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3.16 NOISE

This section analyzes the potential for adverse noise impacts of the Honoapiʻilani Highway Improvements Project (the Project) and provides for a comparative assessment of the Build Alternatives.

Noise is unwanted sound that can come from many sources in a community, including transportation sources (for example, automobiles, trucks, buses, and aircraft), local stationary sources (for example, manufacturing facilities), and natural resources (for example, wind, ocean, and animals). The Project is a highway realignment project; therefore, this analysis is focused on highway traffic noise as perceived by the community, which primarily depends on the volume and speed of traffic, the number of trucks in the traffic flow, and the distance of the community from the traffic. Because each Build Alternative has a different alignment with either a closer or farther proximity to residences, public spaces, and culturally important resources (for example, the Olowalu Petroglyphs), the critical potential community impact from the Project is the change in distance. In comparing the Build Alternatives, the overall volumes, speeds, and truck percentages is largely unchanged (Section 3.14, Transportation).

Following publication of the Draft Environmental Impact Statement (EIS), the public was afforded an opportunity to review and comment on the effects of the Project with respect to noise. As part of this Final EIS, the analysis contained within this section was revised to reflect those comments, or other information gathered after the publication of the Draft EIS.

3.16.1 Regulatory Context

The Project is federally funded and defined as a Type I noise project under the criteria identified by Title 23 CFR Part 772, Procedures for Abatement of Highway Traffic Noise and Construction Noise, as well as the Hawaiʻi Department of Transportation's (HDOT) *Highway Noise Policy and Abatement Guidelines*.[1] As set forth in 23 CFR 772.5 (definitions), a Type I project is "a proposed Federal or Federal-aid highway project for the construction of a highway on new location or the physical alteration of an existing highway which significantly changes the horizontal or vertical alignment or increases the number of through-traffic lanes."

The Federal Highway Administration (FHWA) and HDOT have identified the following noise analysis procedures for federally funded projects to provide guidance and criteria for noise studies and noise abatement measures:

- Measuring existing noise levels at representative noise-sensitive receivers
- Predicting future traffic noise levels
- Comparing ~~existing and~~ predicted future traffic noise levels with the FHWA/HDOT Noise Abatement Criteria (NAC)

[1] State of Hawaiʻi Department of Transportation (HDOT). 2016. Highway Noise Policy and Abatement Guidelines. April 2016.

- Comparing existing and predicted future traffic noise levels with the HDOT Substantial Increase criterion
- ~~Evaluating potential~~ Determining noise impacts ~~and mitigation~~
- Evaluating abatement ~~possible noise barriers~~

HDOT also assesses the effects of construction noise and vibration. ~~Assessing the effects of construction noise~~ Vibration is a periodic motion or oscillation around an equilibrium position that, in the context of a highway project, is most notable during construction. Vibration can result in the noticeable movement of building floors, rattling of windows, shaking of items on shelves or hangings on walls, and even rumbling sounds. Vehicular roadways do not result in vibration levels that are perceptible or result in architectural or structural damage. As such, an assessment of vibrations from the highway and bridge operations for the Project was not warranted. However, sensitive receptors (primarily residences in the project area) near construction-related activities have the potential for exposure to high vibration levels.

3.16.2 Methodology

This section outlines the approach that was used to collect and evaluate the beneficial and adverse effects of the Build Alternatives related to noise and vibration. It includes an introduction to acoustics, a description of the study area, relevant laws and regulations, and methods for collecting data, assessing impacts, and evaluating possible abatement ~~mitigation~~ measures.

3.16.2.1 Noise Fundamentals

Noise, or sound, is any change in air pressure that the human ear can detect—from levels that are barely perceptible to those that can cause hearing damage. In the human ear, these changes in air pressure are translated to sound. The greater the change in air pressure, the louder the sound. For example, a whisper in the library creates a relatively small change in the room air pressure, whereas air pressure changes are much greater in the front row of a loud rock concert. This section discusses how noise is evaluated (its definition, transmission characteristics, and measurement) and provides typical noise levels for reference.

Decibel Scale

Sound is measured in terms of both loudness and frequency. The unit used to measure the loudness of sound is called a decibel (dB). The dB scale is a logarithmic conversion of air pressure level variations (measured in a unit called a pascal) to a unit of measure with a more convenient numbering system. The adjusted dB scale, referred to as the A-weighted dB (dBA) scale, provides an accurate "single number" measure of what the human ear can hear. This analysis uses dBA as the unit of measure.

Typical Noise Levels

In most neighborhoods, nighttime noise levels are noticeably lower than daytime levels. In a quiet rural area at night, noise levels from crickets or wind rustling leaves on the trees can range between 32 and 35 dBA. As residents start their days and local traffic increases, the same rural area can have noise levels ranging from 50 to 60 dBA. Noise levels in urban neighborhoods are louder than those in rural

areas. Noise levels during the day in a noisy urban area are frequently as high as 70 to 80 dBA. Nighttime noise levels in urban areas are generally much quieter than daytime noise levels and can range from 40 to 50 dBA.[2]

Long-term, or continuous, exposure to very loud noises can damage the human ear. Noise levels exceeding 85 dBA over continuous periods can result in permanent hearing loss. Noise levels above 110 dBA become first intolerable, then extremely painful. FIGURE 3.16-1 shows noise levels for typical transportation sources, followed by a description of a normal human response to each.

FIGURE 3.16-1. **Typical Noise Levels**

NOISE SOURCE OR ACTIVITY		SUBJECTIVE IMPRESSION	RELATIVE LOUDNESS (human judgment of different sound levels)
Jet aircraft takeoff from carrier (50 feet)	140	Threshold of pain	64 times as loud
50-horsepower siren (100 feet)	130		32 times as loud
Loud rock concert near stage Jet takeoff (200 feet)	120	Uncomfortably loud	16 times as loud
Float plane takeoff (100 feet)	110		8 times as loud
Jet takeoff (2,000 feet)	100	Very loud	4 times as loud
Heavy truck or motorcycle (25 feet)*	90		2 times as loud
Garbage disposal (2 feet) **Pneumatic drill (50 feet)**	80	**Moderately loud**	**Reference loudness**
Vacuum cleaner (10 feet) Passenger car at 65 mph (25 feet)*	70		1/2 as loud
Typical office environment	60		1/4 as loud
Light auto traffic (100 feet)*	50	Quiet	1/8 as loud
Bedroom or quiet living room Bird calls	40		1/16 as loud
Quiet library, soft whisper (15 feet)	30	Very quiet	
High quality recording studio	20		
Acoustic test chamber	10	Just audible	
	0	Threshold of hearing	

Source: Beranek, L.L., 1988. *Noise and Vibration Control*. Institute of Noise Control Engineering. McGraw Hill (1988) and U.S. Environmental Protection Agency (EPA), 1974. *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety.* Report Number 550/9-74-004.

Public response to noise depends greatly on the range over which the noise varies in an environment. For example, people generally find a moderately high, constant noise level more tolerable than a quiet background level interrupted by high-level noise intrusions. Considering this subjective response, it is often useful to look at a statistical distribution of noise levels over a given period. Such distributions

[2] Federal Transit Administration. 2018. Transit Noise and Vibration Impact Assessment Manual. FTA Report Number 0123. September 2018

identify the noise level exceeded, and the percentage of time exceeded, which provides for a more complete description of the range of noise levels during the given measurement period.

TABLE 3.16-1 summarizes changes in noise levels that a human can perceive. Generally, the average human is unable to perceive noise level changes until the changes measure in the 2 to 3 dBA range. But these increases are barely perceptible to most listeners, and it is not until the noise level change reaches 5 dBA or more that most humans can readily perceive changes in noise levels.

TABLE 3.16-1. **Average Human Ability to Perceive Changes in Noise Levels**

NOISE LEVEL CHANGE (dBA)	HUMAN PERCEPTION
0 to 2	Not perceptible to most listeners
2 to 3	Barely perceptible
5	Readily perceptible
10	Clearly perceptible

Source: Adapted from Bolt Beranek and Newman, Inc. June 1973. *Fundamentals and Abatement of Highway Traffic Noise*, Report No. PB-222-703. Prepared for the FHWA.

Noise levels from most sources tend to vary with time. For example, noise levels increase when a car approaches, peak as it passes, and then decrease as the car moves farther away. In this example, noise levels within a 1-minute timeframe may range from 45 dBA as the vehicle approaches, to 65 dBA as it passes, and then return to 45 dBA as it moves farther away. To account for the variance in loudness over time, the equivalent sound level (L_{eq}) is used. The L_{eq} is defined as the energy average noise level, in dBA, for a specific period (for example, 1 minute). Returning to the example of the passing car, the energy average noise level is assumed to be 60 dBA during the entire time the car is heard as it passes by. In this example, the noise level is stated as 60 dBA L_{eq}. The same approach is used to determine the L_{eq} for other periods such as hourly (L_{eq} [h]) or over a 24-hour period (L_{eq} [24h]).

Noise Propagation

Several factors determine how sound levels decrease, or attenuate, over a distance. Two general categories apply to noise sources: a point source (for example, a church bell) and a line source (for example, constant flowing traffic on a busy highway).

A single-point noise source attenuates at a rate of 6 dB each time the distance from the source doubles. Thus, a point source producing a noise level of 60 dB at 50 feet attenuates to 54 dB at 100 feet and to 48 dB at 200 feet. A line source such as a highway, however, generally reduces at a rate of approximately 3 dB each time the distance doubles. Using the example above, a line source measured at 60 dB at 50 feet would attenuate to 57 dB at 100 feet and to 54 dB at 200 feet.

Noise Criteria

The HDOT Noise Policy and Abatement Guidelines policy implements FHWA regulations on noise abatement. The FHWA has established NAC for different exterior and interior land use activities (TABLE 3.16-2). While the NAC do not constitute legally enforceable noise standards, they provide a yardstick for evaluating the effect of a project's noise on the surrounding community. The State of Hawai'i has adopted the NAC as its standard.

TABLE 3.16-2. **Noise Abatement Criteria**

ACTIVITY CATEGORY	ACTIVITY $L_{EQ}(h)$ dBA[1]	CRITERIA $L_{10}(h)$ dBA[2]	EVALUATION LOCATION	DESCRIPTION OF ACTIVITY
A	57	60	Exterior	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B[3]	67	70	Exterior	Residential.
C[3]	67	70	Exterior	Active sports areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, televisions studios, trails, and trail crossings.
D	52	55	Interior	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.
E[3]	72	75	Exterior	Hotels, motels, offices, restaurants/bars, and other developed lands, properties or activities not included in A-D or F.
F	----	----	----	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities, (water resources, water treatment, electric), and warehousing.
G	----	----	----	Undeveloped lands that are not permitted.

Source: U.S. Department of Transportation, FHWA. 2010. Highway Traffic Noise: Analysis and Abatement. Revised December 2010.

Notes: $L_{10}(h)$ is the noise level exceeded for 10% of the time of the measurement duration (1 hour).

* **Bold** indicates applicability to the project area

1 Either Leq(h) or $L_{10}(h)$ (but not both) may be used on a project.

2 The Leq(h) and the $L_{10}(h)$ Activity Criteria values are for impact determination only and are not design standards for noise abatement measures.

3 Includes undeveloped lands permitted for this activity category.

Under HDOT's noise policy, a noise impact occurs when the predicted traffic noise levels approach (or exceed) the NAC or substantially exceed the existing noise levels. "Approach" means within 1 dBA less than the NAC, and "substantially exceed the existing noise levels" means an increase of at least 15 dBA. If the NAC are approached or exceeded, or if there is a substantial increase above the existing noise level, noise abatement measures must be considered.

3.16.2.2 Study Area

The noise study area for the Project includes the full project area of approximately 6 miles in length and encompasses the Build Alternatives described in Chapter 2, Alternatives. As defined in HDOT's noise policy, receptor locations are identified if they are present within a noise sensitive region, which is defined as an area comprising a 500-foot swath centered along a highway centerline. In fact, most

of the receptors in the Project’s noise study area are located outside the noise sensitive region. Nevertheless, all noise sensitive receptors identified within 500 feet of the centerline of each alternative and identified noise sensitive receptors located beyond 500 feet ~~in this chapter~~ have been evaluated in this chapter.

3.16.2.3 Data Collection Methods

As part of the noise abatement analyses, sound level measurements were recorded to validate the FHWA Traffic Noise Model (TNM), version 2.5. These sound level measurements were not used to establish the existing noise levels in the study area. Once the model was validated with the sound measurement data, the existing sound levels were identified by modeling the worst noise hour traffic volumes. Worst-hour (that is, loudest-hour) traffic from 2023 was used to model existing conditions, and year 2045 traffic was used to model conditions for the No Build Alternative and the Build Alternatives. The following sections describe the methods and equipment used to collect the noise data.

Noise Monitoring

Noise monitoring was conducted from June 20 to June 23, 2023, at 13 outdoor locations within the study area (FIGURE 3.16-2). Of the 13 monitoring sites, three were 24-hour measurements and the other 10 were short-term (15 to 30 minutes). HDOT conducted the 24-hour site measurements to document the peak or worst hour occurring over a 24-hour period at residential and land use activities where sleep occurs. The three 24-hour locations were at the Maui Butterfly Farm, at the end of Luawai Street, and at the end of Paeki‘i Place. The short-term sites were used primarily for traffic noise and land uses with daytime activities such as residences, parks, and places of worship. Site observations indicated (and the noise levels from the three 24-hour sites confirmed) that short-term measurement periods provided sufficient traffic noise levels with free-flow traffic conditions for noise model validation and prediction of worst- or loudest-hour traffic noise levels. Appendix 3.16, Noise Technical Report, provides hourly noise levels collected at the three 24-hour measurement locations.

