DAVID Y. IGE
GOVERNOR

JADE T. BUTAY
DIRECTOR

Deputy Directors
LYNN A.S. ARAKI-REGAN
DEREK J. CHOW
ROSS M. HIGASHI
EDWIN H. SNIFFEN

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
MAUI DISTRICT
650 PALAPALA DRIVE
KAHULUI, HAWAII 96732-2321

IN REPLY REFER TO:

HWY-M 2.489-19

July 10, 2019

TO: MR. SCOTT GLENN, DIRECTOR
OFFICE OF ENVIRONMENTAL QUALITY CONTROL (OEQC)

FROM: ROBIN SHISHIDO
MAUI DISTRICT ENGINEER

SUBJECT: FINAL ENVIRONMENTAL ASSESSMENT AND
FINDING OF NO SIGNIFICANT IMPACT
KAHULUI BASEYARD AND MATERIALS TESTING LABORATORY
HDOT PROJECT NO: N/A
TAX MAP KEY: (2) 3-8-006:075

With this letter, the State of Hawaii Department of Transportation – Highways Division, Maui District, hereby transmits the Final Environmental Assessment and Finding of No Significant Impact (FEA-FONSI) for the Kahului Baseyard and Materials Testing Laboratory situated at TMK: (2) 3-8-006:075 in the Wailuku Distric on the island of Maui for publication in the next available edition of *The Environmental Notice.*

Enclosed is a completed OEQC Publication Form, one (1) hard copy of the FEA-FONSI, three (3) copies of the FEA-FONSI as an Adobe Acrobat PDF, and an electronic version of the Publication Form in MS Word.

If there are any questions, please contact Mr. Ervin Pigao, Maui District, Highways Division, at (808) 873-3535 or via email at ervinanthony.pigao@hawaii.gov.

Enclosures

20-012

AGENCY
PUBLICATION FORM

Project Name:	Kahului Baseyard and Materials Testing Laboratory
Project Short Name:	Kahului Baseyard
HRS §343-5 Trigger(s):	(1) Propose the use of state or county lands or the use of state or county funds
Island(s):	Maui
Judicial District(s):	Wailuku-Kahului
TMK(s):	(2) 3-8-006:075
Permit(s)/Approval(s):	National Pollutant Discharge Elimination System (NPDES) Permit County of Maui Building Permit
Proposing/Determining Agency:	State of Hawai'i Department of Transportation Highways Division – Maui District Office
Contact Name, Email, Telephone, Address	Ervin R. Pigao, P.E. ervinanthony.r.pigao@hawaii.gov (808) 873-3535 650 Palapala Drive Kahului, Hawai'i 96732
Accepting Authority:	(for EIS submittals only)
Contact Name, Email, Telephone, Address	
Consultant:	SSFM International
Contact Name, Email, Telephone, Address	Jennifer M. Scheffel jscheffel@ssfm.com (808) 356-1273 99 Aupuni Street, Suite 202 Hilo, HI 96720

Status (select one)	**Submittal Requirements**
__ __ DEA-AFNSI	Submit 1) the proposing agency notice of determination/transmittal letter on agency letterhead, 2) this completed OEQC publication form as a Word file, 3) a hard copy of the DEA, and 4) a searchable PDF of the DEA; a 30-day comment period follows from the date of publication in the Notice.
__X__ FEA-FONSI	Submit 1) the proposing agency notice of determination/transmittal letter on agency letterhead, 2) this completed OEQC publication form as a Word file, 3) a hard copy of the FEA, and 4) a searchable PDF of the FEA; no comment period follows from publication in the Notice.
____ FEA-EISPN	Submit 1) the proposing agency notice of determination/transmittal letter on agency letterhead, 2) this completed OEQC publication form as a Word file, 3) a hard copy of the FEA, and 4) a searchable PDF of the FEA; a 30-day comment period follows from the date of publication in the Notice.
____ Act 172-12 EISPN ("Direct to EIS")	Submit 1) the proposing agency notice of determination letter on agency letterhead and 2) this completed OEQC publication form as a Word file; no EA is required and a 30-day comment period follows from the date of publication in the Notice.
____ DEIS	Submit 1) a transmittal letter to the OEQC and to the accepting authority, 2) this completed OEQC publication form as a Word file, 3) a hard copy of the DEIS, 4) a searchable PDF of the DEIS, and 5) a searchable PDF of the distribution list; a 45-day comment period follows from the date of publication in the Notice.
____ FEIS	Submit 1) a transmittal letter to the OEQC and to the accepting authority, 2) this completed OEQC publication form as a Word file, 3) a hard copy of the FEIS, 4) a searchable PDF of the FEIS, and 5) a searchable PDF of the distribution list; no comment period follows from publication in the Notice.

____ FEIS Acceptance Determination	The accepting authority simultaneously transmits to both the OEQC and the proposing agency a letter of its determination of acceptance or nonacceptance (pursuant to Section 11-200-23, HAR) of the FEIS; no comment period ensues upon publication in the Notice.
FEIS Statutory Acceptance	Timely statutory acceptance of the FEIS under Section 343-5(c), HRS, is not applicable to agency actions.
____ Supplemental EIS Determination	The accepting authority simultaneously transmits its notice to both the proposing agency and the OEQC that it has reviewed (pursuant to Section 11-200-27, HAR) the previously accepted FEIS and determines that a supplemental EIS is or is not required; no EA is required and no comment period ensues upon publication in the Notice.
____ Withdrawal	Identify the specific document(s) to withdraw and explain in the project summary section.
____ Other	Contact the OEQC if your action is not one of the above items.

Project Summary

The State of Hawai'i Department of Transportation (HDOT) Highways Division, Maui District Office plans to construct a permanent baseyard and materials testing laboratory on HDOT property in Kahului, Maui. Currently, the site contains three temporary field office trailers and was previously used as the staging area for the construction of Airport Access Road.

The proposed baseyard and laboratory would occupy approximately 3.6 acres of land within a 19.6-acre parcel (Tax Map Key [TMK]: (2) 3-8-006:075) on the southwest side of the intersection of Hāna Highway and Airport Access Road. The Proposed Action includes construction of an 800 to 1000 square foot building to be used as a materials testing laboratory for concrete, asphalt, and soil/aggregates, and the installation of infrastructure to make the existing field office trailers permanent.

Final Environmental Assessment and Finding of No Significant Impact

Kahului Baseyard and Materials Testing Laboratory

Kahului, Maui, Hawai‘i

Prepared for:

State of Hawai‘i Department of Transportation
Highways Division – Maui District Office

Prepared by:

SSFM INTERNATIONAL

July 2019

This page intentionally blank

Kahului Baseyard and Materials Testing Laboratory

Kahului, Maui, Hawai‘i

Prepared for:

State of Hawai‘i Department of Transportation
Highways Division – Maui District Office
650 Palapala Drive
Kahului, Hawai‘i 96732

Prepared by:

SSFM International, Inc.
99 Aupuni Street, Suite 202
Hilo, Hawai’i

July 2019

This page intentionally blank

Project Summary

Project Name	Kahului Baseyard and Materials Testing Laboratory
Location	Kahului, Maui, Hawai'i
District	Wailuku-Kahului
Project Site Tax Map Key	(2) 3-8-006:075
Landowner	State of Hawai'i Department of Transportation
Project Site Existing Uses	The project site contains three temporary field office trailers and was previously used as the staging area for the construction of Airport Access Road.
State Land Uses	Urban
Maui County Zoning	LI, Light Industrial
Proposed Action	The State of Hawai'i Department of Transportation (HDOT) Highways Division, Maui District Office plans to construct a permanent baseyard and materials testing laboratory on HDOT property in Kahului, Maui. The proposed baseyard and laboratory would occupy approximately 3.6 acres of land within a 19.6-acre parcel on the southwest side of the intersection of Hāna Highway and Airport Access Road. The Proposed Action includes construction of an 800 to 1000 square foot building to be used as a materials testing laboratory for concrete, asphalt, and soil/aggregates, and the installation of infrastructure to make the existing field office trailers permanent.
Anticipated Impacts	The Proposed Action is not expected to negatively alter existing conditions at the site or have negative impacts on the environment.
Proposing Agency	State of Hawai'i Department of Transportation Highways Division – Maui District Office 650 Palapala Drive Kahului, Hawai'i 96732
Determination	Finding of No Significant Impact (FONSI)
Project Site Permits/ Approvals Required	National Pollutant Discharge Elimination System (NPDES) Permit County of Maui Building Permit
EA Preparer	SSFM International 99 Aupuni Street, Suite 202 Hilo, HI 96720 Contact: Jennifer Scheffel (808) 356-1273
Individuals, Community Groups, and Agencies Consulted	See Error! Reference source not found. Error! Reference source not found.

This page intentionally blank

Table of Contents

List of Tables

List of Figures

Appendices

This page intentionally blank

Acronyms

AAQS	Ambient Air Quality Standards
BMP	Best Management Practices
CAA	Clean Air Act
COM	County of Maui
CWRM	Commission on Water Resources Management
CZM	Coastal Zone Management
CZMA	Coastal Zone Management Act of 1972
DLNR	Department of Land and Natural Resources
DOH	State of Hawai'i Department of Health
DWS	Department of Water Supply
EA	Environmental Assessment
FEMA	Federal Emergency Management Agency
FHWA	Federal Highways Administration
HAR	Hawai'i Administrative Rules
HDOT	State of Hawai'i Department of Transportation
HRS	Hawai'i Revised Statutes
ICAC	Interagency Climate Adaptation Committee
ITE	Institute of Transportation Engineers
MBTA	Migratory Bird Treaty Act
MECO	Maui Electric Company
MPD	Maui Police Department
msl	mean sea level
NAAQS	National Ambient Air Quality Standards
NPDES	National Pollutant Discharge Elimination System
TMK	Tax Map Key
UH SOEST	University of Hawai'i School of Ocean and Earth Science and Technology
USACE	U.S. Army Corps of Engineers
USEPA	U.S. Environmental Protection Agency

This page intentionally blank

1. PURPOSE AND NEED FOR THE PROPOSED ACTION

1.1. Project Overview

The State of Hawai'i Department of Transportation (HDOT) Highways Division, Maui District Office plans to construct a permanent baseyard and materials testing laboratory on HDOT property in Kahului, Maui. Currently, the site contains three temporary field office trailers and was previously used as the staging area for the construction of Airport Access Road.

The proposed baseyard and laboratory would occupy approximately 3.6 acres of land within a 19.6-acre parcel (Tax Map Key [TMK]: (2) 3-8-006:075) on the southwest side of the intersection of Hāna Highway and Airport Access Road, as shown in **Figure 1-1**. The Proposed Action includes construction of an 800 to 1000 square foot building to be used as a materials testing laboratory for concrete, asphalt, and soil/aggregates, and the installation of infrastructure to make the existing field office trailers permanent.

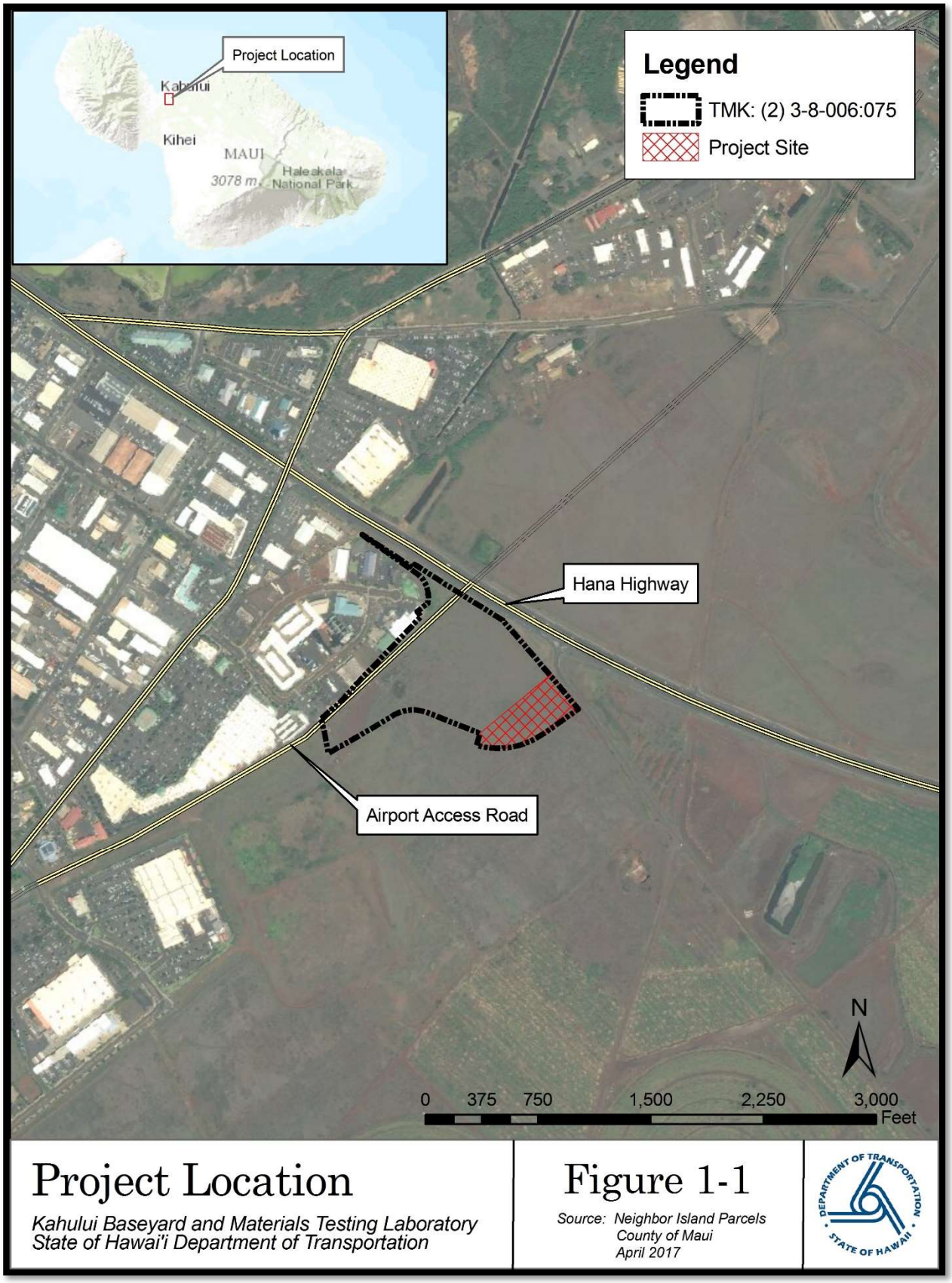
The Draft Environmental Assessment (EA) for the Proposed Action was published in the State of Hawai'i Office of Environmental Quality Control's *The Environmental Notice* July 8, 2018. This Final EA includes revisions based on comments received on the Draft EA. For ease of reading, all deletions are shown in double strike-through, and all additions are shown in double underline. Comments received on the Draft EA are provided in **Appendix A-2**.

1.2. Purpose and Need for the Proposed Action

The purpose of the Proposed Action is to establish a permanent field office and materials testing laboratory in Kahului on the island of Maui.

Title 23, Code of Federal Regulations (CFR), Part 637, Subpart B prescribes policies, procedures, and guidelines to assure the quality of materials and construction in all Federal-aid highway projects on the National Highway System. State transportation departments, including HDOT, are responsible for ensuring that materials incorporated into highway construction projects conform substantially to requirements of the plans and specifications. This requires materials testing in a qualified construction materials laboratory. There is currently not a materials testing laboratory in Kahului. Therefore, the Proposed Action is needed to ensure compliance with 23 CFR 637B and District requirements.

The Fiscal Year 2015 through 2018 Statewide Transportation Improvement Program for Maui includes over 20 projects in Central Maui (HDOT, 2017). The field office trailers are needed to provide permanent office space for HDOT construction engineers and personnel.



Project Location

Kahului Baseyard and Materials Testing Laboratory
State of Hawai'i Department of Transportation

Figure 1-1

Source: Neighbor Island Parcels
County of Maui
April 2017

1.3. Permits and Approvals Required for the Proposed Action

In addition to the environmental disclosure requirements of HRS Chapter 343, implementation of the Proposed Action would require coordination with state and county agencies for permits or approvals as presented in **Table 1-1**.

Table 1-1. Permits and Approvals Required for the Proposed Action

Permit or Approval	Description	Regulation(s)	Administrative Authority
National Pollutant Discharge Elimination System, Notice of Intent	Form C required for stormwater discharge associated with construction activities that disturb one (1) acre or more of total land area.	• Clean Water Act, Section 401 • Hawai'i Administrative Rules, Section 11-55	Department of Health, Clean Water Branch
Grading Permit	Required for excavation of fill, or for the temporary storage of soils, sand, gravel, rock, or any similar material.	• Maui County Code, Chapter 20.08	County of Maui Department of Public Works
Grubbing Permit	Required for any act by which vegetation, including trees, timber, shrubbery, and plants is uprooted and removed from the surface of the ground.	• Maui County Code, Chapter 20.08	County of Maui Department of Public Works
Building Permit	Required for the construction, alteration, moving, demolition, repair, and use of any building or structure within the county.	• Maui County Code, Title 16	County of Maui Department of Public Works

1.4. ~~Anticipated~~ Findings and Determination

Based on the significance criteria set forth in Hawai'i Administrative Rules (HAR) 11-200 and discussed in **Section** Error! Reference source not found., it is anticipated that the Proposed Action will not have a significant effect on the environment. ~~and that a Finding of No Significant Impact (FONSI) will be filed with the State of Hawai'i Office of Environmental Quality Control following the public comment period.~~ HDOT is therefore filing a Finding of No Significant Impact (FONSI) with the State of Hawai'i Office of Environmental Quality Control with this Final EA.

