.

Layer II (10-32 cmbs) consisted of very dark gray (10YR 3/1) very hard road gravel. No roots were present, and the lower boundary was abrupt.

Layer III (30-120 cmbs) consisted of dark reddish brown (5YR 3/3) mottled with reddish yellow (7.5YR 6/8) massive, granular, hard, firm, sticky, and plastic terrigenous sandy clay loam. No roots were present, and the lower boundary was diffuse.

Layer IV (120-200 cmbs) consisted of reddish brown (5YR 5/4) mottled with pale brown (10YR 7/3) massive, granular, slightly hard, firm, sticky, and plastic sandy clay loam of mixed origin. No roots were present, and the lower boundary was the base of excavation.

### STRATIGRAPHIC TRENCH 12

Stratigraphic Trench 12 (220 cm deep) was located on a northwest/southeast axis and contained six stratigraphic layers. Figures 41 and 42 are respectively a schematic representation and a photograph of the soil profile. The stratigraphic layers were the following:

Layer I (0-10 cmbs) consisted of asphalt.

Layer II (10-40 cmbs) consisted of very dark gray (10YR 3/1) very hard road gravel. No roots were present, and the lower boundary was abrupt.

Layer III (39-200 cmbs) consisted of very pale brown (10YR 7/3) single-grain, granular, fine, weakly coherent, very friable, non-sticky, and non-plastic marine sand. No roots were present, and the lower boundary was abrupt.

Layer IV (200-220 cmbs) consisted of brown (10YR 4/3) single-grain, granular, fine, weakly coherent, very friable, slightly sticky, and non-plastic terrigenous sandy loam. No roots were present, and the lower boundary was the base of excavation.

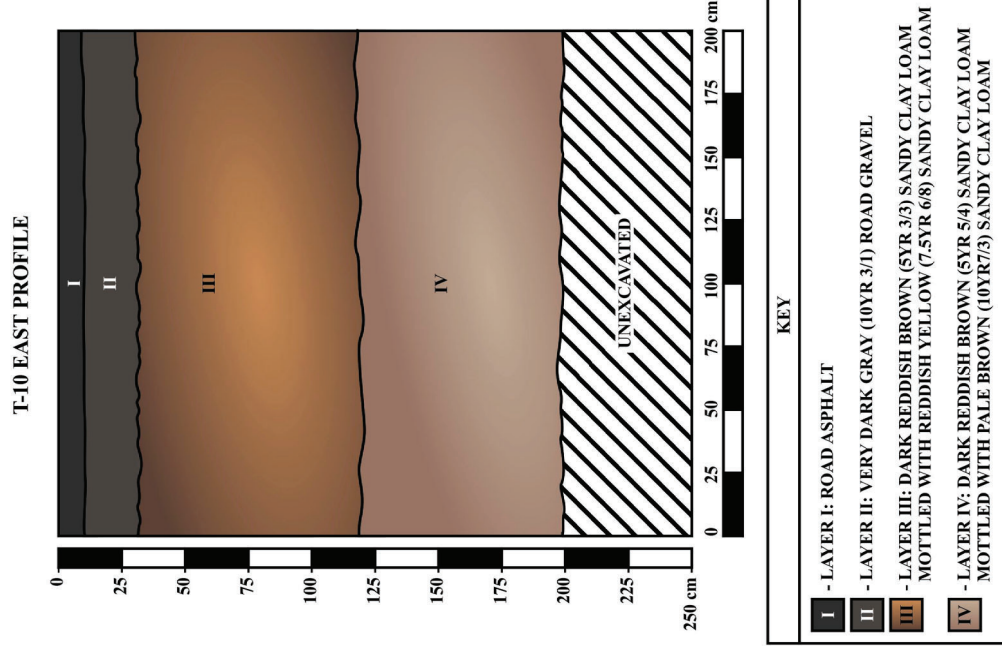


Figure 39: ST-10 stratigraphic profile of the east wall

T-12 SOUTH PROFILE

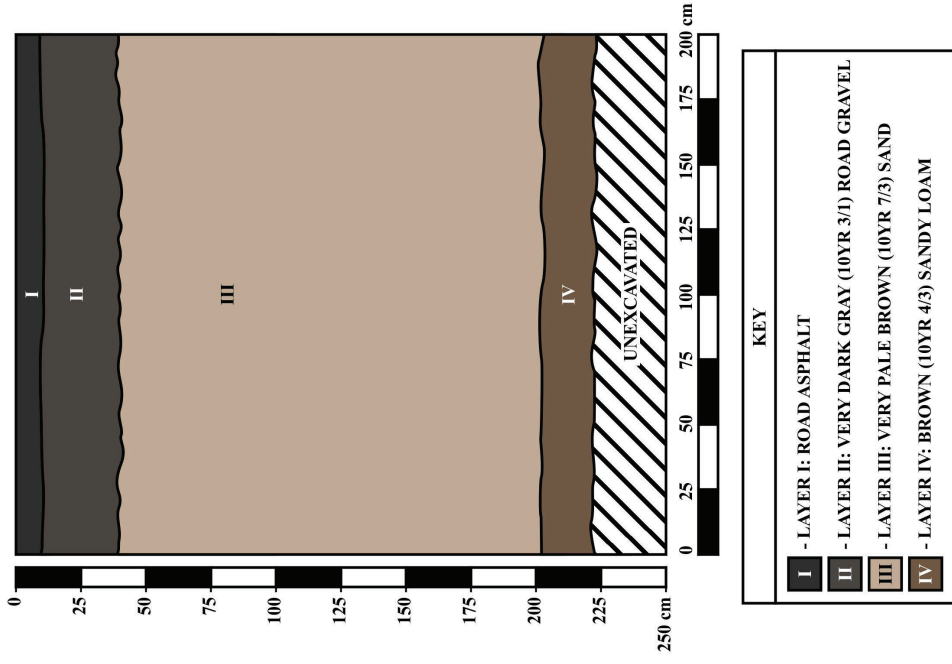


Figure 41: ST-12 stratigraphic profile of the south wall

67



Figure 40: Photograph of the ST-10 east wall taken on September 28, 2022

66

### STRATIGRAPHIC TRENCH 13

Stratigraphic Trench 13 (215 cm deep) was located on a north/south axis and contained six stratigraphic layers. Figures 43 and 44 are respectively a schematic representation and a photograph of the soil profile. The stratigraphic layers were the following:

Layer I (0–10 cmbs) consisted of asphalt.

Layer II (10–45 cmbs) consisted of very dark gray (10YR 3/1) very hard road gravel. No roots were present, and the lower boundary was abrupt.

Layer III (44–75 cmbs) consisted of dark reddish brown (5YR 3/3) massive, granular, slightly hard, firm, sticky, and plastic terrigenous sandy clay loam. No roots were present, and the lower boundary was diffuse.

Layer IV (74–85 cmbs) consisted of very pale brown (10YR 7/3) single-grain, granular, fine, loose, non-sticky, and non-plastic marine sand. No roots were present, and the lower boundary was abrupt.

Layer V (84–148 cmbs) was the same as Layer III.

Layer VI (147–215 cmbs) consisted of reddish yellow (7.5YR 6/8) single-grain, granular, weakly coherent, fine, very friable, non-sticky, and non-plastic sand. No roots were present, and the lower boundary was the base of excavation.

### CONCLUSIONS AND RECOMMENDATIONS

SCS conducted an AIS of a 5-acre parcel at 650 Palapala Drive, Kahului, Pūali Komohana District, Wailuku Ahupua'a, Maui [TMK: (2) 3-8-079:018 por.]. The survey consisted of a pedestrian survey completed in 2020 and a subsurface component in the form of 12 stratigraphic trenches reaching 220 cmbs deep excavated in 2022. Neither lead to the identification of historic properties.

As expected, given previous land use in the project area, the surface was devoid of any sites or artifact/midden scatters. Subsurface contexts were dominated by upper-level construction fill, with natural sediments beneath the fill. No cultural layers or other resources were present.

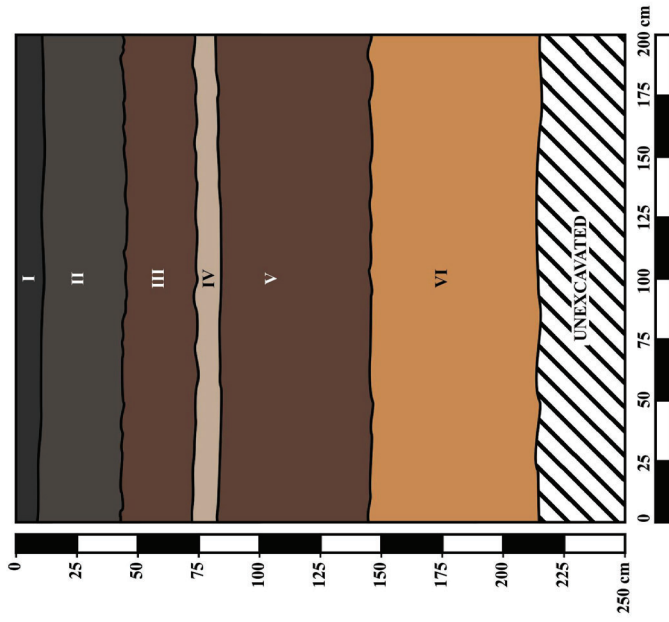
Even though no historic properties were identified, the presence of sandy substrata associated with Pre- and Early Post-Contact burials, as well as previous archeological reports about Post-Contact historic properties in the vicinity of the project area, suggest that it is possible that culturally significant features may be identified during future subterranean work on the parcel and nearby environs. Thus, SHPD should be consulted regarding any future ground disturbance work or permits for the property. SCS recommends no further archaeological work.



Figure 42: Photograph of the ST-12 south wall taken on September 28, 2022



T-13 WEST PROFILE



KEY	
I	- LAYER I: ROAD ASPHALT
II	- LAYER II: VERY DARK GRAY (10YR 3/1) ROAD GRAVEL
III	- LAYER III: DARK REDDISH BROWN (5YR 3/3) SANDY CLAY LOAM
IV	- LAYER IV: VERY PALE BROWN (10YR 7/3) SAND
V	- LAYER V: DARK REDDISH BROWN (5YR 3/3) SANDY CLAY LOAM
VI	- LAYER VI: BROWNISH YELLOW (7.5YR 6/8) SAND

Figure 43: ST-12 stratigraphic profile of the west wall



Figure 44: Photograph of the ST-12 west wall taken on September 28, 2022



## REFERENCES

- Adler, Jacob
- 1966 *Claus Spreckels: The Sugar King in Hawaii*. Mutual Publishing, Honolulu
- Bassford, Ian, and Michael F. Dega
- 2012 *An Archaeological Inventory Survey of Approximately 41 Acres for the Consolidated Rental Car Facility and Associated Improvements at Kahului Airport, Kahului, Wailuku Ahupua'a, Wailuku District, Island of Maui, Hawaii* [TMK: (2) 3-8-001:123, 239 and 3-8-079:021]. Scientific Consultant Services, Inc. Honolulu.
- Beaglehole, John C. (Ed.)
- 1967 *The Journals of Captain Cook on His Voyages of Discovery*. Vol. 3. The Voyage of the Resolution and Discovery. Cambridge University Press for Hakluyt Society.
- Burgett, Berdena, and Robert L. Spear
- 1997 *An Archaeological Inventory Survey of the Proposed Maui Electric Company, Limited's Waena Generating Station and Transmission Line Corridors, Wailuku and Makawao Districts, Island of Maui, Hawaii* (TMK: 2-5, 3-8). Scientific Consultant Services, Inc., Honolulu.
- Chinen, Jon J.
- 1961 *Original Land Titles in Hawaii*. Jon Jitsucho Chinen. Library of Congress Catalogue Card No. 61-17314.
- Clark, Stephen D., and James H. Toenjes
- 1987 *Archaeological Monitoring of Sewer Line Construction from Spreckelsville to Ku'au, Maui, State of Hawaii*. B.P. Bishop Museum, Honolulu.
- Condé, Jesse C., and Gerald M. Best
- 1973 *Sugar Trains: Narrow Gauge Rails of Hawaii*. Glenwood Publishers, Felton, California.
- Connolly, Robert D. III
- 1981 An Archaeological Reconnaissance Survey at and around the Kahului Airport at Kahului, Maui. *Environmental Field Surveys at Kahului Airport and Vicinity, Kahului, Maui*, pp 62-76. AECOS, Inc. Kane'ohe, Hawaii.
- Cordy, Ross
- 1981 *A Study of Prehistoric Social Change: The Development of Complex Societies in the Hawaiian Islands*. Academic Press, New York.
- Dagher, Cathleen A.
- 2021 *A Cultural Impact Assessment Report in Advance of the Proposed Department of Transportation (DOT) Kahului Baseyard Improvements Project Wailuku (Pu'ali Komohana) Ahupua'a, Wailuku District, Island of Maui, Hawaii* [TMK: (2) 3-8-079:018 por.; Formerly TMK: (2) 3-8-001:075]. Scientific Consultant Services, Inc., Honolulu.
- Dagher, Cathleen A., and Michael F. Dega
- 2018 *Archaeological Assessment for the Maui Electric Power Plant Subdivision Project (Lots 1-A, 1-B, and 1-C) Kahului Ahupua'a, Wailuku District, Island of Maui, Hawaii* [TMK: (2) 3-7-011:017, 019 por., and 023]. Scientific Consultant Services, Inc., Honolulu.
- Daws, Gavan
- 1974 *Shoal of Time: History of the Hawaiian Islands*. University of Hawai'i Press, Honolulu.
- Dega, Michael, F.
- 2021 *Archaeological Inventory Survey Consultation for the Storm Water Improvement Project at the Kahului Baseyard, Wailuku Ahupua'a, Pu'ali Komohana District, Island of Maui, TMK: (2) 3-8-079:018 por.* Scientific Consultant Services, Inc. Honolulu.
- Dega, Michael F. and John Risedorf
- 2004 *Archaeological Monitoring Report in Near-Coastal Kahului, Wailuku Ahupua'a, Wailuku District, Island of Maui, Hawaii* [TMK 3-7-12:017]. Scientific Consultant Services, Inc., Honolulu.
- Dudley, Walter C., and Min Lee
- 1998 *Tsunami!* Second edition. University of Hawai'i Press, Honolulu.
- Folk, William H., and Hallett H. Hammett
- 1991 *Archaeological Survey and Subsurface Testing for the Kahului Airport, Kahului, Maui*. Cultural Surveys Hawai'i, Inc., Honolulu.

- Folk, William H., Victoria S. Creed, David W. Shideler, and Hallett H. Hammatt  
 2000 *Archaeological Inventory Survey of Sugarcane Lands Proposed for Development at Spreckelsville, Wailuku Ahupua'a, Wailuku District, Maui (TMK 3-8-01:por.7)*. Cultural Surveys Hawaii.
- Fomander, Abraham  
 1916-1917 *Collection of Hawaiian Antiquities and Folk-Lore, Volume IV*. Bishop Museum Press, Honolulu.  
 1919-1920 *Collection of Hawaiian Antiquities and Folk-Lore, Volume VI*. Bishop Museum Press, Honolulu.
- Foote, D.E., E.L. Hill, S. Nakamura, and F. Stephens  
 1972 *Soil Survey of the Islands of Kaua'i, O'ahu, Maui, Molokai, and Lanai, State of Hawaii*: i. USDA Soil Conservation Service, GPO, Washington, D.C.
- Fredericksen, Erik M.  
 2003 *Archaeological Assessment of Kanaha Beach Park, A C. 75-Acre Coastal Parcel of Land in Wailuku Ahupua'a, Wailuku District, Island of Maui (TMK: 3-8-01:119 and 19 por.)*. Xamanek Researches, LLC, Pukalani.  
 2008 *An Archaeological Assessment Survey for Lot 8, Kanaha Industrial Subdivision II, Located on a 2.5 Acre Portion of Land in Wailuku Ahupua'a, Wailuku District, Maui Island (TMK: (2) 3-7-11: 028)*. Xamanek Researches, LLC, Pukalani
- Fredericksen, Demaris, L., and Walter M. Fredericksen  
 1988 *An Archaeological Inventory Survey Preliminary Report on a Parcel of Land (232 Acres) in Kahului, Maui, Hawaii*. Xamanek Researches, LLC, Pukalani.  
 1989 *An Archaeological Inventory Survey of an Additional Area (130 acres) (TMK: 3-8-06-38) in the Kahului Industrial Park Petition Area, Kahului, Maui, Hawaii*. Xamanek Researches, LLC, Pukalani.
- Frey, Jennifer J., and Erik M. Fredericksen  
 2014 *Archaeological Monitoring Report for A 38.19 Acre Portion of Land in Wailuku Ahupua'a, Wailuku District, Island of Maui, Hawaii* :i [TMK: 3-8-079:13]. Xamanek Researches, LLC, Pukalani.
- Giambelluca, T.W., X. Shuai, M.L. Barnes, R.J. Alliss, R.J. Longman, T. Miura, Q. Chen, A.G. Frazier, R.G. Mudd, L. Cuo, and A.D. Businger.  
 2014 *Evapotranspiration of Hawaii*:i. Final report submitted to the U.S. Army of Corps of Engineers – Honolulu District, and the Commission on Water Resource Management, State of Hawaii':i. Accessed November 2022.
- Goodfellow, Susan T.  
 1991 *Archaeological Inventory Survey, VIP Foodservice New Warehouse Site, Wailuku, Wailuku District, Island of Maui*. Paul H. Rosendahl, Ph.D., Inc. Hilo.
- Google Earth  
 n.d. Aerial photographs of Hawai'i. Google Inc., 1600 Amphitheatre Parkway, Mountain View, California. www.google.com/earth.html. Accessed November 2022.
- Hobby, Robert W.  
 2005 *Wetland Determination for the Kanaha Industrial Subdivision Project, Kahaha, Kahului, Hawaii*. Prepared for Benjamin L. Brown
- \*T̄i, John Papa  
 1959 *Fragments of Hawaiian History*. Bishop Museum Press, Honolulu
- Kamakau, Samuel M.  
 1961 *Ruling Chiefs of Hawaii*. The Kamehameha Schools Press, Honolulu.
- Kame'eleihiwa, Lilikalā  
 1992 *Native Land and Foreign Desires: Pehea La E Pono Ai?* Bishop Museum Press. Honolulu.
- Kehajit, Chonnikarn, and Michael F. Dega  
 2020 *An Archaeological Assessment for the Windward Hotel Project Kahului, Wailuku Ahupua'a, Wailuku District, Island of Maui, Hawai'i TMK (2) 3-8-103: 014, 015, 016, 017, 018 (Formerly TMK (2) 3-8-079:013)*. Scientific Consultant Services, Inc. Honolulu.
- Kelly, Marion  
 1983 *Na Māla o Kona: Gardens of Kona*. Report 83-2, Department of Anthropology. Bishop Museum. Bishop Museum Press, Honolulu, Hawai'i.
- Kennedy, Joseph  
 1990 *Archaeological Subsurface Testing Results at the Site of the Proposed Maui Community Arts and Cultural Center, TMK 3-8-07, Located at Kahului, Maui*. Archaeological Consultants of Hawaii, Inc., Haleiwa.
- Kingsbury, Nigel T., and Michael F. Dega  
 2019 *Archaeological Assessment in Support of Keolani Triangle Retail Center 520 Keolani Place, Kahului, Wailuku Ahupua'a, Wailuku District, Island of Maui, Hawai'i TMK (2) 3-8-079:015*. Scientific Consultant Services, Inc., Honolulu.

- Kirch, Patrick V.
- 1985 "The Chronology of Early Hawaiian Settlement." *Archaeology and Physical Anthropology in Oceania* 9:110-119.
- 2011 "When Did the Polynesians Settle Hawaii? A Review of 150 Years of Scholarly Inquiry and a Tentative Answer," in *Hawaiian Archaeology*. 12 (2011) pp. 3-26.
- Kirch, Patrick V., and Marshall Sahlins
- 1992 *Anahulu: The Anthropology of History in the Kingdom of Hawaii*. Vol. 1 and 2. University of Chicago Press, Chicago, Illinois.
- Kolb, Michael J., Patty J. Conte, and Ross Cordy (Editors)
- 1997 *Kula: The Archaeology of Upcountry Maui in Waiohuli and Keokea*. Prepared for the Department of Hawaiian Home Lands, State Historic Preservation Division, Honolulu.
- Kuykendall, Ralph S.
- 1953 *The Hawaiian Kingdom—Volume 2: Twenty Critical Years, 1854-1874*. University of Hawaii; Press, Honolulu.
- 1967 *The Hawaiian Kingdom—Volume 3: The Kalanika Dynasty, 1874-1893*. University of Hawaii; Press, Honolulu.
- Lee, Gloria C.A., and Michael F. Dege
- 2021 *Archaeological Monitoring Report for Curb Ramp Improvements at the Ho'okele Street / Pūlehu Place / Pūlehu Road Intersection in Kahului, Wailuku Ahupua'a (Formerly Pū unēhē), Pū'ali Komohana District, Island of Maui, Hawaii* [TMK: (2) 3-8-001:268, (2) 3-8-006:080, and (2) 3-8-101:037]. Scientific Consultant Services, Inc., Honolulu.
- 2022 [in review] *Archaeological Monitoring Report for Office Depot Fire Line Project at 80 Hāna Highway in Kahului, Wailuku Ahupua'a, Pū'ali Komohana District, Island of Maui, Hawaii* [TMK: (2) 3-7-009:029 por., and 999 (Kamehameha Avenue ROW)]. Scientific Consultant Services, Inc., Honolulu.
- Madeus, Jonas K., and Erik M. Fredertiksen
- 2008 *Archaeological Inventory Survey of a 12.778-Acre Parcel in Wailuku Ahupua'a, Wailuku District, Island of Maui, Hawaii* [TMK: 3-8-079:13]. Xamanek Researches, LLC, Pukalani.
- McGerty, Leanne, and Robert L. Spear
- 2001 *An Archaeological Assessment for the Wailuku Force Main Project in Wailuku and Kahului, Maui (Portions of TMK:3-04-27; 3-07-001, 002, 003, 004, 007-011; 3-08-007)*. Scientific Consultant Services, Inc., Honolulu.
- McIntosh, James, and Paul L. Cleghorn
- 2003 *Archaeological Monitoring for the Proposed Verizon Wireless Telecommunications Facility at 291 Dairy Road, Wailuku Ahupua'a, Wailuku District, Island of Maui, Hawaii* [TMK 3-8-65:11]. Pacific Legacy, Inc., Kailua.
- Medrano, Stephanie, and Michael F. Dege
- 2012 *Archaeological Monitoring Report for Traffic Operational Improvements Project Number HPY M-01-08, Wakea Street, Kahului, Wailuku Ahupua'a, Wailuku District, Island of Maui, Hawaii* [TMK: (2) 3-7-012 and 3-8-66]. Scientific Consultant Services, Inc., Honolulu.
- 2015 *An Archaeological Monitoring Report for the Kahului Force Main and Wailuku Force Main Improvement Project, Kahului, Wailuku Ahupua'a, Wailuku District, Island of Maui, Hawaii* [TMK: (2) 3-7-009:002 and 999; 3-7-011:999 and 019; and 3-8-001:188 and 999]. Scientific Consultant Services, Inc., Honolulu.
- Morawski, Lauren, and Robert Spear
- 2001 *Archaeological Inventory Survey of 0.25 Acres in Hamakuaopoko Ahupua'a Makawao District, Island of Maui, Hawaii* [TMK:2-6-01:1 and 2-5-05:50]. Scientific Consultant Services, Inc., Honolulu.
- Munsell Color
- 2009 *Munsell Soil Color Charts*. Macbeth Division of Kollmorgen Instruments Corporation, Baltimore.
- Office of Hawaiian Affairs
- n.d. Kipuka Online Database (<http://kipukadatabase.com/kipuka>). Accessed November 2022.
- O'Rourke, Laura C.
- 2005a *Archaeological Inventory Survey of Approximately 1400 M<sup>2</sup> of Land Located in The Maui Country Club, Spreckelsville, Wailuku Ahupua'a, Wailuku District, Maui Island, Hawaii* [TMK:(2)3-8-78:01]. Scientific Consultant Services, Inc., Honolulu.
- 2005b *Burial Treatment Plan for One Partial Burial Found During the Archeological Inventory Survey of Approximately 1400 M<sup>2</sup> of Land Located in The Maui Country Club, Spreckelsville, Wailuku Ahupua'a, Wailuku District, Maui Island, Hawaii* [TMK:(2)3-8-78:01]. Scientific Consultant Services, Inc., Honolulu.

- Parham, James E., Glenn R. Higashi, Eko K. Lapp, Darrell G.K. Kuamo'o, Robert T. Nishimoto, Skippy Hau, J. Michael Fitzsimons, Daniel A. Polhemus, and William S. Devick  
2008 *Atlas of Hawaiian Watersheds & Their Aquatic Resources. Hawaii Division of Aquatic Resources and Bernice Pauahi Bishop Museum, Honolulu.*  
(<https://www.hawaiiwatershedatlas.com/index.html>) Accessed November 2022.
- Peralta, Erika, and Michael F. Dega  
2020 [in review] *A Literature Review and a Field Inspection for the Department of Transportation (DOT) Kahului Baseyard Improvements Project in Kahului, Wailuku Ahupua'a, Wailuku District, Island of Maui, Hawaii'i [TMK: (2) 3-8-079:018 por.]*. Scientific Consultant Services, Inc. Honolulu.
- Perzinski, David, and Michael F. Dega  
2014 *An Archaeological Monitoring Report for Kahului Airport UPS Building Relocation, Kahului, Wailuku Ahupua'a, Wailuku District, Island of Maui, Hawaii'i [TMK: (2) 3-8-001:329 and (2) 3-8-001:019 por.]*. [Draft] Scientific Consultant Services, Inc., Honolulu.
- Pukui, Mary K., Samuel H. Elbert, and Esther Mookini  
1974 *Place Names of Hawaii*. University of Hawaii'i Press, Honolulu.
- Ruberti, Amanda, Napoli Souza, and Tanya Lee-Greig  
2021 [in review] *Supplemental Archaeological Assessment Report for the Kanahā Hotel at Kahului Airport, Permit Applications CPA 2018/0001, CIZ 2018/0001, SM1 2018/0001, and EA 2018/0001, Wailuku Ahupua'a, Pū'ali Komohana Moku, Wailuku Modern Tax District, Island of Maui, TMK: (2) 3-8-103:014 por., 015 por., and 016-018 (Formerly a portion of TMK [2] 3-8-079:013)*. 'Āina Archaeology, Kīhei.
- Samwell, David  
1967 *Journal of Captain Cook's Third Voyage, 1776-1779*. In J.C. Beaglehole. Shetcheck, Donna M., and Michael F. Dega  
2007 *An Archaeological Assessment of Approximately 10 Acres in Wailuku, Wailuku Ahupua'a (Formerly Pū'unēhē), Wailuku District, Island of Maui, Hawaii'i [TMK: 3-8-6:04 por.]*. Scientific Consultant Services, Inc., Honolulu.
- Sinoto, Akihiko, and Jeffrey Pantaleo  
1992 *Archaeological Inventory Survey of the East Maui Waterline Project Wailuku and Makawao, Maui Island (TMK 2-5-03 thru 05; 2-7-03, 2-7-07 thru 11, 2-7-13, 2-7-16 thru 20; 3-8-01, 3-8-06 thru 07, 3-8-51, 3-8-59, 3-8-61, 3-8-70, 3-8-71)*. Aki Sinoto Consulting, LLC, Honolulu.
- Starr, Kim, and Forest Starr  
2005 Photograph #050525-6901. *Starr Environmental*.  
(<http://www.starrenvironmental.com/images/image/?q=24136241194>) Accessed November 2022.
- Sterling, Elspeth P.,  
1998 *Sites of Maui*. Bishop Museum Press, Honolulu.
- Toenjes, James H., William H. Folk, and Hallett H. Hammatt  
1991 *Archeological Testing of Subsurface Deposits Proposed Approach "Clear Zone," North End of Runway 2-20, Kahului Airport, Kahului, Maui*. Cultural Surveys Hawaii.
- Tomonari-Tuggle, Myra J., and David J. Welch  
1995 *The Archaeology of Kahului Airport*. International Archaeological Research Institute, Inc., Honolulu.
- U.S. Geological Survey  
2017 *Paia, HI*. Maui USGS 7.5-minute topographic quadrangle. Available at USGS Information Services, Box 25286, Denver, Colorado.
- Waihona 'Āina  
n.d. *Land Grants* (<https://waihona.com/royalSearch.asp>) Accessed November 2022.
- Welch, David J.  
1998a *Archaeological Subsurface Survey at Kaliainui Gulch, Kahului Airport, Maui*. International Archaeological Research Institute, Inc., Honolulu.  
1998b *Archaeological Survey at Kahului Airport, Maui*. International Archaeological Research Institute, Inc., Honolulu.  
1991 *Archaeological Subsurface Testing for Kanaha Beach Park Addition and Kanaha Airport Transient Apron, Kahului Airport, Wailuku, Maui, Hawaii'i*. International Archaeological Research Institute, Inc., Honolulu.

**APPENDIX A:  
CORRESPONDENCE WITH THE  
STATE HISTORIC PRESERVATION DIVISION  
REGARDING PROJECT NO. 2021PR00447**

DAVID V. AGE  
COMMISSIONER OF  
LAND AND NATURAL RESOURCES



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES

STATE HISTORIC PRESERVATION DIVISION

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CONTRACTS AND ADMINISTRATION  
HAWAIIAN ISLANDS DISTRICT COMMERCIAL  
BUILDINGS

May 11, 2021

Ty Fukuroku  
County of Maui  
Department of Transportation (HDOT)  
Maui District Office  
650 Palapala Drive  
Kahului, Maui 96731  
Email: Ty.Fukuroku@hawaii.gov

IN REPLY REFER TO:  
Project No.: 2021PR00447  
Submittal No.: 2021PR00447.001  
Doc. No.: 2105AM09  
Archaeology

Dear Ty Fukuroku:

**SUBJECT:** Chapter 6E-8 Historic Preservation Review—  
Request for Concurrence with Project Effect Determination  
Storm Water Improvements Project at the Kahului Baseyard  
Within Ahupua'a, Punaluu Komohana District, Eiaha of Maui  
TIME: (3) 3-8,479-018 per.

This letter provides the State Historic Preservation Division's (SHPD's) review of the State of Hawaii Department of Transportation (HDOT), Highways Division titled Storm Water Improvements Project at the Kahului Baseyard. SHPD received the submission on April 21, 2021 which included a cover letter from HDOT requesting SHPD's concurrence with a project effect determination of "no historic properties affected" (Shuhido, April 2021), maps of the current project area, an HRS 6E Submittal Form, a copy of a cultural impact assessment report (Dagler, February 2021), and a copy of an archaeological literature review and field inspection report (Paralita and Dega, July 2020).

HDOT proposes the Storm Water Improvements Project at the Kahului Baseyard to upgrade the existing facility. The project will include the replacement of two 2,000-gallon above-ground fuel tanks with two 5,000-gallon above-ground fuel tanks, the installation of a secondary containment system, the replacement of the existing fuel station canopy, the replacement of the existing vehicle washing system, and the installation of associated utility improvements including a waterline connection, subsurface drainage, and electrical service connection. The project will require ground disturbance work including excavation for the fuel station canopy and concrete pad, wash rack, and unlines. The maximum depth of disturbance for the fuel canopy support columns will be .20 feet deep and the wash rack will require excavation of 10 feet deep for the underground wastewater collection system.

A search of our records indicates an archaeological inventory survey (AIS) has not been conducted within the current project area. However, historical records of the project area include the archaeological inventory survey conducted by Frederick F. Folsom (1898), Folsom and Folsom (1901), Folsom and Folsom (2003), Shuhido (2003), Shuhido and Dega (2012), Folsom and Folsom (2014), and Precinski and Dega (2014). Several significant historic properties have been identified in the area including historic structures: Central Power Plant (Site 50-50-09-078570), WWII Naval Air Station (Site 50-50-09-01783), concert flume (Site 50-50-04-07347), and generator building (50-50-04-07348). Also identified in the coastal dune area are traditional Hawaiian sites and features including a burial site (Site 50-50-05-01798) and a habitation site (Site 50-50-05-01799), and to the west of the project area is Kamahā Pond (Site 50-50-04-01783). Aerial photographs of the project area indicate the property was previously disturbed for the installation of the current fuel station and wash rack, however the infrastructure was built sometime during the 1970s and may qualify as a historic property prior to the initiation of the project. The USDA (Footte et al. 1972)



Ty Fukunoku  
05/11/21  
Page 2

identifies soils within the current project area as Juacas Sand (Jc). These sands are culturally sensitive due to the documented presence of habitation features and human burials.