HDOT measured the noise in accordance with the American National Standard Institute (ANSI) procedures for community noise measurements and the FHWA Noise Measurement Handbook ~~Field Guide~~.[3] The measurement locations were placed at least 5 feet from any solid structure to prevent acoustical reflections and at a height of 5 feet off the ground. The equipment HDOT used for noise monitoring included Larson Davis Type 720 and 820 sound level meters, which were calibrated before and after the measurement period using handheld or software-based equipment calibration.

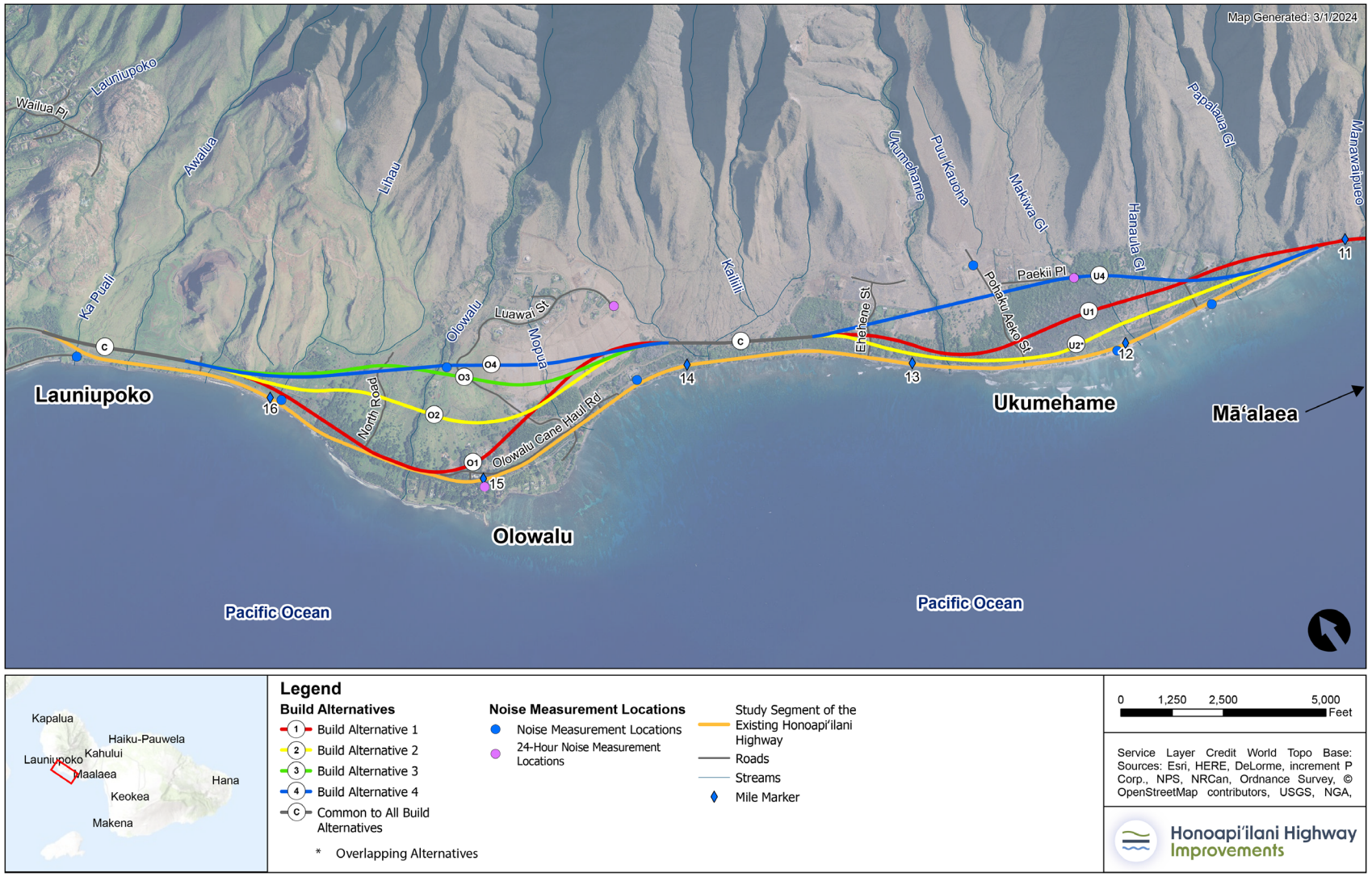
HDOT performed the noise measurements during satisfactory weather conditions and during times when traffic on Honoapi‘ilani Highway was free flowing. The temperatures on these days ranged from 73 to 88 degrees Fahrenheit with mostly sunny skies, no precipitation, and low wind speeds during measurement periods.

HDOT simultaneously counted traffic volumes for the measurement sites. The traffic counts used five vehicle classifications: automobiles, medium trucks, heavy trucks, motorcycles, and buses. HDOT observed vehicle speeds during the measurements, and the corridor was driven daily to estimate

[3] Federal Highway Administration. 2017. Noise Measurement Field Guide – Final Report. FHWA-HEP-18-066.

vehicle speeds during measurement periods. Noise measurements were not taken unless traffic conditions were free flowing. HDOT performed traffic counts at 15-minute intervals along Honoapi‘ilani Highway from vantage points with direct line-of-sight to traffic.

FIGURE 3.16-2. **Noise Monitoring Locations**



Traffic Noise Model Validation

The FHWA TNM version 2.5 was used to model existing traffic noise levels at the measurement sites along the existing lane configuration of Honoapi‘ilani Highway and the sites along the Build Alternatives. The model estimates the traffic noise level at a receptor location resulting from a series of straight-line roadway segments. Noise emissions from free-flowing traffic depend on the following:

- Number of automobiles, medium trucks, and heavy trucks per hour
- Vehicular speed
- Reference noise emission levels of specified vehicles

The TNM also considers effects of intervening barriers, topography, trees, and atmospheric absorption. By intent and design, HDOT did not include noise from sources other than traffic. Therefore, when nontraffic noise (for example, aircraft) was considerable in an area, the TNM results were less than the measured noise levels.

~~HDOT exported base maps as DXF files and imported them into the TNM. In addition, ArcGIS was used to develop the TNM with major roadways, retaining walls, topographical features, building rows, and sensitive receptors digitized into the model. The United States Geological Survey 7.5 minute Digital Elevation Model was also used.~~

HDOT imported the Project’s conceptual Build Alternative design files into ESRI ArcMap® GIS software to develop geometry for TNM elements such as roadways, receivers, terrain lines, and ground zones. The elevation data was based on existing survey data and roadway design files were developed. HDOT then imported the geometry into the TNM to develop a traffic noise model for existing conditions.[4]

HDOT scaled up traffic volumes counted during the short-term measurement periods to 1-hour volumes and entered the traffic volumes into the TNM along with the measured vehicle speeds to validate the TNM. Measured and modeled noise levels for the sites measured near Honoapi‘ilani Highway were generally close (within 3.0 dBA). For these sites, traffic data used for 2023 and Future Year 2045 noise predictions were the peak hour provided by the traffic analysis performed for the Project. Modeled traffic volumes are included in the Noise Technical Report (Appendix 3.16). Modeled volumes included the following vehicle percentages: 1.0% heavy trucks or vehicles with more than three axles, 2.5% medium trucks or three-axle vehicles, and 96.5% automobiles or two-axle vehicles. The vehicle mix is based on modeled vehicle classifications and traffic information provided by HDOT and traffic data collection for this ~~Draft~~ Final Environmental Impact Statement (EIS).

HDOT included ~~60~~ 66 modeled sites that represent ~~44~~ 48 residences~~,~~ 10 parks, (five parks or recreation areas, one church, one cemetery, three areas of cultural interest), and outdoor areas at eight commercial businesses in the TNM to describe noise levels at noise sensitive land uses located along the study area. FIGURE 3.16-2 shows the approximate locations of the modeled sites.

4 U.S. Geological Survey (USGS). https://viewer.nationalmap.gov/basic/. Accessed June 2023.

Results of Existing Noise Measurements

FIGURE 3.16-3 presents the measured noise levels at each of the 10 short-term monitoring sites (15- to 30-minute noise measurements). Existing measured levels ranged from 44 dBA to 71 dBA depending on the proximity of the measurement to the existing Honoapiʻilani Highway alignment. The primary noise source at monitoring sites located within a few hundred feet of Honoapiʻilani Highway was traffic noise from road. At receptor sites ST-1, ST-2, ST-4, and ST-6, 30-minute noise measurements were taken. This was to document a sample of ambient conditions at these locations (over 1,500 feet from Honoapiʻilani Highway) where roadway noise was not audible at the time of the noise measurement.

TABLE 3.16-3. **Noise Measurement Data and Traffic Noise Model Validation**

SITE ID	SITE LOCATION	LAND USE	DATE OF MEASUREMENT/ START TIME	MEASURED NOISE LEVEL	MODELED NOISE LEVEL	DIFFERENCE BETWEEN MEASURED – MODELED
ST-1	Luawai Street, east terminus	Adjacent to Residence	6/20/2023 11:30	45	N/A	N/A
ST-2	Utility Building near Petroglyphs	Utility Building near Petroglyphs	6/20/2023 12:10	47	N/A	N/A
ST-3	Pāpalaua Wayside Park	Park	6/20/2023 14:30	71	69	-2
ST-4	Adjacent to Residence on Pōhaku ʻAeko Street	Adjacent to Residence	6/20/2023 14:55	44	N/A	N/A
ST-5	Adjacent to Olowalu Lanakila Hawaiian Church	Adjacent to Church	6/20/2023 15:35	63	64	1
ST-6	Paekiʻi Place, east terminus	Adjacent to Residence	6/21/2023 11:50	47	N/A	N/A
ST-7	Ukumehame Beach Park	Park	6/21/2023 12:55	66	67	1
ST-8	Southern terminus of former Honoapiʻilani Highway	Adjacent to Beach	6/21/2023 15:25	58	60	2
ST-9	Olowalu Landing Parking	Adjacent to Park	6/21/2023 15:55	60	60	0
ST-10	Honoapiʻilani Highway frontage, south of Olowalu Recycling and Refuse Convenience Center	Adjacent to Access Road	6/21/2023 16:35	63	63	0

N/A 30-minute noise measurements were conducted at sites ST-1, ST-2, ST-4, and ST-6 as a sample of existing ambient conditions. Measured noise levels at these sites were not validated within the TNM due to the distance from the existing Honoapiʻilani Highway alignment (over 1,500 feet) from each site where roadway noise was not audible at the time of the noise measurement.

3.16.3 Affected Environment

3.16.3.1 Existing and Future Noise-Sensitive Land Uses

HDOT identified existing and future noise-sensitive land uses and activities adjacent to Honoapi‘ilani Highway and nearby roadways through site inspections and existing mapping. Existing land uses located along this portion of the highway include residential buildings, parks, trails, places of worship, a cemetery, cultural resource areas, and other uses. The residences along the study area are Category B, and the recreation areas, parks, places of worship, and similar uses are Category C. Category B and Category C activities have an exterior NAC of $L_{eq}(h)$ of 66 ~~67~~ dBA. Category E commercial businesses are in the area and have an exterior NAC of $L_{eq}(h)$ of 71 ~~72~~ dBA.

During site observations, HDOT identified areas of undeveloped land within the study area that could be part of a future development. HDOT reviewed Maui’s Automated Planning and Permitting System online permitting files in April 2023 for any permitted development located within 500 feet of the centerline of the Build Alternatives.[5] At the time of ~~this~~ the development of the Draft EIS, no permits were on file at the Maui County Planning Department for planned developments along the study area. Section 3.1, Land Use and Zoning, describes land use in the project area. In January 2025 and subsequent to publication of the Draft EIS, four additional new housing construction sites in the Ukumehame subdivision were observed in the project area and were added to the receptors modeled for the noise assessment (sites M63, M64, M65, and M66).

Existing Conditions

FIGURE 3.16-4 presents the modeled existing worst-hour traffic noise levels and the number of receptors represented at each site. Worst-hour traffic noise levels for residential areas range from 35 dBA to 69 dBA. These levels depend on the proximity of the receiver to the roadway traffic and the presence of buildings and topography providing noise attenuation between the receiver and the roadway. The worst-hour traffic noise levels do not approach or exceed the NAC at any of the modeled sites.

TABLE 3.16-4. **Predicted Existing Worst-Hour Traffic Noise Levels**

SITE ID	DESCRIPTION OF RECEIVERS REPRESENTED	NUMBER OF RECEIVERS REPRESENTED	HDOT NOISE ABATEMENT CATEGORY (CRITERION*)	MODELED EXISTING 2023 WORST-HOUR LEQ(H), DBA	IMPACT TYPE* (S, A/E, OR NONE)
UKUMEHAME					
M1	Pāpalaua Wayside Park	1	C/66	60	None
M2	Ukumehame Beach Park	1	C/66	62	None
M3	Ukumehame Firing Range	1	C/66 ~~E/71~~	46	None
M4	Residence at Paeki‘i Pl.	1	B/66	41	None
M5	Residence at Pōhaku ‘Aeko St.	1	B/66	41	None
M6	SOD Farm at Ehehene St.	2	B/66, E/71	46	None
M7	Residence at Ehehene St.	1	B/66	44	None

[5] https://mapps.co.maui.hi.us/energov_prod/selfservice/MauiCountyHIProd#/search.