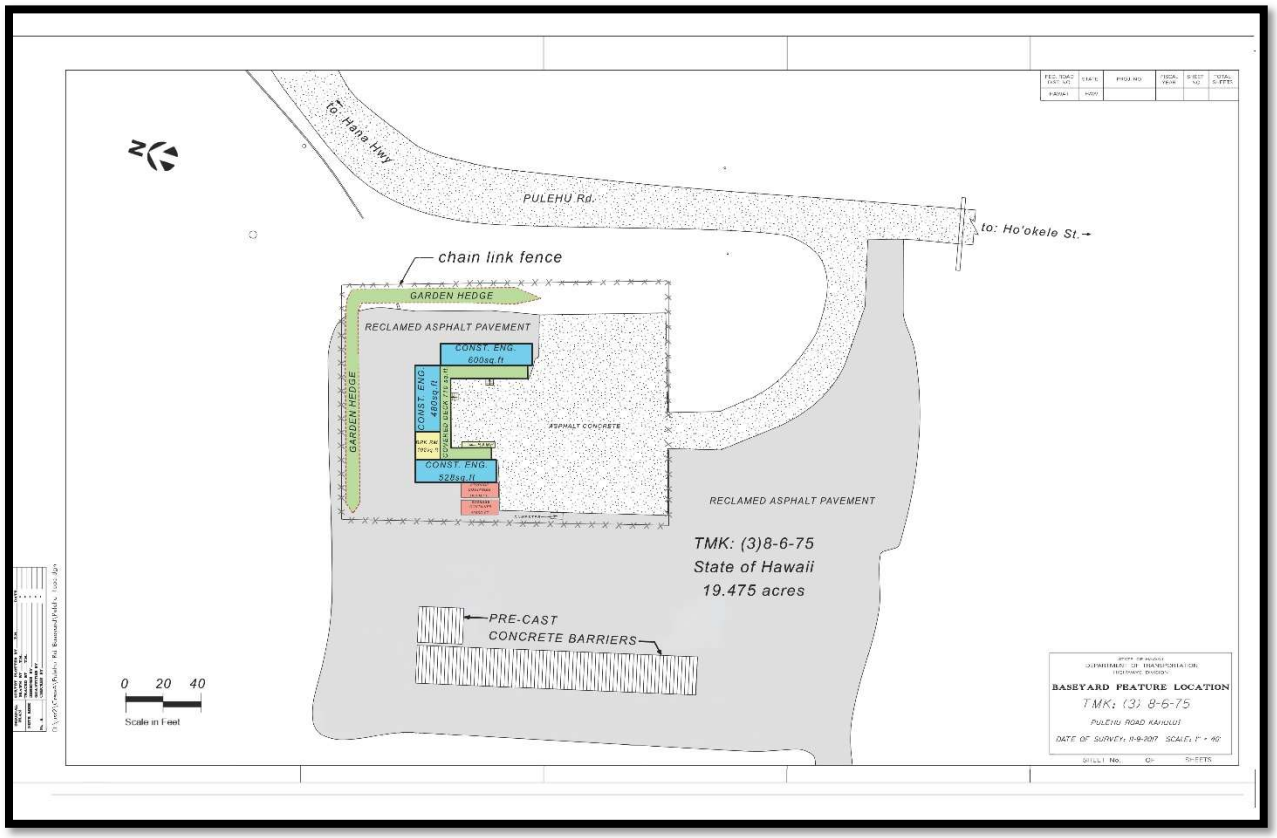
This page intentionally blank

2. PROPOSED ACTION AND ALTERNATIVES

2.1. No-Action Alternative

Under the No-Action Alternative, the materials testing laboratory would not be constructed. The temporary field office trailers would remain on the site and would continue to utilize the temporary, above-ground septic tanks that require emptying on a regular basis. The existing facilities on shown on the site plan in **Figure 2-1**.

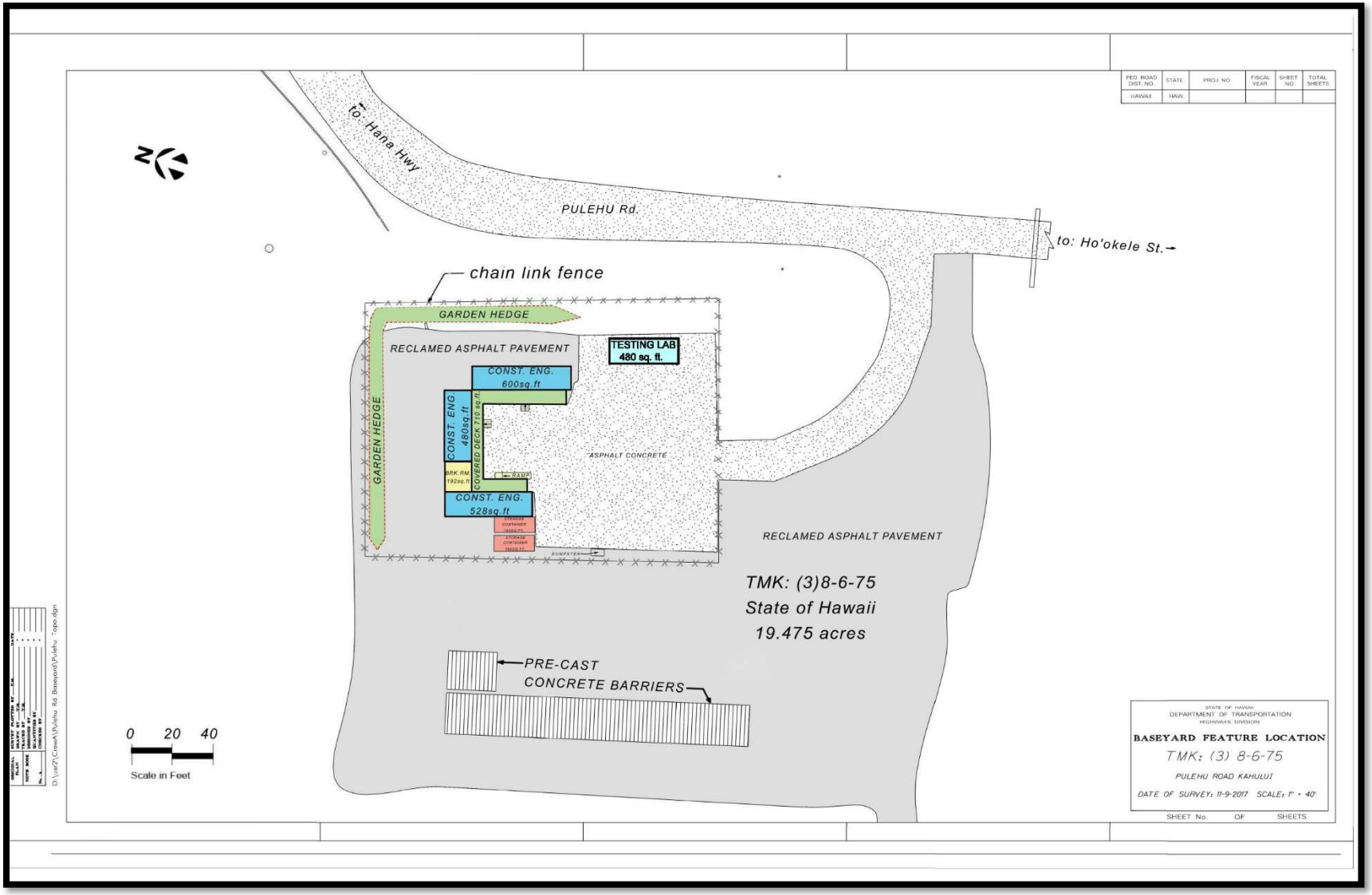
Figure 2-1. Existing Facilities Site Plan



2.2. Proposed Action

The Proposed Action includes the construction of an approximate 480 square foot materials testing laboratory and infrastructure to make the existing field office trailers permanent. The materials testing laboratory would be constructed of either wood or metal and would include construction of a concrete foundation. The laboratory would be connected to the existing electrical and water supply on the site. Wastewater would be processed through a septic system (i.e., septic tank and leach field) to be constructed as part of the Proposed Action. The Proposed Action would also include connection of the existing temporary field office trailers to the new septic system. There would be no change to the existing access to the site or the existing asphalt parking area. The proposed site plan is included as **Figure 2-2**.

Figure 2-2. Proposed Site Plan



3. ENVIRONMENTAL SETTING, POTENTIAL IMPACTS, AND MINIMIZATION AND MITIGATION MEASURES

3.1. Climate and Air Quality

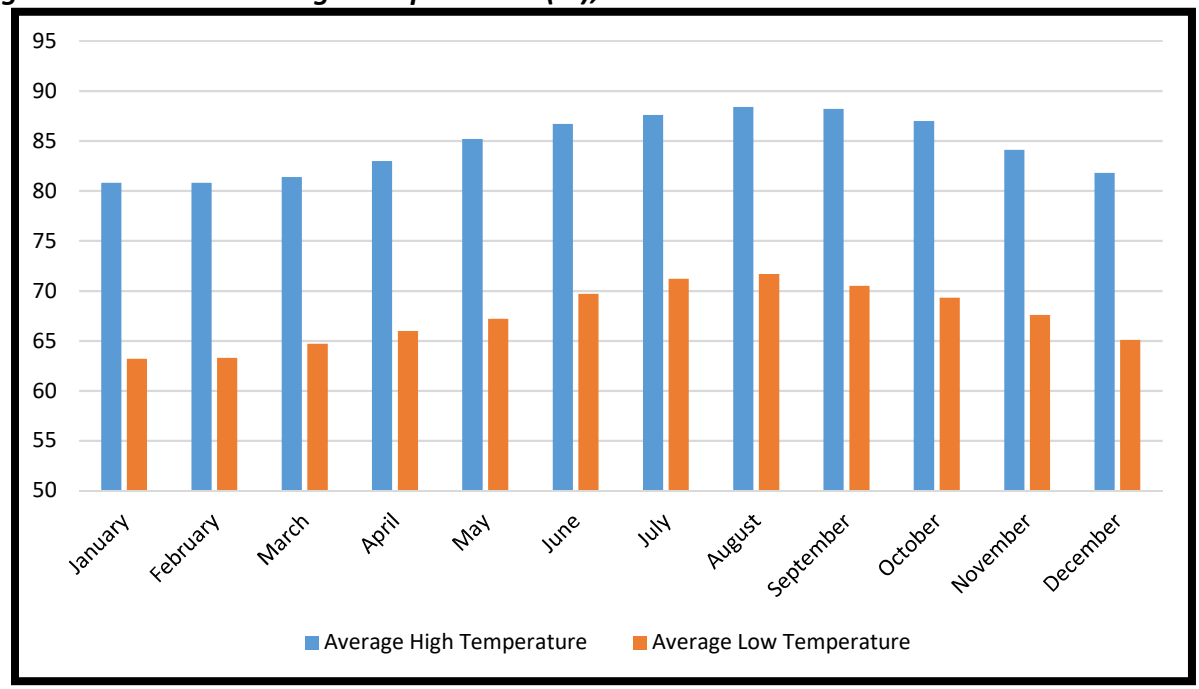
Existing Conditions

Climate

The Proposed Action is located in Kahului on the island of Maui. Kahului has a hot, semi-arid climate with a dry summer season due to its location on the leeward side of the island. Temperatures in this area are moderate and equable throughout the year. This reflects the small seasonal variation in the energy received from the sun and the tempering effect of the surrounding Pacific Ocean. Being situated in the tropics, Hawai'i has a relatively uniform day length and temperature.

The Kahului area has an average high temperature of 84.6 degrees Fahrenheit (°F) and an average low temperature of 67.5°F. As shown in **Figure 3-1**, the warmest months are August and September, and the coolest months are January and February. Kahului averages approximately 15.7 inches of rain per year (NWS, 2017c).

Figure 3-1. Kahului Average Temperatures (°F), 2000-2017



Sources: NWS, 2017a, 2017b

The prevailing winds throughout the year in Hawai'i are the northeasterly trade winds. Trade wind frequency varies from more than 90% of the time during the summer season to only 50% in January, with an overall frequency of 70%. Westerly, or Kona, winds occur primarily during the winter months, generated by low pressure systems near the islands.

Trade winds are produced by the outflow of air from the Pacific Anticyclone high pressure system, also known as the Pacific High. The center of this system is located well north and east of the Hawaiian chain and moves to the north and south seasonally. In the summer months, the center moves to the north, causing the trade winds to be at their strongest from May through September. In the winter, the center moves to the south, resulting in decreasing trade wind frequency from October through May.

Wind patterns of a more transient nature increase during the winter months. Winds from extra-tropical storms can be very strong from almost any direction, depending on the strength and position of the storm. Kona winds are generally from a southerly to southwesterly direction, and are sometimes associated with slow moving low pressure systems known as Kona lows situated to the west of the island chain. These storms are often accompanied by heavy rains.

Air Quality

The Clean Air Act of 1972 and its 1990 Amendments (CAA) and subsequent legislation regulate air emissions from area, stationary, and mobile sources. Both the U.S. Environmental Protection Agency (USEPA) and the State of Hawai'i have instituted Ambient Air Quality Standards (AAQS) to maintain air quality in the interest of public health and secondary public welfare.

At the present time, seven parameters are regulated: particulate matter, sulfur dioxide, hydrogen sulfide, nitrogen dioxide, carbon monoxide, ozone and lead. The Hawai'i AAQS are in some cases considerably more stringent than the comparable National Ambient Air Quality Standards (NAAQS). In particular, the Hawai'i 1-hour AAQS for carbon monoxide is four times more stringent than the comparable national limit. **Table 3-1** illustrates the NAAQS and State AAQS and the units of measure (micrograms per cubic meter, $\mu g/m^3$ and parts per million, ppm).

As described above, the prevailing winds throughout the year in Hawai'i are the northeasterly trade winds. These trade winds keep the air quality generally good. The Department of Health (DOH) operates a network of air quality monitoring stations at various locations around the state, including one in Kahului. The Kahului station was established in January 2015 and monitors $PM_{2.5}$. The monitoring objective for this station is to monitor air quality impacts associated with cane burning. In 2015, the highest concentration of $PM_{2.5}$ was 19.8 $\mu g/m^3$, with a 98^{th} percentile of 11.5 $\mu g/m^3$. The annual average was 5.4 $\mu g/m^3$ and there were no occurrences of 24-hour concentrations greater than 35 $\mu g/m^3$ (the Federal standard) (DOH, 2016). With the discontinuation of the sugar cane industry on Maui, it is expected that concentrations of $PM_{2.5}$ will be consistent throughout the year and the largest sources of air pollution will most likely be associated with automobile traffic using the roadway network in the project area.

In addition to the NAAQS and the State AAQS, the DOH regulates fugitive dust. HAR Section 11-60.1-33, Fugitive Dust, states that no person shall cause or permit visible fugitive dust to become airborne without taking reasonable precautions, and no person shall cause or permit the discharge of visible fugitive dust beyond the property lot line on which the fugitive dust originates (DOH, 2014). This rule applies to construction projects and would, therefore, be applicable to the Proposed Action.

Table 3-1. State of Hawai'i and National Ambient Air Quality Standards

Pollutant	Units	Averaging Time	Maximum Allowable Concentration		
			National Primary	National Secondary	State of Hawaii
Particulate Matter <10 microns (PM_{10})	µg/m³	Annual 24 Hours	- 150[a]	- 150[a]	50 150[b]
Particulate Matter <2.5 microns ($PM_{2.5}$)	µg/m³	Annual 24 Hours	12[c] 35[d]	15[c] 35[d]	- -
Sulfur Dioxide (SO_2)	ppm	Annual 24 Hours 3 Hours 1 Hour	- - - 0.075[e]	- - 0.5[b] -	0.03 0.14[b] 0.5[b] -
Nitrogen Dioxide (NO_2)	ppm	Annual 1 Hour	0.053 0.100[f]	0.053 -	0.04 -
Carbon Monoxide (CO)	ppm	8 Hours 1 Hour	9[b] 35[b]	- -	4.4[b] 9[b]
Ozone (O_3)	ppm	8 Hours	0.070[g]	0.070[g]	0.08[g]
Lead	µg/m³	3 Months Quarter	0.15[h] 1.5[i]	0.15[h] 1.5[i]	- 1.5[i]
Hydrogen Sulfide	ppb	1 Hour	-	-	25[b]

Notes:
[a]Not to be exceeded more than once per year on average over three years.
[b]Not to be exceeded more than once per year.
[c]Three-year average of the weighted annual arithmetic mean.
[d]98th percentile value averaged over three years.
[e]Three-year average of fourth-highest daily 1-hour maximum.
[f]98th percentile value of the daily 1-hour maximum averaged over three years.
[g]Three-year average of annual fourth-highest daily 8-hour maximum.
[h]Rolling 3-month average.
[i]Quarterly average.
Source: DOH, 2015

Potential Impacts

Only short-term construction-related impacts to air quality are anticipated with implementation of the Proposed Action. During construction, potential emission sources that may affect air quality at the project site include the following:

- Diesel and/or gasoline-powered construction equipment and motor vehicles would contribute to additional CO and CO_2 in the air.
- Fugitive dust emissions resulting from construction of the materials testing laboratory.

Because levels of criteria pollutants in Hawai'i are consistently below Federal and State AAQS, and because the prevailing trade winds rapidly carry pollutants offshore limiting the effect on receptors, increases in levels of criteria pollutants at the project site from construction activities are not expected to be

significant. It is not anticipated that Federal or State AAQS would be exceeded during construction activities.

The Proposed Action would not add an emission source; therefore, there would be no impact to the existing air quality upon completion of construction.