HDOT requested SHPD's concurrence with a 6E-S project effect determination of "no historic properties affected." SHPD does not concur as we have insufficient information regarding the potential for the subject project to impact historic properties and/or human burials in the Juacas Sand deposits. SHPD requests an archaeological inventory survey with a subsurface testing component be conducted and that an AIS report meeting the requirements of HAR §13-276-5 be submitted to SHPD for review and acceptance prior to initiation of project related work.

The AIS shall be conducted by a qualified archaeologist in order to adequately identify and document any archaeological historic properties that may be present, to assess their significance, to determine the potential impacts of this project on any identified archaeological historic properties, and to identify and ensure appropriate mitigation is implemented, if needed.

SHPD requests the project proponent and archaeological firm consult with our office regarding an appropriate testing strategy prior to initiation of the AIS.

SHPD shall notify the County when the archaeological inventory survey report and any required mitigation plans are accepted, and the permit issuance process may proceed.

When completed, please submit the AIS report to our office via HICRIS to Project 2021PR00151 using the Project Supplement option.

Please contact Andrew McCallister, Maui Archaeologist IV at [andrew.mccallister@hawaii.gov](mailto:andrew.mccallister@hawaii.gov) for matters regarding archaeological resources or this letter.

Aloha

*Alan Downer*

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

cc: Michael Degan, Scientific Consultant Services, Inc., [mike@scshawaii.com](mailto:mike@scshawaii.com)  
Yvonne Turro, The Limitaco Consulting Group, Inc., [yvonne@lctshawaii.com](mailto:yvonne@lctshawaii.com)

A3

From: McCallister, Andrew S <[andrew.mccallister@hawaii.gov](mailto:andrew.mccallister@hawaii.gov)>  
Sent: Monday, October 3, 2022 8:03 AM  
To: Mike <[mike@scshawaii.com](mailto:mike@scshawaii.com)>  
Cc: Lebo, Susan A <[susan.a.lebo@hawaii.gov](mailto:susan.a.lebo@hawaii.gov)>; Kauhane, Iolani K <[iolani.kauhane@hawaii.gov](mailto:iolani.kauhane@hawaii.gov)>  
Subject: RE: Kahului Baseyard Testing Change

Hello Mike,

Can you please tell me the project number? Please send your project related requests through HICRIS.

Andrew  
Andrew McCallister  
Maui Island Archaeologist IV  
State Historic Preservation Division  
Department of Land and Natural Resources  
130 Mahalani Street  
Wailuku, HI 96793  
(808) 652-1510

From: Mike <[mike@scshawaii.com](mailto:mike@scshawaii.com)>  
Sent: Wednesday, September 28, 2022 9:14 AM  
To: McCallister, Andrew S <[andrew.mccallister@hawaii.gov](mailto:andrew.mccallister@hawaii.gov)>  
Cc: Lebo, Susan A <[susan.a.lebo@hawaii.gov](mailto:susan.a.lebo@hawaii.gov)>  
Subject: [EXTERNAL] RE: Kahului Baseyard Testing Change

Aloha

As a follow up to the below, the SCS crew is continuing excavations in the Kahului baseyard today....5 m long trenches.

In Trench #7, after digging 2 m linear distance, they encountered a electrical conduit at 1 mbs. If OK with you, they will preserve this small section and not dig through the pipe, but rather continue the trench for an extra meter to the north to ensure 5 m are excavated.

I hope this strategy is satisfactory. Thank you

Mike

From: McCallister, Andrew S <[andrew.mccallister@hawaii.gov](mailto:andrew.mccallister@hawaii.gov)>  
Sent: Wednesday, August 31, 2022 2:27 PM

A4

**APPENDIX B: ELECTRICAL SITE PLAN**

**To:** Mike <[mike@schawaii.com](mailto:mike@schawaii.com)>  
**Subject:** RE: Kahului Baseyard Testing Change

Yes thank you for the notification.

Andrew  
Andrew McCallister  
Maui Island Archaeologist IV  
State Historic Preservation Division  
Department of Land and Natural Resources  
130 Mahalani Street  
Wailuku, HI 96793  
(808) 652-1510

---

**From:** Mike <[mike@schawaii.com](mailto:mike@schawaii.com)>  
**Sent:** Wednesday, August 31, 2022 2:24 PM  
**To:** McCallister, Andrew S <[andrew.mccallister@hawaii.gov](mailto:andrew.mccallister@hawaii.gov)>  
**Subject:** [EXTERNAL] Kahului Baseyard Testing Change

Aloha Andrew: Hope all is well.

In the attached, accepted AIS plan, we had proposed trenches around the baseyard (Figure 11). The place is spaghetti but we managed to fit 10 trenches in after MECO and everyone did toning. We cannot dig one trench: Proposed Carport Facility, far right in the parking area of Figure 11: it contains both MECO and Haw Tel lines in that area, including fiber optic lines. When those lines are hit, they charge \$15,000 **per minute** until it's fixed. We would be out of business by tonight. OK to skip that trench please?

Thank you!

Mike

A5

B



## **APPENDIX E**

Cultural Impact Assessment Report by Scientific Consultant Services, Inc.

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**A CULTURAL IMPACT ASSESSMENT REPORT IN ADVANCE OF THE  
PROPOSED DEPARTMENT OF TRANSPORTATION (DOT) KAHULUI  
BASEYARD IMPROVEMENTS PROJECT  
WAILUKU (PŪ'ALI KOMOHANA) AHUPUA'A, WAILUKU DISTRICT  
ISLAND OF MAUI, HAWAII**

[TMK: (2) 3-8-079-018 por.; Formerly TMK: (2) 3-8-001:075]

Prepared by:  
**Cathleen A. Dagher, B.A.**  
January 2021  
Revised February 2021

**DRAFT**

Prepared for:  
**Enviroservices & Training Center, LLC**  
505 Ward Avenue, Suite 202  
Honolulu, Hawaii 96814

**SCIENTIFIC CONSULTANT SERVICES, Inc.**



1357 Kapiolani Blvd., Suite 850 Honolulu, Hawaii 96814

**TABLE OF CONTENTS**

INTRODUCTION .....1

CULTURAL IMPACT ASSESSMENT METHODOLOGY .....5

GEOGRAPHICAL EXTENT .....6

OEQC GUIDELINES FOR ASSESSING CULTURAL IMPACTS .....6

CULTURAL IMPACT ASSESSMENT CONTENTS .....7

PROJECT METHODOLOGY .....8

ARCHIVAL RESEARCH .....8

INTERVIEWS .....9

KA PA'A KAI O KA'AINA V. LAND USE COMM'N, STATE OF HAWAII .....9

ENVIRONMENTAL SETTING .....11

PROJECT AREA .....11

SOILS .....12

CLIMATE .....12

TRADITIONAL AND HISTORICAL CULTURAL CONTEXT .....14

PAST POLITICAL BOUNDARIES .....14

TRADITIONAL SETTLEMENT PATTERN .....15

PRE-CONTACT PERIOD (PRE-1778) .....16

THE MAHELE .....17

LAND COMMISSION AWARDS (LCAS) .....18

LAND GRANTS .....20

WAHI PANA (LEGENDARY PLACES) .....20

HISTORIC PERIOD (POST-1778) .....24

PREVIOUS ARCHAEOLOGY .....26

CONSULTATION .....30

RESULTS .....32

WRITTEN RESPONSES .....32

WAILUKU AND KAHULUI RAILROAD COMPANY CONSTRUCTION 1879-1880 .....41

NAVAL AIR STATION KAHULUI .....42

THELMA SHIMAKOKA, COMMUNITY OUTREACH COORDINATOR III, OFFICE OF HAWAIIAN AFFAIRS .....46

HŌKŪAO PELLEGRINO, CULTURAL PRACTITIONER AND A CULTURAL AND LINEAL DESCENDANT OF WAIKAPŪ AND WAILUKU AHUPUA'A, WAILUKU MOKU, MAUI ISLAND, HAWAII .....48

INTERVIEWS .....50

DR. SCOTT FISHER, ASSOCIATE EXECUTIVE DIRECTOR OF CONSERVATION, HAWAII ISLAND LAND TRUST, AND MEMBER OF THE MAUI/LĀNA'I ISLANDS BURIAL COUNCIL .....59

IDENTIFIED CULTURAL PRACTICES .....60

CULTURAL IMPACT ASSESSMENT SUMMARY .....	60
CONCLUSION AND RECOMMENDATIONS.....	61
REFERENCES .....	62
APPENDIX A: EXAMPLE LETTER OF INQUIRY .....	A
APPENDIX B: CIA NOTICE (64 #A10L4, SEPTEMBER 2020, VOL. 37 NO.9).....	B
APPENDIX C: EXAMPLE FOLLOW-UP LETTER.....	C
APPENDIX D: SIGNED INFORMATION RELEASE FORM .....	D

**LIST OF FIGURES**

Figure 1: Usgs (Paia, Hi 1997; 1:24,000) Quadrangle Map Showing Dot Kahului Baseyard Location.....	2
Figure 2: Tax Map Key [Tmk: (2) 3-8-079] Showing Dot Kahului Baseyard Location.....	3
Figure 3: Satellite Image (Google 2020; Satellite Imagery Date 6/15/2019) Showing Dot Kahului Baseyard Location.....	4
Figure 4: Satellite Image (Google 2020; Satellite Imagery Date 6/15/2019) Showing Soil Types In The Dot Kahului Baseyard And The Vicinity (Usda-Ness Ssurgo And Statsgo Soil Survey Products Online Database 2020).....	13
Figure 5: Usgs (Paia, Hi 1997; 1:24,000) Quadrangle Map Showing Previous Archaeology Conducted In The Vicinity Of The Dot Kahului Baseyard.....	29
Figure 6: Historic Map Showing Ahupuaa Of Wailuku And Its Appurtenant Fishery Grant 3345 To Claus Spreckles (From The Public Archives Of Hawaii).....	39
Figure 7: Pilots Of The “Hellcats” Of Fighter Squadron 27 Operated From The Aircraft Carrier U.S.S. Princeton. Photographed At Nas Kahului. Pilots Carl Brown, Richard Stambrook And Robert Burnell Designed The Cat-Mouth Markings During Their Training At Naval Air Station Kahului During March And April 1944. [Image: “File Copy” April 1944 Nas Kahului, Chief Of Bureau Of Aeronautics, U.S. Navy]......	44
Figure 8: Aerial Photograph Of U. S. Naval Air Station At Kahului. Three Symmetrical Rows Of Ammunition Magazines Are Visible In Kanaha Pond At The Very Top Right Portion Of This Oblique Photo. North Is To The Right In This Photo, As Is The Ocean. [Image: U.S. Navy Photograph, September 1944. Accessed From Hdot, Airports Division.....	45

**INTRODUCTION**

At the request of Enviroservices & Training Center, LLC , Scientific Consultant Services, Inc. (SCS) has prepared a Cultural Impact Assessment (CIA) in advance of the proposed Department of Transportation (DOT) Kahului Baseyard Improvement Project in Kahului, Wailuku (Pū‘ali Komohana) Ahupua‘a, Wailuku District, Island of Maui, Hawai‘i [TMK: (2) 3-8-079-018 por.: Formerly TMK: (2) 3-8-001-075] (Figures 1 through 3).

The Department of Transportation proposes to make various improvements at the Kahului Baseyard facility, which was constructed approximately 40 years ago. The project site encompasses a 5.2-acre portion of an approximately 22-acre parcel, which is owned by the State of Hawai‘i. The majority of the site is paved and has several buildings utilized for agency operations including a district office, maintenance, industrial repair, and industrial storage facilities. Some components of the facility have reached the end of their useful life. Proposed improvements include the replacement of a wash rack and increasing the volume and operational capacity of the existing fuel station. New fuel tanks will be placed on relatively the same footprint as the originals, with secondary containment systems in place to provide protection in the case of any fuel spills. Photovoltaic systems may be installed on all existing buildings subject to the availability of funding.

The Hawaii State Office of Environmental Quality Control (OEQC 1997:11) states that “an environmental assessment of cultural impacts” gathers information about cultural practices and cultural features that may be affected by significant environmental effects:

Cultural impacts differ from other types of impacts assessed in environmental assessments or environmental impact statements. A cultural impact assessment includes information relating to the practices and beliefs of a particular cultural or ethnic group or groups.

The purpose of a CIA is to identify the possibility of on-going cultural activities and resources within a project area, or its vicinity, and then assess the potential for impacts on these cultural resources. The CIA is not intended to be a document of in depth archival-historical land research, or a record of oral family histories, unless these records contain information about specific cultural resources that might be impacted by a proposed project.



### CULTURAL IMPACT ASSESSMENT METHODOLOGY

The Constitution of the State of Hawai'i clearly states the duty of the State and its agencies is to preserve, protect, and prevent interference with the traditional and customary rights of native Hawaiians. Article XII, Section 7 (2000) requires the State to "protect all rights, customarily and traditionally exercised for subsistence, cultural and religious purposes and possessed by *ahupua'a* tenants who are descendants of native Hawaiians who inhabited the Hawaiian Islands prior to 1778." Additionally, Article IX and XII of the state constitution, other state laws, and the courts of the State, impose on government agencies a duty to promote and protect cultural beliefs and practices, and resources of native Hawaiians as well as other ethnic groups.

Kamehameha III (Kauikaouli) preserved the peoples traditional right to subsistence. As a result, in 1850, the Hawaiian Government confirmed the traditional access rights to native Hawaiian *ahupua'a* tenants to gather specific natural resources for customary uses from undeveloped private property and waterways under the Hawaiian Revised Statutes (HRS) 7-1. In 1992, the State of Hawai'i Supreme Court, reaffirmed HRS 7-1 and expanded it to include, "native Hawaiian rights...may extend beyond the *ahupua'a* in which a native Hawaiian resides where such rights have been customarily and traditionally exercised in this manner" [*Pele Defense Fund v. Paty*, 73 Haw.578, 620, 837 P.2d 1247, 1272 (1992)].

Act 50, enacted by the Legislature of the State of Hawai'i (2000) with House Bill (HB) 2895, relating to Environmental Impact Statements, proposes that:

...there is a need to clarify that the preparation of environmental assessments or environmental impact statements should identify and address effects on Hawai'i's culture, and traditional and customary rights... [H.B. NO. 2895].

Act 50 also requires state agencies and other developers to assess the effects of proposed land use or shoreline developments on the "cultural practices of the community and State" as part of the HRS Chapter 343 (2001) environmental review process. It also re-defined the definition of "significant effect" to include "the sum of effects on the quality of the environment including actions that impact a natural resource, limit the range of beneficial uses of the environment, that are contrary to the State's environmental policies, or adversely affect the economic welfare, social welfare or cultural practices of the community and State." Cultural resources can include a broad range of often overlapping categories, including places, behaviors, values, beliefs, objects, records, stories, etc. (H.B. 2895, Act 50, 2000).



Figure 3: Satellite Image (Google 2020; Satellite Imagery Date 6/15/2019) Showing DOT Kahului Baseyard Location.



## **GEOGRAPHICAL EXTENT**

As defined by the Hawaii State Office of Environmental Quality Control (OEQC 1997:11), the geographical extent should be greater than the area over which the proposed project will take place in order to ensure that cultural practices that occur outside of the project area, but which may still be affected, are included in the assessment. For example, a project that may not itself physically impact traditional gathering practices but may block access to those locations would be included within the assessment. The concept of geographical expansion is recognized by using, as an example, “the broad geographical area, e.g. district or *ahupuaʻa*.” In some cases, the geographical extent could extend beyond the *ahupuaʻa* if cultural practices do so as well.

## **OEQC GUIDELINES FOR ASSESSING CULTURAL IMPACTS**

According to the Guidelines for Assessing Cultural Impacts established by the Hawaii State Office of Environmental Quality Control (OEQC 1997:12):

The types of cultural practices and beliefs subject to assessment may include subsistence, commercial, residential, agricultural, access-related, recreational, and religions and spiritual customs. The types of cultural resources subject to assessment may include traditional cultural properties or other types of historic sites, both man made and natural, which support such cultural beliefs.

The meaning of “traditional” was explained by in *National Register Bulletin*:

“Traditional” in this context refers to those beliefs, customs, and practices of a living community of people that have been passed down through the generations’, usually orally or through practice. The traditional cultural significance of a historic property then is significance derived from the role the property plays in a community’s historically rooted beliefs, customs, and practices... [Parker and King 1998:1]

This CIA was prepared as much as possible in accordance with the suggested methodology and content protocol in the Guidelines for Assessing Cultural Impacts (OEQC 1997:11-13). In outlining the “Cultural Impact Assessment Methodology,” the OEQC (1997:11) states that:

...information may be obtained through scoping community meetings, ethnographic interviews and oral histories...

This Cultural Impact Assessment was prepared in accordance with the Guidelines for Assessing Cultural Impacts (OEQC 1997:11-13). The Guidelines recommend that preparers of assessments analyzing cultural impacts adopt the following protocol:

- Identify and consult with individuals and organizations with expertise concerning the types of cultural resources, practices and beliefs found within the broad geographical area, e.g., district or *ahupuaʻa*;
- Identify and consult with individuals and organizations with knowledge of the area potentially affected by the proposed action;

- Receive information from or conduct ethnographic interviews and oral histories with persons having knowledge of the potentially affected area;
- Conduct ethnographic, historical, anthropological, sociological, and other culturally related documentary research;
- Identify and describe the cultural resources, practices and beliefs located within the potentially affected area; and
- Assess the impact of the proposed action, alternatives to the proposed action, and mitigation measures, on the cultural resources, practices and beliefs identified.

## **CULTURAL IMPACT ASSESSMENT CONTENTS**

The Guidelines state that an assessment of cultural impacts should address, but not be limited to the following:

- Discussion of the methods applied and results of consultation with individuals and organizations identified by the preparer as being familiar with cultural practices and features associated with the project area, including any constraints or limitations which might have affected the quality of the information obtained.
- Description of methods adopted by the preparer to identify, locate, and select the persons interviewed, including a discussion of the level of effort undertaken.
- Ethnographic and oral history interview procedures, including the circumstances under which the interviews were conducted, and any constraints or limitations which might have affected the quality of the information obtained.
- Biographical information concerning the individuals and organizations consulted for their particular expertise and their historical and genealogical relationship to the project area, as well as in information concerning the persons submitting information or interviewed for their particular knowledge and cultural expertise, if any, and their historical and genealogical relationship to the project area.
- Discussion concerning historical and cultural source materials consulted, the institutions and repositories searched and the level of effort undertaken. This discussion should include, if appropriate, the particular perspective of the authors, any opposing views, and any other relevant constraints, limitations or biases.
- Discussion concerning the cultural resources, practices and beliefs identified, and, for resources and practices, their location within the broad geographical area in which the proposed action is located, as well as their direct or indirect significance or connection to the project site.
- Discussion concerning the nature of the cultural practices and beliefs, and the significance of the cultural resources within the project area affected directly or indirectly by the proposed project.
- Explanation of confidential information that has been withheld from public disclosure in the assessment.

- Discussion concerning any conflicting information in regard to identified cultural resources, practices and beliefs.
- Analysis of the potential effect of any proposed physical alteration on cultural resources, practices or beliefs; the potential of the proposed action to isolate cultural resources, practices or beliefs from their setting; and the potential of the proposed action to introduce elements which may alter the setting in which cultural practices take place.
- A bibliography of references and attached records of interviews which were allowed to be disclosed.

If on-going cultural activities and/or resources are identified within the project area, assessments of the potential effects on the cultural resources in the project area and recommendations for mitigation of these effects can be proposed.

#### **PROJECT METHODOLOGY**

This report contains archival and documentary research, as well as communication with organizations and individuals having knowledge of the project area, its cultural resources, and its practices and beliefs. An example of the initial letter of inquiry is presented in Appendix A, copies of the posted newspaper notice and affidavit are presented in Appendix B, and an example of the follow up letter is presented in Appendix C. The signed information release form is presented in Appendix D. This Cultural Impact Assessment was prepared in accordance with the suggested methodology and content protocol provided in the Guidelines for Assessing Cultural Impacts (OEQC 1997:13), whenever possible. The assessment concerning cultural impacts may include, but not be limited to the following items discussed below.

#### **ARCHIVAL RESEARCH**

Archival research focused on a historical documentary study involving both published and unpublished sources. These included legendary accounts of native and early foreign writers; early historical journals and narratives; historic maps, land records, such as Land Commission Awards, Royal Patent Grants, and Boundary Commission records; historic accounts, and previous archaeological reports.

Historical and cultural source materials were extensively used and can be found listed in the References Cited portion of this report. Such scholars as Samuel Kamakau, Martha Beckwith, Jon J. Chinen, Lihikalā Kame'elehiwa, R. S. Kuykendall, Marion Kelly, E. S. C. Handy and E.G. Handy, John Papa 'Ī'i, Gavin Daws, A. Grove Day, and Elspeth P. Sterling, and Mary Kawena Pukui and Samuel H. Elbert continue to contribute to our knowledge and understanding of Hawai'i, past and present.

The works of these and other authors were consulted and incorporated in this report where appropriate. Historic land use document research was supplied by the Waihoana 'Aina Corporation online database (2020), the Office of Hawaiian Affairs Kipuka online database (2020), and the County of Maui County Real Property Assessment Division online database (2020).

#### **INTERVIEWS**

In general, interviews are conducted in accordance with Federal and State laws and guidelines when knowledgeable individuals are able to identify traditional cultural practices and/or resources procured in the project area or in the environs. If they have knowledge of traditional stories, practices and beliefs, and resources associated with a project area or if they know of historical properties within the project area, they are sought out for additional consultation and interviews. Individuals who have particular knowledge of traditions passed down from preceding generations and a personal familiarity with the project area are invited to share their relevant information concerning particular cultural resources. Often people are recommended for their expertise, and indeed, organizations, such as Hawaiian Civic Clubs, the Island Branch of Office of Hawaiian Affairs (OHA), historical societies, Island Trail clubs, and Planning Commissions are depended upon for their recommendations of suitable informants. These groups are invited to contribute their input and suggest further avenues of inquiry, as well as specific individuals to interview. It should be stressed again that this process does not include formal or in-depth ethnographic interviews or oral histories as described in the OEQC's *Guidelines for Assessing Cultural Impacts* (1997). The assessments are intended to identify potential impacts to ongoing cultural practices, or resources, within a project area or in its close vicinity.

If knowledgeable individuals are identified, personal interviews are sometimes taped and then summarized. These draft summaries are returned to each of the participants for their review and comments. After corrections are made, each individual is to sign an information release form, making the interview available for this study. When telephone interviews occur, a summary of the information is also sent for correction and approval or dictated by the informant and then incorporated into the document. If no cultural resource information is forthcoming and no knowledgeable informants are suggested for further inquiry, interviews are not conducted.

#### **KA PA'A KAI O KA'AINA V. LAND USE COMM'N, STATE OF HAWAII**

The Land Use Commission (LUC) is also required to apply the analytical framework set forth by the Hawaii Supreme Court in *Ka Pa'akai O Ka'Aina v. Land Use Comm'n*, State of Hawaii, 94 Hawai'i 31, 7 P.3d 1068 (2000) (hereinafter, "*Ka Pa'akai*"). In this case, a coalition of native Hawaiian community organizations challenged an administrative decision by the Land Use Commission (the "*LUC*") to reclassify nearly 1,010 acres of land from conservation to urban use, to



## ENVIRONMENTAL SETTING

The Island of Maui ranks second in size of the eight main islands in the Hawaiian Archipelago (Stearns 1966:155, Handy and Handy 1972:485). Maui Island was formed by two volcanoes, Pu'u Kukui in the west and Haleakalā in the east. Pu'u Kukui stands 1,215 meters (m.) above mean sea level (amsl.) is composed of large, heavily eroded amphitheater valleys that contain well-developed permanent stream systems that watered fertile agricultural lands extending to the coast. The isthmus between the two volcanoes is primarily composed of alluvial fans made of out-washed silts and gravels overlain by coralline sands blown inland from the coast. Lower sand strata have become firmly lithified, forming a soft rock known as collanite (Stearns 1966:10).

The younger of the two volcanoes, Haleakalā, soars 2,727 m (10,023 feet) above sea level and embodies the largest section of the island. Unlike the amphitheater valleys of West Maui, the flanks of Haleakalā are distinguished by gentle slopes. Although it receives more rain than its counterpart in the east, the permeable lavas of the Honomanū and Kula Volcanic Series prevent the formation of rain-fed perennial streams. The few perennial streams found on the windward side of Haleakalā originate from springs located at low elevations. Valleys and gulches were formed by intermittent water run-off.

### **PROJECT AREA**

The project area is located along the north coast of the island of Maui, immediately adjacent and east of Kahului Harbor. The physical address of the Department of Transportation (DOT) Kahului Baseyard is 650 Palapala Drive, in Kahului, Wailuku District, Wailuku (Pū'ali Komohana) Ahupua'a, Island of Maui, Hawai'i [TMK: (2) 3-8-079:018 por.; Formerly TMK: (2) 3-8-001:075]. The project area is located 0.58 miles (0.93 km) to the nearest coastline, and situated at 12 feet (ft) above mean sea level (amsl). Some well-known areas in the vicinity of the project area include the Kahului Airport (OGG) which is located 0.97 km east of the project area, Courtyard by Marriott Maui is located 0.35 km west of the project area on Haleakalā Highway, and the Kanahā Pond Wildlife Sanctuary is located approximately 0.85 km northwest of the project area. According to Pukui et al. (1974:83):

[n]early 500 native Hawaiian stilts (āe'o) have been counted here at one time, about a third of the known total. Some 50 kinds of birds have been seen here, including herons, geese, ducks, owls, plovers, sandpipers, tattlers, coots, pheasants, and doves.

allow for the development of a luxury project including upscale homes, a golf course, and other amenities. The native Hawaiian community organizations appealed, arguing that their native Hawaiian members would be adversely affected by the LUC's decision because the proposed development would infringe upon the exercise of their traditional and customary rights. Noting that “[a]rticle XII, section 7 of the Hawaii Constitution obligates the LUC to protect the reasonable exercise of customary and traditionally exercised rights of native Hawaiians to the extent feasible when granting a petition for reclassification of district boundaries,” the Hawai'i Supreme Court held that the LUC did not provide a sufficient basis to determine “whether [the agency] fulfilled its obligation to preserve and protect customary and traditional rights of native Hawaiians” and, therefore, the LUC “failed to satisfy its statutory and constitutional obligations.” Ka Pa'akai, 94 Hawai'i at 46, 53, 7 P.3d at 1083, 1090.

The Hawai'i Supreme Court in Ka Pa'akai provided an analytical framework in an effort to effectuate the State's obligation to protect native Hawaiian customary and traditional practices while reasonably accommodating competing private interests. In order to fulfill its duty to preserve and protect customary and traditional native Hawaiian rights to the extent feasible, the LUC must—at a minimum—make specific findings and conclusions as to the following:

- A. the identity and scope of “valued cultural, historical, or natural resources” in the petition area, including the extent to which traditional and customary native Hawaiian rights are exercised in the petition area;
  - B. the extent to which those resources--including traditional and customary native Hawaiian rights--will be affected or impaired by the proposed action; and
  - C. the feasible action, if any, to be taken by the LUC to reasonably protect native Hawaiian rights if they are found to exist.
- See Ka Pa'akai, 94 Hawai'i at 47, 7 P.3d at 1084.

To fulfill these purposes outlined by Ka Pa'akai, the Cultural Impact Assessment has reviewed historical research and suggestions from contacts knowledgeable about traditional cultural practices which were conducted within the project area corridor and in the surrounding environs. The potential effect of the proposed project on cultural resources, practices or beliefs, its potential to isolate cultural resources, practices or beliefs from their setting, and the potential of the project to introduce elements which may alter the setting in which cultural practices take place has been analyzed, as required by the OEQC (1997).

## SOILS

According to Foote et al. (1972: Sheet Map: 104; Figure 4), the DOT Kahului Baseyard is comprised primarily of soils of the Jaucas Series, specifically Jaucas sand, saline, 0 to 12 percent slopes (JcC) soil. The southeast corner of the DOT Kahului Baseyard is located within soils of the Molokai Soil Series, specifically Molokai silty clay loam, 3 to 7 percent slopes (MuB).

According to Foote et al. (1972:48) soils of the Jaucas Series are comprised of well-drained calcareous soils "...that occur as narrow strips on coastal plains, adjacent to the ocean." These soils can be found at elevations ranging from sea level to 100 feet above mean sea level (amsl) in areas with annual rainfall ranging from 10 to 40 inches. These deposits formed from aeolian and water-deposited sand which, in turn, derived from coral and marine shell.

Foote et al. (1972:49) describes the JcC matrix as:

[occurring] near the ocean where the water table is near the surface and salts have accumulated. It is somewhat poorly drained in depressions but excessively drained on knolls. In the depressions there is normally a layer of silty alluvial material flocculated by the high concentration of soluble salts. The water table is normally within a depth of 30 inches.

Areas comprised of JcC soils are typically wildlife habitats, ranchlands, and developed into urban areas (Foote et al. 1972:49).

Foote et al. (19972:96) states that the well-drained volcanic soils of the Molokai Series are found on the islands of Maui, Lāna'i, Molokai, and O'ahu. They occur between sea level to 1,000 feet amsl. in areas receiving 20 to 25 inches of rainfall annually. The MuB soils exhibit slow runoff and a slight to moderate erosion hazard. Areas comprised of MuB soils are usually used to cultivate sugarcane and pineapple, and as ranchlands, wildlife habitats, and for residential developments.

## CLIMATE

The Kahului area is fairly dry owing in part to the 'rain shadow' effect of Haleakalā. According to Giambelluca et al. (2013) the area in which the DOT Kahului Baseyard is located receives approximately 16 inches of rainfall annually. The winter months, December through February, receive an average of approximately 2 inches of rainfall. The summer months, June through August, receive approximately 0.2 inches.

Giambelluca et al. (2014) indicate the average annual temperature in the area in which the DOT Kahului Baseyard is located is 74.5 degrees (Fahrenheit). The average summer temperature, between June and August, is approximately 78 degrees. The cooler winter months, between December and February, have an average temperature of 71 degrees (Fahrenheit).



Figure 4: Satellite Image (Google 2020; Satellite Imagery Date 6/15/2019) Showing Soil Types in the DOT Kahului Baseyard and the Vicinity (USDA-NCSS SSSURGO and STATSGO Soil Survey Products Online Database 2020).

## TRADITIONAL AND HISTORICAL CULTURAL CONTEXT

Traditionally, the Hawaiian economy was based on agricultural production and marine exploitation, as well as raising livestock and collecting wild plants and birds. Extended household groups settled in various ahupua'a. During pre-Contact times, there were primarily two types of agriculture, wetland and dry land, both of which were dependent upon geography and physiography. River valleys provided ideal conditions for wetland *kalo* (*Colocasia esculenta*) agriculture that incorporated pond fields and irrigation canals. Other cultigens, such as *kō* (sugar cane, *Saccharum officinarum*) and *mai'a* (banana, *Musa sp.*), were also grown and, where appropriate, such crops as 'uala (sweet potato, *Ipomoea batatas*) were produced. This was the typical agricultural pattern seen during traditional times on all the Hawaiian Islands (Kirch and Sahlins 1992, Vol. 1:5, 119; Kirch 1985).