SITE ID	DESCRIPTION OF RECEIVERS REPRESENTED	NUMBER OF RECEIVERS REPRESENTED	HDOT NOISE ABATEMENT CATEGORY (CRITERION*)	MODELED EXISTING 2023 WORST-HOUR LEQ(H), DBA	IMPACT TYPE* (S, A/E, OR NONE)
M8	Residence beyond Ehehene St.	1	B/66	39	None
M9	Ukumehame Mauka Cultural Sites	1	C/66	38	None
M61	Residence at north end of Ehehene St.	1	B/66	42	None
M62	Residence along Ukumehame Stream	1	B/66	51	None
M63	Residence at Pōhaku 'Aeko St.	1	B/66	49	None
M64	Residence at Pōhaku 'Aeko St.	1	B/66	46	None
M65	Residence at Pōhaku 'Aeko St.	1	B/66	44	None
M66	Residence at Pōhaku 'Aeko St.	1	B/66	43	None
OLOWALU					
M10	Olowalu Lanakila Hawaiian Church	1	C/66	56	None
M11	Residence at Olowalu Village Rd.	1	B/66	54	None
M12	Residence at Olowalu Village Rd.	1	B/66	59	None
M13	Residence at Olowalu Village Rd.	1	B/66	58	None
M14	Residence at Olowalu Village Rd.	1	B/66	57	None
M15	Residence at Olowalu Village Rd.	1	B/66	57	None
M16	Residence at Olowalu Village Rd.	1	B/66	57	None
M17	Residence at Olowalu Village Rd.	1	B/66	60	None
M18	Residence at Olowalu Village Rd.	1	B/66	54	None
M19	Residence at Olowalu Village Rd.	1	B/66	55	None
M20	Residence at Olowalu Village Rd.	1	B/66	53	None
M21	Residence at Olowalu Village Rd.	1	B/66	53	None
M22	Residence at Olowalu Village Rd.	1	B/66	60	None
M23	Olowalu Beach	1	C/66	50	None
M24	Camp Olowalu	1	C/66	56	None
M25	Residence at Olowalu Village Rd.	1	B/66	48	None
M26	Residence at Olowalu Village Rd.	1	B/66	48	None
M27	Residence at Olowalu Village Rd.	1	B/66	49	None
M28	Olowalu Landing	1	C/66	47	None
M29	Commercial – Plantation House	1	E/71	48	None
M30	Residence at Kuahulu Pl.	1	B/66	51	None
M31	Residence at Kuahulu Pl.	1	B/66	49	None
M32	Residence at Kuahulu Pl.	1	B/66	48	None
M33	Commercial – Leoda's	1	E/71	66	None
M34	Residence/Commercial – General Store	2	B/66, E/71	65	None

SITE ID	DESCRIPTION OF RECEIVERS REPRESENTED	NUMBER OF RECEIVERS REPRESENTED	HDOT NOISE ABATEMENT CATEGORY (CRITERION*)	MODELED EXISTING 2023 WORST-HOUR LEQ(H), DBA	IMPACT TYPE* (S, A/E, OR NONE)
M35	Commercial – The Maui Butterfly Farm	1	E/71	65	None
M36	Commercial – Olowalu Juice Stand	1	E/71	69	None
M37	Residence at Luawai St.	1	B/66	41	None
M38	Residence at Luawai St.	1	B/66	43	None
M39	Residence at Luawai St.	1	B/66	43	None
M40	Residence at Luawai St.	1	B/66	43	None
M41	Residence at Luawai St.	1	B/66	42	None
M42	Residence at Luawai St.	1	B/66	43	None
M43	Residence at Luawai St.	1	B/66	43	None
M44	Residence at Luawai St.	1	B/66	42	None
M45	Residence at Luawai St.	1	B/66	41	None
M46	Residence at Kalai Pl.	1	B/66	41	None
M47	Residence at Kalai Pl.	1	B/66	41	None
M48	Residence at Kalai Pl.	1	B/66	43	None
M49	Residence at Luawai St.	1	B/66	42	None
M50	Residence at Luawai St.	1	B/66	42	None
M51	Residence at Kalai Pl.	1	B/66	41	None
M52	Residence at Kalai Pl.	1	B/66	40	None
M53	Olowalu Cultural Reserve	1	C/66	35	None
M54	Residence at Luawai St.	1	B/66	36	None
M55	Olowalu Petroglyphs	7	C/66	36	None
M56	Residence at Luawai St.	1	B/66	41	None
M57	Residence at Luawai St.	1	B/66	41	None
M58	Awalua Cemetery	1	C/66	46	None
M59	Recreation ~~Commercial~~ - Paintball	1	C/66 ~~E/71~~	49	None
M60	Residence at Olowalu Village Road	1	B/66	45	None

Notes: See Table 3.16-2 for descriptions of Noise Abatement Categories.
The calculation of dwelling units represented by site M55 were calculated using HDOT's method of comparing the impact area (estimated at 30,000 square feet) to the typical urban lot size of 4,200 square feet when required to determine noise barrier feasibility and reasonableness.
A "Receiver" is an area of frequent human outdoor activity such as homes, apartments, parks.
* Impact Type: S = Substantial Increase (15 dBA or more), A/E = Approach or Exceed NAC.

3.16.4 Environmental Consequences

The noise analysis considers traffic noise levels and resulting exceedances or impacts of the NAC or substantial increase threshold of 15 dBA at receivers for the future No Build Alternative and the Build Alternatives. The FHWA TNM was used to model the noise levels in 2045 at ~~60~~ 66 modeled sites that

represent ~~44~~ 48 residences, 10 parks~~,~~ (five parks or recreation areas, one church, one cemetery, three areas of cultural interest), and outdoor areas at eight commercial businesses—with and without the Project being constructed. Input variables to noise modeling and analysis include traffic volumes, vehicle speeds, and vehicle fleet mix (automobile, medium truck, and heavy truck percentages). The noise analysis considers the peak traffic hour as the noisiest hour of the day. The number of vehicles expected to travel on Honoapi‘ilani Highway in 2045 is predicted to increase based on regional demand and would be greater than existing conditions (2023) but would not vary by Build Alternative. Appendix 3.16, Noise Technical Report, provides future modeled traffic data. FIGURE 3.16-3 and TABLE 3.16-5 show the noise levels of the Build Alternatives by receptor location.

3.16.4.1 No Build Alternative

Predicted 2045 traffic noise levels for the No Build Alternative are expected to be within 2 dBA of existing noise levels. An increase of 1 dBA to 2 dBA in future noise levels is predicted at most sites, which is the result of an increase in future traffic. The NAC of 67 dBA $L_{eq}(h)$ (the threshold for residential) is predicted to be approached or exceeded at one of the ~~60~~ 66 modeled sites representing one residence located next to the Olowalu General Store (TABLE 3.16-5). Predicted 2045 traffic volumes were used to model future noise levels for the No Build Alternative which range from 36 dBA to 70 dBA depending on the proximity of the receiver to Honoapi‘ilani Highway.

3.16.4.2 Build Alternatives

Olowalu

Common to All Build Alternatives

The change in traffic noise levels throughout the project area is affected by an increase in future traffic volumes ~~noise levels~~; however, the primary factor is the new location of the new Honoapi‘ilani Highway alignment and its distance relative to receptor sites. ~~For the existing highway to remain as a local connector road, overall volumes would decrease substantially~~. As summarized in TABLE 3.16-5, for all Build Alternatives the reduction in traffic volumes on the existing Honoapi‘ilani Highway results in a reduction in noise levels for those receptors located along the existing roadway (except under Build Alternative 1 as discussed below).

The NAC threshold of 67 dBA $L_{eq}(h)$ is not predicted to be approached or exceeded at any of the 51 modeled sites in Olowalu, and no sites are predicted with the modeled 2045 traffic noise levels to experience a substantial increase~~d impact resulting from an increase in traffic noise levels by~~ of 15 dBA ~~(the NAC threshold that is considered as substantially exceeding existing noise levels)~~ over existing noise levels (except for one location in Build Alternative 4 discussed below).

FIGURE 3.16-3. **Modeled 2045 Noise Levels with the Project - Olowalu**

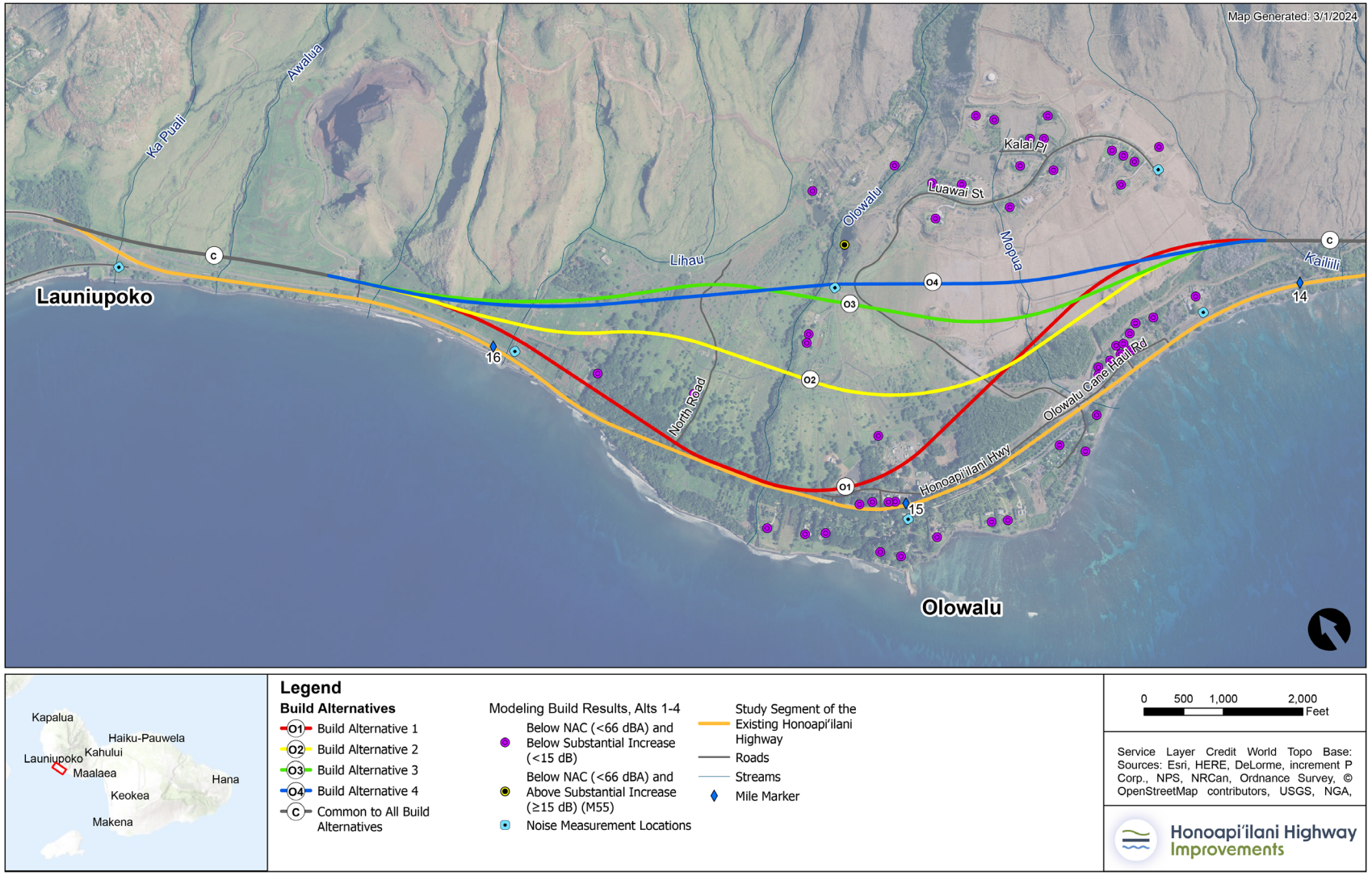


FIGURE 3.16-4. **Modeled 2045 Noise Levels with the Project - Ukumehame**

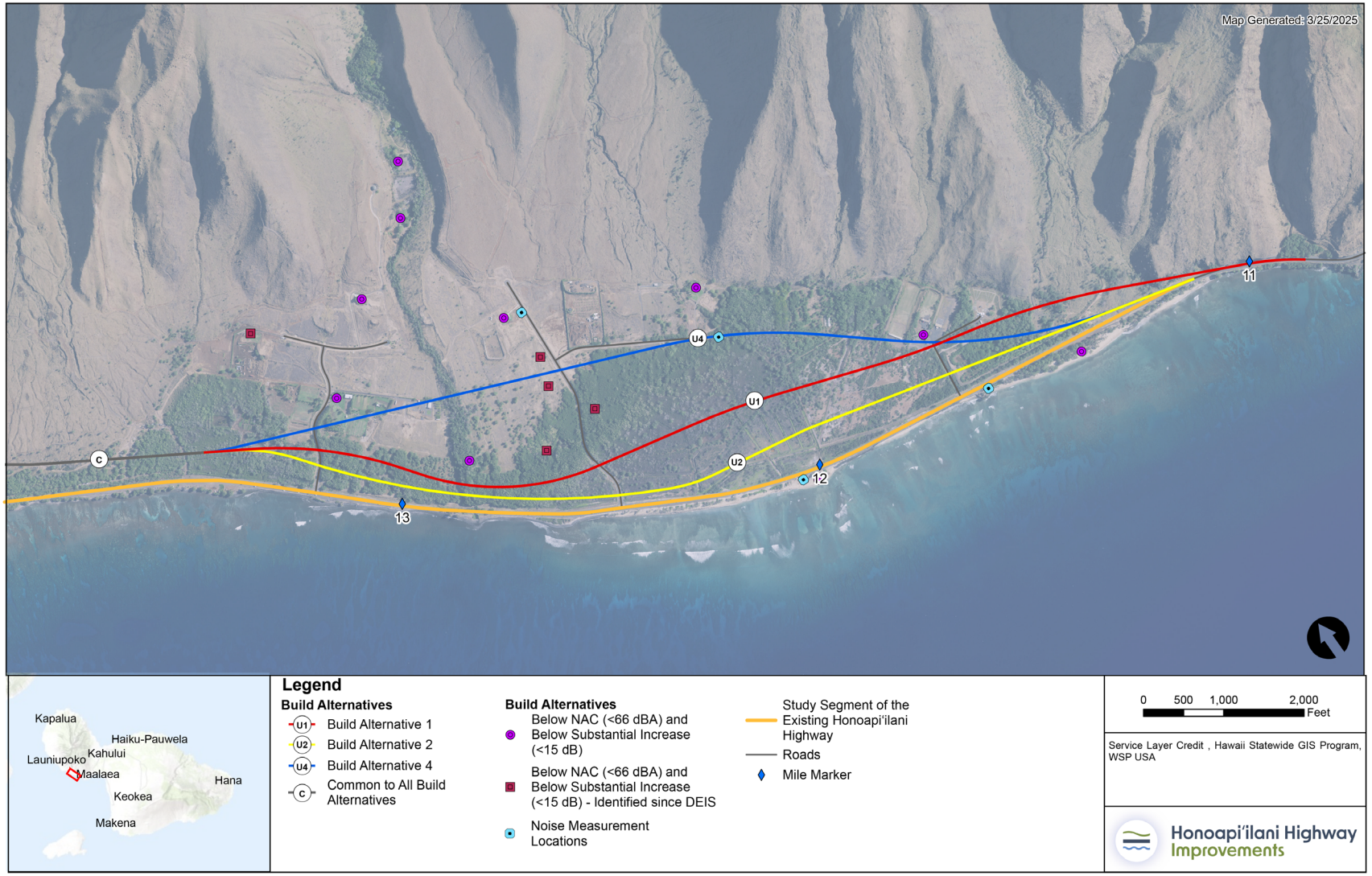


TABLE 3.16-5. **Predicted Existing and Future Build Worst-Hour Traffic Noise Levels**