Under the No-Action Alternative, no construction activities would occur and no additional emission sources would be added; therefore, there would be no impact to the existing air quality.

Minimization and Mitigation Measures

A dust control plan, to be approved by the DOH, would be developed and implemented to minimize fugitive dust during construction. The plan would include some or all of the following measures:

- Watering of active work areas
- Screening piles of materials from wind, if appropriate
- Cleaning nearby paved roads affected by construction
- Covering open trucks carrying construction materials
- Limiting areas to be disturbed at any given time
- Mulching or chemically stabilizing inactive areas that have been disturbed

Additionally, contractors would be required to maintain equipment with emissions controls.

3.2. Noise

Existing Noise Environment

Noise is defined as unwanted sound and is one of the most common environmental issues of concern to the public. A number of factors affect sound as it is perceived by the human ear. These include the actual level of the sound (i.e., noise), the frequencies involved, the period of exposure to the noise, and changes or fluctuations in the noise levels HAR, Section 12-200.1 – Occupational Noise Exposure

The State of Hawai'i Community Noise Control Rule (HAR Chapter 11-46) defines three classes of zoning districts and specifies corresponding maximum permissible sound levels due to stationary noise sources such as air-conditioning units, exhaust systems, generators during exposure. The accepted unit of measure for noise levels is the decibel (dB).

The State of Hawaii regulates noise exposure in the following statutes and rules:

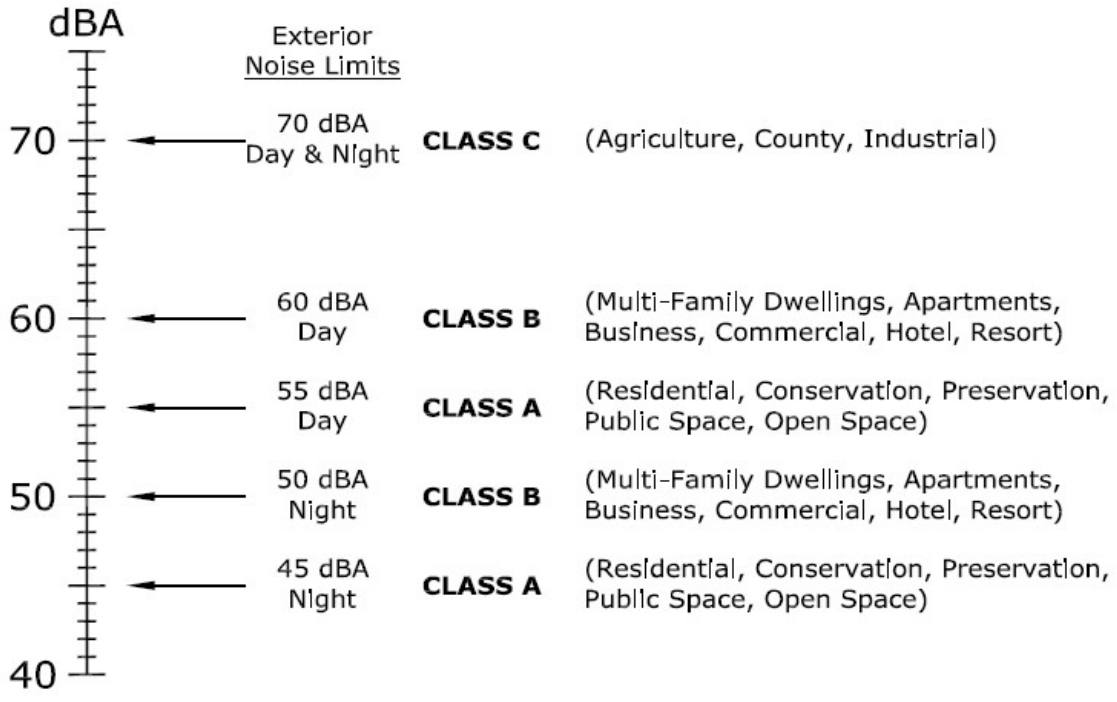
- HRS, Section 342F – Noise Pollution
- HAR, Section 11-46 – Community Noise Control

The State of Hawai'i Community Noise Control Rule (HAR Chapter 11-46) defines three classes of zoning districts and specifies corresponding maximum permissible sound levels due to stationary noise sources such as air conditioning units, exhaust systems, generators, compressors, pumps, etc. The Community Noise Control Rule does not address most moving sources, such as vehicular traffic noise, air traffic noise, or rail traffic noise. However, the Community Noise Control Rule does regulate noise related to construction activities, which may not be stationary.

The maximum permissible noise levels are enforced by the DOH for any location at or beyond the property line and shall not be exceeded for more than 10% of the time during any 20-minute period. The specified noise limits which apply are a function of the zoning and time of day as shown in **Figure 3-2**. With respect to mixed zoning districts, the rule specifies that the primary land use designation shall be used to determine the applicable zoning district class and the maximum permissible sound level. In determining the maximum permissible sound level, the background noise level is taken into account by the DOH.

Figure 3-2. Hawai'i Maximum Permissible Sound Levels for Various Zoning Districts

Zoning District	**Day Hours** (7 AM to 10 PM)	**Night Hours** (10 PM to 7 AM)
CLASS A Residential, Conservation, Preservation, Public Space, Open Space	55 dBA (Exterior)	45 dBA (Exterior)
CLASS B Multi-Family Dwellings, Apartments, Business, Commercial, Hotel, Resort	60 dBA (Exterior)	50 dBA (Exterior)
CLASS C Agriculture, Country, Industrial	70 dBA (Exterior)	70 dBA (Exterior)



As discussed in Section 4.2, the Proposed Action is located in the Light Industrial zone (COM Planning Commission, 2010), which is designated as "Class C". The project site is subject to noise generated from

traffic on nearby Airport Access Road and Hāna Highway, as well as overflights of aircraft from the Kahului Airport.

Potential Impacts

Noise would be generated during construction by construction equipment used to build the materials testing lab. Noise generation would be short-term and limited to the project area. Construction equipment may include excavators, trucks, and other heavy equipment. Earthmoving equipment (e.g., bulldozers and diesel-powered trucks) would probably be the loudest equipment used during construction. Typical noise emission levels for construction equipment is provided in **Table 3-2**.

Table 3-2. Typical Noise Emission Levels for Construction Equipment

Type of Equipment	Noise Level at 50 feet (dBA)
Air Compressor	81
Backhoe	80
Bulldozer	82
Chain Saw	85
Concrete/Grout Pumps	82
Crawler Service Crane (100-ton)	83
Dump Truck	88
Excavator	85
Front End Loader	80
Generator	81
Jackhammer (compressed air)	85
Lift Booms	85
Pick-Up Truck	55
Power-Actuated Hammer	88
Water Pump	76
Water Truck	55

Source: FHWA, 2015

Upon completion of construction, noise effects would be minimal and similar to the existing noise. Vehicles and equipment from the baseyard are expected to leave the baseyard at the start of the work shift and return at the end of the work day. There may be repairs and preventative maintenance which occurs within a normal work day. The baseyard is expected to close during weekday nights, holidays, and weekends. Noise from the materials testing laboratory would be enclosed within the building and is not expected to add to the existing noise environment.

Under the No-Action Alternative, no construction activities would occur and no additional noise sources would be added. The temporary baseyard would continue to operate at its current capacity; therefore, there would be no change to the existing noise environment.

Minimization and Mitigation Measures

Noise generated from construction activities and the use of machinery would be minimized by requiring contractors to adhere to state and county noise regulations. Construction activities would be conducted on weekdays and in daytime hours. The construction contractor would be required to obtain a Community Noise Permit from the DOH Indoor and Radiological Health Branch. In the event that work occurs after normal working hours (i.e., at night or on weekends), or if permissible noise levels are exceeded, the construction contractor would be required to obtain a Community Noise Variance and comply with any permit conditions.

3.3. Topography, Geology, and Soils

Existing Conditions

The Proposed Action would occupy 3.6 acres of land within a 19.6-acre parcel in a commercially developed area on lands formerly used for sugar cane production. The project site is approximately 20 feet above mean sea level (msl) with little to no slope.

As shown in **Figure 3-3**, the project site is located on the Kula Volcanics geological unit. Kula Volcanics are lavas that have weathered into deep soils because of the long time that has lapsed since the last lava flow in the area (Stearns, H.T. and G.A. MacDonald, 1942).

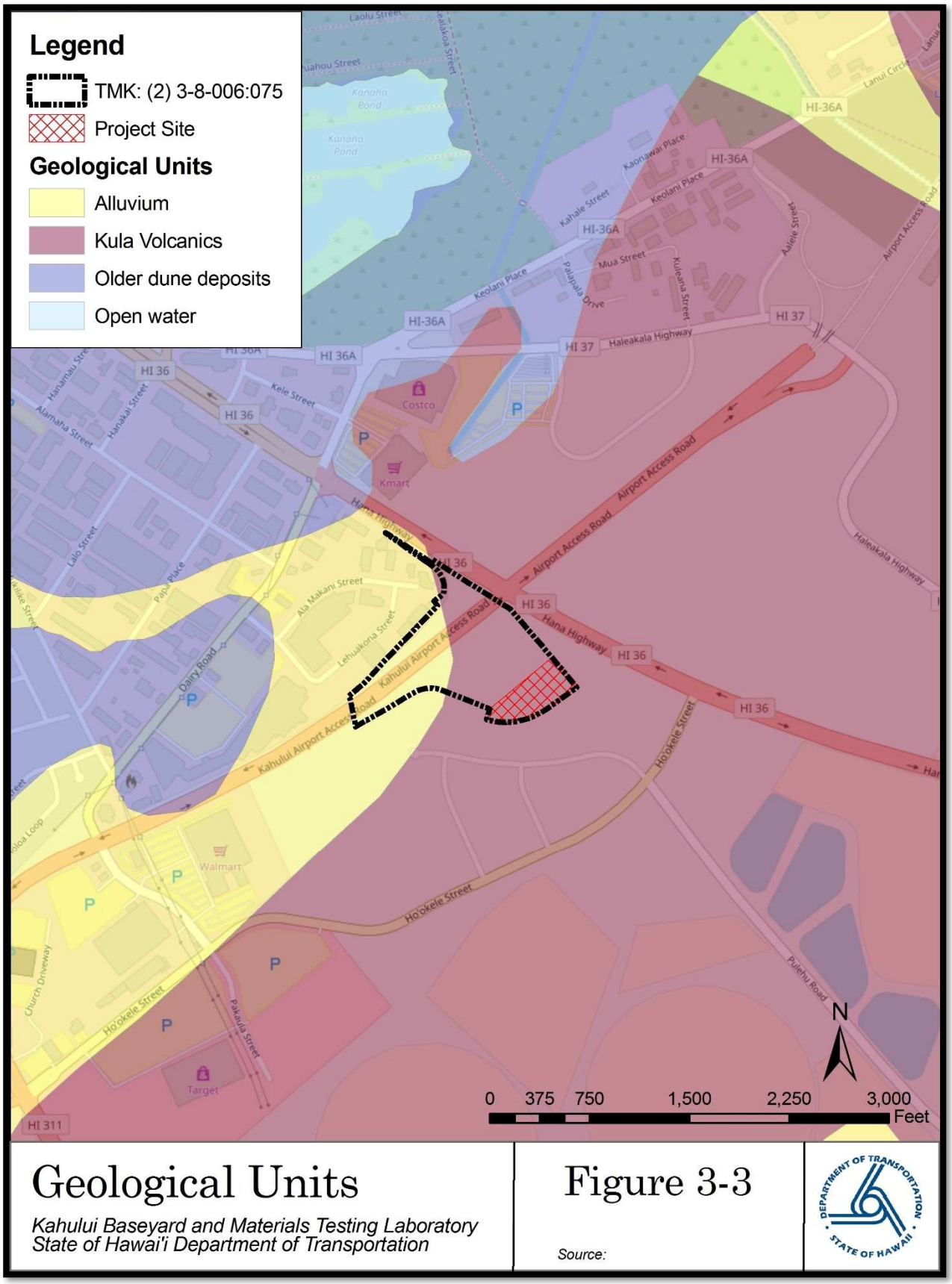
As shown in **Figure 3-4**, the project site overlays EaA, Ewa silty clay loam, 0 to 3 percent slope. The well-drained volcanic soils of the Ewa Soil Series occur in basins and alluvial fans on Maui and O'ahu. Soils of this series occur at elevations between sea level and 150 feet msl in areas receiving 10 to 30 inches of rainfall annually. The EaA soil type exhibits a very slow runoff and a very slight erosion hazard. In general, the EaA soils are used for commercial cultivation of sugar cane and for residential developments (Foote, et.al, 1972).

Potential Impacts

Construction of the Proposed Action would include grading and site preparation for the materials testing laboratory and infrastructure associated with the laboratory and field office trailers. Short-term construction activities may include minor soil loss and erosion.

Overall, the Proposed Action would not have a significant effect on the topography, geology, or soils of the area. The soil type of the area is appropriate for building construction.

Under the No-Action Alternative, no construction activities would occur; therefore, there would be no impacts to topography, geology, or soils.

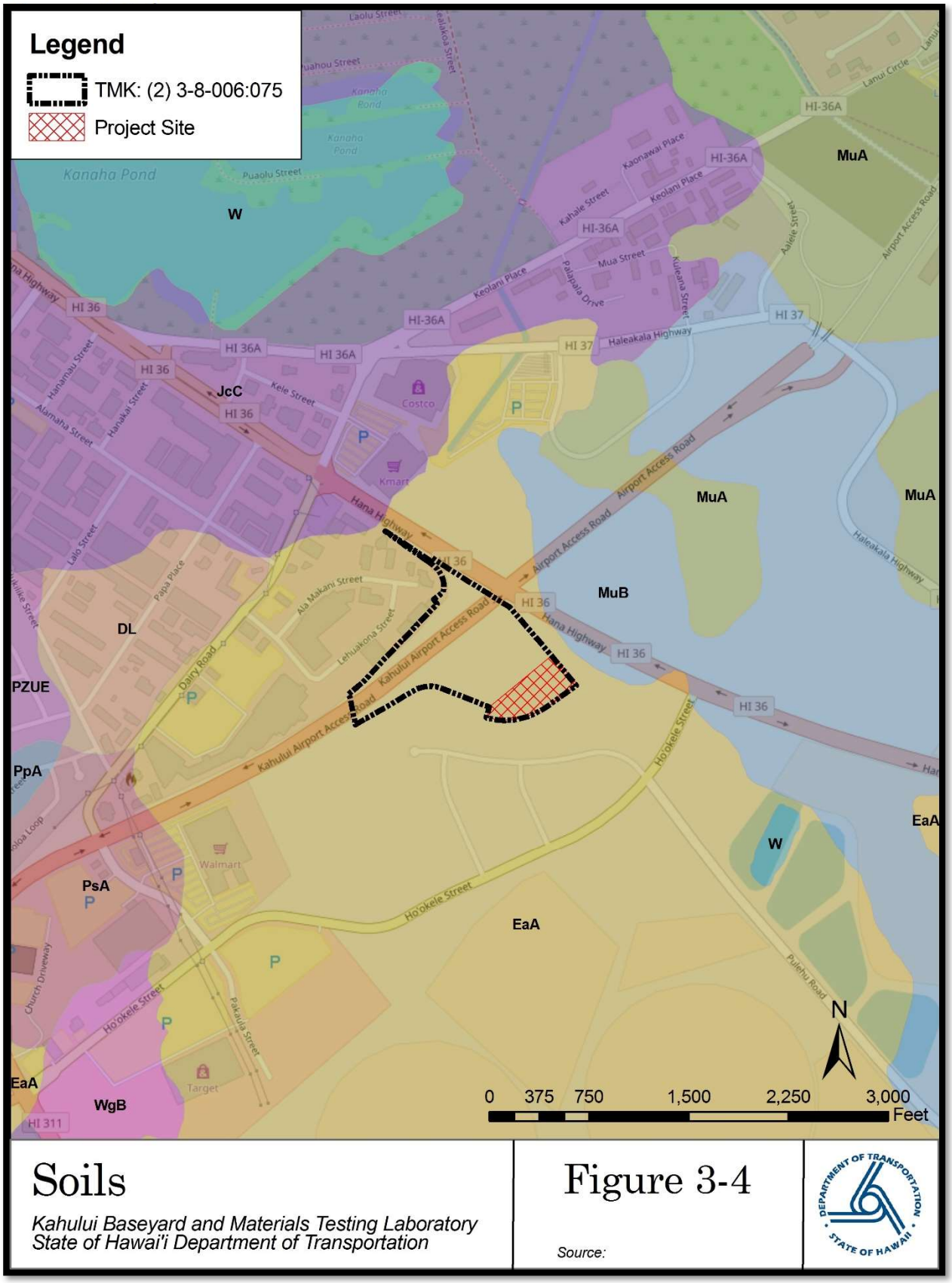


Geological Units

Kahului Baseyard and Materials Testing Laboratory
State of Hawai'i Department of Transportation

Figure 3-3

Source:



Soils

Kahului Baseyard and Materials Testing Laboratory
State of Hawai'i Department of Transportation

Figure 3-4

Source:

Minimization and Mitigation Measures

HDOT would obtain coverage under the National Pollutant Discharge Elimination System (NPDES) General Permit for stormwater discharge associated with construction activities. As part of the permit process, HDOT would prepare a construction site Best Management Practices (BMP) plan that would include an erosion and sediment control plan, a site-specific plan to minimize erosion of soil and discharge of other pollutants into State waters, and descriptions of measures that would minimize the discharge of pollutants via stormwater after construction is complete. BMPs would be installed prior to ground-disturbing activities and would be inspected and maintained throughout the construction period.