### **PAST POLITICAL BOUNDARIES**

Approximately 600 years ago, the Hawaiian population had expanded throughout the Hawaiian Islands to a point where large, political districts could be formed (Lyons 1903; Kamakau 1992). At that time, Maui was divided into twelve districts (moku): Lāhainā, Kula, Honua'ula, Kahikinui, Kaupō, Kīpahulu, Hāna, Ko'olau, Hāmākualoa, Hāmākuapoko, Wailuku, and Kā'anapali (Sterling 1998:3). The division of Maui Island lands into districts and sub-districts was performed by a kahuna (priest, expert) named Kalaihatōhia, during the time of the ali'i Kaka'alaneo (Beckwith 1979:383; Fornander [1919-20, Vol. 6:248] places Kaka'alaneo at the end of the 15<sup>th</sup> century or the beginning of the 16<sup>th</sup> century). Land was considered the property of the king or ali'i'ai moku (the ali'i who eats the island/district), which he held in trust for the gods. The title of ali'i'ai moku ensured rights and responsibilities to the land but did not confer absolute ownership. The king kept the parcels he wanted, his higher chiefs received large parcels from him and, in turn, distributed smaller parcels to lesser chiefs. The maka'āinana (commoners) worked the individual plots of land. Following the Civil Code of 1859, the twelve districts were consolidated into four districts: Lāhainā, Wailuku, Makawao, and Hāna (Sterling 1998:3).

In general, several terms, such as moku, ahupua'a, 'ili or 'ili'āina were used to delineate various land sections. A moku contained smaller land divisions (ahupua'a), which customarily continued inland from the ocean and upland into the mountains. Extended household groups living within the ahupua'a were therefore, able to harvest from both the land and the sea. Ideally, this situation allowed each ahupua'a to be self-sufficient by supplying needed resources from different environmental zones (Lyons 1875:111). The 'ili'āina or 'ili were smaller land divisions next to importance to the ahupua'a and were administered by the chief who controlled

the ahupua'a in which it was located (Lyons 1875: 33; Lucas 1995:40). The mo'o'āina were narrow strips of land within an 'ili. The land holding of a tenant or ho'a'āina residing in an ahupua'a was called a kuleana (Lucas 1995:61).

### **TRADITIONAL SETTLEMENT PATTERN**

Archaeological settlement pattern data suggests that initial colonization and occupation of the Hawaiian Islands first occurred on the windward shoreline areas of the main islands between A. D. 850 and 1100, with populations eventually settling in drier leeward areas during later periods (Kirch 2011). Although coastal settlement was dominant, native Hawaiians began cultivating and living in the upland kula (plains) zones. Greater population expansion to inland areas began around the 14th century and continued through the 16th century. Large scale or intensive agriculture was implemented in association with habitation, religious, and ceremonial activities.

In Hawai'i, much of the coastal lands were preferred for chiefly residence. Easily accessible resources such as offshore and onshore fishponds, the sea with its fishing and surfing—known as the sports of kings, and some of the most extensive and fertile wet taro lands were located in the coastal areas (Kirch and Sahlins, 1992 Vol. 1:19). Inland resources necessary for subsistence could easily be brought to the ali'i residences on the coast from nearby inland plantations. The majority of farming was situated in the lower portions of stream valleys where there were broader alluvial flat lands or on bends in the streams where alluvial terraces could be modified to take advantage of the stream flow. Dry land cultivation occurred in colluvial areas at the base of gulch walls or on flat slopes (Kirch 1985; Kirch and Sahlins 1992, Vol. 2:59).

To the northwest of the current project area lies 'Iao Valley, one of the most important locations in the area for during the pre-Contact Period. Connolly (1974:5) states that the pre-Contact valley ['Iao] had a large population base with "most people residing in a settlement near 'Iao Needle," just north of the project area. The subsistence base of this population consisted of fish and taro, with Kahului Harbor and the coast close by and lo'i systems lining 'Iao Valley's stream banks. Pre-Contact irrigation ditches or 'auwai were utilized in taro cultivation (Connolly 1974:5). Sterling (1998:86) adds that two 'auwai within the valley:

...have existed immemorably and were evidently constructed for the purpose of irrigating kalo on the plains which stretch away to the northward and southward of the ['Iao] river. Several minor 'auwai have, since ancient times, tapped the river at different points lower down and spread the water through the lands in the gulch on either side of the river bed.

Handy in Sterling (1998:63) further notes that "... [f]rom Waihee and Wailuku Valley, in ancient times, was the largest continuous area of wet taro cultivation in the islands." Cheever (1851:124) writes, "[f]he whole valley of Wailuku, cultivated terrace after terrace, gleaming with running waters and standing pools, is a spectacle of uncommon beauty to one that has a position a little above it."

No discussion of Wailuku District is complete without mentioning the important heiau complex above 'Īao Valley near its seaward terminus. During the mid to late 18th century, the Halekii-Pihana heiau complex was supposedly designed by a Hawaiian named Kiha (Sterling 1998:89). These monuments designated as State Site 50-50-04-522 are described as very important heiau within Hawaiian history. Yent (1983:7) notes the life cycle of the ali'i was represented here. It was the place where Kamehameha I's wife (Keōpuolani) was born, Kahakili lived, and Kekaulike died. Thrum (1909:46) reported that Kamehameha I evoked his war god at Pihana Heiau after his warriors defeated Kalanikūpuli's forces during the Battle of 'Īao in 1790. The two heiau are primarily associated with Kahakili, who is connected with the Halekii-Pihana complex between c. A.D. 1765 and 1790, and Kamehameha, during his conquering of Maui in 1792 (Yent 1983:18).

#### **PRE-CONTACT PERIOD (PRE-1778)**

The District of Wailuku inhabits the eastern side of the West Maui Mountains (Mauna Kahalawai) and occupies the isthmus through the center of the island to the coastal reaches in Kahului, on the north, and Mā'alaea, on the south. Wailuku District is frequently mentioned in historical texts and oral traditional accounts as being politically, ceremonially, and geographically important areas during the pre-Contact Period (Cordy 1981, 1996; Kirch 1985). The number of heiau constructed in the Wailuku area point to its ceremonial and religious importance during the pre-Contact Period (pre-1778).

The history of the ahupua'a of Waikapū, Waihe'e, Waiehu, and Wailuku are quite intertwined. These four ahupua'a are collectively known as the Nā Wai 'Ehā, or "the four waters" (Handy and Handy 1972:497; Kame'elehiwa 1992; Pukui and Elbert 1986; and Creed 1993). This area "...comprised the four great valleys [Waihe'e, Waiehu, Wailuku, and Waikapū] which cut far back into the slopes of West Maui and drain the eastward watershed of Pu'u Kukui and the ridges radiating northeastward, eastward, and southeastward from it" (Handy and Handy 1972:496).

The area from Waihe'e to Wailuku was the second of the traditional five major population centers on the Island of Maui (Handy and Handy 1972:272) and was formally the most extensive continuous area of wet taro cultivation in the Hawaiian Islands. Wailuku, itself, has been described as a "chiefly center" (Sterling 1998:40), although the seat of power was most certainly concentrated in and around the 'Īao Valley (see the Traditional Settlement Pattern discussion above).

Traditionally, the lands of Waihe'e and Waiehu, now part of Wailuku District, "were independent of any of any *moku* and are listed in the *Book of the Māhele* as being in 'Puuli Komohana', i.e., West Isthmus" (R.D. King in J.W. Coulter 1935 cited in Sterling 1998:3). R.D. King in J.W. Coulter 1935 cited in Sterling 1998:3 further states that Wailuku and Waikapū Ahupua'a also were independent of any *moku* (district), and were referred to as Na Poko, with "...Na Poko in this case meaning a smaller division of land." W.D. Alexander (1891 cited in Sterling 1998:63) stated that the ahupua'a of Waihe'e, Waiehu, Wailuku, and Waikapū were grouped into a district in modern times. R.D. King (in J.W. Coulter 1935 cited in Sterling 1998:3) explains, "...with reference to the *ahupuaa* of Waihee, Waiehu, Wailuku, and Waikapu, on the map it was necessary to form a new district and call it Wailuku [because] Nawaiehu, 'the four waters,' [was] too cumbersome and ill understood."

According to Sterling (1998:13), "[t]he villages on Maui were in general placed at the mouths of larger gulches or at least within sight of the sea." There is very little information on the area of Kahului during the pre-Contact Period, suggesting the area may have been sparsely populated. Sterling suggests the possibility that the modern village of Kahului may have been built on the site of a traditional village, but indicates there is no accurate way to determine the size of a "former population" (Sterling 1998: 13).

#### **THE MĀHELE**

During the mid-1800s, extreme modification to traditional land tenure occurred throughout the Hawaiian Islands. The Māhele (Division) of 1848 divided Hawaiian lands between the king, the chiefs (the ali'i and konohiki), and the government. It also introduced the western concept of private ownership of lands and set the stage for vast changes to land holdings within the islands. Although it remains a complex issue, many scholars believe that in order to protect Hawaiian sovereignty from foreign powers, Kamehameha III (Kamehameha III) established laws changing the traditional Hawaiian system of land tenure, which were intended to keep lands in the hands of the Hawaiians, but resulted in providing an opportunity for foreigners to obtain land (Kuykendall Vol. I, 1938:145 footnote 47, 152, 165–166, 170; Daws 1968:111; Kelly 1983:45; Kame'elehiwa 1992:169–170, 176).



Article IV of the Board of Commissioners to Quiet Land Titles was passed in December 1845, initiating the legal process of private land ownership. In January 1846, land was made available for eventual ownership to the commoners (maka'āinana). Once lands were made available for private land ownership, Hawaiians, including the maka'āinana (commoners), were able to claim plots of land that they had been cultivating and living on for years, through the Kuleana Act of 1850. These claims did not include any lands that had been cultivated but left fallow at the time of the Māhele, stream fisheries, or many other resources necessary for traditional survival (Kelly 1983; Kame'elehiwa 1992:295; Kirch and Sahlins 1992). Once Hawaiians established their occupation of property through the testimony of two witnesses, the petitioners were awarded the claimed land, which was called Land Commission Award (LCA), or kuleana lands, and issued a Royal Patent (RP), after which they could take possession of the property (Chinen 1961:16). Commoners claiming house lots in Honolulu, Hilo, and Lāhainā were also required to pay commutation to the government before obtaining a Royal Patent for their awards.

Foreigners could acquire land through the Alien Landownership Act of 1850. Oftentimes, they were simply given lands by the ali'i. Commoners, however, could make claims only if they had first been made aware of the foreign procedures. Lengthy and costly procedures enabled Hawaiians who had been cultivating and living on the lands to claim some of the plots (Chinen 1961: 16).

#### LAND COMMISSION AWARDS (LCAS)

During the Māhele, Wailuku District was declared Crown Land and numerous Land Commission Awards, with the majority of LCAs were awarded to Hawaiians, a gauge that can be used to measure pre-Contact settlement (Creed 1993:38). Literally hundreds of Land Commission Awards (LCA) are documented for Wailuku Ahupua'a (see, e.g., Sterling 1998:86), although, in keeping with the broad settlement pattern outlined above, most of these were located in and around Ō'ao Valley, west of the Wailuku Town and well removed from the project area. The existence of such large numbers of LCAs, however, attests to the large settlements in the lower Ō'ao Valley during the mid-nineteenth century; residents of Kahului were no doubt drawn into this sphere of influence. According to the Waihoana 'Aina Corporation online database (2020), there were 100 claimed LCAS in the district of Wailuku. The Office of Hawaiian Affairs Kipuka online database (2020) indicates no LCAs were located within the current project area.

According to the Frederickson and Frederickson (1988:8-11), in 1882, the fee title to many lots/parcels in the Wailuku area were acquired by Claus Spreckles under Grant 3343 (from 'King Kalakaua'). The property consisted of 24,000 acres of land from Wailuku to Pā'ia and toward Mā'āleā, a portion of which included the current Parcel 4 [TMK: (2) 3-8-079:021], near the highway. In 1885, the property was sold by Spreckles to the Hawaiian Commercial and Sugar Company, a California company owned by Spreckles, for five dollars. The company was located in San Francisco, California, with the plantation headquarters being in Spreckelsville, Maui. In 1898, Hawaiian Commercial and Sugar Company was purchased by James Castle, William Castle, Henry Baldwin, and Samuel Alexander, the latter two founding the Alexander and Baldwin company. The Hawaiian Commercial and Sugar Company constructed the Puunene Mill in 1902 to increase production and the Koolau Ditch in 1904 to transport more water to the mill. By 1928, the annual crop production had reached 70,000 tons of sugar. Parcel 4 of the current study was part of this production zone. Also in the 1920s, a railroad was constructed to haul the cane; the railroad was present just to the north of current Parcel 5 (see Tuggle and Welch 1995:19). Interestingly, a portion of TMK: (2) 3-8-001:1231 was cut and filled between 1924 and 1964, during the various phases of construction in the area, including many of the Naval Air Station Kahului (NASKA) facilities, which mostly were built approximately 1 mile northeast of the current project area. These facilities included buildings/offices, support facilities, magazines, and other infrastructure. The NASK facility was constructed after the on-set of WWII because the Naval Air Station, Puunene, facility could no longer adequately accommodate of the number of squadrons enroute to the various air bases closer to the war zones.

According to Tuggle and Welch (1995), during World War II (1942), the current airport area was leased by the U.S. Military and developed into NASKA, with at least one-third of these lands still being in sugar cane. Areas inland of Runway 2/20 were sugar cane lands from the 1880s through construction of the airport and camps occurred in the area, near the fields, to the 1950s when they were torn down. After the war, in the early 1950s, air facilities were acquired by the Territorial government and utilized for commercial and general aviation purposes. In 1954 a third runway was constructed. This airport has since developed into the major transport hub seen today.

## LAND GRANTS

In some cases, the Hawaiian government sold lands to generate income for the Kingdom. These lands were referred to as land grants. According to the Waihona 'Aima Corporation online database (2020):

At the time of the Māhele, some of the land was the King's own land which later became known as Ceded Lands. Other lands in the possession of ali'i were returned to the King in exchange for Commutation of property the ali'i kept. Some of these returned lands became Government lands and were sold by the government to generate income for the Kingdom, since the King gave up his traditional right to collect taxes and goods following the Māhele.

According to the Office of Hawaiian Affairs Kipuka Online Database (2020), the project area and the adjacent lands were crown lands which were subsequently included in the 24,000 acres acquired by Claus Spreckles, in 1882, under Land Grant 3343. Prior to being awarded to Spreckles, these lands were crown lands.

## WAHI PANA (LEGENDARY PLACES)

“Wahi Pana” can be defined as celebrated or noted places or locations (Pukui and Elbert 1986:313, 376), and refers to legendary places or landmarks of historical significance. These places of note have distinctive features (i.e., mountain peaks, streams, wind, rain, etc.) that are given specific names through which the history of an area is passed down from generation to generation through chants, legends, and songs.

According to Kamakau (1870 in Sterling 1998: 2), “...the ancient name of the island of Maui was Ihikēpalaumaewa...”. The island was renamed “...after a famous child of Wakea and Papa who became ancestor of the people of Maui (Kamakau (1870 cited in Sterling 1998: 2). The town of Kahului is situated within the Wailuku Ahupua'a and Wailuku District. The following is a brief summary of the salient aspects of these data. The project area is located in the *ahupua'a* of Wailuku.

A famous chant from the Rebecca Nuuhiwa Audio collection (in Sterling 1998:62), called The Four Winds, is associated with Wailuku:

Wailuku's wind is the Makani-lawe-mālie, the wind that takes it easy. Waiehu's wind is the Makani-hoo'eha-ili, the wind that hurts the skin. Waikapu's wind is the Makani-ko-koloho, the gusty wind. Waihee's wind is the Makani-kii-'o-pu.

According to Fomander (in Sterling 1998:63), “Wailuku is the source of the flying clouds. It is the broad plain where councils are held”.

“Wailuku” translated literally means “water of destruction” (Pukui *et al.* 1974:225) and the Wailuku area was witness to many battles, from the Battles of 'Īao and Sand Hills to the Battles of Kepaniwai and Kakanilua. The most famous battle was that of Kepaniwai where Kamehameha I, in July 1790, finally wrested control of Maui Island. Kamehameha I and his warriors landed at the Kawela portion of Kahului Bay and proceeded up 'Īao and other valleys to score a decisive victory. Of additional note is that in the Kauhāea area of 'Īao Valley (southeast of 'Īao Stream below Pihana Heiau), warriors apparently dwelt and were “trained in war skills and there was a boxing site in the time of Kahekili” (Sterling 1998:89).

As Wailuku District was a center of political power, it was often at war with its rival in Hāna. By the end of the 18<sup>th</sup> century, Kahekili resided with his entourage in Wailuku and it was on the sand dunes that Kahekili and his warriors engaged those of Kalani'ōpu'ū, Chief from Hawai'i Island.

In his bid to conquer Kahekili and obtain Maui (A.D.1776), Kalani'ōpu'ū brought his famous, and fearless, 'Ālapa warriors who were slaughtered by Kahekili's men. “The dead lay in heaps strewn like *kūkui* branches; corpses lay heaped in death; they were slain like fish enclosed in a net...” (Kamakau 1992:85-89).

George W. Bates recounted his journey from Wailuku to Kahului in 1854:

Leaving Wai-lu-ku [town], and passing along toward the village Kahului, a distance of three miles, the traveler passes over the old battle-ground named after the village. It is distinctly marked by moving sand-hills, which owe their formation to the action of the northeast trades. Here these winds blow almost with the violence of a sirocco, and clouds of sand are carried across the northern side of the isthmus to a height of several hundred feet. These sand-hills constitute a huge “Golgotha” for thousands of warriors who fell in ancient battles. In places laid bare by the action of the winds, there were human skeletons projecting, as if in the act of struggling for resurrection from their lurid sepulchers. In many portions of the plain who cart-loads were exposed in this way. Judging of the numbers of the dead, the contest of the old Hawaiians must have been exceedingly bloody... [Sandwich Island Notes, 309].

G.W. Bates' interpretation of a major battleground site in Kahului may not have been accurate, although there are many oral traditions about battles in this general area.

The 1776 encounter between Kahekili and Kalani'ōpu'ū resulted in a temporary truce which was broken in 1790 by the battle of Kepaniwai, when Kamehameha I consolidated his control over Maui Island. There were so many warriors and canoes invading from Hawai'i Island that it was called the Great Fleet. During Kamehameha's campaign, it was recorded that



the bay from Kahului to Hopukoa was filled with war canoes and they extended to Kalae'ilii'ili at Waia'e and below Pu'uhele and Kamakailima:

Kamehameha and his chiefs went on to the principal encounter at Wailuku. The bay from Kahului to Hopukoa was filled with war canoes. For two days there was constant fighting in which many of the most skillful warriors of Maui took part, but Kamehameha brought up the cannon, Lopaka, with men to haul it and the white men, John Young and Isaac Davis, to handle it, and there was great slaughter. (Kamakau 1992: 148).

Approximately 0.25 miles northwest of the DOT Kahului Baseyard were the kuapa (fishponds) of Kanahā and Mau'oni, also known as the twin ponds of Kapi'ioho (a chief of O'ahu and half of Moloka'i in the early 18<sup>th</sup> century; Cordy 2002). Pukui et al. 1974:83) state the ponds are "said to have been built by Chief Kiha-a-Pi'ilani, brother-in-law of 'Umi... who lived about A.D. 1500." Kamakau (1992:42) confirms that when "Keawe-nui-a-'Umi sailed from Hilo to Kapu'ekahi in Hana and from Hana to Kahului of Wailuku", where he encountered:

Kiha-a-Pi'ilani, ruler of Maui, was building the walls of the pond of Mau'oni. A wide expanse of water lay between Kaipu'ua and Kanahā, and the sea swept into Mau'oni. The two ruling chiefs met and greeted each other with affection.

According to Sterling (1998: 11), to construct the fishpond walls, stones were passed hand-to-hand by a line of men extending from Makawela to Kanahā during the building of the banks. The construction is well- described by Puaea-a-Makakaulii [a.k.a. Mrs. Rosalie Blaisdell, an informant of J.F. G. Stokes (1918) cited in Sterling 1998:87]:

Kapiiohokalani, king of Oahu and half of Molokai, built the banks of kuapa of Kamaha and Mauoni, known as the twin ponds of Kapiioho- for the purpose he used men from Oahu and Molokai as well as those of Maui under his aunt Papaikaniua. Tradition relates that the laborers stood so closely together that they passed the stones from hand to hand. The line extended from Makawela (the sea fishery at the sea base of the Wailuku road, as you turn in to Kahului) to Kanahā. With such a multitude to feed, the nehu and opae were most suitable as being obtainable in quantity. At times the men had only one nehu each for a meal and had to fill up with sea-weed and salt, hence the saying " Kakahi ka nehu a Kapiioho."

Before the ponds were finished, Kapiioho had been killed by Alapainui of Hawaii at the battle of Kawela, Molokai. He was survived by a daughter Kahamatuihiikaohilani and son Kanahaokalani.

The ponds were completed by Kamehamehanui, king of Maui, who placed a kapu on the bank or Kuapa dividing the two ponds.

Another version published in *Ka Nuipepa Kuiokea* stated that after Kapi'ioho was killed, Kihapi'ilani began the construction of the ponds and it was he who separated the water with a wall, giving it two names (August 23, 1884). The twin ponds supplied mullet to the population during the times of fishing kapu (Bartholomew and Bailey 1994).

Traditionally, native Hawaiians collected sea salt from depressions along the coast. The ocean water would pool in these basins and when the water had evaporated, the salt could be extracted and transported (Kirch 1975:273). According to one informant (Rebecca Niuhiwa cited in Sterling (1998: 90):

In olden days salt was gathered at Kanaha. When the sea rose the hollows in the rocks were filled.

In addition to being a source of subsistence resources, the ponds served as resting a spot for weary travelers traveling across the island. Moses in *Ka Nuipepa Huoka*, February 16, 1844, cited in Sterling 1998:89) provides the following account:

When the chief left Waiehu, this man went ahead and the chief behind and this is how they went as far as Wailuku, down to the sea of Poiaku and up the sand ridge called Makapalua. In no time their feet tread the soft sounding sands of Kahului. There dawn broke over them and the sky glowed. The houses of Kahului were left behind them in the dark. They approached Kanaha and Mauoni (ponds). It was fully light when they reached the boundary of Kanaha. They rested there for a while and washed their faces with water.

According to W. H. Uaua, the ponds of Kanahā and Mau'oni were mentioned in the Legend of the Battle of the Owls (*Ke Au Okoa*, June 29, 1871, 1 cited in Sterling 1998: 92):

When Ka-nene-nui-a-ka-wai-kali was chief of Maui, there lived a certain noted man, Kapiol and wife in Wailuku; at Kaimuhee, above the two waters, Kanaha and Mauoni. These were famous ponds of Wailuku.

The twin ponds (Kanahā and Mau'oni) were also associated with the legendary mo'ō (lizard) goddess Kihawahine. In life, Kihawahine was one of Pi'ilani's four children, who apparently died fairly young. Following her death, Kihawahine was kākū'ai (transfigured) into the lineage of the mo'ō. And that is when the Ali'i Kihawahine became the powerful mo'ō goddess Kihawahine Mokuhinia Kalama'ula Kalā'aiheana (Kamakau 1987:85). Kihawahine's primary home was Mokuhinia, in Lahaina, but she was known to travel around the Hawaiian Islands and, according to Kamakau (1987:83):

Kihawahine was frequently seen at Mokuhinia, at Kapunakea, at Paukukalo, and at Kanaha; and when Kamehameha added her to his gods, she was one of his gods that united the kingdom from Hawaii to Kauai.

### **HISTORIC PERIOD (POST-1778)**

Contact with the western world occurred on January 18, 1778, with the arrival of Captain James Cook in the Hawaiian Islands during his third voyage into the Pacific Ocean (Daws 1968:1). This section discusses traditional life after Cook's arrival. Early records, such as journals kept by explorers, travelers and missionaries, document Hawaiian traditions that survived long enough to be written down, and archaeological investigations have assisted in the understand of past cultural activities.

Traditional land utilization was rapidly and dramatically supplanted by sugar cane cultivation during the 1850s (Dorrance and Morgan 2000). Documentation of 19<sup>th</sup> century land use in the area is much more pronounced, which also may mean that limited traditional period activities occurred in and near the current project area. Many of the awarded Land Commission Awards (see Māhele discussion below) in Wailuku Ahupua'a were under sugar cane cultivation by the mid-nineteenth century. Sites and features built during this period include water irrigation ditches, terraces, freestanding walls, historic houses, and mill structures. Cultivation of sugar cane dominated land use in Wailuku Ahupua'a from the 1880s through the 1990s (see Tuggle and Welch 1995:24).

In 1837, the village of Kahului consisted of twenty-six *pili*-grass houses living close to the sea and depending on fishing in the coastal waters for the majority of their food (Bartholomew and Bailey 1994). Mullet was still harvested from the twin ponds (Kanahā and Mau'oni) in the early 1900s and people swam in the spring waters that were continuously refreshed (Bartholomew and Bailey 1994). Thomas Hogan built the first western building, a warehouse, near the shoreline of Kahului in 1863 (Clark 1980). The dredging of Kahului harbor through the years filled in large sections of the ponds, eventually blocking the outlet to the sea (Bartholomew and Bailey 1994: 132)

As the sugar industry developed, Kahului became a cluster of warehouses, stores, wheelwright and blacksmith shops close to the harbor. A small landing was constructed in 1879 to serve the sugar company (Clark 1980). In the late 1800s, Kahului possessed a new custom house, a saloon, Chinese restaurants, a railroad and a small population of residents. Kahului's main focus was shipping. The 1900 bubonic plague outbreak destroyed much of the town as officials decided to burn down the Chinatown area in an effort to contain the epidemic. The Chinese, Japanese and Hawaiian residents were displaced by this action. To further insure isolation, authorities encircled the entire town with corrugated iron rat-proof fences which ended the spread of the plague (Bartholomew and Bailey 1994). The Kahului Railroad Company built

a 1,800 foot long rubble-mound breakwater in 1910 and dredging of the harbor now allowed ships with a 25-foot draft to dock at the new 200-foot wharf (Clark 1980).

In 1876, the Reciprocity Treaty's ratification notice arrived by steamer, along with Claus Spreckles, California's sugar magnate, who viewed the sugar situation and decided two years later to turn the dry plains of Maui into a garden of cultivated cane (Van Dyke 2008). By various questionable means, he was able to acquire half interest in 16,000 acres of land in Waikapū commons and was able to lease 24,000 acres of Crown Lands on the Wailuku plains in central Maui for \$1,000 (Van Dyke 2008).

Having seen the success of the recently completed Hamakua Ditch bringing mountain water to the otherwise dry, and unproductive East Maui fields, and having lost his battle to control this ditch water, Spreckles formed the Hawaiian Commercial Company and decided to construct a ditch system of his own on East Maui above the Hamakua Ditch, for his newly acquired land (Wilcox 1996). Spreckles' Haiku Ditch extended 30 miles, from Honomanū Stream to the Kīhei boundary and the water was used to irrigate his cane lands in the central Maui plains (Wilcox 1996).

In 1882, Spreckles reorganized his company into a California corporation, called Hawaiian Commercial and Sugar Company, or HC&S (Wilcox 1996). Later he constructed another water system known as the Waithee Ditch in West Maui. It brought water from 15 miles away, starting at an elevation of 435 feet, to Kālua where it emptied into HC&S Wai'ale Reservoir (Wilcox 1996).

The ensuing years brought trials and tribulations between Spreckles, his associates, and the Maui sugar planters, resulting finally in the 1898 sale of his HC&S stock, at an all-time low, to James Castle in partnership with Alexander and Baldwin, and the departure of Claus Spreckles from Hawai'i (Dorrance and Morgan 2000; Wilcox 1996).

Henry Baldwin and Lorrin Thurston formed the Kīhei Sugar Company in 1899, to grow cane on their ranch lands in south central Maui, which included the project area (Dorrance and Morgan 2000). It was sent to the mill at Pu'unēnē to be ground, but, although production was high, it was not enough to cover the costs (Dorrance and Morgan 2000).

After the annexation in 1898, some of the planters on Maui, including Alexander and Baldwin, had decided to combine plantations to reap maximum profit. They formed the Maui Agricultural Company, a co-partnership that initially encompassed seven plantations and two mills. In 1904, five new plantations became part of the Maui Agricultural Company, as Kula

Plantation Company, Makawao Plantation Company, Pulehu Plantation Company, Kailua Plantation and Kilauea Plantation Company were newly formed by carving up the unprofitable Kihei Plantation land (Dorrance and Morgan 2000). Maui Agricultural Company merged with HC&S in 1948 (Dorrance and Morgan 2000).

Land use in Wailuku and Waikapū Ahupua'a in the mid-19th and early 20th century was largely devoted to the sugar industry. During the 1860s, the sugar business was growing, with plantations and mills at Wailuku, Waie'e, Waikapū, and Ha'ikū. Many of the plantation camps associated with these mills were centered in the Pu'unenē, Kahului, and Wailuku area (see Denham *et al.* 1992:16). Hopoi Camp is said to have been located near Hopoi Reservoir. Hopoi Reservoir was constructed by at least by 1922, when references to Hopoi Camp occurred on an area map. Historic utilization of the Waikapū-Wailuku landscape near the project area focused on industrial-levels of cultivating sugar cane and pineapple. Water was channeled from traditional sources (e.g., Waikapū Stream, western aquifers or springs) through plantation lands. Both local and imported workers operated on these plantation lands and the area maintained fair population density. These former sugar cane and pineapple lands are now being reclaimed through residential developments and industrial baseyards.

#### PREVIOUS ARCHAEOLOGY

The earliest reported archaeological work conducted in the District of Lāhainā, was carried out by Winslow Walker (1931), under the auspices of the Bishop Museum, as part of an island-wide archaeological survey of Maui. In recent years many archaeological projects have been conducted in the coastal area of Kahului. Their data allows for a deeper understanding of the traditional use of DOT Kahului Baseyard and adjacent areas. These are projects are briefly discussed below and the project locations are shown in Figure 5.

Cultural Surveys of Hawaii, Inc. (Folk and Hammatt 1991) conducted an archaeological inventory survey of Areas P and O, Area R, Area H-H, and Area M-M of the proposed Kahului Airport expansion project, located in Kahului, Wailuku Ahupua'a, Wailuku District, Island of Maui, Hawaii'i [TMK: (2) 3-8-001:019 por.]. No historic properties were identified.

Xamanek Researches (Fredericksen 2003) conducted an assessment of the cultural resources existing at the Kanahā Beach Park, in conjunction with a biological resources survey and a wet land determination to be used in the development of a long range plan-the Master Plan for the Kanahā Beach Park Expansion, located in Kahului, Wailuku Ahupua'a, Wailuku District, Maui Island [TMK: (2) 3-8-119: and 19 por.]. Several features associated with former World War II Era activities were identified, but were not assigned State Inventory of Historic Properties

(SIHP) Site Numbers. While Fredericksen (2003:1) states that portions of the area were filled-in recently and during WWII. In addition Fredericksen (2003:5) states:

However, given the parcel's coastal location, the presence of two possible freshwater springs and the proximity of Kanaha Pond, it appears possible that the Kanaha Beach Park area may have been utilized for marine resource exploitation, habitation, burial and/or ceremonial functions.

The International Archaeological Research Institute, Inc. (Tomonari-Tuggle and Welch 1995) conducted an assessment of cultural resources at Kahului Airport, located in Kahului, Wailuku Ahupua'a, Wailuku District, Island of Maui, Hawaii'i, which included the subject property containing the site of the DOT Kahului Baseyard. This assessment was prepared as part of the environmental impact statement for the airport. The assessment included, but was not limited to, reviewing and summarizing all of the archaeological reports documenting the findings of previous archaeological projects conducted at the Kahului Airport, or the adjacent environs; conducting additional historical research and field survey, as necessary; and evaluating sites/structures for eligibility to the National Register of Historic Places. Tomonari-Tuggle and Welch (1995:iii) discussed five previously identified archaeological sites within the airport study: two subsurface cultural deposits; a human, burial/reburial area; a possible surface habitation site; and a fishpond with traditional origins.

In 2006, Archaeological Services Hawaii, LLC (Pantaleo 2007) conducted an archaeological inventory survey of 27.619-acre property located in Spreckelsville, Wailuku Ahupua'a, Wailuku District, Island of Maui, Hawaii'i [TMK: (2) 3-8-001:003 por.]. No historic properties were identified.