SITE ID	LOCATION/DESCRIPTION	NUMBER OF RECEIVERS REPRESENTED	HDOT NOISE ABATEMENT CATEGORY (CRITERION*)	MODELED EXISTING 2023 WORST-HOUR LEQ(H), DBA	MODELED NO BUILD 2045 WORST-HOUR LEQ(H), DBA	LEQ(H), DBA INCREASE (+) OR DECREASE (-)	MODELED BUILD ALT 1 2045 WORST-HOUR LEQ(H), DBA	LEQ(H), DBA INCREASE (+) OR DECREASE (-)	MODELED BUILD ALT 2 2045 WORST-HOUR LEQ(H), DBA	LEQ(H), DBA INCREASE (+) OR DECREASE (-)	MODELED BUILD ALT 3 2045 WORST-HOUR LEQ(H), DBA	LEQ(H), DBA INCREASE (+) OR DECREASE (-)	MODELED BUILD ALT 4 2045 WORST-HOUR LEQ(H), DBA	LEQ(H), DBA INCREASE (+) OR DECREASE (-)	IMPACT TYPE* (S, A/E, OR NONE) ALTS 1 TO 4
UKUMEHAME															
M1	Pāpalaua Wayside Park	1	C/66	60	61	1	52	-8	56	-4	56	-4	55	-5	None
M2	Ukumehame Beach Park	1	C/66	62	63	1	49	-13	53	-9	53	-9	45	-17	None
M3	Ukumehame Firing Range	1	C/66 ~~E/71~~	46	48	2	55	9	52	6	52	6	55	9	None
M4	Residence at Paekiʻi Pl.	1	B/66	41	42	1	45	4	42	1	42	1	51	10	None
M5	Residence at Pōhaku ʻAeko St.	1	B/66	41	42	1	43	2	42	1	42	1	48	7	None
M6	SOD Farm at Ehehene St.	2	B/66, E/71	46	48	2	51	5	49	3	49	3	57	11	None
M7	Residence at Ehehene St.	1	B/66	44	46	2	45	1	45	1	45	1	47	3	None
M8	Residence beyond Ehehene St.	1	B/66	39	40	1	40	1	40	1	40	1	41	2	None
M9	Ukumehame Mauka Cultural Sites	1	C/66	38	39	1	39	1	38	0	38	0	39	1	None
M61	Residence at north end of Ehehene St.	1	B/66	42	44	2	44	2	44	2	44	2	45	3	None
M62	Residence along Ukumehame Stream	1	B/66	51	52	1	57	6	54	3	54	3	49	-2	None
M63	Residence at Pōhaku ʻAeko St.	1	B/66	49	50	1	56	7	52	3	52	3	48	-1	None
M64	Residence at Pōhaku ʻAeko St.	1	B/66	46	48	2	52	6	48	2	48	2	53	7	None
M65	Residence at Pōhaku ʻAeko St.	1	B/66	44	46	2	48	4	45	1	45	1	61	17	S-Alt 4
M66	Residence at Pōhaku ʻAeko St.	1	B/66	43	44	1	46	3	44	1	44	1	60	17	S-Alt 4
OLOWALU															
M10	Olowalu Lanakila Hawaiian Church	1	C/66	56	58	2	51	-5	53/52	-3	52	-4	52	-4	None
M11	Residence at Olowalu Village Rd.	1	B/66	54	55	1	51	-3	53/50	-1	51	-3	50	-4	None
M12	Residence at Olowalu Village Rd.	1	B/66	59	61	2	49	-10	50/48	-9	49	-10	48	-11	None
M13	Residence at Olowalu Village Rd.	1	B/66	58	60	2	49	-9	50/48	-8	49	-9	47	-11	None
M14	Residence at Olowalu Village Rd.	1	B/66	57	59	2	49	-8	51/49	-6	49	-8	47	-10	None
M15	Residence at Olowalu Village Rd.	1	B/66	57	58	1	50	-7	51/49	-6	48	-9	47	-10	None
M16	Residence at Olowalu Village Rd.	1	B/66	57	58	1	50	-7	51/49	-6	48	-9	47	-10	None
M17	Residence at Olowalu Village Rd.	1	B/66	60	61	1	50	-10	51/48	-9	48	-12	47	-13	None
M18	Residence at Olowalu Village Rd.	1	B/66	54	55	1	50	-4	52/50	-2	49	-5	48	-6	None
M19	Residence at Olowalu Village Rd.	1	B/66	55	56	1	50	-5	51/49	-4	49	-6	48	-7	None
M20	Residence at Olowalu Village Rd.	1	B/66	53	55	2	50	-3	52/50	-1	50	-3	48	-5	None
M21	Residence at Olowalu Village Rd.	1	B/66	53	54	1	51	-2	53/50	0	51	-2	49	-4	None
M22	Residence at Olowalu Village Rd.	1	B/66	60	62	2	51	-9	50/49	-10	49	-11	48	-12	None
M23	Olowalu Beach	1	C/66	50	51	1	47	-3	46/46	-4	46	-4	45	-5	None
M24	Camp Olowalu	1	C/66	56	58	2	50	-6	49/48	-7	48	-8	48	-8	None

SITE ID	LOCATION/DESCRIPTION	NUMBER OF RECEIVERS REPRESENTED	HDOT NOISE ABATEMENT CATEGORY (CRITERION*)	MODELED EXISTING 2023 WORST-HOUR LEQ(H), DBA	MODELED NO BUILD 2045 WORST-HOUR LEQ(H), DBA	LEQ(H), DBA INCREASE (+) OR DECREASE (-)	MODELED BUILD ALT 1 2045 WORST-HOUR LEQ(H), DBA	LEQ(H), DBA INCREASE (+) OR DECREASE (-)	MODELED BUILD ALT 2 2045 WORST-HOUR LEQ(H), DBA	LEQ(H), DBA INCREASE (+) OR DECREASE (-)	MODELED BUILD ALT 3 2045 WORST-HOUR LEQ(H), DBA	LEQ(H), DBA INCREASE (+) OR DECREASE (-)	MODELED BUILD ALT 4 2045 WORST-HOUR LEQ(H), DBA	LEQ(H), DBA INCREASE (+) OR DECREASE (-)	IMPACT TYPE* (S, A/E, OR NONE) ALTS 1 TO 4
M25	Residence at Olowalu Village Rd.	1	B/66	48	49	1	46	-2	44/44	-4	44	-4	44	-4	None
M26	Residence at Olowalu Village Rd.	1	B/66	48	50	2	47	-1	45/45	-3	44	-4	44	-4	None
M27	Residence at Olowalu Village Rd.	1	B/66	49	51	2	48	-1	45/44	-4	43	-6	44	-5	None
M28	Olowalu Landing	1	C/66	47	49	2	47	0	44/43	-3	42	-5	42	-5	None
M29	Commercial – Plantation House	1	E/71	48	49	1	49	1	44/43	-4	42	-6	43	-5	None
M30	Residence at Kuahulu Pl.	1	B/66	51	52	1	52	1	45/44	-6	43	-8	43	-8	None
M31	Residence at Kuahulu Pl.	1	B/66	49	51	2	52	3	45/44	-4	43	-6	43	-6	None
M32	Residence at Kuahulu Pl.	1	B/66	48	50	2	51	3	45/44	-3	42	-6	42	-6	None
M33	Commercial – Leoda's	1	E/71	66	68	2	58	-8	55/55	-11	55	-11	55	-11	None
M34	Residence/Commercial – Store	2	B/66, E/71	65	67	2	58	-7	54/54	-11	54	-11	54	-11	None
M35	Commercial –Maui Butterfly Farm	1	E/71	65	66	1	58	-7	53/53	-12	53	-12	53	-12	None
M36	Commercial – Olowalu Juice Stand	1	E/71	69	70	1	60	-9	58/58	-11	58	-11	58	-11	None
M37	Residence at Luawai St.	1	B/66	41	42	1	45	4	44/47	3	45	4	45	4	None
M38	Residence at Luawai St.	1	B/66	43	45	2	48	5	47/50	4	47	4	47	4	None
M39	Residence at Luawai St.	1	B/66	43	44	1	47	4	46/50	3	46	3	47	4	None
M40	Residence at Luawai St.	1	B/66	43	44	1	47	4	46/49	3	46	3	46	3	None
M41	Residence at Luawai St.	1	B/66	42	44	2	49	7	47/49	5	48	6	49	7	None
M42	Residence at Luawai St.	1	B/66	43	44	1	46	3	46/49	3	45	2	46	3	None
M43	Residence at Luawai St.	1	B/66	43	44	1	47	4	46/49	3	46	3	48	5	None
M44	Residence at Luawai St.	1	B/66	42	43	1	45	3	46/47	4	45	3	47	5	None
M45	Residence at Luawai St.	1	B/66	41	42	1	44	3	43/44	2	43	2	43	2	None
M46	Residence at Kalai Pl.	1	B/66	41	42	1	43	2	43/47	2	43	2	43	2	None
M47	Residence at Kalai Pl.	1	B/66	41	43	2	44	3	43/45	2	43	2	43	2	None
M48	Residence at Kalai Pl.	1	B/66	43	44	1	46	3	45/48	2	45	2	46	3	None
M49	Residence at Luawai St.	1	B/66	42	43	1	44	2	44/47	2	44	2	44	2	None
M50	Residence at Luawai St.	1	B/66	42	44	2	45	3	45/49	3	45	3	45	3	None
M51	Residence at Kalai Pl.	1	B/66	41	42	1	43	2	43/43	2	42	1	42	1	None
M52	Residence at Kalai Pl.	1	B/66	40	42	2	43	3	43/43	3	42	2	42	2	None
M53	Olowalu Cultural Reserve	1	C/66	35	36	1	38	3	39/41	4	40	5	40	5	None
M54	Residence at Luawai St.	1	B/66	36	37	1	38	2	40/40	4	44	8	44	8	None
M55	Olowalu Petroglyphs	7	C/66	36	37	1	38	2	41/41	5	48	12	51	**15**	**S – Alt 4**
M56	Residence at Luawai St.	1	B/66	41	42	1	44	3	53/52	12	53	12	51	10	None
M57	Residence at Luawai St.	1	B/66	41	43	2	44	3	54/54	13	51	10	50	9	None
M58	Awalua Cemetery	1	C/66	46	47	1	51	5	51/50	5	45	-1	46	0	None

SITE ID	LOCATION/DESCRIPTION	NUMBER OF RECEIVERS REPRESENTED	HDOT NOISE ABATEMENT CATEGORY (CRITERION*)	MODELED EXISTING 2023 WORST-HOUR LEQ(H), DBA	MODELED NO BUILD 2045 WORST-HOUR LEQ(H), DBA	LEQ(H), DBA INCREASE (+) OR DECREASE (-)	MODELED BUILD ALT 1 2045 WORST-HOUR LEQ(H), DBA	LEQ(H), DBA INCREASE (+) OR DECREASE (-)	MODELED BUILD ALT 2 2045 WORST-HOUR LEQ(H), DBA	LEQ(H), DBA INCREASE (+) OR DECREASE (-)	MODELED BUILD ALT 3 2045 WORST-HOUR LEQ(H), DBA	LEQ(H), DBA INCREASE (+) OR DECREASE (-)	MODELED BUILD ALT 4 2045 WORST-HOUR LEQ(H), DBA	LEQ(H), DBA INCREASE (+) OR DECREASE (-)	IMPACT TYPE* (S, A/E, OR NONE) ALTS 1 TO 4
M59	Commercial - Paintball	1	C/66 ~~E/71~~	49	51	2	62	13	53/52	4	49	0	50	1	None
M60	Residence at Olowalu Village Road	1	B/66	45	47	2	54	9	51/51	6	46	1	46	1	None

Note: See Table 16-2 for descriptions of Noise Abatement Categories.
Bold = level approaches or exceeds the NAC or reaches substantial increase impact of 15 dBA or above compared to existing conditions noise levels.
As applicable, to evaluate noise barrier feasibility and reasonableness for NAC C and E sites, the calculation of dwelling units ~~represented by site M55 were calculated using~~ uses HDOT's method of comparing the impact area ~~(estimated at 30,000 square feet)~~ to the typical urban lot size of 4,200 square feet ~~when required to determine noise barrier feasibility and reasonableness~~.
A "Receiver" is an area of frequent human outdoor activity such as homes, apartments, parks.
*Impact Type: S = Substantial Increase (15 dBA or more), A/E = Approach or Exceed NAC.
[1] An updated noise analysis for Olowalu Alternative 2 was completed between the Draft and Final EIS (based on determination as the Preferred Alternative – see Chapter 5, Selected Alternative) and both Draft and Final EIS results are reported here.