HDOT would also obtain Grading and Grubbing Permits from the County of Maui Department of Public Works, Development Services Division. The contractor would be required to comply with the General Provisions for the permits, as well as the standard permit conditions.

3.4. Natural and Man-Made Hazards

Existing Conditions

Floods

Flood zones are geographic areas that the Federal Emergency Management Agency (FEMA) has defined according to varying levels of flood risk. Flood zones are depicted on Flood Insurance Rate Maps. As shown in **Figure 3-5**, the majority of the project area is located in Flood Zone X. Flood Zone X is the flood insurance rate zone that corresponds to areas outside the one percent annual chance floodplain (FEMA, 2016).

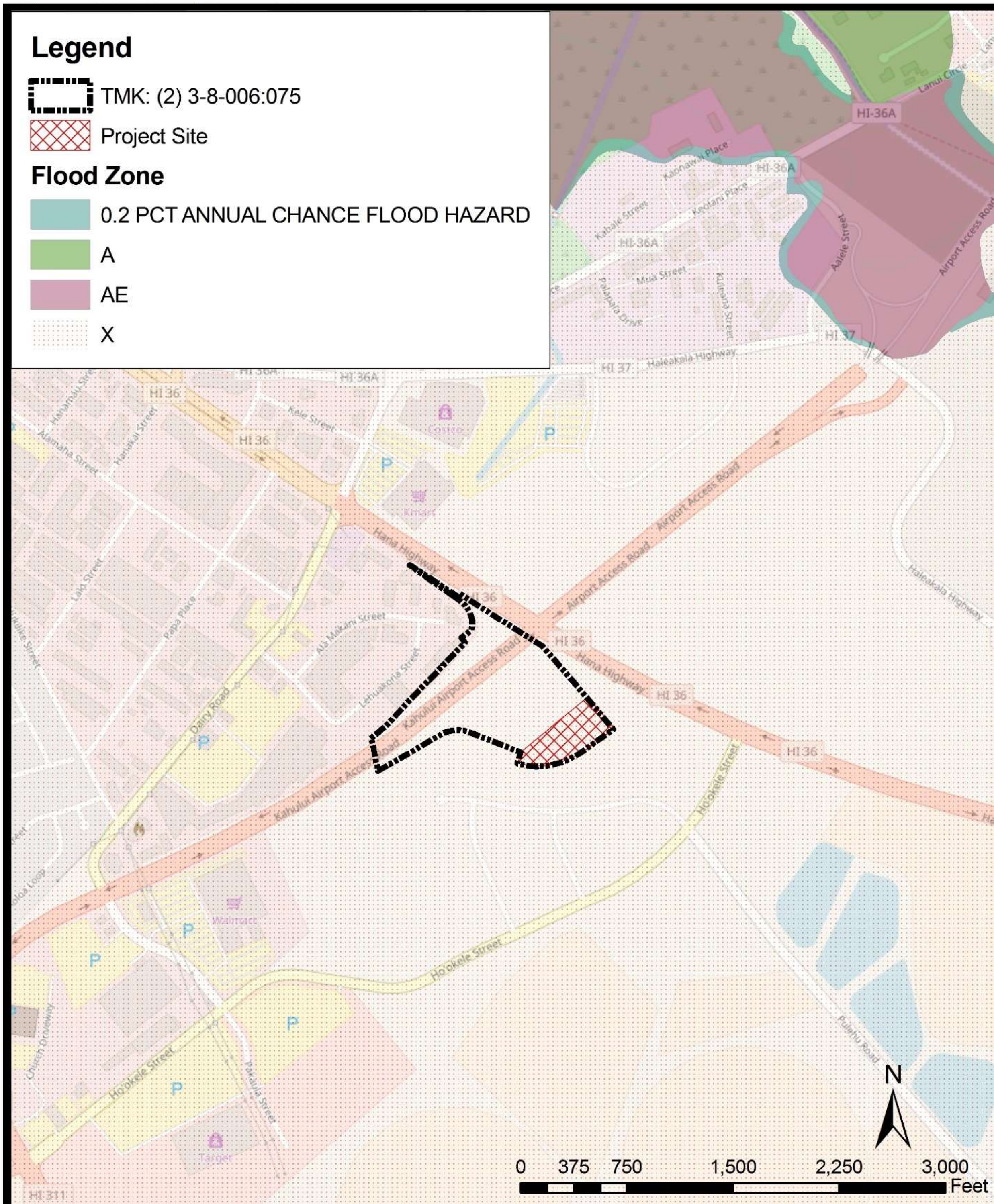
Earthquakes

As a series of islands formed by volcanoes, the Islands of Hawai'i are very seismically active. Most of the earthquakes in Hawai'i occur on the Big Island and are associated with volcanic activity. However, other earthquakes are caused by the weight of the Hawaiian Islands on the Pacific lithosphere.

As of October 18, 2017, the island of Maui had experienced 18 earthquakes in the past 365 days, with the largest earthquake having a 4.7 magnitude (Earthquake Track, 2017). Earthquakes on the island of Hawai'i and between the islands can sometimes be felt on Maui, as well.

Hurricanes and Tropical Storms

The Hawaiian Islands are seasonally affected by Pacific hurricanes from June through the November. On average, there are between four and five tropical cyclones observed in the Central Pacific every year. The state has been affected by significant hurricanes over the years. These include Hiki (1950), Nina (1957), Dot (1959), Iwa (1982), Iniki (1992), and Iselle (2014) (HNN, 2016a). In addition to damaging winds and heavy rains, hurricanes cause heavy surf and wave action that can damage beach areas. According to a report presented at the International Union of Conservation of Nature World Conservation Congress, global climate change could mean that Hawai'i may experience more frequent and more severe hurricanes in the future (HNN, 2016b).



Flood Hazard Areas

Kahului Baseyard and Materials Testing Laboratory
State of Hawai'i Department of Transportation

Figure 3-5

Source: FEMA's Natl. Flood Map Service Center
March 28, 2016

Tsunami

As shown in **Figure 3-6**, the project area is within the Tsunami Evacuation Zone. A tsunami involves the generation of a series of destructive ocean waves that can affect all shorelines. These waves can occur at any time with limited or no warning, and are most commonly generated by earthquakes in marine and coastal regions (NOAA, 2017).

Climate Change and Sea Level Rise

Climate change is currently considered a threat to all coastal areas. Over time, changes due to sea level rise are anticipated to erode beaches and cause damage to low-lying areas. Stronger storms and more severe flooding also have the possibility as sea levels continue to rise.

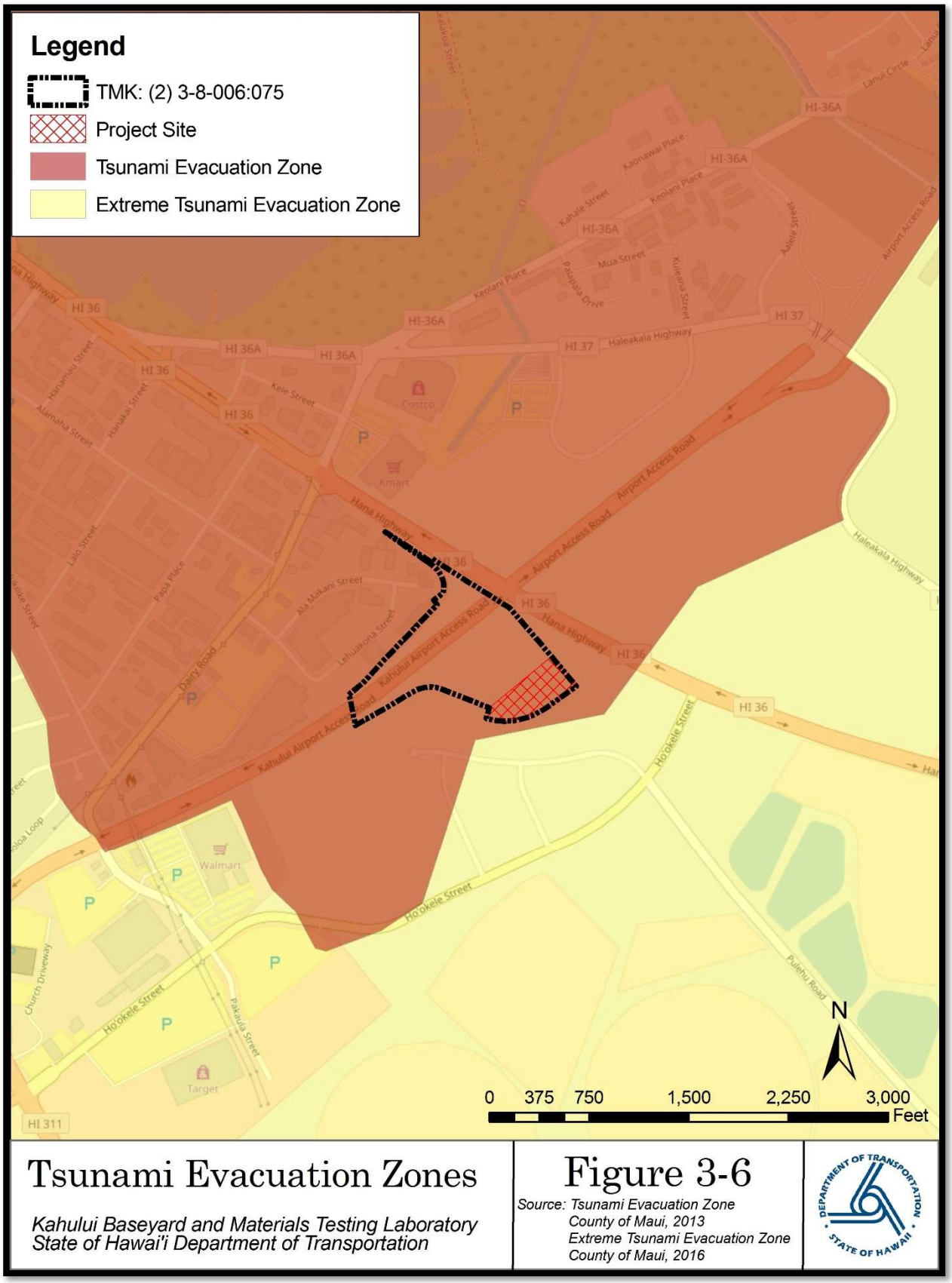
Planning for sea level rise is challenging as there are several changing and unknown factors. The U.S. Army Corps of Engineers (USACE) has developed tools and references for guidance. With regard to long-range planning, the USACE highlights the following:

> *The climate for which the project was designed can change over the full lifetime of a project to the extent that stability, maintenance, and operation may be impacted, possibly with serious consequences, but also potentially with beneficial consequences* (USACE, 2014a).

The USACE supports a SMART (S: Specific; M: Measurable; A: Attainable; R: Risk Informed; T: Timely) planning approach, which is risk-informed, decision-focused planning that integrates planning and engineering when assessing sea level rise. A method for calculating global sea level rise was advanced by the USACE in their publication, *Sea Level Change Considerations for Civil Works Programs* (EC1165-2-212, October 2011) (USACE, 2011).

For this EA, the USACE Sea Level Rise Calculator (USACE, 2014b) was utilized to provide sea level rise projections through 2100. In addition, future planning work by HDOT for other improvements beyond this design period will consider future additional data, trends, and projections that become available.

In addition to the USACE tools and references, there are also ongoing efforts at the State and County levels to evaluate changes that need to be made to current rules, regulations, and practice standards, with the ultimate goal of establishing a standard that can be implemented State-wide. The Interagency Climate Adaptation Committee (ICAC) is currently developing a Sea Level Rise Report to be completed by July 2018. The intent of this report is to serve as the framework for the State and the ICAC to address other climate-related threats and climate change adaptation priorities, ultimately leading to a Climate Adaptation Plan for the State of Hawai'i, which will be prepared by the State of Hawai'i Office of Planning (State of Hawai'i, 2016). The University of Hawai'i School of Ocean and Earth Science and Technology (UH SOEST) has also been studying sea level rise.



Tsunami Evacuation Zones

Kahului Baseyard and Materials Testing Laboratory
State of Hawai'i Department of Transportation

Figure 3-6

Source: Tsunami Evacuation Zone
County of Maui, 2013
Extreme Tsunami Evacuation Zone
County of Maui, 2016

Potential Impacts

Natural Hazards

Natural hazards cannot be controlled; rather, they can only be remediated for after the events occur. Construction of the materials testing laboratory and associated infrastructure would not create conditions that would exacerbate natural hazards. The Maui County Emergency Management Agency is responsible for administering and operating the various local, State, and Federal civil defense programs for the County. In the event of a hurricane or tsunami, watches and/or warnings are issued by the Central Pacific Hurricane Center and the Pacific Tsunami Warning Center, respectively. In the event of a hurricane or tsunami warning, construction would halt until such time as the warning is lifted and proper evacuation procedures would be followed.

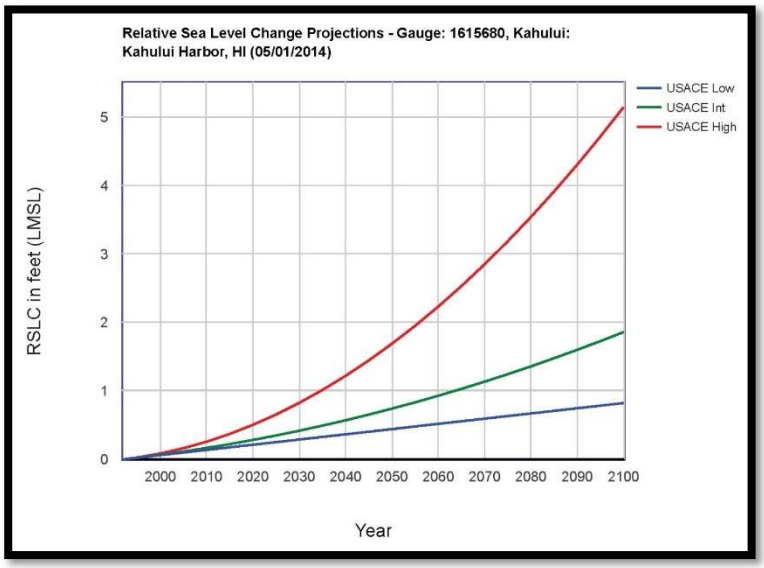
The Proposed Action would be designed to withstand the level of forces necessary to minimize the likelihood that an extreme event would damage the structure. The Proposed Action does not involve habitable uses nor will it encourage such uses. In the event of a hurricane warning, workers would follow civil defense instructions regarding evacuations. If a tsunami warning were to occur while workers are on-site, evacuation procedures would be followed to safely get out of the tsunami evacuation area and move Upcountry.

Under the No-Action Alternative, no construction would occur. The temporary baseyard would continue to operate at its current capacity, and workers would continue to listen to civil defense warnings and follow civil defense instructions during times of emergency.

Climate Change and Sea Level Rise

The project site is approximately 20 feet above msl. As shown in **Figure 3-7**, there could be approximately one to five feet of sea level rise at Kahului Harbor. Therefore, the project site is not expected to be directly affected by sea level rise with either the Proposed Action or the No-Action Alternative.

Figure 3-7. Sea Level Rise Projections, Kahului Harbor



Source: USACE Sea Level Rise Calculator

Minimization and Mitigation Measures

The design and construction of the Proposed Action would be in accordance with all applicable County of Maui building standards. No other minimization or mitigation measures are proposed or expected to be required.

3.5. Water Resources

Existing Conditions

Groundwater

The State of Hawai'i Department of Land and Natural Resources (DLNR) Commission on Water Resources Management (CWRM) has established a groundwater hydrologic unit and coding system for groundwater resource management. The project site is located within the Kahului Aquifer System (60301) of the Central Aquifer Sector and has an estimated yield of one million gallons per day.

Surface Waters and Wetlands

There are no surface waters or wetlands on the project site.

Potential Impacts

Construction of the Proposed Action would include grading and site preparation for the materials testing laboratory and infrastructure associated with the laboratory and field office trailers. Short-term construction activities may include minor soil loss and erosion. Grading and grubbing activities would be limited to the area which is necessary for construction of the materials testing laboratory and associated infrastructure to minimize erosion potential. Construction activities are not likely to introduce to, nor release from the soil any materials which could adversely affect groundwater. Dewatering activities are no anticipated for this project.

The Proposed Action would have no effects to surface waters and wetlands since there are none on or near the site. The Proposed Action is not expected to have adverse effects to groundwater.

Under the No-Action Alternative, no construction would occur and there would be no impacts to water resources during construction. The temporary baseyard would continue to operate at its current capacity.

Minimization and Mitigation Measures

HDOT would obtain coverage under the NPDES General Permit for stormwater discharge associated with construction activities. As part of the permit process, HDOT would prepare a construction site BMP plan that would include an erosion and sediment control plan, a site-specific plan to minimize erosion of soil and discharge of other pollutants into State waters, and descriptions of measures that would minimize the discharge of pollutants via stormwater after construction is complete. BMPs would be installed prior to ground-disturbing activities and would be inspected and maintained throughout the construction period.

HDOT would also obtain Grading and Grubbing Permits from the County of Maui Department of Public Works, Development Services Division. The contractor would be required to comply with the General Provisions for the permits, as well as the standard permit conditions.

In addition to the above permits, the Proposed Action would implement the following measures recommended by the County of Maui (COM) Department of Water Supply (DWS) during the pre-assessment consultation for the project to minimize infiltration and runoff during construction:

- Prevent cement products, oil, fuel, or other toxic substances from falling or leaching into the ground.
- Remove all construction debris and toxic substances daily to prevent entry into the ocean.
- Maintain vehicles and equipment to prevent oil or other fluids from leaking.
- Rinse concrete trucks and tools off-site.
- Properly install and maintain erosion control barriers, such as silt fencing or straw bales.
- Disturb the smallest area possible.
- Retain ground cover until the last possible date. Stabilize denuded areas by sodding or planting as soon as possible. Use high seeding rates to ensure rapid stand establishment. Apply biocides only during dry periods of low rainfall to minimize chemical runoff.
- Keep runoff on site.