In 2006, SCS (Morawski and Dega 2006) conducted an archaeological inventory survey for the proposed Runway Safety and Related Improvements (RSA) within Areas "A" and "C" (Phase 2) at Kahului Airport in Kahului, Wailuku Ahupua'a, Wailuku District, Island of Maui, Hawaii'i [TMK: (2) 3-8-001:019]. No historic properties were identified.

In 2007, SCS (Shefcheck and Dega 2008) conducted a program of archaeological monitoring during ground altering activities associated with the installation of a dust fence and replacement of a chain-link fence around the eastern boundary of the Kahului Airport, Wailuku Ahupua'a, Wailuku District, Island of Maui, Hawaii'i [TMK: (2) 3-8-001:019]. No historic properties were identified.

Between 2011 and 2014, Xamanek Researches (Frey and Fredericksen 2014) conducted an archaeological monitoring program during ground altering activities associated with the construction of the Maui Business Park Phase II North Project in Wailuku Ahupua'a, Wailuku District, Island of Maui [TMK: (2) 3-8-079:013]. The area is the former site of the Central Power Plant. No historic properties were identified.

In 2012, SCS (Bassford and Dega 2012) conducted an archaeological inventory survey on approximately 41-acres of mostly undeveloped land for the Consolidated Rental Car Facility and Associated Improvements at Kahului Airport, Kahului Wailuku Ahupua'a, Wailuku District, Island of Maui, Hawai'i [TMK: (2) 3-8-001:123, 239, and 3-8-079:021]. Excavation of 36 representative trenches led to the identification of two historic properties: an historic-era concrete flume (SIHP #50-50-04-7347) and a small generator building likely associated with former Navy use of the lands (SIHP #50-50-04-7348).

In 2014, SCS (Perzinski and Dega 2014) conducted an archaeological monitoring program during ground altering activities associated with the construction and improvements to a new UPS structure near the Kahului Airport [TMK: (2) 3-8-001:019]. No historic properties were identified.

In 2016, SCS (Dagher and Dega 2016) conducted an archaeological inventory survey for the Maui Electric Power Plan Subdivision Project in Kahului Ahupua'a, Wailuku District, Island of Maui, Hawai'i [TMK: (2) 3-7-011:017, 019 por., and 023]. While historic properties have been identified within lands adjacent to, and surrounding the Kahului Harbor, no historic properties were identified on the ground surface or in subsurface contexts.

In 2020, SCS (Peralta and Dega 2020) conducted an archaeological field inspection of the subject property which included a pedestrian survey of the project area in order to identify any extant historic and archaeologically significant sites (including buildings, structures, objects or districts) listed eligible for listed regulations implementing 36 CFR 800.106 of the National Historic Preservation Act of 1996, as amended. The results of the field inspection show the project area consisted entirely of a built environment with existing buildings and infrastructure. No historic properties were identified.

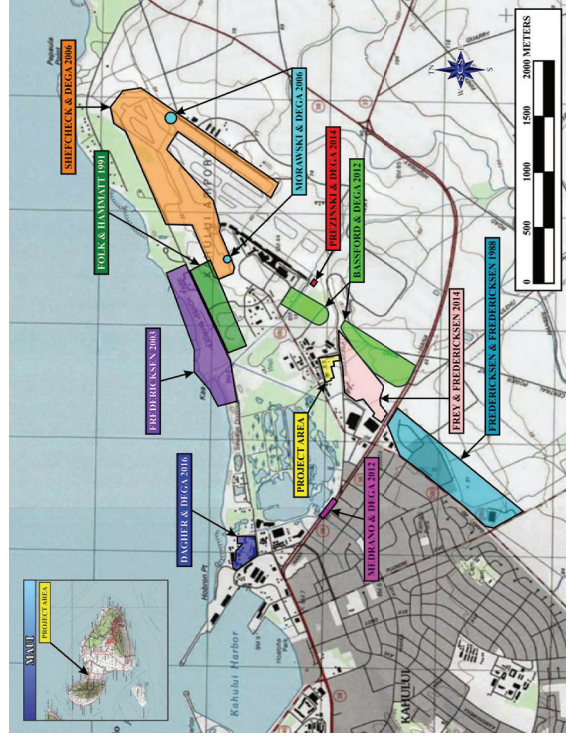


Figure 5: USGS (Paia, HI 1997; 1:24,000) Quadrangle Map Showing Previous Archaeology Conducted in the Vicinity of the DOT Kahului Baseyard.



## CONSULTATION

The consultation process is conducted via telephone, e-mail, and the U.S. Postal Service. Information pertaining to cultural resources and traditional cultural practices conducted within the project area or within Wailuku Ahupua'a was sought from the from the thirty-six (36) individuals and organizations listed below. The initial letters of inquiry were mailed between August 21, 2020 and October 26, 2020.

1. Hōkūāo Pellegrino, cultural practitioner and a cultural and lineal descendant of Waikapū and Wailuku Ahupua'a, Wailuku Moku, Maui Island, Hawai'i
2. Rose Duey, cultural practitioner
3. Kumu Hōkūlani Holt, Kumu hula, cultural practitioner, and Director, Ka Hikina O Ka Lā Hawai'i Papa o ke Ao, University of Hawaii Maui College
4. Joycynn Costa, cultural practitioner and Hāmākuāloa Moku Representative, Aha Moku O Maui
5. Kumu Kī'ope Raymond, cultural practitioner and formerly of Hawaiian Studies Program Department of Humanities, University of Hawaii, Maui College
6. Kai Markell, Compliance Manager, Office of Hawaiian Affairs
7. Thelma Shimaoka, Community Outreach Coordinator III, Office of Hawaiian Affairs
8. Roy Newton, Office of Hawaiian Affairs
9. Chris "Ikaika" Nakahashi, Cultural Historian, State Historic Preservation Division
10. Andrew "Kealana" Phillips, Burial Sites Specialist, State Historic Preservation Division
11. Ke'eaumoku Kapu, CEO, Aha Moku O Maui Inc.
12. Clyde Kahalehau, Wailuku Moku Po'o, Aha Moku O Maui
13. Clayton Suzuki, formerly with the Wailuku Sugar Company and now with the Wailuku Water Company
14. Blossom Feiteira, Maui Mokuupuni Council
15. Johanna Kamaunu, Wailuku District Representative, Maui/Lāna'i Islands Burial Council
16. Foster Ampong, recognized cultural descendant of inadvertent discovered iwi kupuna of Wailuku Ahupua'a, a lineal and cultural descendant of o'iwi (native Hawaiian) ancestors that lived in the Wailuku Moku, and member of Wailuku Moku, Aha Moku O Maui
17. Kanihoa Kamaunu, member of Wailuku District, Aha Moku O Maui
18. Leimana DaMate, Executive Director, Aha Moku Advisory Committee, State of Hawai'i Department of Land and Natural Resources
19. Albert Perez, Executive Director, Maui Tomorrow Foundation

20. Lucienne de Naie, Vice President, Maui Tomorrow Foundation
21. Maui Sierra Club
22. Hale Mahaolu
23. Dane Maxwell, Chair, Maui/Lāna'i Island Burial Council
24. Annella Amaral, President, Association of Hawaiian Civic Clubs
25. Kamika Kepa'a, Native Hawaiian Preservation Council
26. Dr. Scott Fisher, Associate Executive Director of Conservation Hawaii Island Land Trust, and member of the Maui/Lāna'i Islands Burial Council
27. Dr. Fern P. Duvall II, Maui Nui Program Manager, Native Ecosystems Protection and Management, Division of Forestry and Wildlife, Hawaii Department of Land and Natural Resources, and former manager of the Kanahā Pond State Wildlife Area
28. Robert Hill, Archaeologist and foremost authority on the Naval Air Station
29. Isaac Hall, Attorney, has been involved with Environmental Impact Studies challenges on behalf of various community groups in the airport area
30. Dana Naone Hall, former Chair, and member, of the Maui/Lāna'i Islands Burial Council, involved in EIS challenges on behalf of various community groups in the airport area.
31. Native Hawaiian Plant Society
32. Wailiete Pellegrino, mother of Hōkūāo Pellegrino, cultural practitioner, and a member of the Waikapū Community Association
33. Victor Pellegrino, father of Hōkūāo Pellegrino, community member
34. Jade "Alohalani" Smith, Kaupō Moku Representative, Aha Moku O Maui, she and her family lived across the street from Kanahā Pond when she was a child
35. Hinano Rodrigues, History and Culture Branch Chief, State Historic Preservation Division
36. Daniel Omellas, District Land Agent, Department of Land and Natural Resources



The follow-up letters of inquiry (see Appendix C) were mailed via e-mail and USPS between October 8, 2020 and December 22, 2020. Follow-up letters were mailed to all the above listed individuals and organizations, with the exception of those individuals and organizations that submitted responses to SCS. In addition, a Cultural Impact Assessment Notice was published in the September 2020 (Vol. 37 No. 9) issue of the OHA newsletter, *Ka Wai Ola* (see Appendix B). This notice stated that Scientific Consultant Services, Inc. is seeking information on cultural resources and traditional cultural activities in the area of the proposed project and the surrounding ahupua'a, briefly described the proposed project, and provided locational information (i.e., the ahupua'a, traditional and modern names of the District, Island, State, and property Tax Map Key designations).

### **RESULTS**

Scientific Consultant Services, Inc. has received responses from fourteen (14) individuals, conducted one interview via telephone, and received permission to include two previously conducted interviews from a near-by cultural assessment study (Kirkendall and Cleghorn 2011). No responses were received as a result of posting a CIA notice in the September 2020 (Vol. 37 No.9) issue of the OHA newsletter, *Ka Wai Ola*. Assessment of the potential effects on cultural resources in the project area and recommendations for mitigation of these effects can be proposed based on these responses and interviews.

### **WRITTEN RESPONSES**

#### **Andrew "Kealana" Phillips, Burial Sites Specialist, State Historic Preservation Division**

Mr. Phillips, Burial Sites Specialist, State Historic Preservation Division, responded via an email dated Monday October 12, 2020:

Sent to burial council members. Mahalo.

**Concerns:** No concerns were expressed.

#### **Blossom Feiteira, Maui Mokupuni Council**

Blossom Feiteira responded via an email dated Saturday, October 10, 2020:

Aloha Cathy.

Am forwarding your request to lifelong residents of Kahului/Wailuku.

I don't know much about the area so it might be more beneficial to you to have people who have been raised here.

Thank you for thinking of me though.  
Blossom

**Concerns:** No concerns were expressed.

#### **Chris (Ikaika) Nakahashi, Cultural Historian, State Historic Preservation Division**

Mr. Nakahashi responded via an e-mail dated Thursday, August 27, 2020:

Aloha Cathy,

Mahalo for contacting me regarding the Cultural Impact Assessment for the proposed DOT Kahului Baseyard Improvements project in the ahupua'a of Wailuku, in the Moku of Wailuku, Maui.

I recommend SCS to utilize the media (e.x. OHA's Ka Wai Ola, Maui News, MauiTime, etc.) to solicit additional information for this CIA.

I recommend SCS minimally to meet with:

•Ke'eumoku Kapu – 'Aha Moku o Maui Inc., kapukapuakea@gmail.com

I recommend SCS to meet with the native tenants and people that currently live or previously lived in the ahupua'a of Wailuku on Maui for information about the cultural resources and practices for this CIA.

Please let me know if I can assist with anything else.

A hui hou,

Christopher "Ikaika" Nakahashi, M.S.

Cultural Historian

Department of Land & Natural Resources

State Historic Preservation Division

**Concerns:** No concerns were expressed.

**Note:** Scientific Consultant Services, Inc. published a CIA notice in the September 2020 (Vol. 37 No. 9) issue of *Ka Wai Ola*, the OHA Newsletter. During the consultation process for this CIA, SCS sent the consultation materials to Ke'eumoku Kapu via emails dated August 26, 2020 and October 28, 2020. However, Mr. Kapu did not respond. Scientific Consultant Services, Inc. made a good faith effort to "meet with the native tenants and people that currently live or previously lived in the ahupua'a of Wailuku on Maui for information about the cultural resources and practices for this CIA," during the consultation process for this CIA.

**Dane Maxwell, Chair, Maui/ Lānaʻi Island Burial Council**

Dane Maxwell, Chair, Maui/ Lānaʻi Island Burial Council, replied via an e-mail dated August 27, 2020:

Aloha e Cathy,

I might know a few families with lineal ties to this area and will make sure to forward this to them and also our Wailuku Rep.

Ke aloha nō,

Dane Maxwell

**Concerns:** No concerns were expressed.

**Kumu Hōkūlani Holt, Kumu hula, cultural practitioner, and Director, Ka Hikina O Ka Lā Hawaiiʻi Papa o ke Ao, University of Hawaii Maui College**

Kumu Holt responded via an email dated October 28, 2020:

I am confident that you will do your due diligence research about Mautoni and Kanahā ponds. Much of that is in Ruling Chiefs and some online Ulukau listings. In addition, I would guess that you would take into account where the ponds were, what was drained for Kafului, NASKA, and the airport. These are probably in County records or the Maui News. The Index to the Maui News should have that.

While much disturbance of the area has already impacted the project area, one must not forget that cultural and historical events were prominent there.

ʻO au iho nō,  
Hōkūlani

Hōkūlani Holt  
Director, Ka Hikina O Ka Lā  
Hawaiiʻi Papa o Ke Ao  
University of Hawaii Maui College

**Concerns:** No concerns were expressed

**Note:** The reader is referred to the Wahi Pana and Historic Period discussions presented in this document, as well as to Robert Hill’s written response, in the Written Response section of this document.

In a subsequent e-mail dated January 11, 2021, SCS asked Kumu Holt for her permission to include an earlier interview for a near-by project presented in the Kirkendall and Cleghorn (2011) cultural impact study for Kanahā Pond in the current CIA. Kumu Holt graciously granted her permission in an e-mail dated January 12, 2021. The interview is presented in the Interview section of the current CIA.

**Johanna Kamaunu, Wailuku District Representative, Maui/Lānaʻi Islands Burial Council**

Ms. Kamaunu responded via an e-mail dated August 27, 2020:

Aloha Cathy,

Pleased to have a conversation. Phone, chat or zoom. Anytime [sic] after Thurs afternoon 1pm and Friday I am available. Looking forward to it.

Mahalo,  
Johanna

**Concerns:** Ms. Kamaunu did not express any concerns in her email.

**Note:** Scientific Consultant Services, Inc. sent the consultation materials to Ms. Kamaunu two subsequent e-mails (dated October 27, 2020 and December 11, 2020) in an effort to schedule an interview with Ms. Kamaunu and to explain the purpose of the CIA consultation process. Ms. Kamaunu did not respond.

**Kumu Kīʻope Raymond, cultural practitioner and formerly of Hawaiian Studies Program Department of Humanities, University of Hawaii, Maui College**

Kumu Raymond responded via an email dated August 6, 2020:

Aloha Cathy,

I have no comment at this time.

Mahalo,  
Kīʻope

**Concerns:** Kumu Raymond did not express any concerns.

**Lucienne de Naie, Vice President, Maui Tomorrow Foundation**

Ms. de Naie made several helpful suggestions in an e-mail dated October 11, 2020:

You could contact Dana and Isaac Hall. They have been involved in EIS challenges on behalf of various community groups in the airport area. They may have more info on the burial(s) found. Dana served on the Burial council for many years.

Fern Duvall of the State forestry program is very knowledgeable about the general Kanaha /airport area- flora and fauna etc.

The Native Hawaiian Plant Society can be contacted via e-mail.

**Concerns:** Ms. de Naie did not express any concerns.

**Note:** Scientific Consultant Services, Inc. sent the consultation materials to Dana and Issac Hall and the Native Hawaiian Plant Society, on October 12, 2020 and October 27, 2020, via email, but did not receive any response. Scientific Consultant Services, Inc. contacted Dr. Fern Duvall, whose comments, sent an email dated October 15, 2020, are presented below:

**Dr. Fern P. Duvall II, Maui Nui Program Manager, Native Ecosystems Protection and Management, Division of Forestry and Wildlife, Hawaii Department of Land and Natural Resources, and former manager of the Kanaha Pond State Wildlife Area**

Cathleen:

This email is in response to your request. I really have no detailed information such as you are seeking. I do know this property was developed originally in the 1940's as the NASKA or Naval Air Station Kahului by the U.S. military. Since that time it has been more or less in various industrial baseyard type use. I cannot report more to your request.

Mahalo a me ke aloha mai Maui Nui

**Concerns:** No concerns were expressed.

**Robert Hill**

Mr. Hill is a professional archaeologist considered to be the foremost authority Naval Air Station. During his interview, Dr. Scott Fisher (Associate Executive Director of Conservation Hawaii Island Land Trust, and member of the Maui/Lāna'i Islands Burial Council) recommended contacting Mr. Hill, given his expertise on the history of the U.S. military in Hawai'i (see Interview section in this report). Mr. Hill provided the detailed information, that is presented below, via an e-mail dated September 24, 2020.

Dear Cathy,

I've noted in each of my previous background reports regarding the region of Kahului, that it was my opinion that pre-Contact settlement in this region must have been scanty, because there were very few place names known in the region.

According to Sterling (1998), the native name for the Kahului region is "Kaihuwa'a. Malo (Malo 1903:268) described the Kahului region as "flat and treeless."

E. Craighill Handy comments on areas of habitation for Maui Island:

The concentration of population for the Kahului area was found in the Wailuku region, as the waters of the Wailuku River [*ʻĪao Stream*] ran into the Kahului Harbor at Paukūkalo. Taro was grown in massive *lo'i* complexes along the Wailuku River, as well as in the Waiehu Valley and Waiehe'e Valley. The habitation regions in these valleys are interspersed with *heiau* structures, that establish those regions as important settlements. [In fact, Handy does not discuss Kahului as a settlement region for agriculture as he does with the other 'okama (land divisions) in the region, such as Wailuku, Waiehe'e and Waiehu.]

To answer the question as to the importance of the region of Kahului in pre-Contact times, the archaeological record contains evidence of settlements of fishing villages along the Kahului coastline, most notable of these archaeological reports is one performed by Cultural Surveys in 1990 – with data revised in 1991. "*Archaeological Testing of subsurface deposits for the proposed Approach "Clear Zone" North End of Runway 2-20 Kahului Airport, Kahului, Maui.*" Revised 1991.] [Toenjes, James H. /Folk, William H./ Hammatt, Hallett H.]



## Remarkable Rise and Fall of the Sea

Wailuku

November 8, 1837

A strange phenomenon appeared last evening in our neighborhood—one which may require the skill of the learned to account for. At about seven o'clock in the evening, the waves of the ocean, just opposite our station, at a small harbor, gradually receded from the shore to a distance of some fifteen or twenty rods, leaving multitudes of fishes bar (sic) upon the ground, so that the children observing it ran and picked some of them up;— leaving a small schooner also, which was at anchor in the harbor, without sufficient water to float her completely, and the wave slowly forming itself as it were into an embankment, or as the natives said a “steep precipice.” Then, as if having collected strength enough for the onset, the wave rushed back upon the beach, overflowed the banks, and carried away an entire village of twenty-six native grass houses, with all their effects and inhabitants, some forty or fifty rods inland, throwing most of the wrecks of houses, broken canoes, fowls, beasts, men, women and children into a small lake of perhaps three miles in circumference, which lay immediately inland from the village.

The rush of the wave was so sudden and unexpected, that the inhabitants of the village, unlike Lot in Sodom, had no warning whatever, except a few who seeing the sea receding from the shore suspected a corresponding reflux, fled inland in season. But, it is not easy for water to baffle a native. This being the element of which he is most fond, and with which he is quite familiar at all seasons. Some swam single-handed with the waves. Others took their children in their arms. Others the sick on their backs, and bore them up until the water ceased from the earth. One man took his old mother on his back and swam with her until he reached the dry land, but laying her down on the ground, he found she was dead. Another poor old woman, having no one to assist her, and it being dark, got into the small lake and was drowned. These, strange to tell, are all the lives that were lost. But it does not appear so strange to us who are acquainted with the expertness of natives in the water. Even the little children spend a great part of their time in this element (pp 251).

After the sea began to swell over the banks, the progress of the waves does not appear from the accounts of the natives to have been very rapid, until they arrived at a certain stage; for one man found the water coming into his house, seized his child and ran so as to escape the inundation entirely; but arriving on the summit of a small sand bank, he looked back and saw the whole village, inhabitants and all, moving towards him, some riding on the tops of their houses, some swimming, and all screaming most frightfully. One circumstance was much in their favor, the moon shed a gentle light upon the whole scene (pp 251).

40

[Tsunamis were probably a contributing reason why the Pihana and Hale ki'i Heiau are up at the top of a steep sand ridge above the 'Iao Stream.] Also: According to Pukui and others (1974), stories of the Pihana heiau include it being built in a single night by the legendary race of Menehune, who brought the stones from Paukūalo beach. Pukui (1974) also states that the construction of this heiau has been attributed to the Maui chief, Kahekili. It is listed as Walker Site 43.

## WAILUKU AND KAHULUI RAILROAD COMPANY CONSTRUCTION 1879-1880

According to Conde (1973), a Mr. J. McKinney was the construction superintendent for the Kahului and Wailuku Railroad, and in a newspaper article that he wrote for the Hawaiian Gazette on July 9, 1879, he stated that an English-made Fowler locomotive was received at Kahului on June 26, 1879, which was assembled by assistant engineer Mr. Levi Perkins and a Mr. Carson. After a length of track had been laid at the harbor, the first locomotive of the Kahului Railroad Company, named the “Queen Emma,” was “fired up and run along the beach on July 2, 1879.” [Conde, Jesse C. and Best, Gerald M. 1973: 14 in “Sugar Trains Narrow Gauge Rails of Hawaii”], also [Conde, Jesse C. 1994 “Fowler Locomotives in the Kingdom of Hawaii”].

The Kahului and Wailuku Railroad main line between Wailuku and Kahului was engineered by John McKinney, a Vermont native who was hired in San Francisco by Thomas Hobron in June 1879. He had been a surveyor on two previous railroad projects in the U.S. According to additional unpublished research by Conde (1973), McKinney wrote other articles in 1879 describing 400 tons of English steel rails ordered by Hobron to get the project started, which were expected to take 3-4 months to come from Liverpool. Work to connect the Wailuku Sugar Plantation to the harbor at Kahului carried through May 1880, during which time the grades, rails, bridges, spurs and service platforms were completed. [Conde's unpublished notes were accessed at the Bancroft Library at the University of California at Berkeley in 1994].

Because numerous Native Hawaiian land claims for taro *kalo* lots in the region were located along the proposed route for the railroad, Protestant missionary Edward Bailey stationed at Wailuku surveyed the route for the narrow-gauge railroad, in order to avoid agricultural lots of valuable farmland. Engineering the grades, curves and bridges for the rail right-of-way fell to McKinney.

41



#### NAVAL AIR STATION KAHULUI

As soon as NAS Puunene became operational in 1942, it was deemed important to build a second Naval Air Station on Maui, to accommodate a larger number of Navy aircraft than the Puunene facility. In the early stages of World War II, the U. S. Navy had ramped up production of aircraft carriers to the extent as to require more forward combat training airfields to keep pace with ship construction. Manpower requirements for the construction of the base fell to the engineering staff of the U. S. Navy.

In September 1942, authorization was granted to construct Naval Air Station Kahului on 1,300 acres of land located between Kahului and Spreckelsville. This made NAS Kahului twice as large as NAS Puunene. The civilian industrial architectural and engineering firm of Holmes and Narver were given the Navy contract to complete this Naval Air Station. Beginning in November 1942, Navy and civilian contractors began the work of bulldozing the runways for Naval Air Station Kahului. Both the 39<sup>th</sup> and 48<sup>th</sup> "SeaBees" commenced construction, using gravel quarried from Pu'u Nēnē ("Goose Hill") to pave the runways. The work included, just as at the Naval Air Station at Puunene, the construction of a railroad line by which ammunition would arrive by ship at the Kahului Harbor, and be routed to ammunition bunkers constructed at the outskirts of the base. The NASKA base was designed to service 180 carrier-based aircraft at one time.

By 15 March 1943, it was determined that the electric service provided by the Hawaiian Commercial & Sugar Company's central power plant was adequate for the operation of the new base. In all 166 separate buildings were constructed, which included bomb-sight vaults, repair shops, a Marine barracks, bachelor officer's quarters, an officer's mess and a sea-side officer's club. It was noted in the official Navy work performance record at NAS Kahului that the *kizme* thorns from the thickets located along the shoreline, caused many injuries during construction.

As of 1 January 1945, 536 civilians were employed at NAS Kahului. Women made up 36% of the total civilian personnel. The station produced a local newspaper highlighting the various departments that both civilians and service men at NASKA were responsible for. The Base newspaper was called *The Fly Paper* (Eggertsen 1945:32) [Claude A. Eggertsen, 1 January 1945, "Historical Report U.S. Naval Air Station Kahului," Kahului, Territory of Hawaii.]

1943 - Naval Air Station Kahului becomes operational!

By 20 September 1943, Naval Air Station Kahului was ready for the Navy Composite Squadron 23 to arrive. When the aircraft carrier U.S.S. Princeton (CVL23) underwent combat preparations at Pearl Harbor, its complement of Douglas Scout Bombers, Eastern TBM-1 torpedo bombers and the new Grumman F6F "Hellcat" fighters flew to NAS Kahului for combat training.

Later, in 1944, the U.S.S. Princeton returned with Fighting Squadron 27, with the squadron name "The Hellcats." This squadron trained at NAS Kahului. Combat training made it possible for the fighter and bomber squadrons to have success in the upcoming battles to invade the Japanese-held islands of Guam, Saipan and Tinian in 1944. During these battles, the aircraft carrier, U.S.S. Princeton was sunk in an attack off the Philippine Islands. [Tillman, Barrett, 1997, "U.S. Navy Fighter Squadrons in World War II," Voyageur Press, Stillwater Minnesota.]

On April 1, 1946, a tsunami struck the NAS Kahului base and caused a great deal of damage. 159 people across the Territory of Hawaii were killed. 77 homes on Maui were destroyed. Most of the 6,000 military personnel of the base had long since been discharged from duty, and the base then became a dormant Navy outpost. The land of the air base eventually was deeded back to the Hawaii Aeronautics Commission for use as the main airport for the island of Maui.

Previous Archaeology:

SEE: "Architecture and Archaeology at Naval Air Station Kahului, Kahului Airport, Island of Maui," August 1997 by Ann Yoklavich, M.S. and Spencer Mason Architects, and M. J. Tomimari-Tuggle, M.A. and David J. Welch, Ph.D.

Prepared for Edward K. Noda and Associates, Honolulu. NAS Kahului is listed as 50-50-05-4197.

That report contains a map that shows the Navy structures as built. It appears that no historic standing structures were present at the HDOT site when this survey was completed. The closest former structure to the HDOT site was numbered structure 330, on map "Figure 2." On page 25 of this report. This structure was identified as the foundation of a theater, which, at the time was already in use as the DOT base yard and covered in supplies. [Page 30.]

SEE: Photograph of NAS Kahului –scroll down to next page.

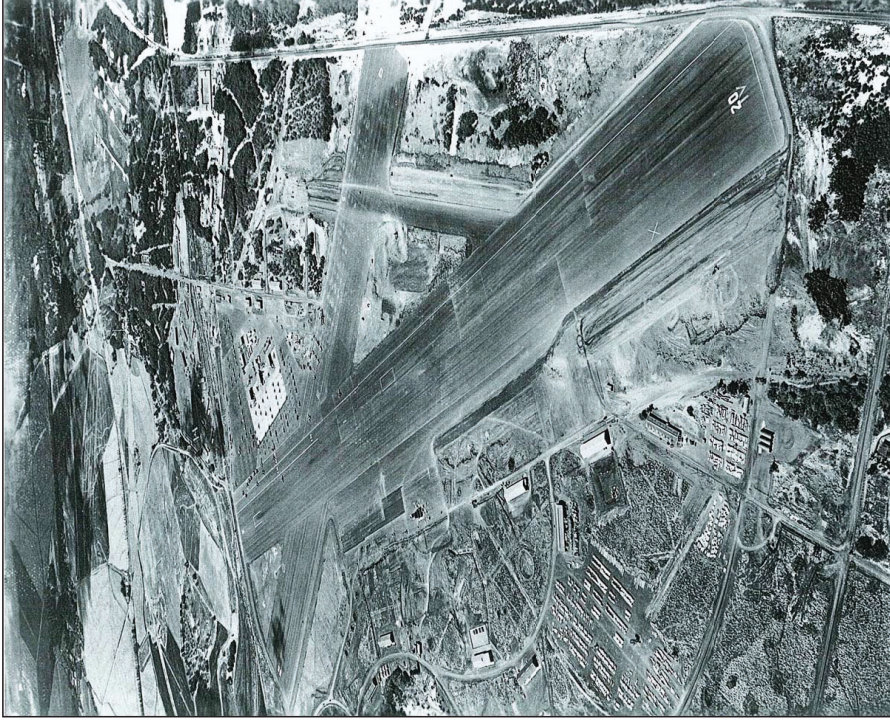


Figure 8: Aerial photograph of U. S. Naval Air Station at Kahului. Three symmetrical rows of ammunition magazines are visible in Kamahā Pond at the very top right portion of this oblique photo. North is to the right in this photo, as is the ocean. [Image: U.S. Navy photograph, September 1944. Accessed from HDOT, Airports Division.



Figure 7: Pilots of the "Hellcats" of fighter squadron 27 operated from the aircraft carrier U.S.S. Princeton. Photographed at NAS Kahului. Pilots Carl Brown, Richard Stambrook and Robert Burnell designed the cat-mouth markings during their training at Naval Air Station Kahului during March and April 1944. [Image: "File Copy." April 1944 NAS Kahului, Chief of Bureau of Aeronautics, U.S. Navy.]

**THELMA SHIMAOKA, COMMUNITY OUTREACH COORDINATOR III, OFFICE OF HAWAIIAN AFFAIRS**  
Ms. Shimaoka responded via an email dated October 22, 2020, which is presented below:

Hui aloha Cathy,

Yes, I finally figured where the construction site is situated. Responding to your letter re: Dots 1-4 and 6. Kai Markell can do number 5 referrals to Iwi Kupuna. Mahalo for the additional information you provided. It helped but I had to travel to the area to finally figure out the exact area.

Listed are names of community and kupuna who may be able to respond to your questions.

1. Foster Ampong- he's with the Wailuku Aha Moku
2. Hinano Rodrigues
3. Hokuao Pellegrino (Mention who you are, and ask if you may speak with his mom or Dad, they would be a great resource on information)
4. Alohalani Jade Smith (share with her who you are, tell her I directed you to her for information, however, ask her if you can talk to her Uncle, he is the kupuna)
5. Clyde Kahalehau-He represents Wailuku Aha Moku as well, he is much older than #1 Foster Ampong.
6. Danielle Omellas- DLNR long time island boy, roots here on Maui

For Iwi Kupuna information, check on Kai Markell, he's the expert in that area. And he probably can give you other information. I'm giving you grassroots informants if they can remember. You should have a history book by now with all the ole information you [are] collecting. You should also try the UH-Maui Campus and ask for information on interviews with Maui kupuna, they must have a long list, and some very interesting stories from sections of Maui.

Good luck

Thelma

**Concerns:** No concerns were expressed.

**Note:** Scientific Consultant Services Inc. sent the consultation materials to Mr. Ampong via emails dated August 26, 2020 and October 8, 2020. Mr., Ampong did not respond. Clyde Kahalehau was sent the consultation materials via emails dated August 26, 2020 and October 8, 2020. Mr., Kahalehau did not respond. Consultation materials were sent to Victor Pellegrino, father

of Hōkūāo Pellegrino and community member, via emails dated October 26, 2020 and December 22, 2020. Mr. Pellegrino did not respond.

Daniel Omellas, District Land Agent, Department of Land and Natural Resources, was sent the consultation materials on October 26, 2020 and December 22, 2020. Mr. Omellas did not respond.

Scientific Consultant Services Inc. sent Consultation materials to Hinano Rodrigues, Hōkūāo Pellegrino, Walette Pellegrino, Jade "Alohalani" Smith, Hōkūāo Pellegrino, and Kai Markel. Their responses are presented below.