Build Alternative 1

For modeled receptor sites that are closer to Build Alternative 1 than to the existing highway, an increase of up to 13 dBA is predicted at sites in Olowalu. Since the alignment is close to the existing highway, there are very small increases for sites where the new and existing highways come together in Olowalu village. In addition, Build Alternative 1 is mauka of the existing alignment at Maui Paintball. With no relocation of this use, there would be an increase of up to 13 dBA adjacent to the new highway alignment. Worst-hour future traffic noise levels for the Build Alternative 1 range from 38 dBA to 62 dBA depending on the proximity of the receiver to Honoapiʻilani Highway. In comparison to existing noise levels, the highest noise levels are predicted to decrease from 69 dBA to 60 dBA ~~because of~~ due to shifting Honoapiʻilani Highway farther away from most noise-sensitive land uses located along the existing roadway.

Build Alternative 2

An increase of up to 13 dBA to a decrease of up to 12 dBA in future noise levels is predicted at sites in Olowalu. Worst-hour future traffic noise levels for Build Alternative 2 range from 39 dBA to 58 dBA depending on the proximity of the receiver to Honoapiʻilani Highway. In comparison to existing noise levels, the highest noise levels are predicted to decrease from 69 dBA to 58 dBA as a result of shifting Honoapiʻilani Highway farther away from most noise-sensitive land uses located along the highway.

Build Alternative 3

An increase of up to 13 dBA to a decrease of up to 12 dBA in future noise levels is predicted at sites in Olowalu. Worst-hour future traffic noise levels for Build Alternative 3 range from 40 dBA to 58 dBA depending on the proximity of the receiver to Honoapiʻilani Highway. In comparison to existing noise levels, the highest noise levels are predicted to decrease from 69 dBA to 58 dBA levels as a result of shifting Honoapiʻilani Highway farther away from most noise-sensitive land uses located closer to the existing Honoapiʻilani Highway alignment.

Build Alternative 4

An increase of up to 15 dBA to a decrease of up to 13 dBA in future noise levels is predicted at sites in Olowalu. Worst-hour future traffic noise levels for Build Alternative 4 range from 40 dBA to 58 dBA depending on the proximity of the receiver to Honoapiʻilani Highway. One site, the Olowalu Petroglyphs (modeled site M55), is predicted to experience a substantial increase resulting in a noise impact ~~an adverse effect~~ based on an increase in traffic noise levels of 15 dBA over existing noise levels.

Worst-hour future traffic noise levels for Build Alternative 4 range from 39 dBA to 58 dBA depending on the proximity of the receiver to Honoapiʻilani Highway. In comparison to existing noise levels, the highest noise levels are predicted to decrease from 69 dBA to 58 dBA as a result of shifting Honoapiʻilani Highway farther away from most noise-sensitive land uses located along the existing roadway.

Ukumehame

Common to All Build Alternatives

The change in traffic noise levels throughout the project area is affected by an increase in future traffic volumes ~~noise levels~~; however, the primary factor is the new location of the new Honoapiʻilani Highway alignment and its distance relative to receptor sites. ~~For the existing highway to remain as a local~~

~~connector road, overall volumes would decrease substantially.~~ As summarized in TABLE 3.16-5, for all Build Alternatives the reduction in traffic volumes on the existing Honoapiʻilani Highway results in a reduction in noise levels for those receptors located along the existing roadway.

The NAC of 67 dBA $L_{eq}(h)$ is not predicted to be approached or exceeded at any of the ~~9~~ 15 modeled sites in Ukumehame and no sites are predicted to experience a substantial increase impact resulting from an increase in traffic noise levels by 15 dBA over existing noise levels.

Build Alternative 1

An increase of 9 dBA to a decrease of up to 13 dBA in future noise levels is predicted at sites in Ukumehame. Worst-hour future traffic noise levels for Build Alternative 1 range from 38 dBA to 55 dBA depending on the proximity of the receiver to Honoapiʻilani Highway. In comparison to existing noise levels, the highest noise levels are predicted to decrease from 62 dBA to 49 dBA as a result of shifting Honoapiʻilani Highway farther away from most noise sensitive land uses located- along the existing roadway.

Build Alternatives 2 and 3

An increase of 6 dBA to a decrease of up to 9 dBA in future noise levels is predicted at sites in Ukumehame. Worst-hour future traffic noise levels for Build Alternatives 2 and 3 range from 38 dBA to 58 dBA depending on the proximity of the receiver to Honoapiʻilani Highway. In comparison to existing noise levels, the highest noise levels are predicted to decrease from 62 dBA to 53 dBA as a result of shifting Honoapiʻilani Highway farther away from most noise-sensitive land uses located along the existing roadway.

Build Alternative 4

An increase of 11 dBA to a decrease of up to 17 dBA in future noise levels is predicted at sites in Ukumehame. Worst-hour future traffic noise levels for Build Alternative 4 range from ~~39~~ 38 dBA to 57 dBA depending on the proximity of the receiver to Honoapiʻilani Highway. In comparison to existing noise levels, the highest noise levels are predicted to decrease from 62 dBA to 45 dBA levels as a result of shifting Honoapiʻilani Highway farther away from most noise-sensitive land uses located along the existing roadway. Receptors M65 and M66 would need to be acquired to construct Alternative 4; these two sites would no longer have a noise-sensitive use under the Build Alternative 4 condition (the existing residential use would be converted to transportation use) and therefore were not studied for traffic noise impacts or abatement for Build Alternative 4.

3.16.5 Construction Effects

The Hawaii State Department of Health (HDOH) maintains community noise control standards (HAR §11-46) that also apply to construction noise. These specifications would be adhered to, and a noise permit would be obtained for construction activities performed during standard work hours (Monday through Friday 7:00 a.m. to 6:00 p.m. and Saturday 9:00 a.m. to 6:00 p.m.). Design considerations evaluated between the Draft and Final EIS determined that to avoid daytime traffic delays, there are two locations where night-time work would be appropriate at the north and south ends of the corridor where the new highway would be connected to the existing roadway (Lāhainā Bypass and at the Pali). Night work would be a short duration event (anticipated to be less than three months at either location)

and occurring with the final linking of the two roadway segments. Both locations are located at considerable distances from closest residences (1,000 or greater feet at the Lāhainā Bypass about one mile or greater from the Pali connection).

The duration and level of construction noise is dependent on the type of activity being performed. Construction activities such as drilling, excavation, and grading would typically be associated with increased noise levels whereas paving and restriping are generally less noise intensive activities.

Areas where drilling, excavating, and grading are planned would likely generate the highest noise levels during construction. Noise generated by construction equipment, including trucks, graders, excavators, drilling equipment, concrete mixers, and generators can reach levels from 76 A-weighted decibels (dBA) to 85 dBA at a distance of 50 feet. Construction equipment noise emissions are regulated by the Environmental Protection Agency's Noise Control Program (Title 40 CFR Part 204). Air compressors are the only equipment currently under regulation and no new regulations are being considered.

TABLE 3.16-6 presents noise levels for equipment that could be used during the excavation and construction of the Project. The noise levels presented are at a reference distance of 50 feet. Construction equipment noise levels decrease at a rate of approximately 6 dBA per doubling of distance; therefore, at a distance of 100 feet, the noise levels would be about 6 dBA less than the levels shown in the table. Similarly, at a distance of 200 feet, the noise levels would be approximately 12 dBA less than shown in the table. Intervening structures or topography can act as a noise barrier to further reduce noise levels.

TABLE 3.16-6. **Construction Equipment Noise Levels**

EQUIPMENT	DECIBELS AT 50 FEET	EQUIPMENT	DECIBELS AT 50 FEET
Air Compressor	78	Generator	81
Auger Drill Rig	84	Gradall	83
Backhoe	78	Grader	85
Blasting	94	Jack Hammer	89
Compactor	83	Hoe Ram	90
Concrete Mixer Truck	79	Paver	77
Concrete Pump Truck	81	Pneumatic Tool	85
Crane	81	Pump	81
Dozer	82	Rock Drill	81
Drill Rig Truck	84	Roller	80
Dump Truck	76	Scraper	84
Excavator	81	Ventilation Fan	79
Flat Bed Truck	74		

Source: FHWA Roadway Construction Noise Model, 2006.

HDOH maintains community noise control standards that apply to construction noise. The Project would not be permitted to exceed the stipulated noise limits unless a variance is granted by HDOH.

During construction, noise control measures would be implemented to minimize construction noise and the effect on existing noise-sensitive land uses. The general noise abatement measures presented below are identified as guidance to be used in the development of construction plans:

- **Design Considerations** – During the early stages of construction plan development, strategic placement of stationary equipment, such as compressors and generators, can be considered for shielding against construction noise.
- **Source Control** – The contractor would comply with HDOT Standard Specifications and all local sound control and noise level rules, regulations, and ordinances which apply to work performed pursuant to the contract. Each internal combustion engine used for any purpose on the job, or related to the job, would be equipped with a muffler of a type recommended by the manufacturer. No internal combustion engine would be operated without a muffler.
- **Community Relations** – At community meetings, project representatives would explain the work, schedule, and planned noise control measures related to construction.

The aforementioned measures would be incorporated into site-specific construction plans, and additional noise emission limits could be developed as well.

3.16.6 Indirect Effects

Changes in noise levels from construction or future operation of a Build Alternative would not likely result in indirect effects that would then create new noise levels or change noise levels associated with unforeseeable future activities. The Project would not create changes in regional travel demand or create new development opportunities that are the primary source of incremental noise.

3.16.7 Mitigation

If traffic noise impacts are identified, noise abatement measures must be considered as part of the Project and should be provided where it is feasible and reasonable to do so. Impacts occur at sites where traffic noise levels approach or exceed the NAC of L_{eq}(h) 67 dBA or substantially exceed (by 15 dBA or more) the ambient noise levels. HDOT's *Highway Noise Policy and Abatement Guidelines* are used to determine if noise abatement measures are reasonable and feasible for implementation:[6]

- Provide at least 5 dBA highway traffic noise reduction for two-thirds of front-row receptors located along the subject Type I project.
- Determine that it is possible to design and construct the barrier after considering issues related to safety, barrier height, topography, drainage, utilities, maintenance, and access to adjacent properties (general and maintenance).
- Consider the viewpoints of the property owners and residents who would benefit from the barrier.
- Keep the cost of noise abatement below $60,000 per benefited receptor.

[6] State of Hawaiʻi Department of Transportation (HDOT). 2016. Highway Noise Policy and Abatement Guidelines. April 2016.

- Achieve noise reduction design goal of 7 dBA for 75% of the benefited front-row receptors located along the subject project.

The noise abatement evaluated for the Project is based on a planning-level cost estimate of the feasible abatement measures identified in this ~~Draft~~ Final EIS. The price per square foot of noise barrier construction is based on the average cost of HDOT's two most recent noise barriers constructed in 2010 ($42.00 per square foot) along with an escalation of construction cost of 3% per year ($61.68 per square foot in 2023).

After determining whether each evaluated noise barrier can satisfy HDOT's feasibility criteria, each feasible noise barrier was then evaluated by comparing the maximum allowable cost to the construction cost estimate. If any barrier meets cost-reasonableness criteria, adjoining property owners would be consulted to determine whether residents desire a barrier. A noise barrier is deemed reasonable only if the estimated cost is less than the maximum allowable cost and a majority of the residents want the barrier.

3.16.7.1 Noise Abatement ~~Mitigation~~ Evaluation: 2045 Build Alternatives

Olowalu

Based on the predicted 2045 traffic noise levels, one ~~of the 60~~ modeled site (~~modeled site~~ M55) is predicted to reach the 15 dBA substantial increase threshold when compared to existing noise levels for Build Alternative 4 only. Future worst-hour noise levels at the Olowalu Petroglyphs site (modeled site M55) are predicted to be 51 dBA, as compared to 36 dBA under existing conditions. As TABLE 3.16-5 shows above, the substantial increase impact at the Olowalu Petroglyphs is only predicted under Build Alternative 4.

Ukumehame

As shown in Table 3.16-5 and based on the predicted 2045 traffic noise levels for Alternative 4, two modeled sites (M65 and M66) are predicted to have an increase of 17 dBA which is above the 15 dBA substantial increase threshold when compared to existing noise levels. Future worst-hour noise levels at residences are predicted to be between 60 and 61 dBA as compared to 43 and 44 dBA under existing conditions.

Noise Impact Abatement

All sites predicted to have a noise impact require the evaluation of noise abatement. However, under Alternative 4, the houses adversely affected by noise (sites M65 and M66) are on parcels that would be a total acquisition. Therefore the residences would be removed and no additional noise abatement assessment is considered. The only ~~One~~ noise barrier ~~was~~ evaluated for Build Alternative 4 is to reduce traffic noise levels at the Olowalu Petroglyphs site. FIGURE 3.16-5 presents the location of the evaluated noise barrier for Build Alternative 4 (Noise Barrier 1). A summary of the noise barrier evaluation is provided below.