3.6. Biological Resources

Existing Conditions

A biological resources assessment survey was conducted of the project site in May and April 2017. The results of the surveys indicated that the flora and fauna assemblages in the survey area are typical of those found in disturbed, low- to mid-elevation areas on Maui. No Federally listed threatened or endangered plant of animal species or proposed listed or candidate species were observed during the pedestrian surveys. The *Biological Resources Survey Report for Department of Transportation Baseyard Project, Kahului, Island of Maui* is provided in **Appendix B**.

The following sections provide more details about flora, fauna, and special status species identified at the project site.

Flora

A total of 55 plant species were recorded in the project area, of which only seven species are native to the Hawaiian Islands.

1. Pōpolo *(Solanum americanum)*
2. ʻuhaloa *(Waltheria indica)*
3. Kīpūkai *(Heliotropium curassavicum)*
4. ʻilima *(Sida fallax)*
5. Naupaka kahakai *(Scaevola taccada)*
6. Kou *(Cordia subcordata)*
7. Pōhinahina *(Vitex rotundifolia)*

All are indigenous plants that are common throughout the Hawaiian Islands.

Vegetation in the project area consists of two vegetation types: ruderal and landscaped. The ruderal vegetation type is found throughout most of the project site except in areas where native vegetation has been planted. Most of the plant species found in this vegetation type are non-natives adapted to

colonizing disturbed areas. Landscaped vegetation consists of native species, including ʻilima, naupaka kahakai, kou, and pōhinahina, which are all planted as landscaping around the perimeter of the project site.

Overall, the vegetation in the project area is disturbed from previous and current land use activities. The vegetation types and species identified are not considered unique, and over 87% of the plant species identified are non-native.

Fauna

A total of five birds were observed in and around the survey area, which includes the following:

1. Common myna *(Acridotheres tristis)*
2. Cattle egret *(Bubulcus ibis)*
3. Spotted dove *(Spilopelia chinensis)*
4. Zebra dove *(Geopelia striata)*
5. Chestnut munia *(Lonchura atricapilla)*

All of these species are non-native to Hawai'i, although the cattle egret is protected by the Migratory Bird Treaty Act (MBTA). Although not observed, the MBTA-protected Pacific golden plover *(Pluvialis fulva)* could also occur in the project area because there is appropriate foraging habitat.

One mammal, the non-native Asian mongoose *(Herpestes javanicus)* was observed in the project area. Axis deer *(Axis axis)* tracks were also observed. Other non-native mammals that could be expected in the project area include the dog *(Canus familiaris),* cat *(Felis catus),* feral pig *(Sus scrofa),* rat *(Rattus* spp.), and mouse *(Mus musculus).*

No terrestrial reptiles or amphibians were observed in the project area. There are no terrestrial reptiles or amphibians native to the Hawaiian Islands.

Native invertebrates were not detected in the project area. Non-native invertebrate species observed include butterflies, wasps and bees, spiders, and ants.

Special Status Species

Although the project area does not provide suitable habitat for the federally and state endangered Hawaiian petrel *(Pterodroma sandwichensis)* and the threatened Newell's shearwater *(Puffinus auricularis newelli)*, these seabirds may fly over the project area at night while travelling to and from their upland nesting sites to the ocean.

Although not observed during the pedestrian survey, the project area does provide suitable forage and roost habitat for the federally and state endangered Hawaiian hoary bat *(Lasiurus cinereus semotus).*

Potential Impacts

Construction of the Proposed Action is not expected to have a significant, adverse effect on flora resources due to the lack of special status or rare native species. Weedy, non-native plant species are common in the project area. Most of these species are widespread in Hawai'i, and their control is not expected to result in a significant decrease in their overall number or distribution. However, construction activities are known to spread invasive species to new areas through the movement of vehicles and materials. Through

the implementation of BMPs and the measures discussed below, it is not expected that construction of the Proposed Action would cause the spread of weedy, non-native species.

Construction of the Proposed Action may temporarily displace fauna species. However, construction would be short-term and temporary and fauna species are expected to be able to find suitable foraging habitat nearby.

Hawaiian seabirds are attracted to lights. After circling the lights, they may collide with nearby wires, buildings, or other structures, or they may land on the ground due to exhaustion. Downed seabirds are subject to increased mortality due to collision with automobiles, starvation, and predation by dogs, cats, and other predators. Outdoor lighting during construction of the Proposed Action could result in seabird disorientation, fallout, and injury or mortality. It is not expected that there would be any nighttime construction or outdoor lighting. If nighttime construction is required, minimization and mitigation measures described below would be implemented. Therefore, construction of the Proposed Action is not expected to impact Hawaiian seabirds.

During construction of the Proposed Action, the Hawaiian hoary bat may be temporarily displaced from the project area. Hawaiian hoary bats forage in open, wooded, and linear habitats with a wide range of vegetation types. They typically roost in trees greater than 16-feet-tall with dense canopy foliage or in the subcanopy when the canopy is sparse and there is open access for launching into flight. Hawaiian hoary bats have been documented roosting in similar structures as the kou tree in the landscaped vegetation type in the survey area. The Hawaiian hoary bat may also forage in the project area. Direct impacts could occur during vegetation removal if a juvenile bat that is too small to fly but too large to be carried by a parent is present in a tree or branch that is cut down. To prevent direct impacts to Hawaiian hoary bats during construction, the minimization and mitigation measures described below would be implemented.

Upon completion of construction, the primary potential impact that the Proposed Action poses is to Hawaiian seabirds that may become disoriented by new exterior lighting. To minimize potential impacts to Hawaiian seabirds, minimization and mitigation measures would be implemented, as described below.

Under the No-Action Alternative, no construction would occur. Therefore, there would be no impacts to biological resources. The baseyard would continue to operate as its current capacity, and no additional impacts to biological resources would be expected.

Minimization and Mitigation Measures

The following measures would be implemented to minimize the unintentional introduction or transport of new terrestrial invasive species to Maui:

- All construction equipment and vehicles arriving from outside Maui would be washed and inspected before entering the project area.
- Construction materials arriving from outside of Maui would be washed and/or visually inspected, as appropriate, for excessive debris, plant materials, and invasive or harmful non-native species, including plants, amphibians, reptiles, and insects.
- Inspection and cleaning activities would be conducted at a designated location. The inspector would be a qualified botanist and/or entomologist that is able to identify invasive species that are of concern relevant to the point of origin of the equipment, vehicle, or material.

- When possible, raw materials (e.g., fill and construction materials) would be purchased from a local supplier on Maui to avoid introducing non-native species not present on the island.
- If landscaping occurs, native Hawaiian plants or non-invasive plants would be used to the maximum extent possible. If native plants do not meet landscaping objectives, plants with a low risk of becoming invasive may be substituted.

The following measures would be implemented to minimize potential impacts to Hawaiian seabirds:

- Construction activity would be restricted to daylight hours as much as practicable during the seabird breeding season (April through November) to avoid the use of nighttime lighting that could attract seabirds.
- All outdoor lights would be shielded to prevent upward radiation.
- Outside lights that are not needed for security and safety would be turned off from dusk through dawn during the fledgling fallout period (September 15 through December 15).

To minimize impacts to the Hawaiian hoary bat, the following measures would be implemented:

- No trees taller than 15 feet would be trimmed or removed between June 1 and September 15 when flightless juvenile bats may be roosting.
- Any fences that are erected as part of the project would have a barbless top-strand to prevent entanglements of the Hawaiian hoary bat on barbed wire.

3.7. Cultural and Historic Resources

Existing Conditions

Cultural Practices and Traditional Uses

A Cultural Impact Assessment was prepared for the project in accordance with the Guidelines for Assessing Cultural Impacts (OEQC, 1997). Letters of inquiry were sent to 35 individuals and organizations that may have knowledge or information pertaining to the collection of cultural resources and/or traditional cultural practices currently or previously conducted in the vicinity of the project area. Five individuals responded with only one having concerns about the Proposed Action.

The project site is located in an area rich with traditional and customary practices during the pre-Contact and early historic eras. However, based on historical research and the responses to the letter of inquiry, it is reasonable to conclude that there is no evidence of cultural practices related to Hawaiian rights, including gathering, access, or other customary activities currently occurring at the site or in the immediate vicinity.

The Cultural Impact Assessment Report is provided in **Appendix C**.

Archaeological and Historic Resources

Numerous archaeological investigations have been conducted over the past 20 years along and in the vicinity of the project area. In the archaeological investigations conducted as part of the Kahului Airport Master Plan efforts, no archaeological or historic resources were found on or in the vicinity of the project site (Munekito & Hiraga, Inc., 2012).

Potential Impacts

Cultural Practices and Traditional Uses

As previously stated, the findings of the Cultural Impact Assessment indicate that the project area has not been used for traditional cultural purposes within recent times. In addition, no "valued cultural, historic, or natural resources" have been identified within or near the project area. Therefore, there would be no impacts to cultural practices and traditional uses during construction or operation of the Proposed Action or under the No-Action Alternative.

Archaeological and Historic Resources

The project site has been previously disturbed during its use as a staging area for the Airport Access Road extension and the placement of the temporary field trailers that currently occupy the site. Therefore, it is unlikely that construction of the Proposed Action would have adverse impacts to archaeological and historic resources. However, it is possible that subsurface historic resources may be encountered during ground-disturbing activities associated with the construction of the materials testing laboratory and the septic system.

Upon completion of construction, operation of the Proposed Action would not involve ground disturbing activities; therefore, there would be impact to archaeological and historic resources.

Under the No-Action Alternative, no construction would occur. Therefore, there would be no impacts to archaeological and historic resources.

Minimization and Mitigation Measures

No minimization or mitigation measures are proposed for cultural practices and traditional uses since there would be no impacts.

In the unlikely event that subsurface historic resources, including human skeletal remains, structural remains, cultural deposits, artifacts, sand deposits, or sinkholes are identified during the demolition and/or construction work, all work shall be ceased in the immediate vicinity of the find, the find would be protected from additional disturbance, and SHPD would be notified. If human remains are discovered, further disturbances and activities would cease in the area or nearby areas suspected to overlie remains, and SHPD would be contacted immediately.

3.8. Socioeconomic Characteristics

Existing Conditions

The Wailuku-Kahului area is the economic and population center of the island. The region's economic character encompasses a broad range of commercial, service, industrial, residential, and government activities. The residential areas of Kahului contain a diverse mix of residents from all income classes and ethnic groups. In addition, the region is surrounded by large agricultural acreages which include former sugar cane fields. The 2030 socioeconomic forecast suggests that the Wailuku-Kahului area will grow faster than other parts of the island as former sugar cane fields are developed into residential subdivisions (County of Maui Department of Planning, 2012).

Potential Impacts

Construction of the Proposed Action would result in temporary, positive economic activity in the form of construction jobs and materials procurements.

The Proposed Action would not change the use of the area and does not have the potential to create changes to land use in the surrounding area or affect growth of the surrounding population. Therefore, the Proposed Action would have no impacts to the socioeconomic environment.

The No-Action Alternative would have no impact on area demographics or economic conditions. The field offices would continue to operate under existing conditions. Therefore, the No-Action Alternative would have no impacts to the socioeconomic environment.

Minimization and Mitigation Measures

No minimization or mitigation measures are proposed or expected to be required.

3.9. Public Facilities and Services

Existing Conditions

Parks and Recreation Areas

The project site is located in a commercial, industrial, and agricultural area. There are no parks or recreation areas in the immediate vicinity of the site.

Medical Facilities

The nearest medical facility to the project site is Minit Medical Urgent Care located at 270 Dairy Road, Suite 239, approximately 0.6 mile from the project site. Other walk-in clinics and their distance from the project site include the following:

- Maui Medical Group, 110 East Kaahumanu Avenue (approximately 1.7 miles)
- Pacific Medical Group, 95 Lono Avenue (approximately 2.1 miles)

The Maui Memorial Medical Center (MMMC) is located approximately 3.6 miles west of the project site at 221 Mahalani Street. MMMC is a full-service hospital with 24-hour emergency care.

Emergency Services

Police

Police protection services are provided by the Maui Police Department (MPD). The Proposed Action is located in District I, the Wailuku Patrol District. It is served by the Wailuku Police Station located at 55 Mahalani Street in Wailuku, approximately 2.8 miles from the project site.

Fire and Emergency Medical Service

Fire protection and emergency medical services are provided by the County of Maui Department of Fire and Public Safety, and the project site is served by the Kahului Fire Station located at 200 Dairy Road approximately 2.0 miles from the project site.

Potential Impacts

Parks and Recreation Areas

The Proposed Action and the No-Action Alternative would have no impact to parks and recreation areas since there are none in the vicinity of the project site.

Medical Facilities and Emergency Services

No significant impacts are expected to medical facility and emergency services during construction and operation of the Proposed Action. Although it is likely that the Proposed Action would require the occasional police and fire protection and medical services, it would not be an increase over the existing conditions and would not represent a significant amount relative to the overall regional demand. The Proposed Action would be designed and built in compliance with the applicable County fire code requirements.

Minimization and Mitigation Measures

No minimization or mitigation measures are proposed or expected to be required.

3.10. Utilities

Existing Conditions

Potable Water

There are no water lines that go to the site. Water at the site is currently provided by an on-site water tank that is refilled as necessary.

Wastewater

There is no wastewater infrastructure at the project site. Wastewater is currently being contained in plastic above-ground septic holding tanks. These tanks are emptied by a vacuum truck as needed.

Electric

Electric service at the project site is provided by the Maui Electric Company (MECO).

Solid Waste

Solid waste at the project site is currently handled through a rented dumpster. The dumpster is emptied by a solid waste contractor and the waste is taken to the Central Maui Landfill in Puunene.

Potential Impacts

Potable Water

As previously stated, there are no water lines at the project site. Therefore, construction of the Proposed Action would have no impacts to potable water infrastructure. During construction, water would be required primarily for dust control. However, non-potable water could be used for this purpose. If non-potable water is used, there would be no impact to potable water during construction of the Proposed Action.

Upon the completion of construction, the DWS projects a water demand from the Proposed Action of approximately 21,600 gallons per day. Water would continue to be supplied via an on-site water tank that would be refilled as necessary.

Under the No-Action Alternative, there would be no construction. The temporary baseyard would continue to operate at its current capacity and the potable water demand would remain the same as under current conditions.

Wastewater

As previously stated, there is no wastewater infrastructure at the project site. Therefore, construction of the Proposed Action would have no impacts to wastewater infrastructure. Portable toilets may be installed during construction to supplement the existing toilets in the temporary trailers.

Upon completion of construction, the Proposed Action would include a septic tank and leach field that would replace the existing plastic above-ground septic holding tanks. All wastewater plans would conform to applicable provisions of HAR 11-62, Wastewater Systems, and Maui County Code Chapters 14-23, Construction Standards, and 14-27, Private Wastewater Disposal Systems.

Under the No-Action Alternative, there would be no construction. The temporary baseyard would continue to operate at its current capacity and utilize the plastic above-ground septic holding tanks.

Electric

During construction of the Proposed Action, HDOT would coordinate with MECO to ensure that electrical lines are not adversely impacted and that electric service would not be interrupted to adjacent areas. Therefore, construction of the Proposed Action is not expected to impact the electric utility.

The Proposed Action would require electrical service to the new materials testing laboratory. All electrical plans and establishment of service would comply with MECO's Engineering Specifications and Standards and the Maui Electric Rules.

Under the No-Action Alternative, there would be no construction. Electricity to the existing temporary field office trailers would continue to be supplied by MECO with no change in use.

Solid Waste Disposal

Construction of the Proposed Action would result in the generation of small amounts of construction and demolition debris. The Central Maui Landfill handles construction waste in accordance with applicable DOH regulations. No hazardous waste is expected from construction of the Proposed Action.

The Proposed Action would continue to utilize a rented dumpster to handle daily solid waste. Hazardous waste produced from the materials testing laboratory, if any, would be disposed of at an appropriate location as per the COM Department of Environmental Management, Solid Waste Division, and in compliance with the applicable provisions of HAR 11-260.1 – 11-279.1, Hazardous Waste Management.

Under the No-Action Alternative, there would be no construction. The temporary baseyard would continue to operate at its current capacity and produce the same amount of solid waste as current operations.

Minimization and Mitigation Measures

The following measure is proposed to minimize impacts to utilities:

- Use recycled water from the Kahului Wastewater Treatment Plant for dust control to reduce potable water demand for the project.

3.11. Transportation and Traffic

Existing Transportation System

The closest major road to the Baseyard is Hana Highway. Hāna Highway is a four-lane divided highway near the project site. HDOT has published traffic data from 2015 for Hāna Highway near the project site, which is provided in **Table 3-3**.