**Hinano Rodrigues, History and Culture Branch Chief, State Historic Preservation Division**  
In an email dated December 23, 2020, Mr. Rodrigues stated:

Alina kua e Cathy:

I hope you are doing well in these unusual times.

Unfortunately I don't know much about the area, I was raised on the Lahaina side.

Hinano

In a subsequent email also dated December 23, 2020, Mr. Rodrigues elaborated that he had not been the "Site Specialist or Cultural Historian for almost 8 years now."

**Concerns:** No concerns were expressed.



**HŌKŪAO PELLEGRINO, CULTURAL PRACTITIONER AND A CULTURAL AND LINEAL DESCENDANT OF WAIKAPU AND WAILUKU AHUPUAʻA, WAILUKU MOKU, MAUI ISLAND, HAWAII**

Mr. Pellegrino responded via an email dated October 28, 2020 and graciously granted SCS permission to include in the current CIA an earlier interview for a near-by project presented in the Kirkendall and Cleghorn (2011) cultural impact study for Kanahā Pond. Mr. Pellegrino also provided an electronic copy of the Kirkendall and Cleghorn (2011) cultural impact study. Mr. Pellegrino's e-mail is presented below and his (Kirkendall and Cleghorn 2011) interview is presented in the Interview section of this document.

Aloha e Cathy,

mahalo for reaching out. I don't have any comments at this time for this particular CIA, however i am happy to share comments that are included in a past CIA for a project area very close to yours. My main concern are always around the protection of iwi, archaeological site, natural and cultural resources. This particular project is close to the Kanahā and Maui'oni wetlands which is why i included my past comments which i think are still relevant. Mahalo nui!

na,

Hōkūāoa

**Concerns:** Mr. Pellegrino expressed concerns for the protection of the iwi, archaeological sites, and the natural and cultural resources which may be located within the DOT Kahului Baseyard project area.

**Walette Pellegrino, mother of Hōkūāoa Pellegrino, cultural practitioner, and a member of the Waikapu Community Association**

Mrs. Pellegrino replied via an email dated January 3, 2021:

Happy New Year Cathy,

Mahalo for contacting me regarding the Cultural Impact Assessment (CIA) in advance of the proposed DOE Kahului Baseyard Improvements project. At this time I am unable to assist with any specific information. Thank you (and Thelma Shimooka [sic] of OHA) for inviting me to participate.

Sincerely,

/s/ Walette Pellegrino

**Concerns:** No concerns were expressed.  
**Jade "Alohalani" Smith, Kaupō Moku Representative, Aha Mōku O Maui, she and her family lived across the street from Kanahā Pond when she was a child**  
In an e-mail dated October 30, 2020, Ms. Smith provided the following comments:

Aloha Cathy,

Thank you for reaching out to me and providing me the necessary information. I reviewed the letter of inquiry and the maps provided. I spoke with my Husband's Uncle and he isn't familiar with that area. No comments from him.

I, However, do know that, that area may have iwi. The pond was a precious water hole to the people who traveled a far. That pond was fresh water before the County or their developer dredged and damaged the very spring that filled that pond while building the water treatment facility. Today, we have salt water or brackish water that goes stagnant at times in that pond. There's no filter or circulation until the rains clean it out.

Close proximity to this pond is the area of question. Our family lived across the street when there were Quonset Hut Houses there. The stories were of those who traveled to these ponds that have passed away. The families didn't want to carry the dead so they buried them in particular areas away from the pond not to contaminate it. We heard of spooky stories of the dead waiting for their families to take them home and how angry these dead loved one were. I never believed in ghosts so it didn't matter to me as a young girl.

When the creation of Kahului town or Dream City evolved, most of the identifying markers and sites have been damaged and desecrated. Back in those days they didn't have such CIA or EA etc. The pond has been compromised with bomb shelters or Bunkers for Military too. We used to play in them as young kids.

So, I would be cautious for iwi if they are digging for this Particular Project. This is all I can share growing up in that area. Mahalo

J. Alohalani Smith

**Concerns:** Ms. Smith expressed concern that traditional native Hawaiian burials may be present in the subsurface deposits within the DOT Kahului Baseyard.

**Kai Markell, Compliance Manager, Office of Hawaiian Affairs**

Mr. Markell provided the comments below via an e-mail dated October 27, 2020:

Aloha Cathy!

Wow! It has been ages! I hope you are doing well!

Let me forward this to our OHACompliance@oha.org email where all OHA intake should go for review and comment. We may have this in our system and staff assigned, or possibly not. Thanks for the email!

I hope you are staying safe, being well and thriving over there.... Much Aloha! kai

Kai Markell  
Ka Pou Kāko'o  
Manager  
Kia'i Kānawai  
Compliance Enforcement  
Office of Hawaiian Affairs

**Concerns:** No concerns were expressed.

#### INTERVIEWS

**DR. SCOTT FISHER, ASSOCIATE EXECUTIVE DIRECTOR OF CONSERVATION, HAWAII ISLAND LAND TRUST, AND MEMBER OF THE MAUI/LĀNA'I ISLANDS BURIAL COUNCIL.**

Dr. Fisher was interviewed via telephone , on September 2, 2020, by Cathleen Dagher, SCS

Senior Archaeologist. Dr. Fisher began the interview by saying that there are not many stories about the area where the DOT Kahului Baseyard is located, which suggests this area was sparsely populated. He thinks it is interesting to note that Kanahā Pond may have originally been the river mouth of Wailuku Stream, which is suggested by the shape and location of the pond. When standing at the pond, now, and facing inland, one is looking directly into Wailuku and into 'Āao Valley. Dr. Fisher hypothesized that the basin that later became Kanahā Pond originally formed as the result of being the river mouth.

Today, the mouth of Wailuku Stream is approximately 1.5 miles away, which is because of the Kahului sand dune formation that makes up most of central Maui. Roughly twenty thousand years ago at the peak of the Late Pleistocene glacial period, what is called the Wisconsin Period, the sea level dropped approximately 350 to 400 feet and the sand built up creating the dunes that now block Wailuku Stream from reaching that river mouth. The current location of the Wailuku Stream river mouth is relatively recent; i.e. occurring within the last 18,000 years, or so.

This chain of geological events informed the cultural significance of the area. As a result of the formation of the Kahului sand dunes, Wailuku Stream could no longer reach the original river mouth and the resulting basin later became the site of Kanahā Pond. The Kahului sand dune formation is known to contain a large number of traditional native Hawaiian burials and the site of the modern village of Kahului.

There are a number of springs in the vicinity of Kanahā Pond which also act as feeders to Kanahā Pond. Kanahā Pond is also fed by Kaliainui Stream, located in Kaliainui Gulch, which originates in Kula. What is significant about Kaliainui Gulch is that the upper portion near Pukalani contains a large number of petroglyphs, many of which depict canoes. Dr. Fisher speculated that the canoe petroglyphs are probably indicative of the method of transporting koa logs harvested for the manufacture of canoes via the stream in Kaliainui Gulch, rather than hauling them over land.

The major cultural event in the vicinity of the DOT Kahului Baseyard, was the construction of the twin fishponds, Kanahā and Mau'oni. Kapihookalani was the ali'i'aimoku or possibly the ali'i'aimokupuni, i.e., the chief of the island of Maui or the district of Wailuku. With help from the people of Moloka'i, Kapihookalani had the ponds built. The twin ponds were named Kanahā, for Kapihookalani's son, and Mau'oni, for Kapihookalani's daughter.

Currently there are endangered species, particularly the ae'o [Hawaiian stilt, *Himantopus mexicanus knudseni*] and the alae ke'oke'o (Hawaiian coot, *Fulica alai*) in that area. Dr. Fisher suggests Dr. Fern Duvall as a person knowledgeable about the Kanahā Pond area. As Dr. Duvall currently works at the Division of Forestry and Wildlife, Hawaii Department of Land and Natural Resources and is a former manager of the Kanahā Pond State Wildlife Area..

In 1980, there was a major tropical depression that sat on top of the island of Maui, which was said to have caused the worst flooding since the 1940s. Although there were existing buildings and structures in place, the flooding of the Kahului area revealed the rough boundaries of Mau'oni Pond, which went along Dairy Road almost all the way to Pu'unenē. The ponds once were much larger – most of Mau'oni Pond is now under the Kahului industrial area. This is supported by the findings of wetland surveys in the Kahului area which indicate the wetlands in the Kahului industrial area were quite extensive. This area has been filled in and built-up extensively over the last 40 years.

The next major historical phase in the area that Dr. Fisher is aware of was the construction of the Naval Air Station Kahului. The Naval Air Station Kahului was under construction on December 7, 1941. Dr. Fisher suggests Robert Hill as an individual knowledgeable about the Naval Air Station Kahului (NASKA). This is where pilots went for their last training prior to being deployed to the South Pacific during WWII.

On January 15, 1941 and January 31, 1941, Japanese submarines attacked Kahului Harbor. Although the story is well known now, at the time it was meant to be kept under wraps and the Maui News was not supposed to publish this story. However, the Maui News did publish the story and in doing so, violated martial law. During WWII, Japanese submarines were operating throughout the Hawaiian Islands. On January 15, 1941 the I-1 spotted the Royal T. Frank, a U.S. Army transport boat, docked in Kahului Harbor and opened fire. As the Royal T. Frank was protecting the harbor, the Japanese could not fire using torpedoes. The submarine fired on the Royal T. Frank using its deck guns and Japanese artillery shells landed in the water, in the lumber yard around Kahului Harbor, and damaged the pineapple mill located at the current location of the Kaahumānu Shopping Center. After this brief attack the Japanese submarine departed without being fired upon in return.



### **Hōkūāo Pellegrino**

Mr. Pellegrino's interview is relative to the current CIA as he discusses the extent of the marshlands and the cultural significance of Kanahā Pond, as well as the plants that thrived in the area and their traditional uses, and the cultivation of fish in Kanahā Pond. He also discusses the spiritual relationship between native Hawaiians and the environment.

Mr. Pellegrino is a well-respected educator, cultural practitioner and kalo farmer on the island of Maui. A Kamehameha Fellow, he has taught at St. Anthony High School, Kamehameha Elementary, Maui Campus, and University of Hawai'i at Hilo. He worked for several years as the Cultural Landscape Curator at the 'Imiloa Astronomy Center of Hawai'i in Hilo. Currently he serves as the Enrichment Program Coordinator (Maui) for Kamehameha Schools. He is a researcher of Native Hawaiian water rights and Land Divisions in the Nā Wai 'Ehā area, and is the cultural and educational coordinator for Noho'ana Farm in Waikapū, Maui. Mr. Pellegrino agreed to provide his expertise in the cultural assessment of Kanahā Pond. The interview took place on Tuesday June 8, 2010.

Mr. Pellegrino initially spoke of the significance of place in reference to the lands fronting Kanahā Pond. He noted that Kalia, a very large 'ili to the southwest of Kanahā extended nearly to the Kanahā area. Kanahā is fronted by Ka'a point, or Lae, and the location of the pond and marshlands within the boundary of Wailuku, yet in relative proximity to Papa'ula, the transition between present day Wailuku District and Makawao District. He named the land divisions within Wailuku ahupua'a along the shoreline from the west; Paukūkalo, Nehe, Kalua, Owa, Ohe, Ahuakokole, and Ha'akoa, and brought with him and old map which he had located that depicted these divisions.

Mr. Pellegrino addressed the water issues. "The degrading of the aquifer has made the springs less viable...the pressure [when adequate] pushes the water and allows it to push forth and come out." He has found, in his research, a reference by Stearns which suggested that Waikapū Stream flowed into Kahului Bay at some time. "There is a break in Kahului Bay, a channel through the reef where the coral doesn't grow because of the fresh water, and that is why they could build the wharf and the pier, because they found that channel." In interviews with Kupuna, he found other references to this. Uncle Louis Silva suggested that the low point behind Kapi'olani Community Center Park (KCC) may represent a remnant of the swale through which Waikapū Stream may have flowed. The remnant swale is still visible, although this would have been prior to arrival of Hawaiians in the archipelago.

Dr. Fisher points out that in the area now known as Kanahā Beach Park, there was a traditional Hawaiian village known as Ka'a, named for the Point in that area. Dr. Fisher believes that Hōkūāni Holt has said that she remembers that area from the time before the last families were pushed out. There were still traditional Hawaiian fishing villages in the area up until the 1950s. He believes Ms. Holt's grandparents might have lived there.

In terms of burials, mauka of the location of Ka'a, the traditional village, and makai of the actual runway, there are burials in that area and it is designated as a burial area. Fairly recently, human skeletal remains were encountered in the vicinity of the Young Bros. when the area was undergoing some improvements.

Cultural practices in the area would have included fishing and gathering, in particular limu gathering. Prior to the arrival of humans, the floral composition would have been made up of Ioulu palms [*Pritchardia hillebrandii*]. Traditional cultural practices in the area would have included fishing and gathering, in particular limu gathering.

**Concerns:** No concerns were expressed. Fishing and gathering, in particular the gathering of limu were previously conducted traditional cultural practices identified in the vicinity of the DOT Kahului Baseyard.

**Note:** Dr. Fern Duvall and Mr. Robert Hill were contacted by SCS during the consultation process for this report. The reader is referred to the Written Responses section of this document. Dr. Fisher's signed information release form, which authorizes SCS to include his interview summary in this report, is presented in Appendix D.

### **INTERVIEWS from the Kirkendall and Cleghorn (2011) cultural assessment study for Kanahā Pond**

As stated elsewhere in this document, SCS received permission to include two interviews which were previously conducted by Dr. Melissa Kirkendall in the cultural assessment study for Kanahā Pond (Kirkendall and Cleghorn 2011). Mr. Pellegrino thoughtfully suggested SCS include his interview summary and generously provided SCS with an electronic copy of the Kirkendall and Cleghorn (2011) report, in an email to SCS dated October 28, 2020. Kumu Holt graciously granted permission for SCS to include her interview summary in an email to SCS dated January 12, 2021. Permission was also sought from Dr. Paul Cleghorn to include these interviews in the current CIA, which he granted in an email dated January 13, 2021. These interviews are presented below.

The marshlands were once very vast, extending inland as far as Wakea and Pu'unēnē intersection, and evidence of this occurred with the last big tidal wave. Mr. Pellegrino's mother remembers it washing far inland; indicative of the extensive lowlands which previously were marsh.

Reestablishing the springs, and former water sources which fed Kanahā and Mauoni is crucial to the restoration process. Mr. Pellegrino views the springs or pūna as representative of the umbilical (piko) connection, through the placenta. The placenta acts as a pool of nutrients, and source of sustenance for the keiki. So too the pūnāwai operates as a pool of nutrients and sustenance in the water. Everything that grows and lives within the ponds and marshlands owes its life to this connection with the pūnāwai. "The pond is not like a river. The ponds are a place with bird life, human life, cultivated crops, fish, and Kihawahine. These were her home, everything that was needed was there, and this is how I interpret the pūnāwai, the spiritual connection. It is also a place where she [Kihawahine] can get what she needs. The ponds and marshland are a fully provisional source that represents life. Food fish, food for fish, trees, makaloa; it is truly the breadbasket of so many different things.

Regarding the plants, and flora that populated the marshlands and ponds, Mr. Pellegrino stated "It is not looking at a fishpond or the birds, but what the makaloa did, it is how they were utilized and what you were able to do. When I look at any ancient culture, such simple things...but because of makaloa, you could weave, or clothe, or feed. Makaloa is associated with the ali'i; moena makaloa, pāwehe or the style and designs, where our kūpuna dyed the makaloa to make these designs. Preparation is difficult, not like lau hala. Makaloa is an art; to be able to weave that. These are very fine strands, and when you look at the Kamehameha moena makaloa at Bishop Museum, it is so intricate and soft. I can see why one would prefer moena makaloa over moena lau hala."

Mr. Pellegrino also discussed ahu'awa and the significance of the plant for straining the 'awa. It was used for cordage, and makes very strong cordage, perhaps enough to use for lashing houses. The plant also served medicinal purposes.

"So you associated the pond with things provided." Mr. Pellegrino acknowledges that parts of the pond were probably kapu based on the numerous fish, moi, stream āholehole, awa, a'amama; moi is selected by chiefs. "Ali'i only, so you find moi running in the fishponds."

Presuming the ponds can be restored into some semblance of what they once were, and developing access, Mr. Pellegrino had this to contribute when he said that this provided a good feeling. "When things are done in a pono way, a manner that brings so much to the table, and leading experts with knowledge, community based. When people know the significance, people know better, and I commend the management right now.

"What our kūpuna saw was a different landscape. We cannot take out the industrial area, the disturbance to the natural ecosystem, but the ambiance...we can make do with what you have, and this project can be done in a fashion where it is so much what it could have looked like you can block out the external impacts."

Mr. Pellegrino also acknowledged that the historic bunkers, if to remain, will not disturb the main area of the pond. He urged that during restorative work, consultants who are experts in their field should be participants; experts in makaloa, kalo, and the project should be community based. Even during the planning stages of the restoration, traditional Hawaiian practitioners in fishing, kalo farming, makaloa collection and weaving should be involved.

The pond represents Hawaiian values into the bigger picture that is Kanahā. When asked about traditional values, and what he sees the pond representing in terms of these values, Mr. Pellegrino indicated that right way he thought "mālama 'āina, and how our kūpuna managed resources. They were very creative without destroying, managing in a way that could sustain themselves and the population, and be a natural habitat. Kapu; we have seasons when certain resources are closed. It is good that we somewhat follow the framework of that. But when it comes to Kanahā and restoration, the springs are very important. How you care for that...springs will allow invasives [plants], so you need values in taking care, during all the different stages after it is restored. Management needs to be from a cultural standpoint, and significance; how to share. An educational component is very important."

Mr. Pellegrino further believes that the key to management is the community, because it is through community that a sense of ownership results. "Sustainability, cultural preservation, understanding springs, it is great to see that some of these [springs] still exist."

#### **Hōkūlani Holt**

Ms. Holt's interview is relative to the current CIA for the same reasons credited to Mr. Pellegrino's. In addition, Ms. Holt established ties to the area through her maternal grandparents.

Hōkūlani Holt, renowned *Kumu Hula*, was born and raised on Maui and O'ahu. She was raised in Waiehu by her grandparents from the time she was born until she was five years old. She then went to live with her parents on O'ahu, and attended Kamehameha Schools, spending all vacations and holidays (summer and winter break) with her grandparents on Maui. She moved back permanently in 1976 to raise her own family. Her grandmother is Ida Pakulani Ka'āhue Kat'ānui, and the family has always been on Maui. It is that side of the family that provides her connection to the Kanahā area. Her grandfather, Henry Keao Long, was from

Kaua'i, and moved here at 19 years of age, married Ms. Holt's grandmother, and never left, other than to visit his Kāua'i family. They had 15 children, 13 of whom lived to adulthood, and five of whom are still living today. Ms. Holt was raised on Kaehu Bay, between the Waiehu and 'Īao Streams.

The interview with Ms. Holt took place on Tuesday May 18, 2010 at the Maui Arts and Cultural Center where Ms. Holt works.

Ms. Holt documented her association with the pond through her grandfather who worked for the Territory as the prison warden. When he retired and moved to the beach house in Waiehu, his connection to this area clearly extended to the end of the present day Kanahā Beach Park, where her grandfather used to fish.

She was told that her great-grandfather was a caretaker for the pond. She commented "I don't know what that particularly means, but my grandmother always commented about the pond, 'it never used to be like that, look like that before, it was always clean, we always took care that the water was clean'."

Ms. Holt's oldest auntie, who is 92 years old, often spoke about going to the pond with her (Ms. Holt) grandparents. It is not clear why they went to the pond, other than fishing along the shoreline, but the auntie spoke about seeing the *mo'owahine* that lived there. Her Auntie's description of the *mo'owahine* was that the *mo'owahine* was sitting on a rock, and combing her long red hair. Auntie did not notice what the lower part of the body was, but the upper part was female. There are many stories about the *mo'owahine*; some say the lower part of the body was "mermaidish", or reptilian/fish, with the upper half sometimes human. Ms. Holt stated, "I never asked how long or how often she saw her."

Other *mo'olelo* or stories that Ms. Holt shared indicated there is a small reference in a story, Hoapi'e, in which he and his sister come to this area and he is still a young boy and he comes to the area and builds a *heiau* to his gods or Kāne and Kānaloa. "That story tells me this is Kāneloa water; brackish that has both fresh and salt. When you have a story about *heiau* near with water, Kāneloa and Kāne, you think of fresh water springs as well. It is a very short part in the beginning of the story; the rest of the story he travels to other islands. Those kinds of story references, and the family remembrances leads me to believe, as well as the historical references, that the importance of this place was much greater than we see it today. Of course we know that Mauoni was filled in to build Kahului so it is gone, but Kanahā because of the drainage and the lack of free flowing water, has become what it is today especially in the summer. I would love to see the pond restored and beautiful again."

In looking at the old map by W.D. Alexander, the wall dividing the two ponds suggested to Ms. Holt that Mauoni is on the south side of the wall, while Kanahā was the named pond on the north. Mauoni has been almost entirely filled in during the construction of the highway and the adjacent industrial area. The necessary drainage channels confirm the presence of the marshland.

Ms. Holt's stepfather was an ornithologist who also taught her and her siblings the importance of the bird life in the area. They were always aware of the bird life that surrounds the pond and makes the pond their life. "The *ae'o* which is evident there today, is an important part of what ponds serve. It also serves as a part of the natural progression of all life around a water place like this; the coming of the birds and the plants. If we could see the *makaloa* expand, and become really established and have a bigger presence it would be such a wonderful thing for cultural practitioners who want to once again regain the knowledge of *makaloa* use which cannot be done without the resource, and the resource cannot exist without the pond, without the water. I imagine there would have been a lot of *makaloa*, that kind of place that would have been conducive to *makaloa* growth."

When asked if this should be incorporated into the restoration, Ms. Holt stressed that yes, restoration of the habitat for *makaloa* and other native plants is an important aspect. She further indicated "Often times when I talk about places, it has to do with part of the life of Hawaiian culture comes from the things that the land can produce. When the land no longer can produce certain materials, the cultural practice dies, because the resource is not there. Allowing the natural free flowing of the rivers and *pūnāwai* is important. I grew up learning how to collect for personal use, keep the rivers clean and I can no longer teach my children and grandchildren because the river no longer flows. So the making of *makaloa* on Maui stops because there is no *makaloa*. Now we have three generations that have passed that cannot make *makaloa*; we have to reclaim it from other people and use our own resources, to have the resources to reclaim our cultural practices is tremendously important."

Regarding accessibility, Ms. Holt talked about how during her grandparents' time, and the time of her great grandparents, the population was much smaller. Knowledge was specific; specific people engaged in specific activities, so the knowledge was maintained personally. She related how many previously available resources such as 'opihī and *manaua* limu are now collected by a few, and sold. While this practice allows people who do not have access to the resources to obtain these goods, it also leads to over-exploitation of the resource. "If the *makaloa* is encouraged to return to the Kanahā area in any great number for cultural practitioners, I think that should occur. I am still ambivalent about the 'for sale' part. I am still ambivalent since it was the work of the 'ohana [to collect] for their need. So the use of the resource comes with a responsibility that not everyone has been taught."

“If the *makaloa* is allowed to regenerate, access is extremely important for personal use, knowledge, or research or reclaim a cultural behavior is all important and I also often encourage people if you are going to take, you participate in making sure the resource stays alive, and management needs to understand there is a reciprocal expectation. Not a problem to come and take, but most cultural practitioners understand the taking care of the resources.”

Ms. Holt discussed other resources as well, that might have been available. She believes the fish cultivation (fishpond) aspect of Kanahā was an important component resource, and that rejuvenation of the water, is crucial to restore the resource and keep the pond intact. “What you are growing is the *limu*, the pond is a place in which the *limu* grows well, with proper nutrients. It is really a place to grow the right kind of food for the fish.”

Fresh water is needed, and restoration of the springs, or *pūnāwāi*, that need to flow again. She pointed to one spring on the labeled aerial photo called Waikiki, “this name of course, Waikīkī; *kīkī* means to spout.”

A pond called Makaloa also appears on the labeled aerial photo. Ms. Holt discussed how traditionally the fishpond might have been the primary use; then other ponds in the surrounding area would have served as other resource areas. Makaloa pond may have been so designated because of *makaloa* that grew there. She also wondered if perhaps other ponds, specifically those underlain with clay, might have served as salt collecting areas. “The clay is important for the salt, so I wonder if the water coming up is a way to collect the salt. When the tide comes up, that might be a way that the salt was collected, because the clay holds it and keeps too much fresh water from coming in, then the sea water evaporates [leaving the salt].” She likened it to areas on Kaua’i and in Keālia Pond where certain areas have been utilized for salt collection. “Some folks may be interested in the restoration of salt collection.”

*Ahu’awa* is another plant resource described by Ms. Holt. She recalls growing up at Kaehuehu Bay, her grandmother was a gatherer of ocean resources. When Wailuku Sugar Mill would let the bagasse come down stream, and it killed many resources. Now, like at Kanahā, there is not enough water, the channelization and diversion of water for agriculture ended the flow of water. But the marshy lands are always a good place to grow *ahu’awa*, the plant used for straining *’awa*. It is important, says Ms. Holt, for cultural practitioners. “The springs in that area are important, just like at Kaehuehu, only at Kanahā the marshlands were more defined. The marsh is so extensive, it still wants to be wet,” she commented in reference to the drainage channels that divert water from areas adjacent to the pond.

A crucial question in the restoration plans is how to provide access for the practitioners. As Ms. Holt indicated, there is a need for traditional practitioners “who have the knowledge or who want to regain that knowledge, because a lot of that is being regained, they are researching to regain the knowledge again.”

Ms. Holt hopes that the *hala* will not be cut down during in restorative efforts. “We use the *hala*. We collect up here and down here” she said pointing to the areas on the map that still have scant remaining *hala* groves.

Ms. Holt concluded by talking about the importance of multi-generational families such as the one in which she grew up, and how this offers children an opportunity to see and experience things they might not if they were in a nuclear family environment. “That’s how it’s supposed to be! It gives a bigger picture. Parents are worried about the today; that is what life is. Grandparents have lived today, and have lived yesterday, and now they tend to look a little bit more into the future.”

“I am so glad there are plans to restore the pond. I am really happy to hear this. I just hope that it can be restored back to the beauty that has been described to me, the beauty that was this pond, where the water did not get rancid, the water ran clear and every living thing that needed to get its life source from the pond such as this was allowed to flourish.”

In Kumu Holt’s January 12, 2021 e-mail to SCS she indicated there were some misspelled names in the Kirkendall and Cleghorn (2011) interview that she would like corrected. In her January 13, 2021 e-mail, Kumu Holt stated:

We use the name Kaehu instead of Kātehu. My grandfather’s name was Henry Keao Long. My grandmother’s name is Ida Pakulani Ka’ahue Kai’anui. It is Kāneloa water for the mixture of Kāne and Kamaloa water.

**Note:** The requested edits and spelling corrections have been made in Kumu Holt’s interview presented above.

#### **IDENTIFIED CULTURAL PRACTICES**

The purpose of a CIA is to identify cultural resources and/or previously or on-going cultural activities within a project area, or its surrounding environs, and then assessing the potential for impacts the proposed action may have on them. As stated elsewhere in this report, the Hawaii State Office of Environmental Quality Control (OEQC 1997:11), states the geographical extent of the CIA study area should be greater than the area over which the proposed project extends to ensure that cultural practices that occur outside of the project area, but which may still be affected, are included in the assessment. Thus, for the purpose of this CIA study, the entire ahupua'a is the project area.

The current consultation identified the DOT Kahului Baseyard as located within what once was an extensive wetland ecosystem containing a variety of marine, flora, and avian resources traditionally used by native Hawaiians. This area is also associated with traditional legends and battles.

More recently, the area was associated with World War II. According to Slatby and Mitchell (2003:10), a "cultural landscape," as currently used by the U.S. National Park Service, is defined as:

a geographic area, including both cultural and natural resources and the wildlife or domestic animals therein, associated with a historic event, activity, or person or exhibiting other cultural or aesthetic values. (Cultural Resource Management Guidelines, NPS-28).

No on-going traditional cultural practices or cultural resources were identified in the DOT Kahului Baseyard. However, several cultural contacts mentioned the possibility that traditional Native Hawaiian burials may be present in the subsurface deposits. In addition, based on its proximity to the NASK, there is also the potential that remnants, in the form of cultural materials and deposits, associated with World War II activities may present within the subsurface deposits of the DOT Kahului Baseyard.

#### **CULTURAL IMPACT ASSESSMENT SUMMARY**

This Cultural Impact Assessment was prepared in accordance with the Guidelines for Assessing Cultural Impacts (OEQC 1997:11-13). The Guidelines recommend that a CIA consult relevant individuals/organizations, conduct ethnographic interviews and archival and historical research, identify cultural resources and practices located within the project area or in proximity, and finally, assess the impact of the proposed action and its mitigation measures on the cultural practices or resources identified.

Letters of inquiry were sent to thirty-six (36) individuals and organizations that may have knowledge or information pertaining to the collection of cultural resources and/or practices currently, or previously, conducted in the vicinity of the proposed project area. The consultation process resulted in SCS receiving fourteen (14) written responses via e-mail, conducting one telephone interview, and receiving permission to include two previously conducted interviews from a near-by cultural assessment study (Kirkendall and Cleghorn 2011).

The information obtained during the consultation process reflects that the proposed project area is located in an environment rich with traditional cultural resources and customary practices conducted during the pre-Contact and early Historic Period, and possibly during the World War II Era, as well.

Based on historical research and the results of the consultation process, it is reasonable to conclude that there is potential for traditional pre-Contact native Hawaiian burials and cultural deposits and/or cultural materials associated with the World War II Era to be present within the subsurface deposits of the DOT Kahului Baseyard.

#### **CONCLUSION AND RECOMMENDATIONS**

The findings of the current CIA did not identify on-going traditional cultural practices or cultural resources in the DOT Kahului Baseyard. However, the consultation process did identify the potential for valued cultural, historical, or natural resources (i.e., the remnants of previously conducted cultural activities, in the form of traditional native Hawaiian burials and cultural materials associated with World War II Era activities) to be present in the subsurface deposits of the DOT Kahului Baseyard project area. This determination has been substantiated by the culture-historical background, the summarized results of prior archaeological studies in the project area and in the neighboring areas, and primarily in the concerns expressed by the cultural informants during the consultation process of the current CIA. As the findings of this CIA suggest the potential for cultural materials to be present in the subsurface deposits of the DOT Kahului Baseyard, consultation with the State Historic Preservation Division is recommended, prior to the commencement of any ground altering activities associated with the DOT Kahului Baseyard improvements project.