Noise Barrier 1, Build Alternative 4

Noise Barrier 1 was evaluated along the northbound Honoapi‘ilani Highway right-of-way at the top of slope north of Luawai Street (FIGURE 3.16-5) to mitigate for noise impacts at site M55. The analysis considered a barrier length of approximately 1,076 linear feet at heights from 8 feet to 20 feet. At

20 feet high, Noise Barrier 1 would provide at least 5 dBA reduction to the one front-row receptor, is constructible based on a planning-level review, and is therefore feasible. At 20 feet high and 1,076 feet long, Noise Barrier 1 meets the 7-dBA noise reduction design goal by providing at least a 7-dBA reduction to at least 75% of the benefited first row receptors located behind the barrier.

The planning-level cost estimate for Noise Barrier 1 is $1,327,353 (using $61.68 per square foot). Barrier heights below 20 feet were evaluated but would not provide the required benefit to meet HDOT's 7-dBA noise reduction design goal. HDOT noise policy would allow a maximum noise barrier cost of $420,000 at the Olowalu Petroglyphs site. However, the noise barrier design that would meet HDOT's noise reduction design goal would cost approximately $1.3 million. Accordingly, a traffic noise barrier at the Olowalu Petroglyphs site is not recommended because it does not meet cost-reasonableness criteria.

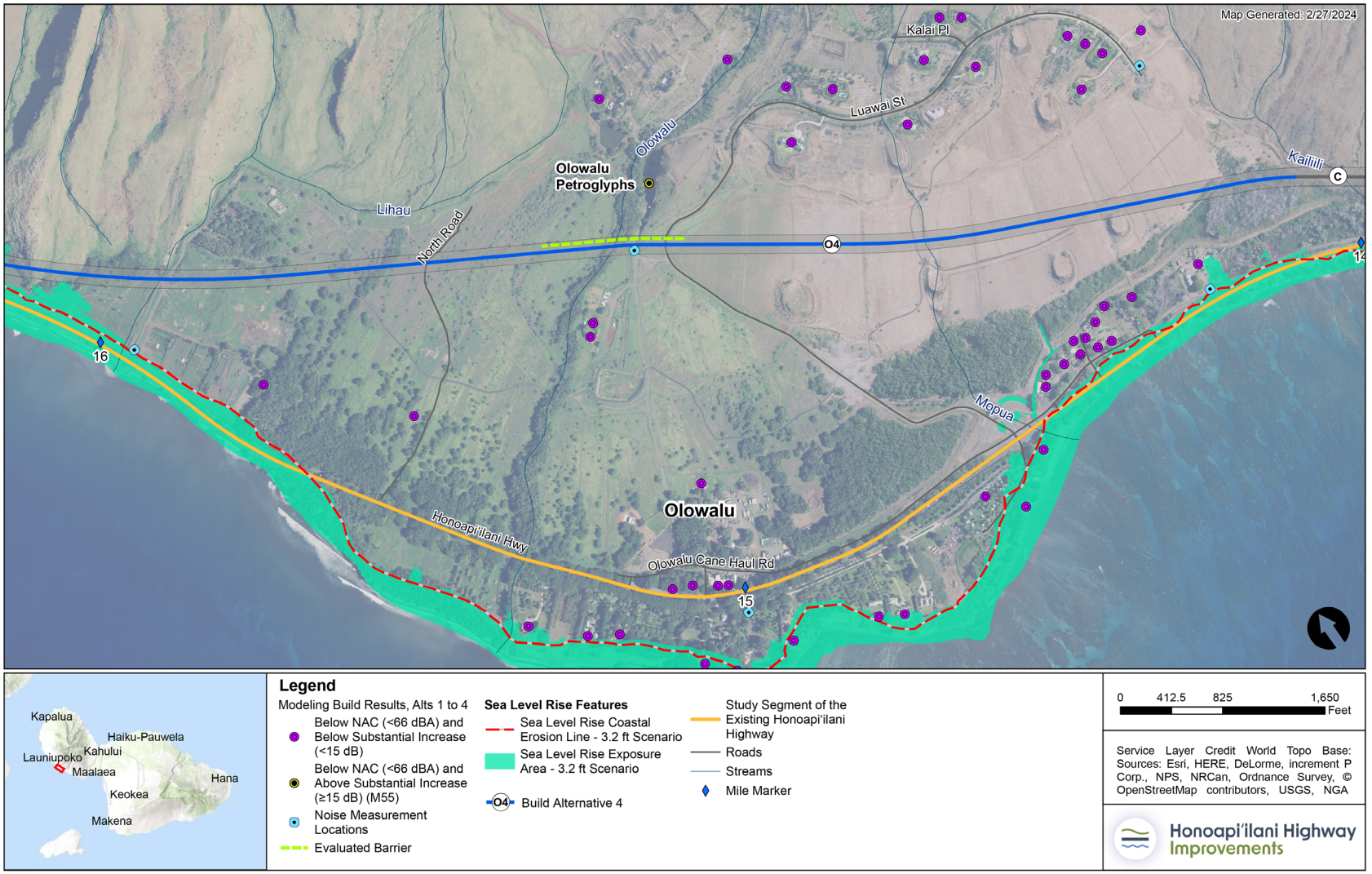
3.16.8 Build Alternatives Comparative Assessment

As TABLE 3.16-5 shows above, predicted 2045 traffic noise levels for the Build Alternatives are largely expected to not result in impacts to ~~adverse effects on~~ noise sensitive receptors. The NAC ~~of 67 dBA Leq(h)~~ is not predicted to be approached or exceeded at any of the 66 ~~60~~ modeled sites. With the exception of one site for Build Alternative 4 in Olowalu, no sites are predicted to experience a substantial increase impact resulting from an increase in traffic noise levels by 15 dBA over existing noise levels.

In Olowalu, Alternative 1 is closest to the existing highway, so there is less of a reduction or an increase in noise for uses along the existing roadway, including a 13dBA increase at the Maui Paintball site.

For Build Alternative 4 in Olowalu, its proximity to the Olowalu Petroglyphs is expected to result in an adverse effect with an increase in noise levels of 15dBA. A traffic noise barrier would not meet HDOT noise policy and is not recommended. In Ukumehame, modeled sites M65 and M66 would need to be acquired for the construction of Alternative 4 and would not exist under the Alternative 4 scenario. Because these homes would not exist if Alternative 4 were constructed, abatement analysis was not completed for these sites.

FIGURE 3.16-5. **Evaluated Noise Barrier Location, Build Alternative 4**



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3.17 INFRASTRUCTURE AND UTILITIES

This section describes existing and future infrastructure in the project area and assesses the potential for the Honoapiʻilani Highway Improvements Project (the Project) to adversely affect these systems. Infrastructure that was evaluated includes water supply, sanitary sewage, stormwater systems, electric and telecommunications, and solid waste.

Following publication of the Draft Environmental Impact Statement (EIS), the public was afforded an opportunity to review and comment on the effects of the Project with respect to infrastructure and utilities. Based on those comments, or other information gathered after the publication of the Draft EIS, no revision to the analysis contained within this section was warranted and no further analysis is required as part of this Final EIS.

3.17.1 Regulatory Context

In Maui County, the Department of Water Supply manages public water systems. The Wastewater Reclamation Division of the County's Environmental Management office manages public wastewater and recycled water collection systems. In addition, the State of Hawaiʻi Public Utilities Commission (PUC) regulates private water systems while the Hawaiʻi State Department of Health regulates sewage systems (primarily individual property septic or cesspool systems).

The Maui Electric Company (MECO), a subsidiary of Hawaiian Electric, is the sole public electric utility provider for the County of Maui and is regulated by the State of Hawaiʻi PUC. Hawaiʻi Gas is the sole public gas utility provider for the County of Maui and is also regulated by the State of Hawaiʻi PUC; however, there are no gas lines within the project area. Several telecommunications providers are in Maui, including Hawaiian Telcom Communications Inc., Oceanic Time Warner Cable, and Verizon. The Solid Waste Division of the County's Environmental Management office maintains solid waste and refuse collection.

3.17.2 Methodology

The study area for the assessment of utilities and infrastructure has the same boundaries as the project area (as defined in Chapter 1, Introduction, Purpose and Need), which encompasses the area around the existing Honoapiʻilani Highway and the Build Alternatives. This assessment describes the following:

- The existing water and sewer infrastructure serving the project area as well as the planned infrastructure improvements in the project area
- The existing electric and telecommunications infrastructure serving the project area as well as any planned infrastructure improvements in the project area
- The existing and future solid waste disposal practices in the project area

3.17.3 Affected Environment

FIGURE 3.17-1 and FIGURE 3.17-2 provide an overview of the infrastructure systems serving Olowalu and Ukumehame, respectively, and each of the key systems is described in the following sections.

3.17.3.1 Potable Water Supply

The project area is within the Launiupoko, Olowalu, and Ukumehame surface and groundwater management areas of the Lāhainā Aquifer Sector Water Management Area, as designated by the Commission on Water Resource Management.[1] Withdrawal, diversion, impoundment, or consumptive use of surface or groundwater in these areas is prohibited without first obtaining a water use permit from the Commission on Water Resource Management.

No public water supply systems are in the project area. The closest system is in Lāhainā.

Potable water distribution in Olowalu is provided by the Olowalu Water Company Inc., a privately owned water system regulated by the State of Hawai'i PUC. The system is served by two wells and a storage tank that are generally adjacent to and upland of the existing subdivision. As depicted in FIGURE 3.17-1, the potable water lines extend toward the Olowalu Subdivision and the Olowalu Village Center from the holding tank and well area within the street bed of Luawai Street for the upper reaches of the subdivision and along a right-of-way bringing the water main directly into Olowalu Center. At this point, the water main extends south along Olowalu Village Road serving the residential area (Kapāiki Place) to the last house and the site of the former Olowalu Lanakila Hawaiian Church. The water main crosses under the existing Honoapi'ilani Highway and then extends to the north and south serving existing business and residences along the shoreline. At Olowalu Stream, this water main turns mauka and runs parallel to the stream to just below the area of the Olowalu Petroglyphs (serving undeveloped portions of the subdivision). In addition, North Street is a mapped subdivision roadway under construction and will be served by the Olowalu Water Company.

In Ukumehame, a privately owned water system serves the subdivision. As described in the Ukumehame Subdivision Final Environmental Assessment (FEA), the Lua Wai Water Company would operate domestic and irrigation water systems within the subdivision though it is not yet a system with reporting requirements based on the limited development to date.[2] Water lines (with fire hydrants) are within the rights-of-way on Ehehene Street north of the Ukumehame Stream, and Pōhaku 'Aeko and Paeki'i Streets south of the stream (FIGURE 3.17-2).

[1] https://dlnr.hawaii.gov/cwrm/groundwater/gwma/lahaina/.

[2] https://files.hawaii.gov/dbedt/erp/EA_EIS_Library/2005-05-23-MA-FEA-Ukumehame-Subdivision-Phase-1-and-2.pdf.