Table 3-3. Hana Highway Traffic (2015)

	Total	To Kaupakulua Road	To Ka'ahumanu Avenue
24-hour total volume	43,900	---	---
AM Peak Hour (7:00 am – 8:00 am)	3,700	1,000	2,700
PM Peak Hour (3:00 pm – 4:00 pm)	3,700	2,400	1,300

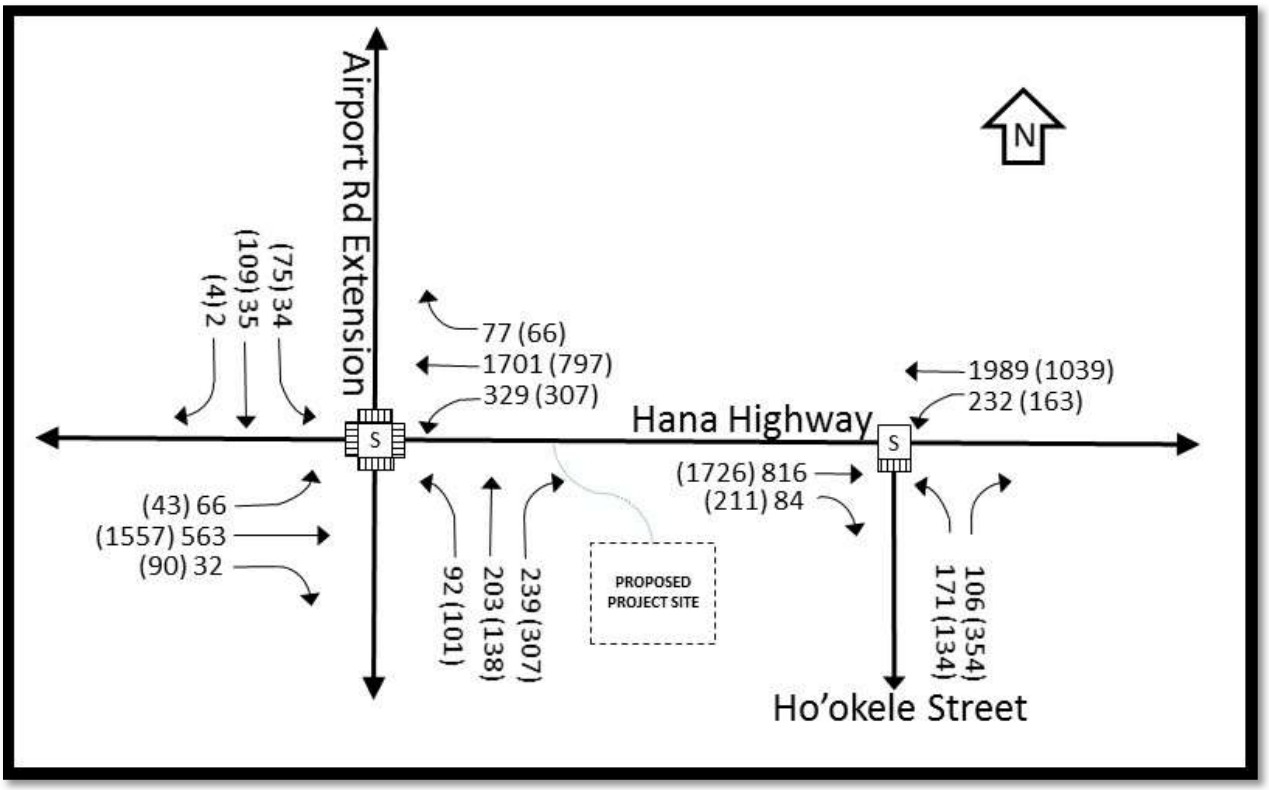
Source: HDOT, 2015

There is an unnamed site access road that leads about 350 feet from Hāna Highway to the project driveway that was formerly the western end of Pūlehu Road. The unnamed site access road is a two-lane local dead end road that only connects Hāna Highway to the Project site. It is paved and approximately 30 feet wide. The access road beyond the site driveway is blocked with a concrete barrier. The only users of the site access road are employees and visitors to the baseyard.

Prior to 2011, Pūlehu Street was the only intersection with Hāna Highway between Dairy Road and Haleakalā Highway. In 2014, Ho'okele Street was connected to Hāna Highway and the Pūlehu Road intersection with Hāna Highway was downgraded to discourage public use. In 2016, the Airport Access Road extension was built and formed another intersection with Hāna Highway about 400 feet west of the point where the site access road intersects Hāna Highway.

Intersection traffic counts were taken in 2017 at the intersection of Hāna Highway and Airport Access Road and the intersection of Hāna Highway and Ho'okele Street. Counts were taken during the morning peak hour (7:10 am – 8:10 am) and afternoon peak hour (4:15 pm – 5:15 pm). Turn volumes at these intersections are shown in **Figure 3-8**.

Figure 3-8. 2017 Peak Hour Turn Volumes – AM(PM)



Potential Impacts

During construction, there is the potential for traffic impacts due to the movement of construction workers, equipment, and materials. Due to the limited scope of the Proposed Action, increases in traffic would be short-term and minor.

Upon completion of construction, the only expected traffic to and from the Proposed Action would consist of trips from an estimated 11 employees and up to two deliveries a day. The Institute of Transportation Engineers (ITE) *Trip Generation Manual, 10th Edition* (ITE, 2017) publishes average trip general rates from hundreds of different land uses, each having numerous studies of sites nationwide. ITE Land Use 110, General Light Industrial[1], was used to estimate the number of trips expected from the Proposed Action.

Table 3-4 provides the estimated number of trips associated with the Proposed Action. The complete traffic assessment report is included as **Appendix D**.

[1] ITE definition of Land Use Code 110 General Light Industrial: "… a free standing facility devoted to single use. The facility has an emphasis on activities other than manufacturing and typically has minimal office space. Typical light industrial activities include printing, material testing …"

Table 3-4. Estimated Trips Associated with the Proposed Action

	Average Trip Generation per Employee	Estimated Trips for 11 Employees
AM Peak Hour	0.52 trips/hour (83% in/17% out)	6 (5 in/1 out)
PM Peak Hour	0.49 trips/hour (22% in/78% out)	5 (1 in/4 out)
Weekday	3.05 trips/day	34 trips/day

Based on the estimated 34 trips per day from 11 employees, traffic impacts to Hāna Highway from the Proposed Action would be almost non-existent.

Under the No-Action Alternative, there would be no construction. The temporary baseyard would continue to operate at its current capacity and produce the same amount of traffic as current operations.

Minimization and Mitigation Measures

The following measures are proposed to minimize impacts to the transportation system and traffic:

- The contractor would be required to keep all construction vehicles in proper operating condition and ensure that all loads are properly secured to prevent dust, debris, leakage, or other adverse conditions from affecting public roadways.
- Deliveries of construction materials would be scheduled to avoid peak traffic, as practicable.
- Traffic exiting the site access road would be restricted to right turns onto Hāna Highway.

3.12. Visual Resources

Existing Scenic and Visual Environment

The project site is located at the southwest corner of Airport Access Road and Hāna Highway in Kahului on the island of Maui. The area is predominantly industrial, commercial, and agricultural. Scenic resources in the vicinity of the project site include views of Haleakāla Volcano and the West Maui Mountains. Open space resources in the vicinity of the project site include fallow sugarcane fields.

Potential Impacts

No unique scenic resources would be impacted by construction and operation of the Proposed Action.

Construction of the Proposed Action would introduce construction equipment and activity to the intersection of Airport Access Road and Hāna Highway. The project site is currently an industrial site and was previously used as a staging area for construction of Airport Access Road; therefore, construction activities would be consistent with the existing conditions of the area. Therefore, impacts to the existing scenic and visual environment during construction would be less than significant.

Upon completion of construction, there would be an additional building at the site. This building would be a one-story building of approximately 480 square feet and would be located adjacent to the existing field office trailers. The new structure would be consistent with the existing buildings on the site; therefore, impacts to the existing scenic and visual environment ~~during construction~~ would be less than significant from the new structure.

The new structure would include outside lighting for safety and security reasons. As per the University of Hawai'i – Mānoa, Institute for Astronomy, nighttime lighting may interfere with telescope operations on Haleakalā and Mauna Kea. Minimization and mitigation measures would be incorporated into project design to minimize these impacts. With the implementation of these measures, impacts to telescope operations would be less than significant.

Under the No-Action Alternative, no construction would occur. Therefore, there would be no impacts to visual resources. The baseyard would continue to operate as its current capacity, and no additional impacts to visual resources would be expected.

Minimization and Mitigation Measures

The design and construction of the Proposed Action would be in accordance with all applicable COM building standards. ~~No other minimization or mitigation measures are proposed or expected to be required.~~ The following measures would be implemented to minimize potential impacts to telescope operations on Haleakalā and Mauna Kea:

- Use of motion-sensor activated lighting
- Use of filtered LED or amber LED lighting
- All lighting would be shielded
- All lighting at the site would conform with the Maui County lighting ordinance, Maui County Code of Ordinances, Chapter 20.35

3.13. Irretrievable and Irreversible Commitment of Resources

Implementation of the Proposed Action would not result in the irretrievable and irreversible commitment of resources other than the financial resources, fuel, land, and other consumable materials required for construction. Development of the Proposed Action would involve the commitment of State-owned land for use as a baseyard and materials testing laboratory, which is considered appropriate as it is currently being utilized as a temporary baseyard with field offices. The expansion and continuation of this use will continue and expand upon HDOT's capabilities to ensure that materials incorporated into highway construction projects conform substantially to requirements of the plans and specifications of Title 23, CFR, Part 637, Subpart B, which prescribes policies, procedures, and guidelines to assure the quality of materials and construction in all Federal-aid highway projects on the National Highway System.

This page intentionally blank

4. RELATIONSHIP TO STATE AND COUNTY LAND USE PLANS AND POLICIES

4.1. State Planning Documents

The Hawai'i State Plan

The Hawai'i State Plan, codified as HRS Chapter 226, provides goals, objectives, policies, and priorities for the State. The Hawai'i State Plan also provides a basis for determining priorities, allocating limited resource, and improving coordination of State and County plans, policies, programs, projects, and regulatory activities. It establishes a set of themes, goals, objectives, and policies that are meant to guide the State's long-range growth and development activities. The Proposed Action is consistent with the following applicable objectives and policies of the Hawai'i State Plan:

Section 226-11. *Objectives and policies for the physical environment – land-based, shoreline, and marine resources.*

(a) Planning for the State's physical environment with regard to land-based, shoreline, and marine resources shall be directed towards achievement of the following objectives:
(1) Prudent use of Hawai'i's land-based, shoreline, and marine resources.
(2) Effective protection of Hawai'i's unique and fragile environmental resources.
(b) To achieve the land-based, shoreline, and marine resources objectives, it shall be the policy of this State to:
(3) Take into account the physical attributes of areas when planning and designing activities and facilities.
(4) Manage natural resources and environs to encourage their beneficial and multiple use without generating costly or irreparable environmental damage.
(8) Pursue compatible relationships among activities, facilities, and natural resources.

Discussion: The Proposed Action includes the construction and operation of a materials testing laboratory and the permanent operation of the existing temporary field office. The Proposed Action is an industrial land use and the project site is located on a parcel zoned LI, Light Industrial.

Section 226-12. *Objective and policies for the physical environment – scenic, natural beauty, and historic resources.*

(a) Planning for the State's physical environment shall be directed towards achievement of the objective of enhancement of Hawai'i's scenic assets, natural beauty, and multi-cultural/historical resources.
(b) To achieve the scenic, natural beauty, and historic resources objective, it shall be the policy of the State to:
(3) Promote the preservation of views and vistas to enhance the visual and aesthetic enjoyment of mountains, ocean, scenic landscapes, and other natural features.
(5) Encourage the design of developments and activities that complement the natural beauty of the islands.

Discussion: The Proposed Action is located at the currently undeveloped southwest corner of Airport Access Road and Hāna Highway. Views in the area include those of Haleakāla Volcano, the West Maui Mountains, and former sugar cane fields. The Proposed Action would be designed and constructed as per Maui County Code Chapter 16.26B, Building Codes. A Building Permit would be obtained from the COM Department of Public Works – Development Services Administration prior to construction.

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

(a) Planning for the State's facility systems in general whall be directed towards the achievement of the objective of water, transportation, waste disposal, and energy and telecommunications 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.

Discussion: The Proposed Action includes the construction and operation of a materials testing laboratory and the permanent operation of the existing temporary field office, which will support existing and future HDOT operations on Maui, including maintenance of existing facilities and construction of new facilities

Section 226-15. *Objectives and policies for facility systems – solid and liquid wastes.*

(c) Planning for the State's facility systems with regard to solid and liquid wastes shall be directed towards the achievement of the following objectives:
(2) Provision of adequate sewerage facilities for physical and economic activities that alleviate her problems in housing, employment, mobility, and other areas.
(d) To achieve solid and liquid waste objectives, it shall be the policy of this State to:
(1) Encourage the adequate development of sewerage facilities that complement planned growth.

Discussion: The Proposed Action includes the replacement of the temporary plastic above-ground septic holding tanks with a permanent in-ground septic tank and leaching field to accommodate the permanent facility.

Section 226-16. *Objectives and policies for facility systems – water.*

(a) Planning for the State's facility systems with regard to water shall be directed towards the achievement of the objective of the provision of water to adequately accommodate domestic, agricultural, commercial, industrial, recreational, and other needs within resource capacities.
(b) To achieve the facility systems water objective, it shall be the policy of this State to:
(1) Coordinate development of land use activities with existing and potential water supply.
(6) Promote water conservation programs and practices in government, private industry, and the general public to help ensure adequate water to meet long-term needs.

Discussion: The Proposed Action would continue to have potable water supplied to an on-site water tank that would be refilled as necessary. It is not expected that a water line would be installed to the project site.

In an effort to promote water conservation, it is recommended that non-potable water be used during construction for dust control. Non-potable water is available from the Kahului Wastewater Treatment Plant.

Section 226-17. *Objectives and policies for facility systems – transportation.*

(a) Planning for the State's facility systems with regard to transportation shall be directed towards the following objectives:
(2) A statewide transportation system that is consistent with and will accommodate planned growth objectives throughout the state.
(b) To achieve the transportation objectives, it shall be the policy of this State to:
(2) Coordinate state, county, federal, and private transportation activities and programs toward the achievement of statewide objectives;
(4) Provide for improved accessibility to shipping, docking, and storage facilities;

Discussion: The Proposed Action would support existing and future HDOT operations on Maui, including maintenance of existing facilities and construction of new facilities by creating a permanent baseyard and materials testing laboratory on the island of Maui.

Section 226-23. *Objective and policies for socio-cultural advancement – leisure.*

(a) Planning for the State's socio-cultural advancement with regard to leisure shall be directed towards the achievement of the objective of the adequate provision of resources to accommodate diverse cultural, artistic, and recreational needs for present and future generations.
(b) To achieve the leisure objective, it shall be the policy of this State to:
(3) Enhance the enjoyment of recreational experiences through safety and security measures, educational opportunities, and improved facility design and maintenance.

Discussion: The Proposed Action would support existing and future HDOT operations on Maui, including maintenance of existing facilities and construction of new facilities by creating a permanent baseyard and materials testing laboratory on the island of Maui. Recreational experiences would be heightened with improved roadway facilities on Maui.

Section 226-27. *Objective and policies for socio-cultural advancement – government.*

(a) Planning for 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.
(2) Fiscal integrity responsibility, and efficiency in the state government and county governments.
(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.

Discussion: The Proposed Action would support existing and future HDOT operations on Maui, including maintenance of existing facilities and construction of new facilities by creating a permanent baseyard and materials testing laboratory on the island of Maui.

Section 226-109. *Climate change adaptation priority guidelines.*

Priority guidelines to prepare the State to address the impacts of climate change, including impacts to the areas of agriculture; conservation lands; coastal and nearshore marine areas; natural and cultural resources; education; energy; higher education; health; historic preservation; water resources; the built environment, such as housing, recreation, transportation; and the economy shall:

(1) Ensure that Hawai'i's people are educated, informed, and aware of the impacts climate change may have on their communities;

(2) Encourage community stewardship groups and local stakeholders to participate in planning and implementation of climate change policies;

(3) Invest in continued monitoring and research of Hawai'i's climate and the impacts of climate change on the State;

(4) Consider native Hawaiian traditional knowledge and practices in planning for the impacts of climate change;

(5) Encourage the preservation and restoration of natural landscape features, such as coral reefs, beaches and dunes, forests, streams, floodplains, and wetlands, that have the inherent capacity to avoid, minimize, or mitigate the impacts of climate change;

(6) Explore adaptation strategies that moderate harm or exploit beneficial opportunities in response to actual or expected climate change impacts to the natural and built environments;

(7) Promote sector resilience in areas such as water, roads, airports, and public health, by encouraging the identification of climate change threats, assessment of potential consequences, and evaluation of adaptation options;

(8) Foster cross-jurisdictional collaboration between County, State, and Federal agencies and partnerships between government and private entities and other nongovernmental entities, including nonprofit entities;

(9) Use management and implementation approaches that encourage the continual collection, evaluation, and integration of new information and strategies into new and existing practices, policies, and plans; and

(10) Encourage planning and management of the natural and built environments that effectively integrate climate change policy.

Discussion: HDOT supports the Hawai'i State Plan Climate Change Adaption Priority Guidelines and acknowledges the importance of planning for potential impacts. Full support and participation will be provided towards ongoing efforts to better understand, plan, and ultimately adapt to Hawai'i's changing climate.

The following themes of Part I of the Hawai'i State Plan are not applicable to the Proposed Action for the following reasons:

- ***Section 226-5.*** *Objective and policies for population:* The Proposed Action would not result in population growth.
- ***Section 226-6.*** *Objectives and policies for the economy – in general:* The Proposed Action would not result in increased and diversified employment opportunities other than the temporary construction jobs.