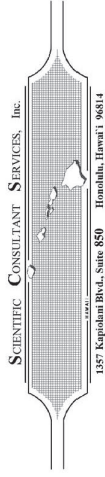
## REFERENCES

- Armstrong, R. W.  
1983 "Climate." In *Atlas of Hawaii*. The University Press of Hawaii, Honolulu.
- Bartholomew, Gail and Bren Bailey  
1994 *Maui Remembers: A Local History*. Mutual Publishing, Honolulu.
- Bassford, Ian and Michael Dega  
2012 *An Archaeological Inventory Survey of Approximately 41-Acres for the Consolidated Rental Car Facility and Associated Improvements at the Kahului Airport, Kahului, Wailuku Ahupua'a, Wailuku District, Maui, Hawaii* [TMK: (2) 3-8-001:123, 239 and 3-8-079:021]. Scientific Consultant Services, Inc., Honolulu.
- Beckwith, Martha  
1940 Hawaiian Mythology. The University of Hawaii. Honolulu.
- Chinen, Jon  
1961 *Original Land Titles in Hawaii*. Copyright 1961 Jon Jitsuzo Chinen. Library of Congress Catalogue Card No. 61-17314.
- Cheever, Rev. H.T.  
1851 *Life in the Sandwich Islands: or, The Heart of the Pacific, As it Was and Is*. A.S. Barnes (New York) and H.W. Darby (Cincinnati).
- Clark, John  
1980 *The Beaches of Maui County*. A Kolowalu Book, University Press of Hawaii: Honolulu.
- Creed, V. S.  
1993 *Settlement Pattern for Waikapū, Wailuku District, Maui, Hawaii*. Volume 1. Cultural Surveys Hawaii. Kailua, Hawaii.
- Conde, Jesse C.  
1993 *Fowler Locomotives in the Kingdom of Hawaii*. Narrow Gauge Railway Society, Peterborough.
- Conde, Jesse C. and Gerald M. Best  
1973 *Sugar Trains Narrow Gauge Rails of Hawaii*. Glenwood Publishers, Felton, California.
- Connolly, R.D. III  
1974 *Phase I Archaeological Survey of 'Iao Valley Flood-Control-Project Area, Maui*. MS. Report 100374, B.P. Bishop Museum, Honolulu.
- Cordy, R. H.  
1981 *A Study of Prehistoric Social Change: The Development of Complex Societies in the Hawaiian Islands*. Academic Press, New York.
- 1996 *Settlement Patterns of Wailuku Ahupua'a from Mahele Records*. Paper Presented at the 9th Annual Conference for the Society of Hawaiian Archaeology in Wailea, Maui.
- Dagher C., and M.F. Dega  
2016 Archaeological Assessment for the Maui Electric Power Plant Subdivision Project (Lots 1-A, 1-B, and 1-C) Kahului Ahupua'a, Wailuku District, Island of Maui, Hawaii [TMK: (2) 3-7-011:017, 019 por. and 023]. Scientific Consultant Services, Inc., Honolulu.
- Daws, G.  
1962 *Shoal of Time: History of the Hawaiian Islands*. University of Hawaii Press, Honolulu.
- Day, A. Grove  
1984 *History Makers of Hawaii*. Mutual Publishing of Honolulu, Honolulu.
- Dorrance, William H. and Francis Morgan  
2000 *Sugar Islands*. Mutual Publishing. Honolulu.
- Folk, William and Hallett H. Hammatt  
1991 *Archaeological and Subsurface Survey Testing for the Kahului Airport, Kahului, Maui*. Cultural Surveys Hawaii, Kailua.
- Footo, D.E., E.L. Hill, S. Nakamura, and F. Stephens  
1972 *Soil Survey of the Islands of Kaita'i, O'ahu, Maui, Molokai, and Lanai, State of Hawaii*. USDA Soil Conservation Service, GPO, Washington, D.C.
- Formander, Abraham  
1919-1920 *Hawaiian Antiquities and Folklore*. Bishop Museum Press, Honolulu.
- 1969 *An Account of the Polynesian Race, Its Origins and Migrations*. Vol. 1 to 3. Charles E. Tuttle Co. Inc.: Jutland.
- Fredericksen, Erik  
2003 *An Archaeological Assessment of Kanaha Beach Park, AC. 75 Acre Coastal Parcel of Land in Wailuku Ahupua'a, Wailuku District, Island of Maui* (TMK: 3-8-01: 119 and Por. 19). Xamanek Researches, Pukalani. On file at the State Historic Preservation Division, Kapolei.
- Fredricksen, D.L., and W.M. Fredricksen  
1988 *An Archaeological Inventory Survey: Preliminary Report on a Parcel of Land (232 Acres) in Kahului, Maui, Hawaii*. Xamanek Researches, Pukalani.

- Frey, Jennifer and Erik M. Fredericksen  
 2014 *An Archaeological Monitoring Report for a 38.19-Acre Portion of Land in Waiuluku Ahupua'a, Waiuluku District, Island of Maui (TMK: (2) 3-8-079; 13)*. Xamanek Researches, Pukalani.
- Giambelluca, T.W., Q. Chen, A.G. Frazier, J.P. Price, Y.-L. Chen, P.-S. Chu, J.K. Eischeid, and D.M. Delporte  
 2013 Online Rainfall Atlas of Hawai'i. *Bull. Amer. Meteor. Soc.* 94, 313-316, doi: 10.1175/BAMS-D-11-00228.1. <http://rainfall.geography.hawaii.edu/howtosite.html>. Accessed January 2021.
- Giambelluca, T.W., X. Shuai, M.L. Barnes, R.J. Alliss, R.J. Longman, T. Miura, Q. Chen, A.G. Frazier, R.G. Mudd, L. Cuo, and A.D. Businger.  
 2014 Evapotranspiration of Hawai'i: Final report submitted to the U.S. Army Corps of Engineers—Honolulu District, and the Commission on Water Resource Management, State of Hawai'i. <http://climate.geography.hawaii.edu/interactivemap.html>. Accessed January 2021.
- Handy, E.S.C.  
 1940 *The Hawaiian Planter*. Volume 1. Bernice P. Bishop Museum Bulletin, 161. Bernice Pauahi Bishop Museum, Honolulu.
- Handy, E.S.C., and E.G. Handy  
 1972 *Native Planters of Old Hawai'i*. Bishop Museum Bulletin 233. Bernice Pauahi Bishop Museum, Honolulu.
- †Ti, John Papa  
 1869 *Fragments of Hawaiian History*. Mary Kawena Pukui, translated; Dorothy Barrère, edited. Bishop Museum Press, Honolulu.
- Kamakau, Samuel M.  
 1987 *Ka Po'e Kahiko, The People of Old*. Bishop Museum Special Publication 51. Honolulu.
- 1992 *Ruling Chiefs of Hawaii: Revised Edition*. Kamehameha Schools Press, Honolulu
- Kame'elehiwa, Lilikalā  
 1992 *Native Land and Foreign Desires: Pehea La E Pono Ai?* Bishop Museum Press. Honolulu.
- Kelly, Marion  
 1983 *Na Māla o Kona: Gardens of Kona*. Report 83-2. Department of Anthropology. Bishop Museum. Bishop Museum Press. Honolulu.
- 1998 *A Gunboat Diplomacy: Sandalwood Lust and National Debt*. In *Ka Wai Ola o OHA*, Vol. 15, No. 4, April 1998.
- Kirch, P.  
 1985 *Feathered Gods and Fishhooks: An Introduction to Hawaiian Archaeology and Prehistory*. University of Hawaii Press, Honolulu.
- 2011 "When Did the Polynesians Settle Hawai'i? A Review of 150 Years of Scholarly Inquiry and a Tentative Answer," in *Hawaiian Archaeology*. 12 (2011) pp. 3-26.
- Kirch, P. V. and Sahlins, M.  
 1992 *Anahulu*. Vol. 1 and 2. University of Chicago Press. Chicago.
- Kirkendall, Melissa K. and Paul Cleghorn  
 2011 *Cultural Impact Study for the Ecosystem Restoration Study and Environmental Assessment Preparation Kanahā Pond Wildlife Sanctuary Maui, Hawai'i* (Contract No. W912A-04-D-0019), Pacific Legacy, Inc., Kailua.
- Kuykendall, R.S.  
 1938 *The Hawaiian Kingdom*. Vol. 1. University of Hawai'i Press. Honolulu.
- Malo, David  
 1903 *Hawaiian Antiquities* (Mooolelo Hawai'i). Hawaiian Gazette Co., Ltd., Honolulu.
- Maui County Real Property Assessment Division Database  
 2019 <http://www.gpublic.net/hi/maui/search.html>. Accessed December 2019.
- Morawski, Lauren and Michael Dega  
 2006 *An Archaeological Assessment of Approximately 4.23 Acres, Areas "A" and "C" Phase 2 at Kailua Airport, Kāhului, Waiuluku Ahupua'a, Waiuluku District, Island of Maui, Hawai'i [TMK 3-8-001:019]*. Scientific Consultant Services, Inc., Honolulu.
- Lucas, Paul F. Nahoa  
 1995 *A Dictionary of Hawaiian Legal Land-terms*. Native Hawaiian Legal Corporation. University of Hawai'i Committee for the Preservation and Study of Hawaiian Language, Art and Culture. University of Hawai'i Press, Honolulu.
- Lyons, C.J.  
 1875 *A Land Matters in Hawaii. The Islander*, Vol. 1, Honolulu.
- National Cooperative Soil Survey.  
 2019 Web Soil Survey. <http://websoilsurvey.sc.egov.usda.gov>. Accessed October 2019.
- Office of Environmental Quality Control  
 1997 *Guide to the Implementation and Practice of the Hawaii Environmental Policy Act*. State of Hawai'i, Honolulu.
- Office of Hawaiian Affairs  
 2020 *Ka Wai Ola*. September 2020, Vol. 37 No. 9.

- 2020 Kipuka Online Database (<http://kipukadatabase.com/kipuka>). Accessed December 2020.
- Pantaleo, Jeffery  
2007 *Archaeological Assessment Report of the E Paepae Ka Puko'a Subdivision (Lots 214- 21G), Spreckelsville, Wailuku Ahupua'a, Wailuku District, Island of Maui TMK 3-8-001:por. 003*. Archaeological Services Hawaii, LLC, Wailuku.
- Parker, Patricia L., and Thomas F. King  
1998 *Guidelines for Evaluating and Documenting Traditional Cultural Properties*. National Register Bulletin 38. Washington, D.C.: National Park Service.
- Peralta Erika and Michael F. Dega  
2020 *A Literature Review and Field Inspection for the Department of Transportation (DOT) Kahului Baseyard Improvements Project in Kahului, Wailuku Ahupua'a, Wailuku District, Island of Maui, Hawai'i [TMK: (2) 3-8-079:018 por.]*. Scientific Consultant Services, Inc., Honolulu.
- Perzinski, Dave and Michael F. Dega  
2014 *An Archaeological Monitoring Report for the Kahului Airport Building Relocation, Kahului, Wailuku Ahupua'a, Wailuku District, Island of Maui, Hawai'i [TMK: (2) 3-8-001:239 and (2) 3-8-001:019 por.]*. Scientific Consultant Services, Inc., Honolulu.
- Pukui, Mary Kawena and Samuel Elbert  
1986 *Hawaiian Dictionary*. University of Hawaii Press, Honolulu.
- Pukui, Mary Kawena, Samuel Elbert, Esther Mookini  
1974 *Place Names of Hawaii*. University of Hawai'i Press, Honolulu.
- Shefcheck, Donna and Michael F. Dega  
2008 *Archaeological Monitoring Report for Proposed Runway Safety and Related Improvements (RSA) at Kahului Airport, Wailuku Ahupua'a, Wailuku District, Island of Maui, Hawai'i [TMK 3-8-001:019]*. Scientific Consultant Services, Inc., Honolulu.
- Slatby, Barbara and Nora Mitchell  
2003 *A Handbook for Managers of Cultural Landscapes with Natural Resource Values*. Conservation and Stewardship Publication No. 5. Woodstock, Vermont.
- State of Hawaii Office of Environmental Quality Control  
1997 *Guide to the Implementation and Practice of the Hawaii Environmental Policy Act, 2012 Edition*. State of Hawaii, Office of Environmental Quality Control, Honolulu. (<http://www.hawaii.gov/health/environmental/oeqc/index.html>).
- Stearns, Harold T.  
1966 *Geology of the State of Hawaii*. Pacific Book Publishers, Palo Alto, California.
- Sterling, Elspeth P.  
1998 *Sites of Maui*. Bishop Museum Press, Honolulu.
- Stokes, J.F.G.  
1909-1916 Maui Heiau. Manuscript on file at the Bernice Pauahi Bishop Museum, Honolulu.
- Thrum, Thomas G.  
1909 Heiau and Heiau Sites throughout the Hawaiian Islands. *Hawaiian Almanac and Annual for 1909*: 36-48.
- 1917 Maui Heiaus and Heiau Sites Revisited. *Hawaiian Almanac and Annual for 1917*: 52-62.
- Toenjes, James H., William H. Folk, William, Hallett Hammatt  
1991 *Archaeological Testing of subsurface deposits for the proposed Approach "Clear Zone" North End of Runway 2-20 Kahului Airport, Kahului, Maui*. Cultural Surveys Hawaii, Kailua
- Tomonari-Tuggle, M.J. and David J. Welch  
1995 *The Archaeology of Kahului Airport*. International Archaeological Research Institute, Inc. Honolulu.
- Tomonori-Tuggle, M.J., David J. Welch and Ann Yoklavich  
1997 *Architecture and Archaeology at Naval Air Station Kahului Airport (NASK4), Island of Maui*. International Archaeological Research Institute, Inc. Honolulu and Spencer Mason Architects, Honolulu.
- United States Department of Agriculture Natural Resources Conservation Service Database  
2020 <https://www.nrcs.usda.gov/wps/portal/nrcs/soilsurvey/soils/survey/state>. Accessed December 2020.
- Van Dyke, Jon  
2008 *Who Owns the Crown Lands of Hawai'i?* University of Hawai'i Press. Honolulu.
- Waihona 'Aima Database  
2020 <https://www.waihona.com>. Accessed December 2020.
- Walker, Winslow W.  
1931 *Archaeology of Maui*. Department of Anthropology, Bernice Pauahi Bishop Museum, Honolulu.
- Yent, Martha  
1983 *Halekii-Pihana State Monument Phase I: Archaeological Testing and the Development of Interpretive Themes*. Manuscript on file State Historic Preservation Division, Honolulu.

**APPENDIX A: EXAMPLE LETTER OF INQUIRY**



Aloha kāua,

Scientific Consultant Services, Inc. (SCS) is seeking information on cultural resources and traditional, previously or on-going, cultural activities within or near the proposed Department of Transportation (DOT) Kahului Baseyard Improvement Project in Kahului, Wailuku Ahupua'a, Wailuku District, Island of Maui, Hawaii (TMK: (2) 3-8-079-018 por.; Figures 1 through 3).

The Department of Transportation proposes to make various improvements at the Kahului Baseyard facility, which was constructed approximately 40 years ago. The project site encompasses a 5.2-acre portion of an approximately 22-acre parcel. The majority of the site is paved and has several buildings utilized for agency operations including a district office, maintenance, industrial repair, and industrial storage facilities. Some components of the facility have reached the end of their useful life. Proposed improvements include the replacement of a wash rack and increasing the volume and operational capacity of the existing fuel station. New fuel tanks will be placed on relatively the same footprint as the originals, with secondary containment systems in place to provide protection in the case of any fuel spills. Photovoltaic systems may be installed on all existing buildings subject to the availability of funding.

The purpose of this Cultural Impact Assessment (CIA) is to identify and understand the importance of any traditional Hawaiian and/or historic cultural resources or traditional cultural practices associated with the project area and the surrounding ahupua'a. In an effort to promote responsible decision-making, the CIA will gather information about the project area and its surroundings through research and interviews with individuals that are knowledgeable about the area in order to assess potential impacts to the cultural resources, cultural practices, and beliefs identified as a result of the proposed project. We are seeking your kōkua and guidance regarding the following aspects of our study:

- General history as well as present and past land use of the project area
- Knowledge of cultural resources which may be impacted by future development of the project area (i.e. historic and archaeological sites, as well as burials)
- Knowledge of traditional gathering practices in the project area, both past and ongoing
- Cultural associations of the project area, such as legends, traditional uses and beliefs
- Referrals of kūpuna or elders and kama'āina who might be willing to share their cultural knowledge of the project area and the surrounding ahupua'a
- Due to the sensitive nature regarding iwi kūpuna or ancestral remains discovered, mana'o regarding nā iwi kūpuna will be greatly appreciated

**APPENDIX B: CIA NOTICE (K4 WAIOLA, SEPTEMBER 2020, VOL. 37 NO.9)**

- Any other cultural concerns the community has related to Hawaiian cultural practices within or in the vicinity of the project area.

The CIA is in compliance with the Hawaii Revised Statute (HRS) Chapter 343 Environmental Impact Statements Law and in accordance with the State of Hawaii Department of Health's Office of Environmental Quality Control (OEQC) *Guidelines for Assessing Cultural Impacts* as adopted by the Environmental Council, State of Hawaii on November 19, 1997 (and revised in 2012).

According to the *Guidelines for Assessing Cultural Impacts* (Office of Environmental Quality Control 2012:12):

The types of cultural practices and beliefs subject to assessment may include subsistence, commercial, residential, agricultural, access-related, recreational, and religious and spiritual customs...The types of cultural resources subject to assessment may include traditional cultural properties or other types of historic sites, both man made and natural which support such cultural beliefs...

Enclosed are maps showing the location of the proposed project area. Please contact me within 30 days at (808) 597-1182 or via e-mail ([cathy@schhawaii.com](mailto:cathy@schhawaii.com)) with any information or recommendations concerning this Cultural Impact Assessment.

Sincerely yours,



Cathleen Dagher  
Senior Archaeologist

Enclosures (3)



APPENDIX C: EXAMPLE FOLLOW-UP LETTER

HOOLAHALEHULEHU

CULTURAL IMPACT ASSESSMENT - MAHAIPOA DISTRICT, SOUTHULO DISTRICT, MAHAIPOA, HAWAII

On behalf of the project owner, Scientific Consultant Services, Inc. (SCS) is seeking information regarding the proposed project...

CULTURAL IMPACT ASSESSMENT - MAHAIPOA DISTRICT, SOUTHULO DISTRICT, MAHAIPOA, HAWAII

On behalf of the project owner, Scientific Consultant Services, Inc. (SCS) is seeking information regarding the proposed project...

CULTURAL IMPACT ASSESSMENT - MAHAIPOA DISTRICT, SOUTHULO DISTRICT, MAHAIPOA, HAWAII

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CULTURAL IMPACT ASSESSMENT - MAHAIPOA DISTRICT, SOUTHULO DISTRICT, MAHAIPOA, HAWAII

On behalf of the project owner, Scientific Consultant Services, Inc. (SCS) is seeking information regarding the proposed project...

CULTURAL IMPACT ASSESSMENT - MAHAIPOA DISTRICT, SOUTHULO DISTRICT, MAHAIPOA, HAWAII

On behalf of the project owner, Scientific Consultant Services, Inc. (SCS) is seeking information regarding the proposed project...

CULTURAL IMPACT ASSESSMENT - MAHAIPOA DISTRICT, SOUTHULO DISTRICT, MAHAIPOA, HAWAII

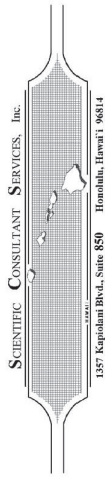
On behalf of the project owner, Scientific Consultant Services, Inc. (SCS) is seeking information regarding the proposed project...

CULTURAL IMPACT ASSESSMENT - MAHAIPOA DISTRICT, SOUTHULO DISTRICT, MAHAIPOA, HAWAII

On behalf of the project owner, Scientific Consultant Services, Inc. (SCS) is seeking information regarding the proposed project...

CULTURAL IMPACT ASSESSMENT - MAHAIPOA DISTRICT, SOUTHULO DISTRICT, MAHAIPOA, HAWAII

On behalf of the project owner, Scientific Consultant Services, Inc. (SCS) is seeking information regarding the proposed project...



Aloha kāua,

This is our follow-up letter to our August 26, 2020, letter which was in compliance with the statutory requirements of the State of Hawaii Revised Statute (HRS) Chapter 343 Environmental Impact Statements Law, and in accordance with the State of Hawaii Department of Health's Office of Environmental Quality Control (OECC) Guidelines for Assessing Cultural Impacts as adopted by the Environmental Council, State of Hawaii, on November 19, 1997.

Scientific Consultant Services, Inc. (SCS) is seeking information on cultural resources and traditional, previously or on-going, cultural activities within or near the proposed Department of Transportation (DOT) Kahului Baseyard Improvement Project in Kahului, Wailuku Ahupua'a, Wailuku District, Island of Maui, Hawaii [TMK: (2) 3-8-079-018 por.].

The Department of Transportation proposes to make various improvements at the Kahului Baseyard facility, which was constructed approximately 40 years ago. The project site encompasses a 5.2-acre portion of an approximately 22-acre parcel. The majority of the site is paved and has several buildings utilized for agency operations including a district office, maintenance, industrial repair, and industrial storage facilities. Some components of the facility have reached the end of their useful life. Proposed improvements include the replacement of a wash rack and increasing the volume and operational capacity of the existing fuel station. New fuel tanks will be placed on relatively the same footprint as the originals, with secondary containment systems in place to provide protection in the case of any fuel spills. Photovoltaic systems may be installed on all existing buildings subject to the availability of funding.

The purpose of this Cultural Impact Assessment (CIA) is to identify and understand the importance of any traditional Hawaiian and/or historic cultural resources or traditional cultural practices associated with the project area and the surrounding ahupua'a. In an effort to promote responsible decision-making, the CIA will gather information about the project area and its surroundings through research and interviews with individuals that are knowledgeable about the area in order to assess potential impacts to the cultural resources, cultural practices, and beliefs identified as a result of the proposed project. We are seeking your kōkua and guidance regarding the following aspects of our study:

- General history as well as present and past land use of the project area
- Knowledge of cultural resources which may be impacted by future development of the project area (i.e. historic and archaeological sites, as well as burials)
- Knowledge of traditional gathering practices in the project area, both past and ongoing
- Cultural associations of the project area, such as legends, traditional uses and beliefs
- Referrals of kūpuna or elders and kama āina who might be willing to share their cultural knowledge of the project area and the surrounding ahupua'a
- Due to the sensitive nature regarding iwi kūpuna or ancestral remains discovered, mana'o regarding nā iwi kūpuna will be greatly appreciated
- Any other cultural concerns the community has related to Hawaiian cultural practices within or in the vicinity of the project area.

The CIA is in compliance with the Hawaii Revised Statute (HRS) Chapter 343 Environmental Impact Statements Law and in accordance with the State of Hawaii Department of Health's Office of Environmental Quality Control (OECC) Guidelines for Assessing Cultural Impacts as adopted by the Environmental Council, State of Hawaii on November 19, 1997 (and revised in 2012).

According to the *Guidelines for Assessing Cultural Impacts* (Office of Environmental Quality Control 2012:12):

The types of cultural practices and beliefs subject to assessment may include subsistence, commercial, residential, agricultural, access-related, recreational, and religious and spiritual customs. The types of cultural resources subject to assessment may include traditional cultural properties or other types of historic sites, both man made and natural which support such cultural beliefs....

Please contact me within 30 days at (808) 597-1182 or via e-mail ([cathy@scshawaii.com](mailto:cathy@scshawaii.com)) with any information or recommendations concerning this Cultural Impact Assessment.

Sincerely yours,

Cathleen Dagher  
Senior Archaeologist

APPENDIX D: SIGNED INFORMATION RELEASE FORM

INFORMATION RELEASE FORM

I, the undersigned, personally participated in a virtual interview with Cathleen Dagher, B.A., of Scientific Consultant Services, Inc., via Zoom, on September 2, 2020.

I understand that the information I have provided to Scientific Consultant Services, Inc., shall be submitted as part of a Cultural Impact Assessment report prepared in advance of the proposed Department of Transportation (DOT) Kahului Bayside Improvement Project in Kahului, Wailuku Ahupua'a, Wailuku District, Island of Maui, Hawaii [TMK: (2) 3-8-079-018 por.]. This information will be subject to publication which will be submitted to the public for general review.

I have read the summary of the interview and the information is true and accurate to the best of my knowledge. By signing this release form, I am providing my approval for the release of the information to Scientific Consultant Services, Inc., for the purpose outlined above (i.e., making the contents of this interview available for publication to the general public).

Print Name: Scott G. Fisher  
Signature: Scott G. Fisher  
Release Dated: 1/25/2021

## **APPENDIX F**

### Consultation and Comments

(This page intentionally left blank.)



**From:** Azama, Becky N  
**Sent:** Tuesday, March 9, 2021 5:45 PM  
**To:** Claire Oshiro  
**Cc:** Namahoe, Sherylyne M  
**Subject:** RE: Storm Water Improvements at Kahului Baseyard on Maui Island

Hi Claire,  
You're welcome.  
Hope there is some useful feedback.  
Becky

**From:** Claire Oshiro  
**Sent:** Tuesday, March 9, 2021 3:34 PM  
**To:** Azama, Becky N  
**Cc:** Namahoe, Sherylyne M  
**Subject:** [EXTERNAL] RE: Storm Water Improvements at Kahului Baseyard on Maui Island

Hi Becky: We have contacted the administrators using the info you provided.

Thank you very much for your time, and we look forward to receiving the comments from Plant Industry Division staff on Maui. Hope the weather has been better today.

Thanks. --Claire

**From:** Azama, Becky N  
**Sent:** Tuesday, March 9, 2021 11:41 AM  
**To:** Claire Oshiro  
**Cc:** Namahoe, Sherylyne M; hdoa\_info  
**Subject:** RE: Storm Water Improvements at Kahului Baseyard on Maui Island

Hi Claire,  
In addition to the Plant Industry Division staff of whom you are already aware, the HDOA office on Mua Street in Kahului houses staff from other divisions. Upon your request, I've listed the three other divisions below with their respective administrators' names and contact information.

1. Administrative Services Office  
Keith Aragaki, Administrative Services Officer  
1428 S. King Street  
Honolulu, HI 96814  
[keith.laragaki@hawaii.gov](mailto:keith.laragaki@hawaii.gov)  
(808) 973-9606
2. Animal Industry Division  
Isaac Maeda, DVM, Division Administrator  
99-951 Halawa Valley Street  
Aiea, HI 96701

[isaac.m.maeda@hawaii.gov](mailto:isaac.m.maeda@hawaii.gov)  
(808) 483-7144

3. Quality Assurance Division  
Leo Obaldo, Ph.D., Division Administrator  
1851 Auiiki Street  
Honolulu, HI 96819  
[leonard.g.obaldo@hawaii.gov](mailto:leonard.g.obaldo@hawaii.gov)  
(808) 832-0700

I will compile any information received from the Plant Industry staff on Maui and forward to you.  
Any questions, please email me back.  
Thank you,  
Becky



**THE LIMTIACO CONSULTING GROUP**  
CIVIL ENGINEERING AND ENVIRONMENTAL CONSULTANTS

November 21, 2022

**SENT VIA EMAIL ONLY:** <Becky.N.Azama@hawaii.gov>  
Administrator, Becky Azama  
State of Hawaii, Department of Agriculture  
Plant Industry Division

**Subject:** Response to Pre-Assessment Consultation, Environmental Assessment for the Municipal Separate Storm Sewer System (MS4) Improvements at the Hawaii Department of Transportation - Highways Kahului Baseyard located at Kahului Airport District, Island of Maui; TMK: (2) 3-8-079:018 (por.)

Dear Administrator Azama,

Thank you for the email correspondence on March 9, 2021 and for providing contact information for the Administrative Services Office, Animal Industry Division and Quality Assurance Division. We acknowledge that the various offices and divisions of the Department of Agriculture provided no comments on the proposed project.

Thank you for your participation in the environmental review process.

Best regards,  
*The Limtiaco Consulting Group, Inc.*

*Claire Oshiro*  
Claire Oshiro  
Environmental Planner

1622 Kanaekamui Street • Honolulu, Hawaii 96817  
(808) 596-7790 • [jcd@hawaii.com](http://jcd@hawaii.com)

**From:** Azama, Becky N  
**Sent:** Thursday, April 1, 2021 4:36 PM  
**To:** Claire Oshiro  
**Cc:** Namahoe, Sheryllyne M  
**Subject:** RE: Storm Water Improvements at Kahului Baseyard on Maui Island

Hi Claire,  
I waited to give our Maui employees a chance to voice any concerns and there were none. Thank you very much for checking with us!  
Best wishes!  
Becky

**From:** Claire Oshiro  
**Sent:** Thursday, April 1, 2021 9:51 AM  
**To:** Azama, Becky N  
**Cc:** Namahoe, Sheryllyne M  
**Subject:** [EXTERNAL] RE: Storm Water Improvements at Kahului Baseyard on Maui Island

Hi Becky: At this time, it looks like no comments were sent pertaining to HDOT's project near HDOA offices on Mua Street in Kahului.

If your department needs more time, please notify me.

I apologize if the comments are in transit and not yet received. Thank you. --Claire

**Claire Oshiro**  
Direct: (808) 687-8750  
Office: (808) 596-7790

**From:** Jason Koga  
**Sent:** Tuesday, March 9, 2021 1:46 PM  
**To:** Ty Fukuroku  
Claire Oshiro  
**Cc:** Storm Water Improvements at Kahului Baseyard, TMK 3-8-079-018  
**Subject:**

**From:** Yvonne Turro  
**Sent:** Wednesday, March 10, 2021 8:37 AM  
**To:** Jason Koga  
Claire Oshiro; Ty Fukuroku  
**Cc:**  
**Subject:** RE: Storm Water Improvements at Kahului Baseyard, TMK 3-8-079-018

Ty,  
I just have a question on whether DOT-Highways currently, or plans to in the future, contribute storm water from the project area to the channel between the Marriott Courtyard Hotel and the subject project area.  
Thank you,  
Jason

  
**ALEXANDER & BALDWIN**  
PARTNERS FOR PROGRESS  
**Jason K. Koga (S)** | Manager, Land & Environmental  
**P:** (808) 872-4310 | **E:** [jkoga@abhi.com](mailto:jkoga@abhi.com)  
11 Pu'uene Avenue, Kahului, Hawaii 96732  
**NYSE: ALEX** | **W:** [alexanderbaldwin.com](http://alexanderbaldwin.com)

Alexander & Baldwin - Legal Disclaimer

This message, including any attachments, is intended for the use of the party to which it is addressed and may contain information that is privileged, confidential and exempt from disclosure. If you are not the intended recipient, any dissemination, distribution or copying of this communication is strictly prohibited. If you have received this communication in error, please contact the sender immediately by reply e-mail, and delete the original and any copies of this message. It is the sole responsibility of the recipient to ensure that this message and any attachments are virus free.

Good morning, Jason.  
Thank you for your inquiry.  
I'm responding on behalf of both Ty Fukuroku and, our environmental planner, Claire Oshiro, since your question is related to civil engineering.  
In response to your question regarding stormwater runoff from our project site discharging to the drainage channel adjacent to the Marriott Courtyard Hotel:  
Our Stormwater Improvements project area will not contribute stormwater runoff to that channel which is located just east of the Marriott Courtyard Hotel. The runoff from our project area will either be collected in onsite drywells or will be conveyed through a series of swales to Keolani Place (State Highway 380). A small, roughly 0.2-acre portion of DOT's 5-acre property does slope toward Haleakala Highway where stormwater may be conveyed to the subject drainage channel, however, that area is outside of the limits of our Stormwater Improvements project.

Please let me know if you have any follow-on questions.

Thank you,  
Yvonne

**Yvonne Turro, P.E.**  
Direct (808) 687-8738  
Office (808) 596-7790





**THE LIMTIACO CONSULTING GROUP**  
CIVIL ENGINEERING AND ENVIRONMENTAL CONSULTANTS

November 21, 2022

SENT VIA EMAIL ONLY: <jkoga@abh.com>

Mr. Jason Koga, Manager, Land and Environmental  
Alexander and Baldwin LLC

**Subject:** Response to Pre-Assessment Consultation, Environmental Assessment for the Municipal Separate Storm Sewer System (MS4) Improvements at the Hawaii Department of Transportation - Highways Kahului Baseyard located at Kahului Airport District, Island of Maui; TMK: (2) 3-8-079:018 (por.)

Dear Manager Koga,

Thank you for your correspondence on March 9, 2021. As indicated in the response on March 10, 2021 from Yvonne Turro, the project will not contribute stormwater runoff to the channel which is located just east of the Marriott Courtyard Hotel. Runoff from the project area will either be collected in onsite drywells or will be conveyed through a series of swales to Keolani Place (State Highway 380).

Thank you for your participation in the environmental review process.

Best regards,  
*The Limtiaco Consulting Group, Inc.*

*Claire Oshiro*  
Claire Oshiro  
Environmental Planner

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DAVID Y. ICE  
GOVERNOR OF HAWAII

ELIZABETH A. CHAR, M.D.  
DIRECTOR OF HEALTH

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

In reply, please refer to:  
File:

March 10, 2021

MAR 15 2021 RCVB

Mr. Ty Fukuroku  
Department of Transportation  
Highways Division – Maui District  
650 Palapala Drive  
Kahului, Hawaii 96732

Dear Mr. Fukuroku:

Thank you for your submittal requesting comments to the Pre-Assessment Consultation, Preparation of the Environmental Assessment for the Storm Water Improvements at the Hawaii DOT – Highways Kahului Baseyard in Kahului, Maui Island, Hawaii; Tax Map Key (2) 3-8-079-018, Project site in Airport District.