FIGURE 3.17-1. **Infrastructure Systems in Olowalu**

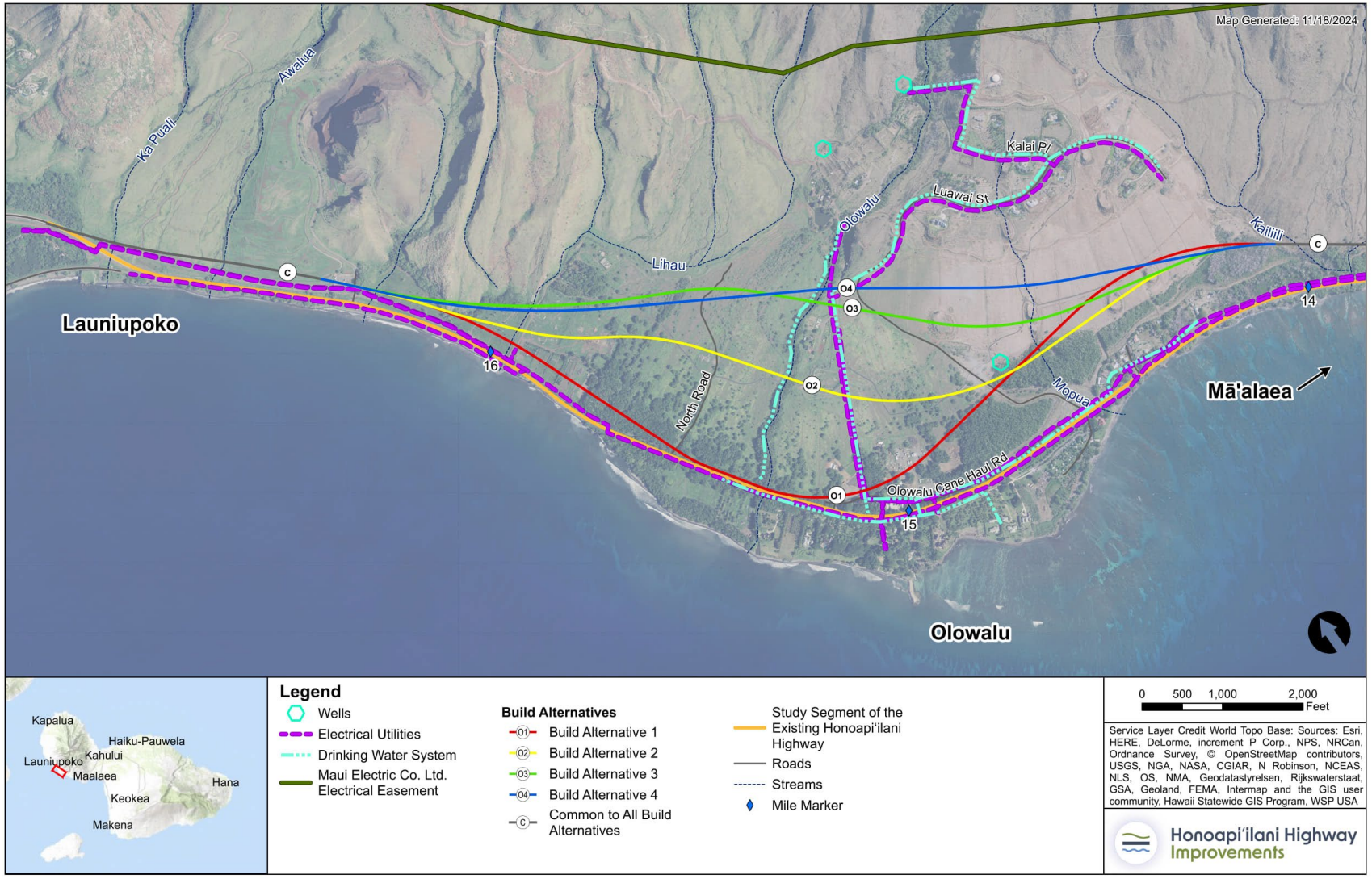
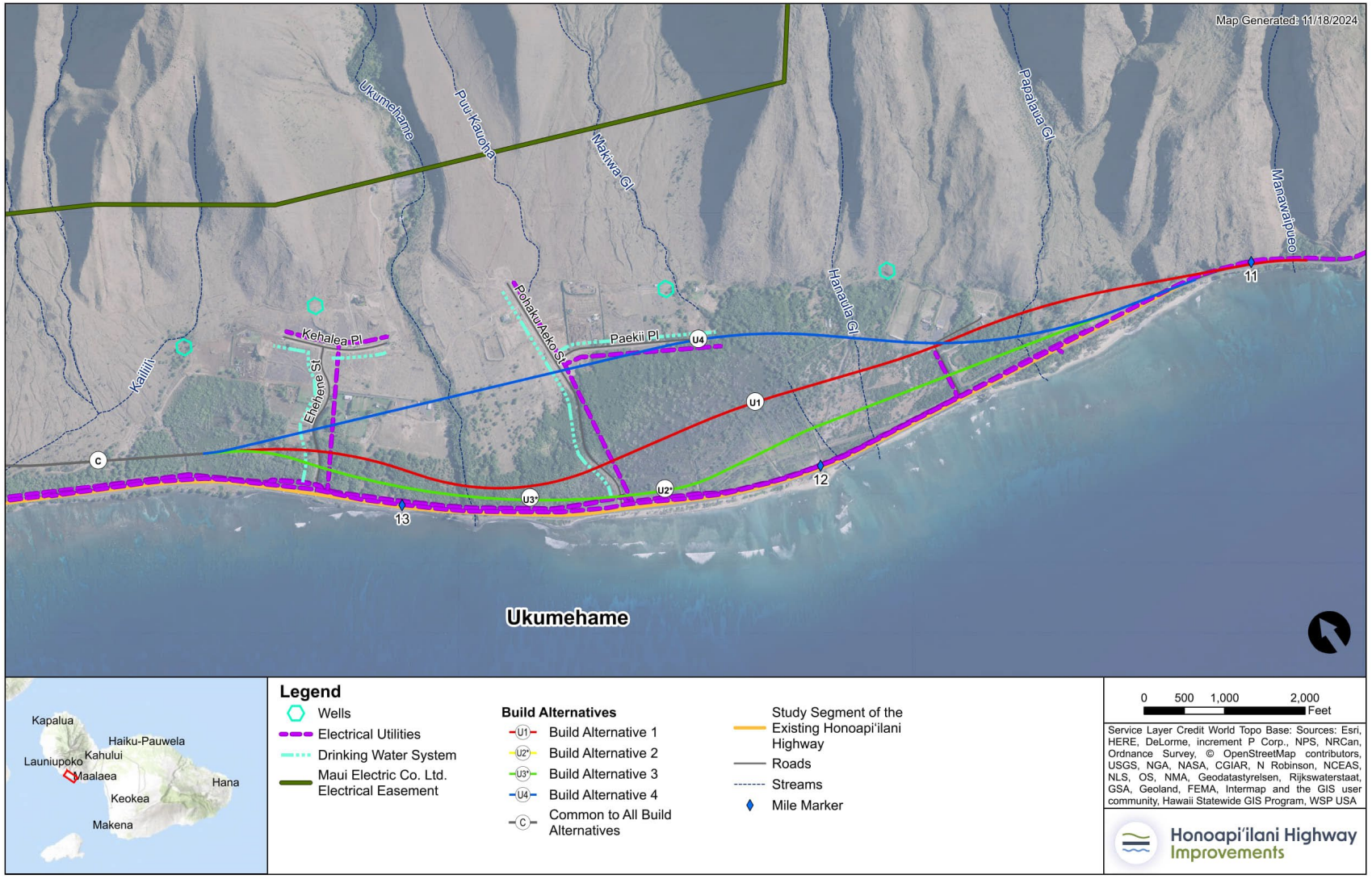


FIGURE 3.17-2. **Infrastructure Systems in Ukumehame**



3.17.3.2 Wastewater Treatment

There is no existing public wastewater infrastructure in the project area. Individual wastewater disposal needs in the project area are accommodated by septic tanks, leach fields, and cesspools. The closest public system is in Lāhainā, north of the project area.

3.17.3.3 Stormwater Systems

Most stormwater generated within the project area from impervious surfaces (that is, no water passes through) is uncontrolled and either collects in low-lying areas—where it evaporates or percolates into the ground—or drains to existing intermittent and perennial streams and existing culverts before discharging directly into the Pacific Ocean. Combined with storm flows from upland watersheds collecting in these same streams and culverts, the general lack of stormwater facilities and treatment of watershed runoff has led to an increase in sediment loading to the reef areas offshore of the project area.

As detailed in Section 3.9, Water Resources, Wetlands, and Floodplains, The Nature Conservancy is working with the Hawaiʻi Department of Transportation (HDOT) to address the erosion and sedimentation issues in this area with a feasibility study of effective and nature-based solutions. along the existing highway. In addition, the Mauna Kahālāwai Watershed Partnership (formerly the West Maui Mountains Watershed Partnership), manages 50,000 acres in the West Maui Mountains to protect forested watersheds, native ecosystems, and freshwater supply through collaborative forest management.

The existing Honoapiʻilani Highway and side streets in the project area do not have stormwater infrastructure in the form of catch basins, nor is stormwater conveyed to management basins. Existing culverts carry intermittent and perennial streams under the existing highway. In certain areas, there is some channelization of waterflows adjacent to the existing highway but there are no connected conveyance systems from the highway itself. HDOT manages one large stormwater detention basin of about 10 acres at the south end of the project area. This basin does not collect storm flows from the highway but is designed to impound runoff from an extensive upland watershed, which retains storm flows to allow sediments to settle before being discharged under the highway via a culvert and to the ocean. The detention basin was constructed in the 1970s, and HDOT periodically removes accumulated sediment.

3.17.3.4 Energy and Telecommunications

Electric and telecommunications utilities are within the project area and are generally aboveground on utility poles along Honoapiʻilani Highway. MECO, Verizon, and Oceanic Time Warner Cable provide electric and telecommunications service for the West Maui region. In addition to the existing infrastructure adjacent to Honoapiʻilani Highway, MECO holds two easements for electric transmission lines that run inland of Honoapiʻilani Highway at the base of the mountains. No natural gas lines serve the project area.

3.17.3.5 Solid Waste and Sanitation

The Olowalu Recycling and Refuse Convenience Center (often referred to as the Olowalu transfer station) accommodates solid waste and sanitation services in the project area. The Solid Waste Division of the County of Maui Environmental Management office operates the facility and provides

refuse drop-off for residents and recycling services. The facility is within the northern portion of the project area, just south of Lāhainā Bypass.

3.17.3.6 Planned Utility and Infrastructure Improvements

No changes to public potable water or sewer services are anticipated in the project area. To the north of the project area, specifically in Lāhainā, there are plans for system upgrades to allow for increased use of recycled wastewater.[3]

In October 2023, the State of Hawaiʻi Board of Land and Natural Resources granted a revocable permit to the County of Maui Department of Environmental Management, Solid Waste Division, for the use of an approximately 0.7-acre landfill parcel to support a Temporary Debris Staging and Reduction site in response to the Lāhainā wildfires. The parcel, roughly adjacent to the existing Olowalu Recycling and Refuse Convenience Center, contains a former scale and weigh station that the County of Maui would repurpose to support debris removal associated with the Lāhainā wildfire. Both the Temporary Debris Staging and Reduction site and the repurposed scale and weigh station are likely to be used for less than five years. Transporting the debris to the landfill was completed in January 2025, and all wildfire debris is now in the process of being relocated to the permanent disposal site in Central Maui, which is expected to be complete by November 2025.[4]

No other known improvements to utilities and infrastructure are anticipated in the project area.

3.17.4 Environmental Consequences

3.17.4.1 No Build Alternative

The No Build Alternative would maintain Honoapiʻilani Highway in its existing configuration with ongoing maintenance and repairs. Because no land use changes or new development are associated with the No Build Alternative, it would not increase demand or have an adverse effect on water supply, sanitary sewage, electric and telecommunications, stormwater runoff, and solid waste and sanitation services.

However, the reduced reliability of Honoapiʻilani Highway in the No Build Alternative would impede access to the Olowalu Recycling and Refuse Convenience Center because it is accessible only via the highway. This reduced reliability would also affect the maintenance and repair of electric and telecommunications infrastructure adjacent to Honoapiʻilani Highway.

3.17.4.2 Build Alternatives

For all Build Alternatives in both Olowalu and Ukumehame, no land use changes or new development associated with the Project would generate demand for water supply, sanitary sewage, electric and telecommunications, stormwater runoff, and solid waste and sanitation services.

[3] https://files.hawaii.gov/dbedt/erp/Doc_Library/2021-06-23-MA-FEA-West-Maui-Recycled-Water-System.pdf.

[4] https://www.mauirecovers.org/debris-containment (Date Accessed: July 2025)

Potable Water Supply

In Olowalu and Ukumehame, the Build Alternatives would require potable water lines to be maintained and appropriately protected—or rebuilt during construction—at every location where a new highway alignment crosses an existing water line.

Wastewater Treatment

Common to all Build Alternatives, there would be no change to the project area’s reliance on individual lot wastewater systems.

Stormwater Systems

The Build Alternatives would incorporate modern design standards, including those described in the Stormwater Post-Construction best management practices (BMPs) Manual, for managing stormwater runoff from the new roadway.[5] For all Build Alternatives, conceptual designs of permanent BMPs are identified in Chapter 2, Alternatives. Permanent BMPs would be designed to treat stormwater generated by the impervious area of the new roadway as it collects at natural low points along the roadway as defined by the final roadway profile. Final design during the design-build process would refine the location, size, and design of these faciliteis and incorporate Low Impact Development Stormwater BMPs such as vegetated swales in the median and on the outside edges of the pavement structure as practicable. The final selection of BMP devices will be done by the design-build contractor as they will be incorporated into the overall design of highway drainage systems.

Energy and Telecommunications

Because there would be no change in delivering electric and telecommunications (including broadband) utilities to local users it is unlikely that the location of the existing system would need to change. The overhead lines would continue to be on poles along Olowalu Village Road and Honoapi‘ilani Highway. Through ongoing coordination with utility providers, belowground conduits that serve the Olowalu and Ukumehame Subdivisions as they cross under the new highway alignment would be maintained or rebuilt. In addition, it is HDOT’s directive to install broadband conduit in all new roads and widened roadways so that resource is also available to providers into the future.

The Project’s final design could potentially accommodate a new utility corridor for MECO or other utility providers, which could create an opportunity to upgrade utility infrastructure and minimize wildfire risks associated with existing power lines and other electric transmission. This potential accommodation would be coordinated with the utility provider and all applicable rules and regulations would be followed. For cross street intersections, needed electrical connections would be pulled from the existing lines already along the cross streets in coordination with MECO including any new vaults or conduit required to serve the new intersection.

Solid Waste and Sanitation

There would be no change to the demand for new solid waste and sanitation services as a result of the Project.

[5] https://www.stormwaterhawaii.com/wp-content/uploads/2022/07/PC-BMP-Manual_220718-FULL.pdf.

All Build Alternatives would result in the displacement and relocation of the existing County of Maui recycling and tranfer station. The County has long considered relocation options for this facility to move it closer to the Lāhainā urban center, where most users originate. Implementation of the Project would accelerate the need for relocation. The temporary uses related to disposal of debris from the Lāhainā wildfire is expected to stop prior to the development of the Project. Therefore, any effects ~~affects~~ to this facility or conflicts with the Lāhainā wildfire debris removal are unlikely.

3.17.5 Construction Effects

As described above, potable water lines would be maintained and appropriately protected or rebuilt during construction of the Project. During construction, management of stormwater would be conducted consistent with HDOT’s Construction Site Runoff Control Program.[6] Construction BMPs would be implemented, and a *Stormwater Pollution Prevention Plan* would be developed.

3.17.6 Indirect Effects

The Project would not be anticipated to result in an increase in demand for or generation of water supply, sanitary sewage, electric and telecommunications, stormwater runoff, and solid waste and sanitation services. No land use changes or new development are associated with the Project, and it is unlikely to induce growth that would result in changes to land use, population density, or population growth. The zoning provisions described in Section 3.1, Land Use and Zoning, apply to the project area. Potential future development within the project area would be anticipated to abide by the density provisions of applicable zoning, which could be developed independent of the Project. Modifications to existing zoning would require approval and would be assessed separately prior to approval. Therefore, the Project would not result in indirect effects to infrastructure and utilities.