- ***Section 226-7.*** *Objectives and policies for the economy – agriculture:* The Proposed Action is not an agricultural project.
- ***Section 226-8.*** *Objective and policies for the economy – visitor industry:* The Proposed Action does not involve the visitor industry.
- ***Section 226-9.*** *Objective and policies for the economy – federal expenditures:* The Proposed Action does not include the use of federal funds.
- ***Section 226-10.*** *Objective and policies for the economy – potential growth and innovative activities:* The Proposed Action does not include opportunities for investment or employment growth.
- ***Section 226-10.5.*** *Objective and policies for the economy – information industry:* The Proposed Action does not include nor impact telecommunications or information technology resources.
- ***Section 226-13.*** *Objectives and policies for the physical environment – land, air, and water quality:* The Proposed Action does not involve actions to improve the existing quality of Hawai'i's land, air, and water quality; however, the appropriate BMPs and additional measures to minimize impacts to land, air, and water quality would be implemented as appropriate during construction and operation of the Proposed Action.
- ***Section 226-18.*** *Objective and policies for facility systems – energy.* The Proposed Action does not include new energy facility systems.
- ***Section 226-18.5.*** *Objective and policies for facility systems – telecommunications.* The Proposed Action does not include new telecommunication facilities.
- ***Section 226-19.*** *Objectives and policies for socio-cultural advancement – housing.* The Proposed Action does not include development of housing.
- ***Section 226-20.*** *Objectives and policies for socio-cultural advancement – health.* The Proposed Action does not include health facilities or services.
- ***Section 226-21.*** *Objectives and policies for socio-cultural advancement – education.* The Proposed Action does not include educational programs or facilities.
- ***Section 226-22.*** *Objectives and policies for socio-cultural advancement – social services.* The Proposed Action does not include social services or activities.
- ***Section 226-24.*** *Objectives and policies for socio-cultural advancement – individual rights and personal well-being.* The Proposed Action would have no impact to personal rights and personal well-being.
- ***Section 226-25.*** *Objectives and policies for socio-cultural advancement – culture.* The Proposed Action would have no impacts to cultural identities, traditions, values, customs, and arts of Hawai'i's people.
- ***Section 226-26.*** *Objectives and policies for socio-cultural advancement – public safety.* The Proposed Action would have no impact on public safety programs.

The themes of Part II of the Hawai'i State Plan are not applicable to the Proposed Action since the Proposed Action does not involve the preparation of planning documents.

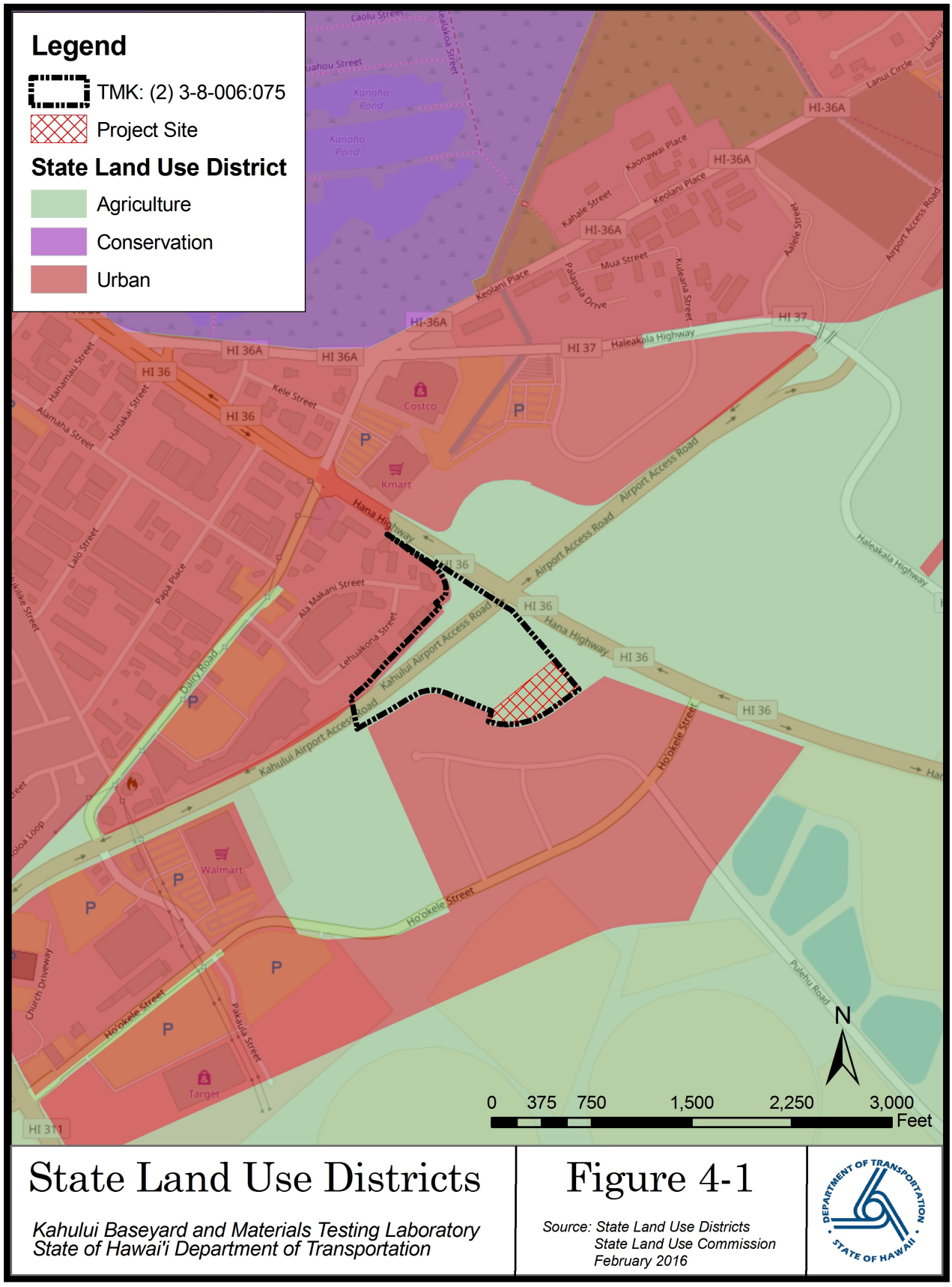
The following themes of Part III of the Hawai'i State Plan are not applicable to the Proposed Action for the following reasons:

- ***Section 226-103.*** *Economic priority guidelines.* The Proposed Action would not provide investment capital for new and expanding enterprises. The Proposed Action would have no impact on the visitor industry, agricultural industry, water use and development, energy use and development, or the information industry.
- ***Section 226-104.*** *Population growth and land resources priority guidelines.* The Proposed Action would not result in population growth nor any change in land use.
- ***Section 226-105.*** *Crime and criminal justice.* The Proposed Action does not involve the criminal justice system.
- ***Section 226-106.*** *Affordable housing.* The Proposed Action would not provide housing.
- ***Section 226-107.*** *Quality education.* The Proposed Action would have no impact on education opportunities or facilities.
- ***Section 226-108.*** *Sustainability.* The Proposed Action would have no impact on sustainability programs.

State Land Use Law

Hawai'i was the first of the fifty States to have a State Land Use Law and a State Plan. Today, Hawai'i remains unique among the fifty states with respect to the extent of control that the state exercises in land use regulation. The state has four classifications: Agricultural, Conservation, Rural, and Urban. The State Land Use Law HRS, Chapter 205 initially set the boundaries for the four classifications: Urban, Agricultural, Conservation, and Rural.

Discussion: **Figure 4-1** identifies the project site as located in the Agriculture state land use district. Although the Agriculture land use district is generally limited to uses associated with agriculture or renewable energy, the project site has been used as a construction staging area and HDOT field office for years. Additionally, as shown in **Figure 4-2** in **Section 4.2**, the project site is zone LI, Light Industrial. A discussion of the LI zone is provided in **Section 4.2**.



State Land Use Districts

Kahului Baseyard and Materials Testing Laboratory
State of Hawai'i Department of Transportation

Figure 4-1

Source: State Land Use Districts
State Land Use Commission
February 2016

4.2. County of Maui Planning Documents

Maui Island Plan, General Plan 2030

The *Maui Island Plan General Plan 2030* (Maui Island Plan) was adopted in December 2012. The Maui Island Plan provides for a recommended path for the County's development. The Proposed Action is consistent with the following applicable objectives and policies of the Maui Island Plan:

Cultural, Historical, and Archaeological Resources Issues

GOAL

2.1 Our community respects and protects archaeological and cultural resources while perpetuating diverse cultural identities and traditions.

OBJECTIVE

2.3 Enhance the island's historic, archaeological, and cultural resources.

POLICY

2.1.3.c Support regulations to require developers, when appropriate, to prepare an Archaeological Inventory Survey, Cultural Impact Assessment, and Ethnographic Inventories that are reviewed and commented upon by the Office of Hawaiian Affairs, Native Hawaiian advisory bodies, the State Historic Preservation Division (SHPD), and the Office of Environmental Quality Control, and systematically comply with the steps listed in SHPD's administrative rules, including consultation and monitoring during construction phases of the projects.

Discussion: The Draft EA has been prepared in accordance with Act 50 and HAR Chapter 6E regarding cultural and historic/archaeological resources, respectively. The Draft EA will be distributed to agencies and area libraries for a 30-day review period.

Watersheds, Streams, and Wetlands Issues

GOAL

2.3 Healthy watersheds, streams, and riparian environments

OBJECTIVE

2.3.2 Decreased NPS and point source pollution

POLICY

2.3.2.a Enforce water pollution related standards and codes.

Discussion: HDOT would obtain coverage under the NPDES General Permit for stormwater discharge associated with construction activities. As part of the permit process, HDOT would prepare a construction site BMP plan that would include an erosion and sediment control plan, a site-specific plan to minimize erosion of soil and discharge of other pollutants into State waters, and descriptions of measures that would minimize the discharge of pollutants via stormwater after construction is complete. BMPs would

be installed prior to ground-disturbing activities and would be inspected and maintained throughout the construction period.

HDOT would also obtain Grading and Grubbing Permits from the County of Maui Department of Public Works, Development Services Division. The contractor would be required to comply with the General Provisions for the permits, as well as the standard permit conditions.

In addition to the above permits, the Proposed Action would implement the following measures recommended by the COM DWS during the pre-assessment consultation for the project to minimize infiltration and runoff during construction:

- Prevent cement products, oil, fuel, or other toxic substances from falling or leaching into the ground.
- Remove all construction debris and toxic substances daily to prevent entry into the ocean.
- Maintain vehicles and equipment to prevent oil or other fluids from leaking.
- Rinse concrete trucks and tools off-site.
- Properly install and maintain erosion control barriers, such as silt fencing or straw bales.
- Disturb the smallest area possible.
- Retain ground cover until the last possible date. Stabilize denuded areas by sodding or planting as soon as possible. Use high seeding rates to ensure rapid stand establishment. Apply biocides only during dry periods of low rainfall to minimize chemical runoff.
- Keep runoff on site.

Wastewater

GOAL

6.2 Maui will have wastewater systems that comply with or exceed State and Federal regulations; meet levels-of-service needs; provide adequate capacity to accommodate projected demand; ensure efficient, effective, and environmentally sensitive operation; and maximize wastewater reuse where feasible.

OBJECTIVE

6.2.2 Adequate levels of wastewater service with minimal environmental impacts.

POLICY

6.2.2.a Meet or exceed all State and Federal standards regulating wastewater disposal or reuse.

Discussion: The Proposed Action includes construction of a septic tank and leach field that would replace the existing plastic above-ground septic holding tanks. All wastewater plans would conform to applicable provisions of HAR 11-62, Wastewater Systems and Maui County Code Chapters 14-23, Construction Standards, and 14-27, Private Wastewater Disposal Systems.

Transportation

GOAL

6.4 An interconnected, efficient, and well-maintained, multi-modal transportation system.

OBJECTIVE

6.4.2 Safe, interconnected transit, roadway, bicycle, equestrian, and pedestrian network.

POLICY

6.4.2.d Identify and improve hazardous and substandard sections of roadways, drainage infrastructure, and bridges, provided that the historical integrity of the roads and bridges are protected.

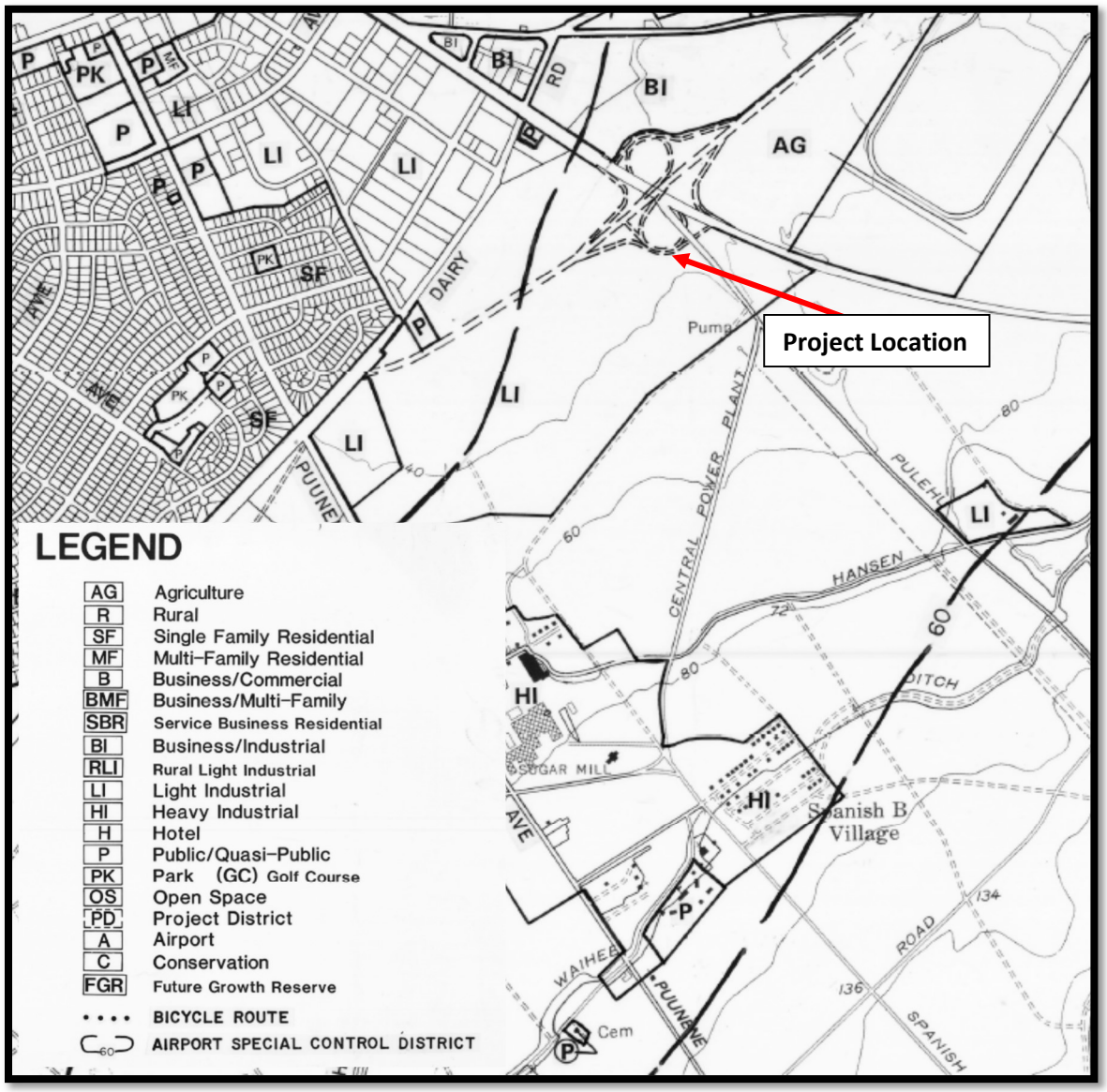
Discussion: The Proposed Action would establish a permanent field office and materials testing laboratory in Kahului on the island of Maui. The materials testing laboratory would test roadway materials to ensure that they conform substantially to requirements of 23 CFR 637B and the District. Materials would be tested during both new roadway construction and maintenance of existing roadways to ensure that roadways are safe.

Wailuku-Kahului Community Plan

The *Wailuku-Kahului Community Plan* (Maui County Council, 2002) reflects the conditions of the Wailuku-Kahului region at the time of its writing, as well as the anticipated conditions in the region. The *Wailuku-Kahului Community Plan* provides specific recommendations to address the goals, objectives, and policies contained in the General Plan. The *Wailuku-Kahului Community Plan* is currently being updated to be consistent with the Maui Island Plan, which was updated and adopted in 2012.

As per the current *Wailuku-Kahului Community Plan,* the Proposed Action is located in an area designated LI (Light Industrial) (see **Figure 4-2**). The LI zone is designated for warehousing, light assembly, service, and craft-type industrial operations. It is expected that the updated *Wailuku-Kahului Community Plan* would maintain the LI designation for the subject parcel. Therefore, the Proposed Action is consistent with the *Wailuku-Kahului Community Plan*.

Figure 4-2. Wailuku-Kahului Community Plan Land Use Designations



Source: County of Maui Planning Commission, 2010

This page intentionally blank

5. FINDINGS AND CONCLUSIONS

5.1. Significance Criteria

HAR 11-200 provides significance criteria for which all projects in Hawai'i are assessed. These significance criteria and their relationship to the Proposed Action are as follows:

(1) Involves an irrevocable commitment to loss or destruction of any natural or cultural resource.

Construction of the Proposed Action may temporarily displace fauna species. However, construction would be short-term and temporary and fauna species are expected to be able to find suitable foraging habitat nearby. Upon completion of construction, the primary potential impact that the Proposed Action poses is to Hawaiian seabirds that may become disoriented by new exterior lighting. To minimize potential impacts to Hawaiian seabirds, minimization and mitigation measures would be implemented, as described in **Section 3.6**.