Project activities shall comply with the following Administrative Rules of the Department of Health, Indoor and Radiological Health Branch:

- Chapter 11-41 Lead-based Paint Activities
- Chapter 11-46 Community Noise Control
- Chapter 11-501 Asbestos Requirements
- Chapter 11-503 Fees for Asbestos Removal & Certification
- Chapter 11-504 Asbestos Abatement Certification Program

Should you have any questions, please contact me at (808) 586-4700.

Sincerely,

Thomas G. Lileikis  
Acting Program Manager  
Indoor and Radiological Health Branch

c: Claire Oshiro, The Limitaco Consulting Group



THE LIMITACO CONSULTING GROUP  
CIVIL ENGINEERING AND ENVIRONMENTAL CONSULTANTS

November 21, 2022

SENT VIA EMAIL ONLY: <thomas.lileikis@doh.hawaii.gov>  
Mr. Thomas Lileikis, Program Manager  
Department of Health  
Indoor and Radiological Health Branch

**Subject:** Response to Pre-Assessment Consultation, Environmental Assessment for the Municipal Separate Storm Sewer System (MS4) Improvements at the Hawaii Department of Transportation - Highways Kahului Baseyard located at Kahului Airport District, Island of Maui; TMK: (2) 3-8-079:018 (por.)

Dear Manager Lileikis:

Thank you for your department's comments in the letter dated March 10, 2021. We will include pertinent statements in the Environmental Assessment about the Administrative Rules of the Department of Health and will refer to the regulatory guidance as the project proceeds.

Thank you for your interest and participation in the environmental review process.

Best regards,  
The Limitaco Consulting Group, Inc.

Claire Oshiro  
Environmental Planner

1622 Kananakamui Street • Honolulu, Hawaii 96817  
(808) 596-7790 • [lclg.hawaii.com](http://lclg.hawaii.com)



**From:** Kraska, Johnathon L  
**Sent:** Tuesday, March 16, 2021 9:12 AM  
**To:** ty.h.fukuroku@hawaii.gov; Claire Oshiro  
**Cc:** PIFWO\_Admin, FW1  
**Subject:** Kahului Baseyard Improvements, 2021-TA-0216 EKRON ONLY

Good morning Ty and Claire,

I am writing to provide the Service's pre-consultation input on your project. As far as Endangered Species Act compliance goes, if there is a federal nexus, the action agency will be required to consult with us on potential effects to listed species. As far as I can tell from the project description, this would probably include listed Hawaiian seabirds (if there is a lighting component or night work), Listed Hawaiian waterbirds, The Hawaiian goose, and the Hawaiian hoary bat and Blackburn's sphinx moth (if there is a vegetation manipulation component). Please note that Critical Habitat for the Blackburn's sphinx moth is designated to the North and Northwest of your proposed project site within the Kanaha pond Wildlife Sanctuary. We typically recommend following some general avoidance and minimization measures to reduce any impacts to listed species from your project and those can be found here:

<https://www.fws.gov/pacificislands/promo.cfm?id=177175840>

Please don't hesitate to contact us at pifwo\_admin@fws.gov if you have any questions relating to this response, or if you need any other assistance.

Thank you,

Johnathon Kraska  
Endangered Species Biologist  
U.S. Fish and Wildlife Service  
Pacific Islands Fish and Wildlife Office  
300 Ala Moana Boulevard, Room 3-122  
Honolulu, Hawaii 96850  
Office: (808) 792-9427, Mobile: (808) 853-8073  
johnathon\_kraska@fws.gov



**THE LIMTIACO CONSULTING GROUP**  
CIVIL ENGINEERING AND ENVIRONMENTAL CONSULTANTS

November 21, 2022

SENT VIA EMAIL ONLY: <johnathon\_kraska@fws.gov>  
Mr. Jonathon Kraska, Endangered Species Biologist  
Department of the Interior  
Fish and Wildlife Service, Pacific Islands Fish and Wildlife Office

**Subject:** Response to Pre-Assessment Consultation, Environmental Assessment for the Municipal Separate Storm Sewer System (MS4) Improvements at the Hawaii Department of Transportation - Highways Kahului Baseyard located at Kahului Airport District, Island of Maui; TMK: (2) 3-8-079:018 (por.)

Dear Mr. Kraska:

Thank you for your department's comments in the email on March 16, 2021 (Ref. 2021-TA-0216 EKRON). We will include pertinent statements in the Environmental Assessment about Hawaiian seabirds, the Hawaiian goose, and the Hawaiian hoary bat. We will also include the information pertaining to Blackburn's sphinx moth and its critical habitat, which is located away from the project site. Most of the 5.2-acre project site is paved. The biologists noted that the caterpillar of the Blackburn's sphinx moth feeds exclusively on plants in the Family Solanaceae, and no tree tobacco or plant species classified in the Family Solanaceae were observed at the project site during their survey.

Thank you for your interest and participation in the environmental review process.

Best regards,  
*The Limtiaco Consulting Group, Inc.*

*Claire Oshiro*  
Claire Oshiro  
Environmental Planner

1622 Kamekani Street • Honolulu, Hawaii 96817  
(808) 596-7790 • [lctg.hawaii.com](http://lctg.hawaii.com)

MICHAEL P. VICTORINO  
Mayor

KARLA H. PETERS  
Director

MARY A. KIELTY  
Deputy Director



**DEPARTMENT OF PARKS AND RECREATION**

700 Hali'a Nakone Street, Unit 2, Waihuku, Hawaii 1 96793  
Main Line (808) 270-7230 / Faesimile (808) 270-7942

March 22, 2021

Ty Fukuroku, Program Manager  
Department of Transportation  
Highways Division – Maui District  
650 Palapala Drive  
Kahului, HI 96732

Dear Mr. Fukuroku:

**SUBJECT: PRE-ASSESSMENT CONSULTATION, PREPARATION OF THE ENVIRONMENTAL ASSESSMENT FOR THE STORM WATER IMPROVEMENTS AT THE HAWAII DEPARTMENT OF TRANSPORTATION – HIGHWAYS KAHULUI BASEYARD IN KAHULUI, MAUI ISLAND, HAWAII; TMK: (2) 3-8-079:018 (POR.); PROJECT SITE IN AIRPORT DISTRICT**

Thank you for the opportunity to review and comment on the subject project. The Department of Parks and Recreation has no comment at this time.

Should you have any questions, please feel free to contact me or Samuel Marvel, Chief of Planning and Development, at samuel.marvel@co.mauhi.hi.us or (808) 270-6173.

Sincerely,

KARLA H. PETERS  
Director of Parks and Recreation

c: Claire Oshiro, The Limitaco Consulting Group  
Samuel Marvel, Chief of Planning and Development

KHP:SM:cga



**THE LIMITACO CONSULTING GROUP**  
CIVIL ENGINEERING AND ENVIRONMENTAL CONSULTANTS

November 21, 2022

SENT VIA EMAIL ONLY: <Karla.Peters@co.mauhi.hi.us>  
Director Karla Peters  
County of Maui  
Department of Parks and Recreation

**Subject:** Response to Pre-Assessment Consultation, Environmental Assessment for the Municipal Separate Storm Sewer System (MS4) Improvements at the Hawaii Department of Transportation - Highways Kahului Baseyard located at Kahului Airport District, Island of Maui; TMK: (2) 3-8-079:018 (por.)

Dear Director Peters:

Thank you for your department's comments in the letter dated March 22, 2021. We acknowledge that the Department of Parks and Recreation provided no comments about the project.

Thank you for your interest and participation in the environmental review process.

Best regards,  
The Limitaco Consulting Group, Inc.

Claire Oshiro  
Environmental Planner

MICHAEL P. VICTORINO  
Mayor

MARC I. TAKAMORI  
Director

MICHAEL B. DU PONT  
Deputy Director



DEPARTMENT OF TRANSPORTATION

COUNTY OF MAUI  
200 SOUTH HIGH STREET  
WAILUKU, MAUI, HAWAII 96793  
TELEPHONE: (808) 270-7511  
FAX: (808) 270-7505



March 22, 2021

Department of Transportation  
Highways Division – Maui District  
Attn: Ty Fukuroku, Program Manager  
650 Palapala Drive  
Kahului, HI 96732  
Email: [ty.h.fukuroku@hawaii.gov](mailto:ty.h.fukuroku@hawaii.gov)

**SUBJECT:** Pre-Assessment Consultation, Preparation of the Environmental Assessment for the Storm Water Improvements at the Hawaii Department of Transportation – Highways Kahului Baseyard in Kahului, Maui Island, Hawaii; Tax Map Key (2) 3-8-079:018 (por.), Project site in Airport District

Dear Mr. Fukuroku,

Thank you for the opportunity to review and comment on this project. We have no comments to make at this time.

Please feel free to contact me should you have any questions.

Sincerely,

Marc Takamori  
Director, Transportation

cc: Claire Oshiro, Environmental Planner, The Limitiaco Consulting Group



THE LIMITIACO CONSULTING GROUP  
CIVIL ENGINEERING AND ENVIRONMENTAL CONSULTANTS

November 21, 2022

SENT VIA EMAIL ONLY: [public.transit@mauicounty.gov](mailto:public.transit@mauicounty.gov)  
Director Marc Takamori  
County of Maui  
Department of Transportation

**Subject:** Response to Pre-Assessment Consultation, Environmental Assessment for the Municipal Separate Storm Sewer System (MS4) Improvements at the Hawaii Department of Transportation - Highways Kahului Baseyard located at Kahului Airport District, Island of Maui; TMK: (2) 3-8-079:018 (por.)

Dear Director Takamori:

Thank you for your department's comments in the letter dated March 22, 2021. We acknowledge that the Department of Transportation provided no comments about the project.

Thank you for your interest and participation in the environmental review process.

Best regards,  
The Limitiaco Consulting Group, Inc.

*Claire Oshiro*  
Claire Oshiro  
Environmental Planner



**POLICE DEPARTMENT**  
COUNTY OF MAUI

MICHAEL P. VICTORINO  
MAYOR

OUR REFERENCE  
YOUR REFERENCE



TIVOLI S. FAJUMU  
CHIEF OF POLICE  
DEAN M. RICKARD  
DEPUTY CHIEF OF POLICE

March 23, 2021

轉發 29 2021 RCW

Ms. Claire Oshiro  
Environmental Planner  
The Limtiaco Consulting Group  
1622 Kananani Street  
Honolulu, Hawaii. 96817

**Re: Pre-Assessment Consultation, Preparation of the Environmental Assessment for the Storm Water Improvements at the Hawaii Department of Transportation – Highways Kahului Baseyard in Kahului, Maui Island, Hawaii; TMK (2) 3-8-079:018 (por.), Project site in Airport District**

Dear Ms. Oshiro:

This is in response to your letter dated March 5, 2021 requesting comments for the preparation of the environmental assessment for the storm water improvements at the State of Hawaii Department of Transportation – Highways Kahului Baseyard in Kahului.

In review of the submitted documents, we would like to recommend measures be taken to minimize any impacts of visibility and obstruction upon the surrounding roadway for pedestrians. We also recommend efforts be made to minimize possible dust and debris so not to inhibit those whose health and wellbeing may be affected.

Thank you for giving us the opportunity to comment on this project.

Sincerely,

  
Assistant Chief John Jakubczak  
for: TIVOLI S. FAJUMU  
Chief of Police



**THE LIMTIACO CONSULTING GROUP**  
CIVIL ENGINEERING AND ENVIRONMENTAL CONSULTANTS

November 21, 2022

SENT VIA EMAIL ONLY: <crs@mpd.net>  
Police Chief John Pelletier  
County of Maui Police Department

**Subject:** Response to Pre-Assessment Consultation, Environmental Assessment for the Municipal Separate Storm Sewer System (MS4) Improvements at the Hawaii Department of Transportation - Highways Kahului Baseyard located at Kahului Airport District, Island of Maui; TMK: (2) 3-8-079:018 (por.)

Dear Police Chief Pelletier:

Thank you for your department's comments in the letter dated March 23, 2021 from your predecessor. We acknowledge that the Maui Police Department (MPD) recommended measures to minimize any impacts of visibility and obstruction upon the surrounding roadway for pedestrians. MPD also recommended efforts to minimize possible dust and debris that may affect the health and wellbeing of people.

Thank you for your interest and participation in the environmental review process.

Best regards,  
The Limtiaco Consulting Group, Inc.



Claire Oshiro  
Environmental Planner



DAVID Y. IGE  
GOVERNOR OF HAWAII



SUZANNE B. CASE  
CHAIRPERSON  
BOARD OF WATER RESOURCES  
COMMISSION ON WATER RESOURCE  
MANAGEMENT

STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
LAND DIVISION

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

March 29, 2021

State of Hawaii  
Department of Transportation  
Highways Division – Maui District  
Attn: Mr. Ty Fukuroku, Program Manager  
650 Palapala Drive  
Kahului, Hawaii 96732

Dear Mr. Fukuroku:

SUBJECT: Pre-Assessment Consultation, Preparation of the Environmental Assessment for the Proposed **Storm Water Improvements** at the Hawaii Department of Transportation – Highways **Kahului Baseyard** located at Kahului Airport District, Island of Maui; TMK: (2) 3-8-079:018 (por.)

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

At this time, enclosed are comments from the (a) Engineering Division and (b) Land Division – Maui District on the subject matter. Should you have any questions, please feel free to contact Darlene Nakamura at (808) 587-0417 or email: [darlene.k.nakamura@hawaii.gov](mailto:darlene.k.nakamura@hawaii.gov). Thank you.

Sincerely,

*Russell Tsuji*

Russell Y. Tsuji  
Land Administrator

Enclosures  
cc: Central Files  
The Limitaco Consulting Group, Inc. (w/copies)  
Attn: Ms. Claire Oshiro, Environmental Planner (email: [claire@tlcqhawaii.com](mailto:claire@tlcqhawaii.com))



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
LAND DIVISION

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

May 11, 2021

**MEMORANDUM**

FROM:

**DLNR Agencies:**  
 Div. of Aquatic Resources ([kendall.l.tucker@hawaii.gov](mailto:kendall.l.tucker@hawaii.gov))  
 Div. of Boating & Ocean Recreation  
 Engineering Division ([DLNR.ENGR@hawaii.gov](mailto:DLNR.ENGR@hawaii.gov))  
 Div. of Forestry & Wildlife ([rubyrrosa.t.terra@hawaii.gov](mailto:rubyrrosa.t.terra@hawaii.gov))  
 Div. of State Parks  
 Commission on Water Resource Management ([DLNR.CWRM@hawaii.gov](mailto:DLNR.CWRM@hawaii.gov))  
 Office of Conservation & Coastal Lands ([sharleen.k.kuba@hawaii.gov](mailto:sharleen.k.kuba@hawaii.gov))  
 Land Division – Maui District ([daniel.ornellas@hawaii.gov](mailto:daniel.ornellas@hawaii.gov))

TO:

Russell Y. Tsuji, Land Administrator *Russell Tsuji*  
 Pre-Assessment Consultation, Preparation of the Environmental Assessment for the Proposed **Storm Water Improvements** at the Hawaii Department of Transportation – Highways **Kahului Baseyard** Kahului Airport District, Island of Maui; TMK: (2) 3-8-079:018 (por.)  
 The Limitaco Consulting Group on behalf of Hawaii Department of Transportation – Highways Division


FROM:

LOCATION:  
APPLICANT:

Transmitted for your review and comment is information on the above-referenced subject matter. Please submit any comments by **March 25, 2021**.

If no response is received by the above date, we will assume your agency has no comments. Should you have any questions about this request, please contact Darlene Nakamura at [darlene.k.nakamura@hawaii.gov](mailto:darlene.k.nakamura@hawaii.gov). Thank you.

- We have no objections.
- We have no comments.
- We have no additional comments.
- Comments are attached.

Signed:   
 Print Name: Carty S. Chang, Chief Engineer  
 Division: Engineering Division  
 Date: Mar 25, 2021

Attachments  
cc: Central Files





STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
LAND DIVISION

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

May 11, 2021

**MEMORANDUM**

TO:

**DLNR Agencies:**

- Div. of Aquatic Resources ([kendall.l.tucker@hawaii.gov](mailto:kendall.l.tucker@hawaii.gov))
- Div. of Boating & Ocean Recreation
- Engineering Division ([DLNR.ENGR@hawaii.gov](mailto:DLNR.ENGR@hawaii.gov))
- Div. of Forestry & Wildlife ([tubytrosa.t.terrago@hawaii.gov](mailto:tubytrosa.t.terrago@hawaii.gov))
- Div. of State Parks
- Commission on Water Resource Management ([DLNR.CWRM@hawaii.gov](mailto:DLNR.CWRM@hawaii.gov))
- Office of Conservation & Coastal Lands ([sharleen.k.kuba@hawaii.gov](mailto:sharleen.k.kuba@hawaii.gov))
- Land Division – Maui District ([daniel.l.omellas@hawaii.gov](mailto:daniel.l.omellas@hawaii.gov))

FROM:

Russell Y. Tsuji, Land Administrator

SUBJECT:

Pre-Assessment Consultation, Preparation of the Environmental Assessment for the Proposed Storm Water Improvements at the Hawaii Department of Transportation – Highways Kahului Baseyard  
Kahului Airport District, Island of Maui; TMK: (2) 3-8-079:018 (por.)  
The Limitaco Consulting Group on behalf of Hawaii Department of Transportation – Highways Division


LOCATION:

APPLICANT:

Transmitted for your review and comment is information on the above-referenced subject matter. Please submit any comments by **March 25, 2021**.

If no response is received by the above date, we will assume your agency has no comments. Should you have any questions about this request, please contact Darlene Nakamura at [darlene.k.nakamura@hawaii.gov](mailto:darlene.k.nakamura@hawaii.gov). Thank you.

- We have no objections.
- We have no comments.
- We have no additional comments.
- Comments are attached.

Signed:   
Print Name: Daniel Omellas  
Division: MDLO  
Date: 3/17/21

Attachments  
cc: Central Files

DEPARTMENT OF LAND AND NATURAL RESOURCES  
ENGINEERING DIVISION

LD/Russell Y. Tsuji

Ref: Pre-Assessment Consultation, Preparation of the Environmental Assessment for the Proposed Storm Water Improvements at the Hawaii Department of Transportation – Highways Kahului Baseyard  
Location: Kahului Airport District, Island of Maui  
TMK(s): (2) 3-8-079:018 (por.)  
Applicant: The Limitaco Consulting Group on behalf of Hawaii Department of Transportation – Highways Division

**COMMENTS**

The rules and regulations of the National Flood Insurance Program (NFIP), Title 44 of the Code of Federal Regulations (44CFR), are in effect when development falls within a Special Flood Hazard Area (high risk areas). State projects are required to comply with 44CFR regulations as stipulated in Section 60.12. Be advised that 44CFR reflects the minimum standards as set forth by the NFIP. Local community flood ordinances may stipulate higher standards that can be more restrictive and would take precedence over the minimum NFIP standards.

The owner of the project property and/or their representative is responsible to research the Flood Hazard Zone designation for the project. Flood Hazard Zones are designated on FEMA's Flood Insurance Rate Maps (FIRM), which can be viewed on our Flood Hazard Assessment Tool (FHAT) (<http://gis.hawaii.nfip.org/FHAT>).

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

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

**The applicant should include water demands and infrastructure required to meet project needs.** Please note that all State projects requiring water service from their local Department/Board of Water Supply system will be required to pay a resource development charge, in addition to Water Facilities Charges for transmission and daily storage.

**The applicant is required to provide water demands and calculations to the Engineering Division so it can be included in the State Water Projects Plan Update projections.**

Signed:   
CARTY S. CHANG, CHIEF ENGINEER  
Date: Mar 25, 2021



**THE LIMITACO CONSULTING GROUP**  
CIVIL ENGINEERING AND ENVIRONMENTAL CONSULTANTS

November 21, 2022

SENT VIA EMAIL ONLY: <dlhr\_land@hawaii.gov>  
Mr. Russell Y. Tsuji, Land Administrator  
Department of Land and Natural Resources  
Land Division

**Subject:** Response to Pre-Assessment Consultation, Environmental Assessment for the Municipal Separate Storm Sewer System (MS4) Improvements at the Hawaii Department of Transportation - Highways Kahului Baseyard located at Kahului Airport District, Island of Maui; TMK: (2) 3-8-079:018 (por.)

Dear Administrator Tsuji:

We appreciate your distribution of our letter to the other divisions. Our responses are below.

Land Division - Maui District (signed March 17, 2022)

We acknowledge that the Land Division - Maui District has no objections.

Engineering Division (signed March 25, 2021)

We appreciate the information that all state projects requiring water service from their local Department/Board of Water Supply System will be required to pay a resource development charge, in addition to the Water Facilities Charges for transmission and daily storage. We acknowledge that the applicant is required to provide water demands and calculations to the Engineering Division so it can be included in the State Water Project Plan Update projections.

Thank you for your interest and participation in the environmental review process.

Best regards,  
*The Limitaco Consulting Group, Inc.*

*Claire Oshiro*  
Claire Oshiro  
Environmental Planner

DAVID Y. IGE  
GOVERNOR



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

March 29, 2021

Ms. Claire Oshiro  
Environmental Planner  
The Limitaco Consulting Group  
1622 Kanakanui Street  
Honolulu, Hawaii 96817

Dear Ms. Oshiro:

Subject: Pre-Assessment Consultation, Preparation of the Environmental Assessment for the Storm Water Improvements at the Hawaii Department of Transportation – Highways Kahului Baseyard in Kahului, Maui Island, Hawaii  
Tax Map Key: (2) 3-8-079:018 (por.), Project Site in Airport District

The State of Hawaii, Department of Transportation, Airports Division (HDOT-A), has reviewed the subject pre-assessment consultation letter and has the following comments:

1. The project site is adjacent to Kahului Airport. All projects within five miles from Hawaii State airports are advised to read the Technical Assistance Memorandum (TAM) for guidance with development and activities that may require further review and permits. The TAM can be viewed at this link: [http://files.hawaii.gov/dbedt/op/docs/TAM-FAA-DOT-Airports\\_08-01-2016.pdf](http://files.hawaii.gov/dbedt/op/docs/TAM-FAA-DOT-Airports_08-01-2016.pdf).
2. Federal Aviation Administration (FAA) regulation requires the submittal of FAA Form 7460-1 Notice of Proposed Construction or alteration pursuant to the Code of Federal Regulations, Title 14, Part 77.9, if the construction or alteration is within 20,000 feet of a public use or military airport which exceeds a 100:1 surface from any point on the runway of each airport with its longest runway more than 3,200 feet. Construction equipment and staging area heights, including heights of temporary construction cranes, shall be included in the submittal. The form and criteria for submittal can be found at the following website: <https://ocaaa.faa.gov/ocaaa/external/portal.jsp>.
3. Due to the proximity to the airport, HDOT-Highways should be aware of potential regular noise from aircraft operations. There is also a potential for fumes, smoke, vibrations, odors, etc., resulting from occasional aircraft flight operations over the project location. These impacts may increase or decrease over time and depending on airport operations.

JADE T. BUTAY  
DIRECTOR

Deputy Directors  
LYNN A.S. PRANK-REGAN  
DEREK J. CHOW  
ROSS M. HIGASHI  
EDWIN H. SNIFFEN

IN REPLY REFER TO:  
AIR-EP  
21.0028

Ms. Claire Oshiro  
March 29, 2021  
Page 2

AIR-EP  
21.0028

4. Standing water has the potential to become a wildlife hazard. HDOT-A recommends that the developer incorporates measures to minimize hazardous wildlife attractants in compliance with FAA Advisory Circular (AC) 150/5200-33C, Hazardous Wildlife Attractants On Or Near Airports. If the project results in a wildlife attractant, these effects shall be immediately mitigated by HDOT-Highways upon notification by the HDOT-A and/or FAA.

If you have any questions, please contact Mr. Herman Tuiolesega, Head Planner, at 838-8810 or by email to [herman.tuiolesega@hawaii.gov](mailto:herman.tuiolesega@hawaii.gov).

Sincerely,

JADE T. BUTAY  
Director of Transportation

c: Mr. Ty Fukuroku, Department of Transportation, Highways Division - Maui District



**THE LIMTIACO CONSULTING GROUP**  
CIVIL ENGINEERING AND ENVIRONMENTAL CONSULTANTS

November 21, 2022

SENT VIA EMAIL ONLY: <[jade.butay@hawaii.gov](mailto:jade.butay@hawaii.gov)>  
Director Jade Butay  
Department of Transportation

**Subject:** Response to Pre-Assessment Consultation, Environmental Assessment for the Municipal Separate Storm Sewer System (MS4) Improvements at the Hawaii Department of Transportation - Highways Kanului Baseyard located at Kahului Airport District, Island of Maui; TMK: (2) 3-8-079:018 (por.)

Dear Director Butay:

Thank you for the department's comments dated March 29, 2021 (Ref. AIR-EP 21.0028). Itemized responses are below.

1. We appreciate the information and link to the Technical Assistance Memorandum (TAM), which provides guidance about development and activities that occur within five miles from Hawaii State airports.
2. We also appreciate the information and link for Federal Aviation Administration (FAA) Form 7460-1, which may be required if certain criteria are met.
3. The Environmental Assessment will note that background noise at the project site may be influenced by regular noise from aircraft operations. There is also a potential for fumes, smoke, vibrations, odors, etc. from occasional aircraft flight operations over the project site.
4. Lastly, we acknowledge that standing water has the potential to become a wildlife hazard and appreciate the reference for FAA's guidance about this issue.

Thank you for your interest and participation in the environmental review process.

Best regards,  
*The Limtiaco Consulting Group, Inc.*

*Claire Oshiro*  
Claire Oshiro  
Environmental Planner

JOSH GREEN, M.D.  
GOVERNOR KE KA'ĀINA  
SYVA LUKE  
LIEUTENANT GOVERNOR KA HOPE KA'ĀINA



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

JOSH GREEN, M.D.  
GOVERNOR KE KA'ĀINA  
SYVA LUKE  
LIEUTENANT GOVERNOR KA HOPE KA'ĀINA



STATE OF HAWAII | KA MOKU'ĀINA 'O HAWAII'  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
LAND DIVISION

STATE OF HAWAII | KA MOKU'ĀINA 'O HAWAII'  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
LAND DIVISION

P.O. BOX 621  
HONOLULU, HAWAII 96809

P.O. BOX 621  
HONOLULU, HAWAII 96809  
Dec 14, 2022

Jan 6, 2023

MEMORANDUM

State of Hawaii  
Department of Transportation  
Highways Division – Maui District  
Attn: Mr. Ty Fukuroku, Program Manager  
650 Palapala Drive  
Kahului, Hawaii 96732

via email: [ty.h.fukuroku@hawaii.gov](mailto:ty.h.fukuroku@hawaii.gov)

The Limitaco Consulting Group, Inc.  
Attn: Ms. Claire Oshiro, Environmental Planner  
1622 Kananui Street  
Honolulu, Hawaii 96817

via email: [claire@tlcchawaii.com](mailto:claire@tlcchawaii.com)

Dear Mr. Fukuroku and Ms. Oshiro:

**SUBJECT:** Draft Environmental Assessment for the Proposed **Kahului HDOT Baseyard Project** located at Wailuku-Kahului District, Island of Maui; TMK: (2) 3-8-079:018 (por.) on behalf of Hawaii Department of Transportation Highways Division, Maui District

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

At this time, enclosed are comments from the (a) Division of Aquatic Resources, (b) Engineering Division, and (c) Office of Conservation & Coastal Lands on the subject matter. Should you have any questions, please feel free to contact Darlene Nakamura at (808) 587-0417 or email: [darlene.k.nakamura@hawaii.gov](mailto:darlene.k.nakamura@hawaii.gov). Thank you.

Sincerely,

*Russell Tsuji*

Russell Y. Tsuji  
Land Administrator

Enclosures  
cc: Central Files

TO:

- DLNR Agencies:**
- X Div. of Aquatic Resources ([elizabeth.a.monaghan@hawaii.gov](mailto:elizabeth.a.monaghan@hawaii.gov))
  - X Div. of Boating & Ocean Recreation
  - X Engineering Division ([DLNR.ENG@hawaii.gov](mailto:DLNR.ENG@hawaii.gov))
  - X Div. of Forestry & Wildlife ([rubyrrosa.t.terrago@hawaii.gov](mailto:rubyrrosa.t.terrago@hawaii.gov))
  - X Div. of State Parks
  - X Commission on Water Resource Management ([DLNR.CWRM@hawaii.gov](mailto:DLNR.CWRM@hawaii.gov))
  - X Office of Conservation & Coastal Lands ([sharleen.k.kuba@hawaii.gov](mailto:sharleen.k.kuba@hawaii.gov))
  - X Land Division – Maui District ([daniel.l.omellas@hawaii.gov](mailto:daniel.l.omellas@hawaii.gov))

FROM: Russell Y. Tsuji, Land Administrator *Russell Tsuji*

SUBJECT: Draft Environmental Assessment for the Proposed **Kahului HDOT Baseyard Project**  
LOCATION: Wailuku-Kahului District, Island of Maui; TMK: (2) 3-8-079:018 (por.)  
APPLICANT: The Limitaco Consulting Group on behalf of Hawaii Department of Transportation Highways Division, Maui District

Transmitted for your review and comment is information on the above-referenced subject matter. The DEA was published on December 8, 2022 by the State Environmental Review Program (formerly the Office of Environmental Quality Control) at the Office of Planning and Sustainable Development in the periodic bulletin, The Environmental Notice, available at the following link: [https://files.hawaii.gov/dbedt/erp/The\\_Environmental\\_Notice/2022-12-08-TEN.pdf](https://files.hawaii.gov/dbedt/erp/The_Environmental_Notice/2022-12-08-TEN.pdf)

Please submit any comments by **January 6, 2023**. If no response is received by this date, we will assume your agency has no comments. Should you have any questions, please contact Darlene Nakamura directly via email at [darlene.k.nakamura@hawaii.gov](mailto:darlene.k.nakamura@hawaii.gov). Thank you.

**BRIEF COMMENTS:**

- We have no objections. *RS*
- We have no comments.
- We have no additional comments.
- Comments are included/attached. *RS*

Signed: \_\_\_\_\_  
 Print Name: Brian Neilson, Administrator  
 Division: Division of Aquatic Resources  
 Date: 1/4/23

Attachments  
cc: Central File



JOSH GREEN, M.D.  
GOVERNOR  
HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
DIVISION OF AQUATIC RESOURCES  
1151 PUNCHBOWL STREET, ROOM 330  
HONOLULU, HAWAII 96813

Date: 12/22/2022  
DAR # AR6327

MEMORANDUM

TO: Brian J. Neilson  
DAR Administrator

FROM: Russell Sparks *[Signature]*, Aquatic Biologist

SUBJECT: DEA for Proposed Kahului HDOT Baseyard Project

Request Submitted by: Russell Y. Tsuji, Land Administrator  
Wailuku-Kahului District, Maui, TMK: (2)3-8-079/018

Location of Project: \_\_\_\_\_

Brief Description of Project:

A Draft Environmental Assessment for improvements to the existing DOT baseyard in Kahului, Maui. The project will replace existing above ground fuel storage tanks with new larger tanks, build a secondary containment system to protect against fuel leaks, replace an aging Fuel station canopy and vehicle wash rack, and include the installation of a photovoltaic systems to reduce electrical consumption at the site. Project improvements will help bring the facility into compliance with the Maui District Municipal Separate Storm and Sewer System (MS4) program designed to upgrade the facility and minimize the discharge of pollutants in storm water runoff. Construction impacts will be mitigated by using appropriate BMPs.

Comments:

No Comments  Comments Attached

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

Comments Approved: *[Signature]* Date: 1/4/23

Brian J. Neilson  
DAR Administrator

JOSH GREEN, M.D.  
GOVERNOR  
HAWAII



STATE OF HAWAII | KA MOKUPĀĀINA 'O HAWAII'  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
LAND DIVISION

P.O. BOX 621  
HONOLULU, HAWAII 96809  
Dec 14, 2022

MEMORANDUM

FROM:

**DLNR Agencies:**  
 Div. of Aquatic Resources ([elizabeth.a.monaghan@hawaii.gov](mailto:elizabeth.a.monaghan@hawaii.gov))  
 Div. of Boating & Ocean Recreation  
 Engineering Division ([DLNR.ENGR@hawaii.gov](mailto:DLNR.ENGR@hawaii.gov))  
 Div. of Forestry & Wildlife ([rubvrosa.t.terrago@hawaii.gov](mailto:rubvrosa.t.terrago@hawaii.gov))  
 Div. of State Parks  
 Commission on Water Resource Management ([DLNR.CWRM@hawaii.gov](mailto:DLNR.CWRM@hawaii.gov))  
 Office of Conservation & Coastal Lands ([sharleen.k.kuba@hawaii.gov](mailto:sharleen.k.kuba@hawaii.gov))  
 Land Division – Maui District ([daniel.l.ornellas@hawaii.gov](mailto:daniel.l.ornellas@hawaii.gov))

TO:

Russell Y. Tsuji, Land Administrator *[Signature]*  
Draft Environmental Assessment for the Proposed Kahului HDOT Baseyard Project  
Wailuku-Kahului District, Maui; TMK: (2) 3-8-079/018 (por.)  
The Limtiaco Consulting Group on behalf of Hawaii Department of Transportation Highways Division, Maui District

Transmitted for your review and comment is information on the above-referenced subject matter. The DEA was published on December 8, 2022 by the State Environmental Review Program (formerly the Office of Environmental Quality Control) at the Office of Planning and Sustainable Development in the periodic bulletin, **The Environmental Notice**, available at the following link: [https://files.hawaii.gov/dbedt/erp/The\\_Environmental\\_Notice/2022-12-08-TEN.pdf](https://files.hawaii.gov/dbedt/erp/The_Environmental_Notice/2022-12-08-TEN.pdf)

Please submit any comments by **January 6, 2023**. If no response is received by this date, we will assume your agency has no comments. Should you have any questions, please contact Darlene Nakamura directly via email at [darlene.k.nakamura@hawaii.gov](mailto:darlene.k.nakamura@hawaii.gov). Thank you.

**BRIEF COMMENTS:**

- ( ) We have no objections.
- ( ) We have no comments.
- (✓) We have no additional comments.
- ( ) Comments are included/attached.

Signed: *[Signature]*  
Print Name: Cary S. Chang, Chief Engineer  
Division: Engineering Division  
Date: Dec 30, 2022

Attachments  
cc: Central File



STATE OF HAWAII | KA MOKU'ĀINA 'O HAWAII'  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
LAND DIVISION

P.O. BOX 621  
HONOLULU, HAWAII 96809

Jan 23, 2023



State of Hawaii  
Department of Transportation  
Highways Division – Maui District  
Attn: Mr. Ty Fukuroku, Program Manager  
650 Palapala Drive  
Kahului, Hawaii 96732  
via email: [ty.h.fukuroku@hawaii.gov](mailto:ty.h.fukuroku@hawaii.gov)

via email: [claire@tlcdhawaii.com](mailto:claire@tlcdhawaii.com)

The Limitaco Consulting Group, Inc.  
Attn: Ms. Claire Oshiro, Environmental Planner  
1622 Kanakanui Street  
Honolulu, Hawaii 96817

Dear Mr. Fukuroku and Ms. Oshiro:

SUBJECT: Draft Environmental Assessment for the Proposed **Kahului HDOT Baseyard Project** located at Wailuku-Kahului District, Island of Maui; TMK: (2) 3-8-079-018 (por.) on behalf of Hawaii Department of Transportation Highways Division, Maui District

Thank you for the opportunity to review and comment on the subject matter. In addition to our previous comments dated January 6, 2023, enclosed are comments from the Division of Forestry & Wildlife on the subject matter. Should you have any questions, please feel free to contact Darlene Nakamura at (808) 587-0417 or email: [darlene.k.nakamura@hawaii.gov](mailto:darlene.k.nakamura@hawaii.gov). Thank you.

Sincerely,

*Russell Tsuji*

Russell Y. Tsuji  
Land Administrator

Enclosures  
cc: Central Files



STATE OF HAWAII | KA MOKU'ĀINA 'O HAWAII'  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
LAND DIVISION

P.O. BOX 621  
HONOLULU, HAWAII 96809

Dec 14, 2022

MEMORANDUM

TO: DLNR Agencies:  
 Div. of Aquatic Resources ([elizabeth.a.monaghan@hawaii.gov](mailto:elizabeth.a.monaghan@hawaii.gov))  
 Div. of Boating & Ocean Recreation  
 Engineering Division ([DLNR.ENGR@hawaii.gov](mailto:DLNR.ENGR@hawaii.gov))  
 Div. of Forestry & Wildlife ([rubrosa.t.terrago@hawaii.gov](mailto:rubrosa.t.terrago@hawaii.gov))  
 Div. of State Parks  
 Commission on Water Resource Management ([DLNR.CWRM@hawaii.gov](mailto:DLNR.CWRM@hawaii.gov))  
 Office of Conservation & Coastal Lands ([sharleen.k.kuba@hawaii.gov](mailto:sharleen.k.kuba@hawaii.gov))  
 Land Division – Maui District ([daniel.lornellas@hawaii.gov](mailto:daniel.lornellas@hawaii.gov))

FROM: Russell Y. Tsuji, Land Administrator  
SUBJECT: Draft Environmental Assessment for the Proposed **Kahului HDOT Baseyard Project**  
LOCATION: Wailuku-Kahului District, Island of Maui; TMK: (2) 3-8-079-018 (por.)  
APPLICANT: The Limitaco Consulting Group on behalf of Hawaii Department of Transportation Highways Division, Maui District

Transmitted for your review and comment is information on the above-referenced subject matter. The DEA was published on December 8, 2022 by the State Environmental Review Program (formerly the Office of Environmental Quality Control) at the Office of Planning and Sustainable Development in the periodic bulletin, The Environmental Notice, available at the following link: [https://files.hawaii.gov/dbedt/erp/The\\_Environmental\\_Notice/2022-12-08-TEN.pdf](https://files.hawaii.gov/dbedt/erp/The_Environmental_Notice/2022-12-08-TEN.pdf)

Please submit any comments by **January 6, 2023**. If no response is received by this date, we will assume your agency has no comments. Should you have any questions, please contact Darlene Nakamura directly via email at [darlene.k.nakamura@hawaii.gov](mailto:darlene.k.nakamura@hawaii.gov). Thank you.

BRIEF COMMENTS:  
 We have no objections.  
 We have no comments.  
 We have no additional comments.  
 Comments are included/attached.

Not in  
Conservation  
District

Signed: \_\_\_\_\_  
Print Name: Michael Cao  
Division: CCCL  
Date: 12-16-22

Attachments  
cc: Central File

RECEIVED  
LAND DIVISION

2022 DEC 19 PM 2:28

DEPT. OF LAND & NATURAL RESOURCES  
STATE OF HAWAII

2022 DEC 14 P 3:14

JOSH GREEN, M.D.  
GOVERNOR OF HAWAII  
LIEUTENANT GOVERNOR (KA HOPE KAUAI)



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

STATE OF HAWAII | KA MOKU'ĀINA 'O HAWAII'  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
LAND DIVISION

P.O. BOX 021  
HONOLULU, HAWAII 96809  
Dec. 14, 2022

MEMORANDUM

FROM:

- DLNR Agencies:
  - Div. of Aquatic Resources ([elizabeth.a.monaghan@hawaii.gov](mailto:elizabeth.a.monaghan@hawaii.gov))
  - Div. of Boating & Ocean Recreation
  - Engineering Division ([DLNR\\_ENGR@hawaii.gov](mailto:DLNR_ENGR@hawaii.gov))
  - Div. of Forestry & Wildlife ([tubryosa.t.terrago@hawaii.gov](mailto:tubryosa.t.terrago@hawaii.gov))
  - Div. of State Parks
  - Commission on Water Resource Management ([DLNR\\_CWRM@hawaii.gov](mailto:DLNR_CWRM@hawaii.gov))
  - Office of Conservation & Coastal Lands ([sharleen.k.kuba@hawaii.gov](mailto:sharleen.k.kuba@hawaii.gov))
  - Land Division – Maui District ([daniel.lomelas@hawaii.gov](mailto:daniel.lomelas@hawaii.gov))

TO: SUBJECT:

Russell Y. Tsuji, Land Administrator  
Draft Environmental Assessment for the Proposed Kahului HDOT Baseyard Project  
Wailuku-Kahului District, Island of Maui; TMK: (2) 3-8-079:018 (por.)  
The Limitaco Consulting Group on behalf of Hawaii Department of Transportation Highways Division, Maui District

LOCATION: APPLICANT:

Transmitted for your review and comment is information on the above-referenced subject matter. The DEA was published on December 8, 2022 by the State Environmental Review Program (formerly the Office of Environmental Quality Control) at the Office of Planning and Sustainable Development in the periodic bulletin, The Environmental Notice, available at the following link: [https://files.hawaii.gov/dbedt/erp/The\\_Environmental\\_Notice/2022-12-08-TEN.pdf](https://files.hawaii.gov/dbedt/erp/The_Environmental_Notice/2022-12-08-TEN.pdf)

Please submit any comments by **January 6, 2023**. If no response is received by this date, we will assume your agency has no comments. Should you have any questions, please contact Darlene Nakamura directly via email at [darlene.k.nakamura@hawaii.gov](mailto:darlene.k.nakamura@hawaii.gov). Thank you.

BRIEF COMMENTS:

- ( ) We have no objections.
- ( ) We have no comments.
- ( ) We have no additional comments.
- Comments are included/attached.

Signed: \_\_\_\_\_ for *Sylvia Luke*  
 Print Name: LAINIE BERRY, Wildlife Program Mgr.  
 Division: Division of Forestry and Wildlife  
 Date: Jan 19, 2023

Attachments  
cc: Central File

JOSH GREEN, M.D.  
GOVERNOR OF HAWAII  
LIEUTENANT GOVERNOR (KA HOPE KAUAI)



STATE OF HAWAII | KA MOKU'ĀINA 'O HAWAII'  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
DIVISION OF FORESTRY AND WILDLIFE  
1151 PUNCHBOWL STREET, ROOM 325  
HONOLULU, HAWAII 96813

January 18, 2023

MEMORANDUM

Log no. 3949

TO: RUSSELL Y. TSUJI, Land Administrator  
Land Division

FROM: LAINIE BERRY, Wildlife Program Manager  
Division of Forestry and Wildlife

SUBJECT: Division of Forestry and Wildlife Comments for the Draft Environmental Assessment (DEA) for the Proposed Kahului HDOT Baseyard Project on Maui

The Department of Land and Natural Resources, Division of Forestry and Wildlife (DOFAW) has received your request for comments for the DEA for the proposed Kahului HDOT Baseyard project located at 650 Palapala Drive in Wailuku Ahupua'a, Wailuku-Kahului District, on the island of Maui; TMK: (2) 3-8-079:018 (por.). The proposed project consists of conducting site improvements at the Kahului Baseyard to upgrade the facility and minimize the discharge of pollutants in stormwater runoff from the site. Site improvements will include several upgrades to the existing fuel station along with associated equipment, concrete pavement, and traffic bollards. The electrical system throughout the baseyard will also be upgraded. Replacement of the aging fuel station canopy and vehicle wash rack, and the installation of photovoltaic (PV) systems may occur in subsequent phases of the project.

DOFAW concurs with the following measures included in the DEA intended to avoid construction and operational impacts to State-listed species, including the Hawaiian Hoary bat (*Lasiurus cinereus semotus*), Hawaiian Duck (*Anas wyvilliana*), Hawaiian Stilt (*Himantopus mexicanus knudseni*), Hawaiian Coot (*Fulica alai*), Hawaiian Common Gallinule (*Gallinula chloropus sandvicensis*), Hawaiian Goose (*Branta sandvicensis*), and seabirds.

- Use of fully shielded outdoor lighting will be incorporated.
- Automatic motion sensor switches and controls will be installed on all outdoor lights or turn off when human activity is not occurring in the lighted area
- Nighttime construction will be avoided during the seabird fledging period, September 15 through December 15.

- If night-time construction is required, all outdoor lighting erected for night-time construction will be fully "dark sky compliant".
- All permanent lighting incorporated into the wash rack and fueling station will be dark sky compliant.
- No standing water feature will be installed at the project site.

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

- For illustrations and guidance related to seabird-friendly light styles that also protect the dark, starry skies of Hawaii, please visit <https://dlnr.hawaii.gov/wildlife/files/2016/03/DOC439.pdf>.
- If nighttime construction is required during the seabird fledging season (September 15 to December 15), we recommend that a qualified biologist be present at the project site to monitor and assess the risk of seabirds being attracted or grounded due to the lighting. If seabirds are seen circling around the area, lights should then be turned off. If a downed seabird is detected, please follow DOFAW's recommended response protocol by visiting <https://dlnr.hawaii.gov/wildlife/seabird-fallout-season/#response>.
- It is against State law to harm or harass State-listed Hawaiian waterbirds and geese. If any of these species are present during construction, all activities within 100 feet (30 meters) should cease and the bird or birds should not be approached. Work may continue after the bird or birds leave the area of their own accord. If a nest is discovered at any point, please contact the Maui Branch DOFAW Office at (808) 984-8100.
- DOFAW recommends minimizing the movement of plant or soil material between workites. Soil and plant material may contain detrimental fungal pathogens (e.g., Rapid 'Ohi'a Death), vertebrate and invertebrate pests (e.g., Coqui Frogs, Little Fire Ants, etc.), or invasive plant parts (e.g., Miconia, Mullein, etc.) that could harm our native species and ecosystems. We recommend consulting the Maui Invasive Species Committee (MISC) at (808) 573-6472 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.
- The project area is within the range of the State listed Blackburn's Sphinx Moth (*Manduca blackburni*). Larvae of BSM feed on many nonnative hostplants, which include tree tobacco (*Nicotiana glauca*), that grow in disturbed soil. We acknowledge that a biological resource assessment was conducted by AECOS on May 12, 2020, and no host plants for BSM were found. However, due to the project site being in close proximity to critical habitat for BSM and due to the fact that it's been two years since the assessment, we recommend that a vegetation survey be conducted to determine the presence of plants preferred by BSM. DOFAW recommends removing plants less than one meter in height or during the dry season to avoid harm to BSM. If you intend to either remove tree tobacco over one meter in height or to disturb the ground around or within several meters of

these plants, they must be thoroughly inspected by a qualified entomologist for the presence of BSM eggs and larvae.

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 Myrna N. Girald Pérez, Protected Species Habitat Conservation Planning Associate at (808) 265-3276 or [myrna.girald-perez@hawaii.gov](mailto:myrna.girald-perez@hawaii.gov).

Sincerely,

*Lainie Berry*

for  
LAINIE BERRY  
Wildlife Program Manager



JOSH GREEN, M.D.  
GOVERNOR



STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
MAUI DISTRICT  
650 PALAPALA DRIVE  
KAHULUI, HAWAII 96732-2321

February 13, 2023

EDWIN H. SNIFFEN  
DIRECTOR

Deputy Directors  
DREANALEE K. KALUI  
TAMMY L. LEE  
ROBIN K. SHISHIDO  
JAMES KUMIETOROKA

IN REPLY REFER TO:

HWY-M 2.071-23

Mr. Russell Y. Tsuji  
February 13, 2023  
Page 2

HWY-M 2.071-23

DOFAW's recommendation to conduct another vegetation survey to determine the presence of plants preferred by BSM is noted; however, another survey is not warranted from our perspective because vegetation at the project site is sparse and proposed site improvements do not involve the disturbance of vegetated areas. Also, no new intentional plantings have occurred at the project site since AECOS, Inc. conducted its survey in May 2020.

Should you have any questions about this submittal, please feel free to contact Ty Fukuroku, Environmental Engineer, Highways Division, Maui District at (808) 873-3535 or via email to ty.h.fukuroku@hawaii.gov. You may also contact our consultant, Yvonne Turro of The Limitaco Consulting Group at (808) 687-8738 or via email to yvonne@tlcg-hawaii.com.

Sincerely,

*Amethenda*

ANNETTE D.H. MATSUDA  
District Engineer, Maui

c: Darlene Nakamura, DLNR (darlene.k.nakamura@hawaii.gov)  
Rubyrosa Terrago, DLNR DOFAW (rubyrosa.t.terrago@hawaii.gov)  
Yvonne Turro, TLCC (yvonne@tlcg-hawaii.com)

Mr. Russell Y. Tsuji  
Administrator  
State of Hawaii  
Department of Land and Natural Resources  
1151 Punchbowl Street, Room 220  
Honolulu, Hawaii 96813

Dear Mr. Tsuji:

**Subject:** Response to Draft Environmental Assessment for the Proposed Kahului  
Hawaii Department of Transportation (HDOT) Baseyard Project,  
Wailuku-Kahului District, Island of Maui; TMK: (2) 3-8-079-018 (por.)

We appreciate your distribution of the Draft Environmental Assessment (EA) notification to the other divisions of the Department of Land and Natural Resources (DLNR). The comment letters we received and this letter will be included in the Final EA which is expected to be published in February 2023.

Division of Aquatic Resources (signed January 4, 2023)

The Division of Aquatic Resources has no objections and no comments. If there are any changes to the project plan, the division requests the opportunity to review and comment on those changes.

Engineering Division (signed December 30, 2022)

The Engineering Division has no additional comments.

Office of Conservation and Coastal Lands (signed December 16, 2022)

In addition to the statement that the project site is not in the Conservation District, the Office of Conservation and Coastal Lands has no comments.

Division of Forestry and Wildlife (signed January 18, 2022)

The Division of Forestry and Wildlife (DOFAW) concurs with the measures included in the Draft EA for avoiding impacts to State-listed species. The letter includes additional comments pertaining to five issues or topics: (1) guidance to protect the dark, starry skies of Hawaii; (2) the recommendation to have a qualified biologist present during nighttime construction; (3) it is against State law to harm or harass State-listed Hawaiian waterbirds and geese; (4) measures to minimize the movement of plant or soil material between work sites; and (5) considerations pertaining to tree tobacco, which is a host plan for the State-listed Blackburn's Sphinx Moth (BSM) larvae.



JOSH GREEN, M.D.  
GOVERNOR



EDWIN H. SNIFFEN  
DIRECTOR  
Deputy Directors  
DREANALEE K. KALLU  
TAMMY L. LEE  
ROBIN K. SHISHIDO  
JAMES KUNNETOKOKA  
IN REPLY REFER TO:

HWY-M 2.070-23

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
MAUI DISTRICT  
650 PALAPALA DRIVE  
KAHULUI, HAWAII 96732-2321

February 13, 2023

RICHARD T. BISSEN, JR.  
Mayor  
KEKUHAIPIO R. AKANA  
Acting Managing Director



SHANE T. DUDOIT  
Acting Director

DEPARTMENT OF PARKS AND RECREATION  
COUNTY OF MAUI  
700 HALI'A NAKO'A STREET, UNIT 2  
WAILUKU, MAUI, HAWAII 96793  
[www.mauicounty.gov](http://www.mauicounty.gov)  
January 12, 2023

Ty Fukuroku, Program Manager  
Department of Transportation  
Highways Division, Maui District  
650 Palapala Drive  
Kahului, HI 96732

Dear Mr. Fukuroku:

**SUBJECT: ENVIRONMENTAL ASSESSMENT FOR THE PROPOSED HDOT  
BASEYARD PROJECT IN WAILUKU AHUPUAA, WAILUKU-KAHULUI  
DISTRICT, MAUI ISLAND, HAWAII, TAX MAP KEY (2) 3-8-079:018  
(POR.)**

Thank you for the opportunity to review and comment on the subject project. The Department of Parks has no comment at this time.

Should you have any questions, please feel free to contact me or Samuel Marvel, Chief of Planning and Development, at [samuel.marvel@co.maui.hi.us](mailto:samuel.marvel@co.maui.hi.us) or (808) 270-7931.

Sincerely,  
  
SHANE T. DUDOIT  
Acting Director of Parks and Recreation

c: Samuel Marvel, Chief of Planning and Development  
Claire Oshiro, The Limitaco Consulting Group

STD:SAM

Mr. Patrick McCall  
Director  
County of Maui  
Department of Park and Recreation  
700 Halia Nakoa Street, Unit 2  
Wailuku, Hawaii 96793

Dear Mr. McCall:

Subject: Response to Draft Environmental Assessment for the Proposed Kahului  
Hawaii Department of Transportation (HDOT) Baseyard Project,  
Wailuku-Kahului District, Island of Maui; TMK: (2) 3-8-079-018 (por.)

Thank you for your department's statement of no comment at this time in the letter from Acting Director Shane T. Dudoit dated January 12, 2023. The comment letter we received and this letter will be included in the Final Environmental Assessment which is expected to be published in February 2023.

Should you have any questions about this submittal, please feel free to contact Ty Fukuroku, Environmental Engineer, Highways Division, Maui District at (808) 873-3535 or via email to [ty.h.fukuroku@hawaii.gov](mailto:ty.h.fukuroku@hawaii.gov). You may also contact our consultant, Yvonne Turro of The Limitaco Consulting Group at (808) 687-8738 or via email to [yvonne@tlghawaii.com](mailto:yvonne@tlghawaii.com).

Sincerely,

ANNETTE D.H. MATSUDA  
District Engineer, Maui

c: Georgette Hill, Department of Parks and Recreation ([Georgette.Y.Hill@co.maui.hi.us](mailto:Georgette.Y.Hill@co.maui.hi.us))  
Yvonne Turro, TLCCG ([yvonne@tlghawaii.com](mailto:yvonne@tlghawaii.com))



# POLICE DEPARTMENT COUNTY OF MAUI

55 MAHALANI STREET  
WAILUKU, MAUI, HAWAII 96793  
TELEPHONE: (808) 244-6400  
FAX: (808) 244-6411

**RICHARD T. BISSEK, JR.**  
MAYOR

OUR REFERENCE  
YOUR REFERENCE



**JOHN PELLETIER**  
CHIEF OF POLICE  
**WADE M. MAEDA**  
DEPUTY CHIEF OF POLICE

January 12, 2023

Ms. Yvonne Turro

The Limitaco Consulting Group  
1622 Kananui Street  
Honolulu, Hawaii 96817

**Re: Kahului HDOT Baseyard – Draft EA (AFNSI)**

Dear Ms. Turro:

This is in response to the Environmental Notice dated December 8, 2022 requesting comments on the draft environmental assessment for permanent site improvements at the State of Hawaii Department of Transportation's Kahului Baseyard.

In review of the submitted documents, we have no objections to the upcoming construction project if it meets minimal standards set for by county codes and state laws. We suggest efforts be made to minimize noise, dust, and debris so not to inhibit those whose health and well-being may be affected, as well the ingress/egress of heavy vehicles and equipment during the construction. Thank you for giving us the opportunity to comment on this project.

Sincerely,

Acting Assistant Chief Keola Tom  
for: **JOHN PELLETIER**  
Chief of Police

c: Mr. Ty Fukuroku, HDOT Maui District

**JOSH GREEN, M.D.**  
GOVERNOR



STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
MAUI DISTRICT  
650 PALAPALA DRIVE  
KAHULUI, HAWAII 96732-2321

February 10, 2023

Mr. John Pelletier  
Chief  
County of Maui  
Maui Police Department  
55 Mahalani Street  
Wailuku, Hawaii 96793

Dear Mr. Pelletier:

**Subject:** Response to Draft Environmental Assessment for the Proposed Kahului Hawaii Department of Transportation Baseyard Project, Wailuku-Kahului District, Island of Maui; TMK: (2) 3-8-079-018 (por.)

Thank you for your department's statement of no objections to the project in the letter signed by Acting Assistant Chief Keola Tom dated January 12, 2023. We acknowledge the department's suggestions about efforts to minimize noise, dust, debris, and the ingress/egress of heavy vehicles and equipment during construction. The comment letter we received, and this letter will be included in the Final Environmental Assessment which is expected to be published in February 2023.

Should you have any questions about this submittal, please feel free to contact Ty Fukuroku, Environmental Engineer, Highways Division, Maui District at (808) 873-3535 or via email to ty.h.fukuroku@hawaii.gov. You may also contact our consultant, Yvonne Turro of The Limitaco Consulting Group at (808) 687-8738 or via email to yvonne@tleghawaii.com.

Sincerely,

**ANNETTE D.H. MATSUDA**  
District Engineer, Maui

**EDWIN H. SNIFFEN**  
DIRECTOR

Deputy Directors  
**DREANALEE K. KALUI**  
**TAMMY L. LEE**  
**ROBIN K. SHIBUDO**  
**JAMES KUNNETOKIOKA**

IN REPLY REFER TO:

**HWY-M 2.068-23**

**RICHARD T. BISSEN JR.**  
Mayor  
**KEKUHAUPIO R. AKANA**  
Acting Managing Director  
**KATHLEEN ROSS AOKI**  
Acting Planning Director



**DEPARTMENT OF PLANNING**  
COUNTY OF MAUI  
ONE MAIN PLAZA  
2200 MAIN STREET, SUITE 315  
WAILUKU, MAUI, HAWAII 96793

January 25, 2023

Ms. Yvonne Turro  
The Limitaco Consulting Group  
1622 Kanakanui Street  
Honolulu, Hawaii 96817

Mr. Ty Fukuroku  
650 Palapala Drive  
Kahului, Hawaii 96732

Dear Ms. Turro and Mr. Fukuroku:

**SUBJECT: REQUEST FOR COMMENT ON THE DRAFT ENVIRONMENTAL ASSESSMENT (DEA) FOR THE EXISTING HDOT KAHULUI BASEYARD, LOCATED AT 650 PALAPALA DRIVE, KAHULUI, ISLAND OF MAUI, HAWAII; TMK: (2) 3-8-079-018 (POR) (EAC2022/0004)**

The Department of Planning (Department) is in receipt of the request for comments on the DEA for the State of Hawaii Department of Transportation (HDOT), Highways Division's proposed site improvements at its existing Kahului Baseyard site. The proposed improvements will occur on a 5.2-acre portion of this approximately 22-acre parcel. The proposal includes replacement of two existing 2,000-gallon above ground fuel tanks with one new 5,000-gallon tank and one new 2,000-gallon above ground fuel tanks along with associated equipment, concrete pavement, and traffic bollards. Additionally, the electrical system in portions of the baseyard will be upgraded. Contingent on available project funding, the fuel station canopy and vehicle wash rack may be replaced and a photovoltaic (PV) system may be installed in subsequent phases. The proposed project activities are to upgrade the existing facility and minimize the discharge of pollutants in storm water runoff from the site.

Based on the foregoing, the Department provides the following comments in preparation of a Final Environmental Assessment.

1. Under "5. Permits and Approvals," the DEA does not list a Special Management Assessment (SMA). Please note that you will need to apply for this assessment to determine if the project is exempt or requires further SMA permitting (minor or major).
2. How much excavation and grading will be required for the proposed activities?

Ms. Yvonne Turro and Mr. Ty Fukuroku  
January 25, 2023  
Page 2

3. A State Historic Preservation District (SHPD) letter dated May 11, 2021 states that the SHPD requests the applicant submit the AIS report to their office. Where are you in the SHPD review process?
4. The DEA states, "the new tanks will be placed on relatively the same footprint as the originals." Please elaborate on this statement: what does "relatively the same footprint" mean? The existing fueling station canopy is not immediately proposed to be replaced; thus, will the new tanks be protected from the elements by the existing canopy?
5. The DEA states that the siting of the new wash racks will affect a row of approximately 10 parking spaces. According to the Zoning Administration Enforcement Division, an analysis must be conducted of the square footage of all structures on site for parking requirements. For the Final EA, please provide a parking analysis.
6. Please show on the site plan that the setbacks conform to 19.28.030 – Yards.
7. Population information only reports figures from 2010. More accurate and recent population figures for 2020 should be used even if these are based on projections provided by the US Census or DBEDT.
8. Please provide a project phasing timeline for all proposed improvements.

The Department acknowledges the proposed improvements will address observed deficiencies that may be attributed to physical wear and exposure. Additionally, improvements to the electrical system would address current baseyard operations and comply with current building codes.

Thank you for the opportunity to comment on this project. Should you require further clarification, please contact Staff Planner Rachel Beasley by email at [rachel.beasley@co.maui.hi.us](mailto:rachel.beasley@co.maui.hi.us) or by phone at (808) 270-7814.

Sincerely,

ANN T. CUA  
Planning Program Administrator

for KATHLEEN ROSS AOKI  
Acting Planning Director

xc: Ann T. Cua, Planning Program Administrator (PDF)  
Danny Dias, Planning Supervisor (PDF)  
Rachel Beasley, Staff Planner (PDF)

KRA:ATC:KB:rma  
K:\WP\_Docs\Planning\EAC2022\000004\_Kahului HDOT Baseyard\etter.doc

JOSH GREEN, M.D.  
GOVERNOR



STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
MAUI DISTRICT  
650 PALAPALA DRIVE  
KAHULUI, HAWAII 96732-2321

February 13, 2023

Ms. Kathleen Ross Aoki  
Director  
County of Maui  
Department of Planning  
2200 Main Street  
One Main Plaza, Suite 315  
Wailuku, Hawaii 96793

Dear Ms. Aoki:

Subject: Response to Draft Environmental Assessment for the Proposed Kahului  
Hawaii Department of Transportation (HDOT) Baseyard Project,  
Wailuku-Kahului District, Island of Maui; Tax Map key (TMK): (2) 3-8-079-018 (por.)

Thank you for the comments from the Department of Planning in the letter signed by Planning Program Administrator Ann Cua dated January 25, 2023. We appreciate the acknowledgment from the Department that our proposed improvements will address observed deficiencies, address current baseyard operations, and comply with current building codes. The comment letter we received and this letter will be included in the Final Environmental Assessment (EA) which is expected to be published in February 2023. Our itemized responses are below.

1. The Special Management Area (SMA) Assessment will be added to the list of permits and approvals in Section 5. Permits and Approvals of the Final EA. Our submittal for the SMA Assessment is currently under review at the Planning Department.
2. The excavation and grading quantity is estimated to be 72.1 cubic yards. No change in grades is anticipated.
3. The requested archeological inventory survey with a subsurface component, which resulted in negative results as documented in the archaeological assessment, was submitted to State Historic Preservation Division (SHPD) for review in November 2022. SHPD has not yet issued a determination.
4. New above-ground storage tanks will be installed under the existing canopy and will not extend beyond its edges. The existing canopy will continue to provide protection from the elements at the fueling station.

EDWIN H. SNIFFEN  
DIRECTOR  
Deputy Directors  
DREANALEE K. KALUI  
TAMMY L. LEE  
ROBIN K. SHISHIDO  
JAMES KUNINETOKIOKA  
IN REPLY REFER TO:

HWY-M 2.069-23

Ms. Kathleen Ross Aoki  
February 13, 2023  
Page 2

HWY-M 2.069-23

5. Existing and required number of parking spaces are shown on the attached "Overall Site Parking Plan." There are a total of 175 existing parking spaces. Based on Maui County Code Chapter 19.36B.020 for "general office" and "industrial and storage" uses, the required number of off-street parking spaces was tabulated to be thirty two (32) spaces which is well under the total provided. The parking analysis will be provided in the Final EA.
6. The 20' front yard setback and 10' side yard setback has been added to the site plan, which depicts the affected portion of TMK: (2) 3-8-079-018 (see attached "Revised Figure 4 - Site Plan").
7. Population information in Section 2.13. Socio-Economic Characteristics of the Final EA will be updated.
8. The timing for site improvements beyond the initial phase is undetermined at this time since funding has not yet been allocated.

Should you have any questions about this submittal, please feel free to contact Ty Fukuroku, Environmental Engineer, Highways Division, Maui District at (808) 873-3535 or via email to ty.h.fukuroku@hawaii.gov. You may also contact our consultant, Yvonne Turro of The Limitaco Consulting Group at (808) 687-8738 or via email to yvonne@tlgchawaii.com.

Sincerely,

*Ono Matsuda*

ANNETTE D.H. MATSUDA  
District Engineer, Maui

Attachments

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