No known cultural resources are located on the site. In the unlikely event that subsurface historic resources, including human skeletal remains, structural remains, cultural deposits, artifacts, sand deposits, or sinkholes are identified during the demolition and/or construction work, all work shall be ceased in the immediate vicinity of the find, the find would be protected from additional disturbance, and SHPD would be notified.

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

There would be no change to the current or potential land use within the project area with implementation of the Proposed Action.

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

The Proposed Action would not conflict with the State's long-term environmental policies. BMPs would be implemented during construction to minimize impacts associated with ground-disturbance. In addition, resource specific measures would be implemented to minimize impacts associated with construction and operation of the Proposed Action.

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

The Proposed Action would not change the use of the area and does not have the potential to create changes to land use in the surrounding area or affect growth of the surrounding population. Therefore, the Proposed Action would have no adverse social or economic impacts. No "valued cultural, historic, or natural resources" have been identified within or near the project area. Therefore, the Proposed Action would have no adverse impacts to cultural practices of the community.

(5) Substantially affects public health.

The Proposed Action would have some temporary, minor impacts on air, noise, and water quality during construction; however, these impacts would be minimized to the extent practicable by the employment of BMPs and compliance with permit conditions. The Proposed Action would not result in any post-construction or long-term effects on public health.

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

The Proposed Action would not alter the existing land use pattern; therefore, there would be no secondary impacts, such as population changes or effects on public facilities.

(7) Involves a substantial degradation of environmental quality.

Other than short-term construction impacts, the Proposed Action would not result in impacts that can be expected to degrade the environmental quality in the project area.

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

The Proposed Action is a standalone project and would have no cumulative impacts or commitments for larger actions. The Proposed Action would support the ongoing operations of HDOT as they pertain to road construction and maintenance.

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

During construction of the Proposed Action, there may be short-term and temporary impacts to the Hawaiian hoary bat and seabirds. During operation of the Proposed Action, outside nighttime lighting may affect seabirds. With the implementation of the following measures, the Proposed Action would not substantially affect rare, threatened, or endangered species or their habitat.

To minimize impacts to the Hawaiian hoary bat, the following measures would be implemented:

- No trees taller than 15 feet would be trimmed or removed between June 1 and September 15 when flightless juvenile bats may be roosting.
- Any fences that are erected as part of the project would have a barbless top-strand to prevent entanglements of the Hawaiian hoary bat on barbed wire.

The following measures would be implemented to minimize potential impacts to Hawaiian seabirds:

- Construction activity would be restricted to daylight hours as much as practicable during the seabird breeding season (April through November) to avoid the use of nighttime lighting that could attract seabirds.
- All outdoor lights would be shielded to prevent upward radiation.
- Outside lights that are not needed for security and safety would be turned off from dusk through dawn during the fledgling fallout period (September 15 through December 15).

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

Only short-term construction-related impacts to air quality are anticipated with implementation of the Proposed Action. During construction, potential emission sources that may affect air quality at the project site include the following:

- Diesel and/or gasoline-powered construction equipment and motor vehicles would contribute to additional CO and CO_2 in the air.
- Fugitive dust emissions resulting from construction of the materials testing laboratory.

A dust control plan, to be approved by the DOH, would be developed and implemented to minimize fugitive dust during construction. The plan would include some or all of the following measures:

- Watering of active work areas
- Screening piles of materials from wind, if appropriate
- Cleaning nearby paved roads affected by construction
- Covering open trucks carrying construction materials
- Limiting areas to be disturbed at any given time
- Mulching or chemically stabilizing inactive areas that have been disturbed

Additionally, contractors would be required to maintain equipment with emissions controls.

Construction of the Proposed Action would include grading and site preparation for the materials testing laboratory and infrastructure associated with the laboratory and field office trailers. Short-term construction activities may include minor soil loss and erosion. Grading and grubbing activities would be limited to the area which is necessary for construction of the materials testing laboratory and associated infrastructure to minimize erosion potential. Construction activities are not likely to introduce to, nor release from the soil any materials which could adversely affect groundwater.

HDOT would obtain coverage under the NPDES General Permit for stormwater discharge associated with construction activities. As part of the permit process, HDOT would prepare a construction site BMP plan that would include an erosion and sediment control plan, a site-specific plan to minimize erosion of soil and discharge of other pollutants into State waters, and descriptions of measures that would minimize the discharge of pollutants via stormwater after construction is complete. BMPs would be installed prior to ground-disturbing activities and would be inspected and maintained throughout the construction period.

HDOT would also obtain Grading and Grubbing Permits from the County of Maui Department of Public Works, Development Services Division. The contractor would be required to comply with the General Provisions for the permits, as well as the standard permit conditions.

In addition to the above permits, the Proposed Action would implement the following measures recommended by the COM-DWS during the pre-assessment consultation for the project to minimize infiltration and runoff during construction:

- Prevent cement products, oil, fuel, or other toxic substances from falling or leaching into the ground.
- Remove all construction debris and toxic substances daily to prevent entry into the ocean.
- Maintain vehicles and equipment to prevent oil or other fluids from leaking.
- Rinse concrete trucks and tools off-site.
- Properly install and maintain erosion control barriers, such as silt fencing or straw bales.
- Disturb the smallest area possible.
- Retain ground cover until the last possible date. Stabilize denuded areas by sodding or planting as soon as possible. Use high seeding rates to ensure rapid stand establishment. Apply biocides only during dry periods of low rainfall to minimize chemical runoff.
- Keep runoff on site.

Noise would be generated during construction by construction equipment used to build the materials testing lab. Noise generation would be short-term and limited to the project area. Noise generated from construction activities and the use of machinery would be minimized by requiring contractors to adhere to state and county noise regulations. Construction activities would be conducted on weekdays and in daytime hours. The construction contractor would be required to obtain a Community Noise Permit from the DOH Indoor and Radiological Health Branch. In the event that work occurs after normal working hours (i.e., at night or on weekends), or if permissible noise levels are exceeded, the construction contractor would be required to obtain a Community Noise Variance and comply with any permit conditions.

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

The Proposed Action is not located within a floodplain, on the beach, in an erosion-prone area, on geologically hazardous land, or near an estuary, fresh water, or coastal waters. However, it is located within the tsunami evacuation zone. The Proposed Action would be designed to withstand the level of forces necessary to minimize the likelihood that an extreme event would damage the structure. The Proposed Action does not involve habitable uses nor will it encourage such uses. In the event of a hurricane warning, workers would follow civil defense instructions regarding evacuations. If a tsunami warning were to occur while workers are on-site, evacuation procedures would be followed to safely get out of the tsunami evacuation area and move Upcountry.

(12)Substantially affects scenic vistas and viewplanes identified in County or State plans or studies.

The project site is located at the southwest corner of Airport Access Road and Hāna Highway in Kahului on the island of Maui. The area is predominantly industrial, commercial, and agricultural. Scenic resources in the vicinity of the project site include views of Haleakāla Volcano and the West Maui Mountains. Open space resources in the vicinity of the project site include fallow sugarcane fields.

The Proposed Action includes construction of a new building at the site. This building would be a one-story building of approximately 480 square feet and would be located adjacent to the existing field office trailers. The new structure would be consistent with the existing buildings on the site. Therefore, the Proposed Action would not substantially affect scenic vistas or viewplanes.

The Proposed Action would include the installation of outside lighting for safety and security reasons. As per the University of Hawai'i – Mānoa, Institute for Astronomy, nighttime lighting may interfere with telescope operations on Haleakalā and Mauna Kea. The following measures recommended by the University of Hawai'i – Mānoa, Institute for Astronomy would be implemented to minimize impacts to telescope operations:

- Use of motion-sensor activated lighting
- Use of filtered LED or amber LED lighting
- All lighting would be shielded
- All lighting at the site would conform with the Maui County lighting ordinance, Maui County Code of Ordinances, Chapter 20.35

(13)Requires substantial energy consumption.

The Proposed Action would not consume a substantial amount of energy.

Construction activities would result in a short-term increase in power demand, but the increase would be of short duration and would cease upon project completion. In the long term, the baseyard and materials testing laboratory would save energy by providing a more convenient starting point for road construction and maintenance in the region.

5.2. ~~Anticipated~~ Finding of No Significant Impact

Based on the significance criteria set forth in HAR 11-200 and discussed in **Section 5.1**, it is anticipated that the Proposed Action would not have a significant effect on the environment. ~~and that a Finding of No Significant Impact (FONSI) will be filed with the State of Hawai‘i Office of Environmental Quality Control following the public comment period.~~ Therefore, HDOT is filing a Finding of No Significant Impact (FONSI) with the State of Hawai’i Office of Environmental Quality Control with this Final EA.

This page intentionally blank

6. AGENCIES AND ORGANIZATIONS CONSULTED

6.1. Pre-Assessment Consultation

The following agencies and organizations were consulted during the preparation of the Draft EA. Those who formally replied are indicated by an asterisk (*). All written comments received during the early consultation period of the Draft EA and responses are included in **Appendix A**.

State of Hawai'i

- Department of Business, Economic Development & Tourism
- Office of Planning *
- Department of Health (DOH), Clean Water Branch *
- DOH, Environmental Planning Office *
- DOH, Clean Air Branch
- DOH, Indoor and Radiological Health Branch *
- Department of Accounting and General Services *
- Department of Land and Natural Resources (DLNR), Division of Aquatic Resources
- DLNR, Division of Forestry and Wildlife
- DLNR, Division of State Parks
- DLNR, Engineering Division *
- DLNR, State Historic Preservation Division
- DLNR, Land Division
- DLNR, Land Division – Maui District *

County of Maui

- Department of Transportation
- Planning Department *
- Department of Public Works
- Department of Parks and Recreation *
- Police Department *
- Department of Fire and Public Safety
- Department of Water Supply *
- Department of Environmental Management

Organizations

- Maui Electric Company
- Hawaiian Telcom
- Spectrum Cable

6.2. HRS Chapter 6E Consultation

HDOT initiated consultation with SHPD in accordance with HRS Chapter 6E-8 and HAR Chapter 13-275 on July 31, 2018. At that time, HDOT requested a letter of determination from SHPD regarding impacts to archaeological and historic resources. As per HAR Chapter 13-275-3(a), "SHPD will provide a determination letter within ninety days." As of the publication of this Final EA, HDOT has not received a determination letter; therefore, HDOT presumes SHPD's concurrence with HDOT's determination of "no historic properties affected." The letter from HDOT to SHPD is provided in **Appendix E**.

As stated in **Section 3.7**, HDOT would implement the following measures to ensure no impacts to historic or archaeologic resources:

- In the unlikely event that subsurface historic resources, including human skeletal remains, structural remains, cultural deposits, artifacts, sand deposits, or sinkholes are identified during the demolition and/or construction work, all work shall be ceased in the immediate vicinity of the find, the find would be protected from additional disturbance, and SHPD would be notified.
- If human remains are discovered, further disturbances and activities would cease in the area or nearby areas suspected to overlie remains, and SHPD would be contacted immediately.

7. LIST OF CONTRIBUTORS

Table 7-1 identifies the personnel that contributed to the completion of this Draft EA.

Table 7-1. Contributors to the Environmental Assessment

Name	Role
SSFM International, Inc.	
Jennifer M. Scheffel	Project Manager and Primary Author
Susan LeBrun	Sr. Traffic Engineer, Traffic Impact Assessment
Clarice Masaki	Engineer, Traffic Impact Assessment
SWCA Environmental Consultants	
Jaap Eijzenga	QA/QC, Biological Resources Reconnaissance Report
Francis Quitazol	Field Lead and Primary Author, Biological Resources Reconnaissance Report
Scientific Consultant Services, Inc.	
Cathleen Dagher	Senior Archaeologist, Cultural Impact Assessment

This page intentionally blank

8. REFERENCES

County of Maui (COM) Department of Planning. 2012. *Maui Island Plan, Island of Maui General Plan 2030.* Adopted by Ordinance No. 4004, December 28, 2012. Available online at: https://www.mauicounty.gov/DocumentCenter/View/84686.

COM Department of Water Supply. 2017.

COM Planning Commission. 2010. *Wailuku-Kahului Community Plan, Planning Commission Map.* Adopted May 30, 2002. Approved February 16, 2010. Available online at: https://www.mauicounty.gov/DocumentCenter/Home/View/10793.

Department of Health (DOH). 2014a. Fugitive Dust Fact Sheet. Prepared by the DOH, Clean Air Branch. Revised October 2014. Available online at: http://health.hawaii.gov/cab/files/2015/09/Hawaii-Fugitive-Dust-Fact-Sheet-Oct-2014-.pdf.

_____. 2015. Federal and State Ambient Air Quality Standards. November 19, 2015. Available online at: http://health.hawaii.gov/cab/files/2013/05/naaqs_nov_2015.pdf.

_____. 2016. *State of Hawai'i Annual Summary 2015 Air Quality Data.* December 2016. Available online at: https://health.hawaii.gov/cab/files/2016/12/aqbook_2015.pdf.

Earthquake Track. 2017. Recent Earthquakes Near Maui, Hawaii. All earthquake data courtesy of the U.S. Geological Survey. Available online at: https://earthquaketrack.com/r/maui-hawaii/recent.

Federal Emergency Management Agency (FEMA). 2016. Flood Hazard Areas – State of Hawaii. County of Maui Publication Date, March 28, 2016. Available online at: http://geoportal.hawaii.gov/datasets/flood-hazard-areas-dfirm-statewide.

Federal Highway Administration (FHWA). 2015. Construction Noise Handbook, Construction Equipment Noise Levels and Ranges. Available online at: https://www.fhwa.dot.gov/environment/noise/construction_noise/handbook/.

Foote, D.E., E.L. Hill, S. Nakamura, and F. Stephens. 1972. *Soil Survey of the Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii.* U.S. Department of Agriculture, Soil Conservation Service, in cooperation with the University of Hawaii Agricultural Experiment Station. Issued August 1972. Available online at: https://www.nrcs.usda.gov/Internet/FSE_MANUSCRIPTS/hawaii/islandsHI1972/Five_islands_SS.pdf.

Hawai'i News Now (HNN). 2016a. Tropical Cyclones in Hawai'i. HNN Hurricane Center. Available online at: http://www.hawaiinewsnow.com/category/190631/hawaii-news-now-hurricane-center.

_____. 2016b. Report: Rising sea temps likely to bring more cyclones to Hawai'i. Available online at: http://www.hawaiinewsnow.com/story/33019216/iucn-experts-rising-sea-temperatures-likely-to-bring-more-intense-hurricanes.

Institute of Transportation Engineers (ITE). 2017. *Trip Generation Manual, 10th Edition.* Published by ITE. September 2017.

Maui County Council. 2002. *Wailuku-Kahului Community Plan.* Available online at: https://www.mauicounty.gov/DocumentCenter/Home/View/1719.

Munekiyo & Hiraga, Inc. 2012. *Kahului Airport Access Road, Phase I, Puunene Avenue to Hana Highway, Wailuku District, Maui, Hawaii, Environmental Assessment.* Prepared for State of Hawai'i Department of Transportation, Highways Division, and Federal Highway Administration. Published October 23, 2012.

National Oceanic and Atmospheric Administration (NOAA). 2017. The Tsunami Story. Available online at: http://tsunami.noaa.gov/tsunami_story.html.

National Weather Service (NWS). 2017a. Monthly Mean Max Temperature for Kahului Area, HI, 2000-2017. NOWData – NOAA Online Weather Data. Available online at: http://w2.weather.gov/climate/xmacis.php?wfo=hnl.

_____. 2017b. Monthly Mean Min Temperature for Kahului Area, HI, 2000-2017. NOWData – NOAA Online Weather Data. Available online at: http://w2.weather.gov/climate/xmacis.php?wfo=hnl.

_____. 2017c. Monthly Total Precipitation for Kahului Area, HI, 2000-2017. NOWData – NOAA Online Weather Data. Available online at: http://w2.weather.gov/climate/xmacis.php?wfo=hnl.

Office of Environmental Quality Control (OEQC). 1997. "Guidelines for Assessing Cultural Impacts." *Guide to the Implementation and Practice of the Hawaii Environmental Policy Act.* State of Hawai'i Office of Planning, Honolulu. Pages 11-13.

State of Hawai'i. 2016. Hawai'i Climate Adaptation Portal, Interagency Climate Adaptation Committee. Available online at http://climateadaptation.hawaii.gov/.

State of Hawai'i Department of Transportation (HDOT). 2015. *Hawaií DOT Traffic Station Maps.*

_____. 2017. Statewide Transportation Improvement Program, FFY 2015 Thru FFY 2018, Revision #10. Revision Effective Date: June 13, 2017. Available online at: https://hidot.hawaii.gov/highways/files/2017/06/20170613-15-18-R10-Processed-FixOC20.pdf.

Stearns, H.T. and G.A. MacDonald. 1942. *Geology and Ground-Water Resources of the Island of Maui, Hawaii.* U.S. Geological Survey Bulletin 7. Available online at: https://pubs.usgs.gov/misc/stearns/Maui.pdf.

U.S. Army Corps of Engineers (USACE). 2011. *Sea Level Change Considerations for Civil Works Programs.* EC1165-2-212, October 2011.

_____. 2014a. *Procedures to Evaluate Sea Level Change: Impacts, Responses, and Adaptation*. Engineer Technical Letter (ETL) 1100-2-1, 30 June 2014. Expiration date March 30, 2019. Available online at: http://www.publications.usace.army.mil/Portals/76/Publications/EngineerTechnicalLetters/ETL_1100-2-1.pdf.

_____. 2014b. Climate Change Adaptation, Comprehensive Evaluation of Projects with Respect to Sea-Level Change. Sea-Level Change Curve Calculator (2014.88). Available online at: http://www.corpsclimate.us/ccaceslcurves_2014_88.cfm.