3.17.7 Mitigation

New roadway construction would require maintaining or relocating existing utility lines and accommodating belowground systems in Olowalu and Ukumehame. Electric, water, and other utility services would be maintained to existing users (other than potential short-term disruptions when service is changed over to a new service line). Overall, no adverse effects from any of the Build Alternatives are expected on infrastructure services and no additional mitigation would be required.

3.17.8 Build Alternatives Comparison Assessment

There is no variation of potential effects among the Build Alternatives. Build Alternative 1 could result in higher overall cost because it would likely require more coordination and reconstruction of water mains in Olowalu, which would likely require relocating or reconstructing water mains along both sides of Honoapi‘ilani Highway.

[6] https://www.stormwaterhawaii.com/wp-content/uploads/2022/02/Ch-4-Construction-Site-Runoff-Control-Program.pdf.

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FIGURES

3.18 HAZARDOUS MATERIALS

This section discusses the potential for the presence of contaminated soils or groundwater and other hazardous materials resulting from previous and existing uses in areas where new construction for the Honoapi‘ilani Highway Improvements Project (the Project) may disturb such materials. It also summarizes the measures that would be implemented to avoid adverse effects from exposure of such materials to construction workers and the surrounding community.

Following publication of the Draft Environmental Impact Statement (EIS), the public was afforded an opportunity to review and comment on the effects of the Project with respect to hazardous materials. Based on those comments, or other information gathered after the publication of the Draft EIS, no revision to the analysis contained within this section was warranted and no further analysis is required as part of this Final EIS.

3.18.1 Regulatory Context

The following federal, State, and local policies and regulations may be applicable to hazardous materials that are discussed in this ~~Draft~~ Final Environmental Impact Statement:

- Federal regulations:
  - Comprehensive Environmental Response, Compensation, and Liability Act (42 U.S.C. 9601 et seq.)
  - Superfund Amendments and Reauthorization Act (26 U.S.C. 9507 et seq.)
  - Resource Conservation and Recovery Act (42 U.S.C. 6901 et seq.)
  - Toxic Substances Control Act (15 U.S.C. 1601 et seq.)
  - Occupational Safety and Health Act (29 U.S.C. 651 et seq.)
  - Clean Air Act (42 U.S.C. 7401 et seq.)
  - Clean Water Act (33 U.S.C. 1251 et seq.)
  - National Environmental Policy Act (42 U.S.C. 4321 et seq.)
  - Supplemental Hazardous Waste Guidance (FHWA)[1]
  - Hazardous Wastes in Highway Rights-of-Way (FHWA)[2]
- State of Hawai‘i regulations:
  - Hawai‘i State Toxics Control Program
  - Guide to the Implementation and Practice of the Hawai‘i Environmental Policy Act
  - Hawai‘i Administrative Rules Chapter 11-200.1
  - State of Hawai‘i Occupational Safety and Health Administrative Rules
  - Hawai‘i Hazard Evaluation and Emergency Response Office Technical Guidance Manual
  - Hawai‘i Hazard Evaluation and Emergency Response Office Screening for Environmental Hazards at Sites with Contaminated Soil and Groundwater Guidance

[1] SupplementalHazardousWasteGuidance.pdf.

[2] HazardousWastes_Highway_ROW.pdf.

3.18.2 Methodology

3.18.2.1 Database Review

The hazardous materials survey consisted of the following tasks:

- Reviewed available historical aerial photographs and United States Geological Survey (USGS) topographic maps to provide an understanding of past occupants, businesses, or land uses that may have affected the soil or groundwater within the project area. Environmental Data Resources, Inc. (EDR) provided historical mapping files, which are included electronically in Appendix 3.18, Hazardous Materials: Additional Documentation.
- Reviewed available government environmental records of properties with prior violations within the project area, such as reporting requirements, illegal dumping, or releases of contaminants that may affect soils or groundwater. EDR provided database records and Appendix 3.18 includes search results.
- Reviewed the Hawai‘i Hazard Evaluation and Emergency Response Office online database of cleanup sites (although no in-person regulatory file reviews at the office were performed as part of this assessment).
- Reviewed geologic and groundwater conditions in the project area, which were identified through a review of USGS geologic mapping and ecology well logs.

3.18.2.2 Site Reconnaissance

The Hawai’i Department of Transportation (HDOT) conducted a reconnaissance-level survey along the project corridor on June 21 and 22, 2023. Observations were conducted in areas that were easily accessible from public properties and public access corridors. Site reconnaissance focused on identifying current land uses within the project area that are likely to generate, use, treat, store, or dispose of hazardous materials. Database listings of concern and database listings that were not clearly located by EDR were also located.

In addition, on December 4, 2023, the U.S. Environmental Protection Agency (USEPA) provided a briefing for the FHWA and HDOT regarding the temporary use of Ukumehame Firing Range to store and process contaminated materials collected as part of the Lāhainā wildfire clean-up effort.

3.18.3 Affected Environment

3.18.3.1 Physical Setting

According to the USGS 7.5-minute Mā‘alaea map (2017), the Project is at an elevation that ranges west–east from approximately 0 to 120 feet above mean sea level. The local topography generally slopes down to the southwest. While there are smaller intermittent ~~interment~~ streams, the nearest and largest surface water bodies are the Pacific Ocean, Olowalu Stream, and Ukumehame Stream, which are located southwest of and within the project area, respectively.

Based on the local topography and proximity of surface water bodies, local groundwater flow is presumed to be to the southwest. This interpretation is an estimate based only on surface observations because local subsurface geologic and built features can affect groundwater flow. A

review of water well records filed with the Ecology Well Log Database System indicates that depth to groundwater in the project area ranges from approximately 2 to 4 feet below ground surface.

3.18.3.2 Observations

HDOT's reconnaissance in June 2023 consisted of systematically traversing the Build Alternatives and viewing adjacent properties from roadways and public access areas. Appendix 3.18, Hazardous Materials: Additional Documentation, includes photographs that document reconnaissance observations.

Land use adjacent to the Build Alternatives is mostly undeveloped land or former/current agricultural land. The Olowalu Recycling and Refuse Convenience Center is near the Lāhainā Bypass connection at the northern end of the project area. Ukumehame Firing Range is near the southern project terminus and south of Pōhaku ‘Aeko Street. Residential homes and businesses are along Honoapi‘ilani Highway near Olowalu Village, and more recent residential development extends farther mauka of Honoapi‘ilani Highway at Luawai, Ehehene, and Pōhaku ‘Aeko Streets. TABLE 3.18-1 summarizes potential sources of hazardous substances identified during site reconnaissance.

TABLE 3.18-1. **Potential Sources of Hazardous Substances**

POTENTIAL SOURCES OF HAZARDOUS SUBSTANCES	PRESENT?
Aboveground storage tanks	No
Fluorescent or mercury vapor light bulbs	No
Hazardous waste generation	No
Heating oil tanks	No
Oil-water separators, dry wells, or floor/storm drains	No
Other hazardous substance containers	No
Solid waste	No
Stains or odors	No
Stressed vegetation	No
Belowground storage tanks, fill and vent pipes, fuel dispensers	No
Water wells or monitoring wells	No
Potential polychlorinated biphenyl (PCB)-containing equipment	Yes
Septic systems	Yes
Suspect asbestos-containing materials	Yes
Suspect lead-based paint	Yes
Treated timbers	Yes

FIGURE 3.18-1 and FIGURE 3.18-2 show the following specific locations with a potential presence of contaminated materials for Olowalu and Ukumehame, respectively:

- The Olowalu Recycling and Refuse Convenience Center is near the northern terminus of the Build Alternatives. The site includes a half dozen trailer-sized containers used to store and transfer residential recycling and refuse. An approximately 15-foot by 15-foot building formerly used as a tipping station for the Olowalu landfill farther mauka of the recycling center is located within the alignments. The former tipping station may contain asbestos and lead-based paint. This site is located approximately one-quarter mile from the Olowalu Landfill.
- The Olowalu Landfill located farther mauka of the recycling center had been capped and closed since the early 1990s. On October 27, 2023, the Board of Land and Natural Resource granted Maui County a land disposition to use the Olowalu Landfill to dispose of the Lāhainā wildfire ash and smaller particles. The debris would be wrapped in liners to prevent the migration of any waste materials and the landfill would again be capped and closed. A small sand and gravel mine is also mauka of the former landfill. Transporting the debris to the landfill was completed in January 2025, and all wildfire debris is now in the process of being relocated to the permanent disposal site in Central Maui, which is expected to be complete by November 2025.[3]
- Ukumehame Firing Range is near the southern terminus and mauka of the Build Alternatives. Lead-contaminated soil and water can result from typical activities at firing ranges, and this was found in baseline soil samples by the USEPA prior to using the firing range for Lāhainā wildfire clean-up efforts. The USEPA is temporarily using a portion of the firing range as a staging and processing area for hazardous materials including electric vehicle batteries and contaminated sludge. All contaminants identified through sampling are stored in metal 55-gallon drums and shipped off-site for treatment and disposal.
- Pole-mounted transformers are present along the entirety of Honoapi‘ilani Highway and along Olowalu Village Road adjacent to Build Alternative 1 in the area of Olowalu Village. Whether or not these transformers contain regulated levels of PCBs is undetermined. Treated timber supports the aboveground power lines.
- Several containers that are commonly used to store hazardous substances are at a ~~residence~~ property ~~at 820~~ makai of Honoapi‘ilani Highway, near Olowalu town center. The storage containers are near Build Alternative 1.
- Site conditions at the storage yard at 814 Olowalu Village Road are not visible from public viewing areas.
- Septic systems are commonly used at residences in the area.

[3] https://www.mauirecovers.org/debris-containment (Date Accessed: July 2025)

FIGURE 3.18-1. **Observed Areas of Potential Contaminated Materials - Olowalu**

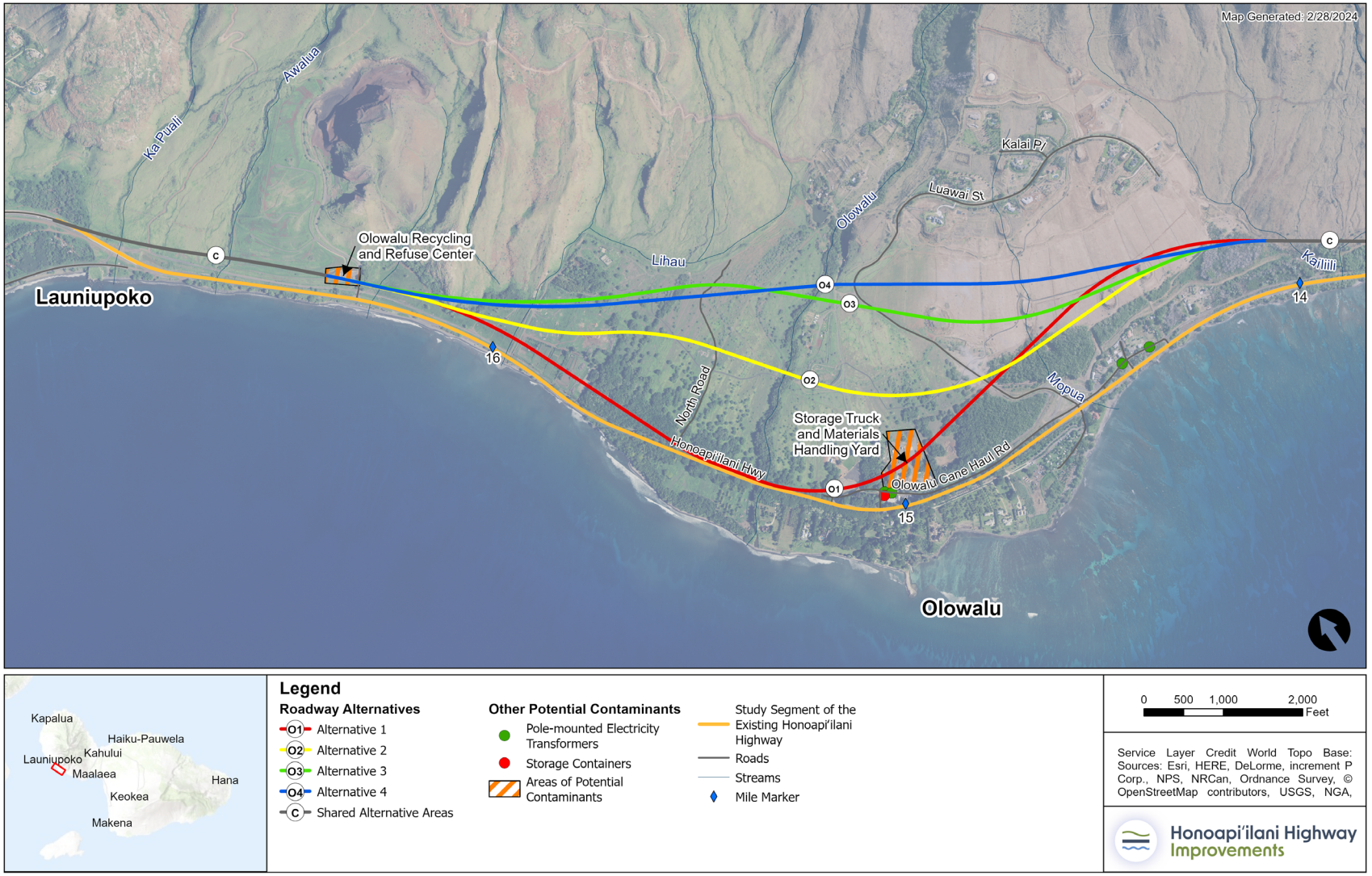
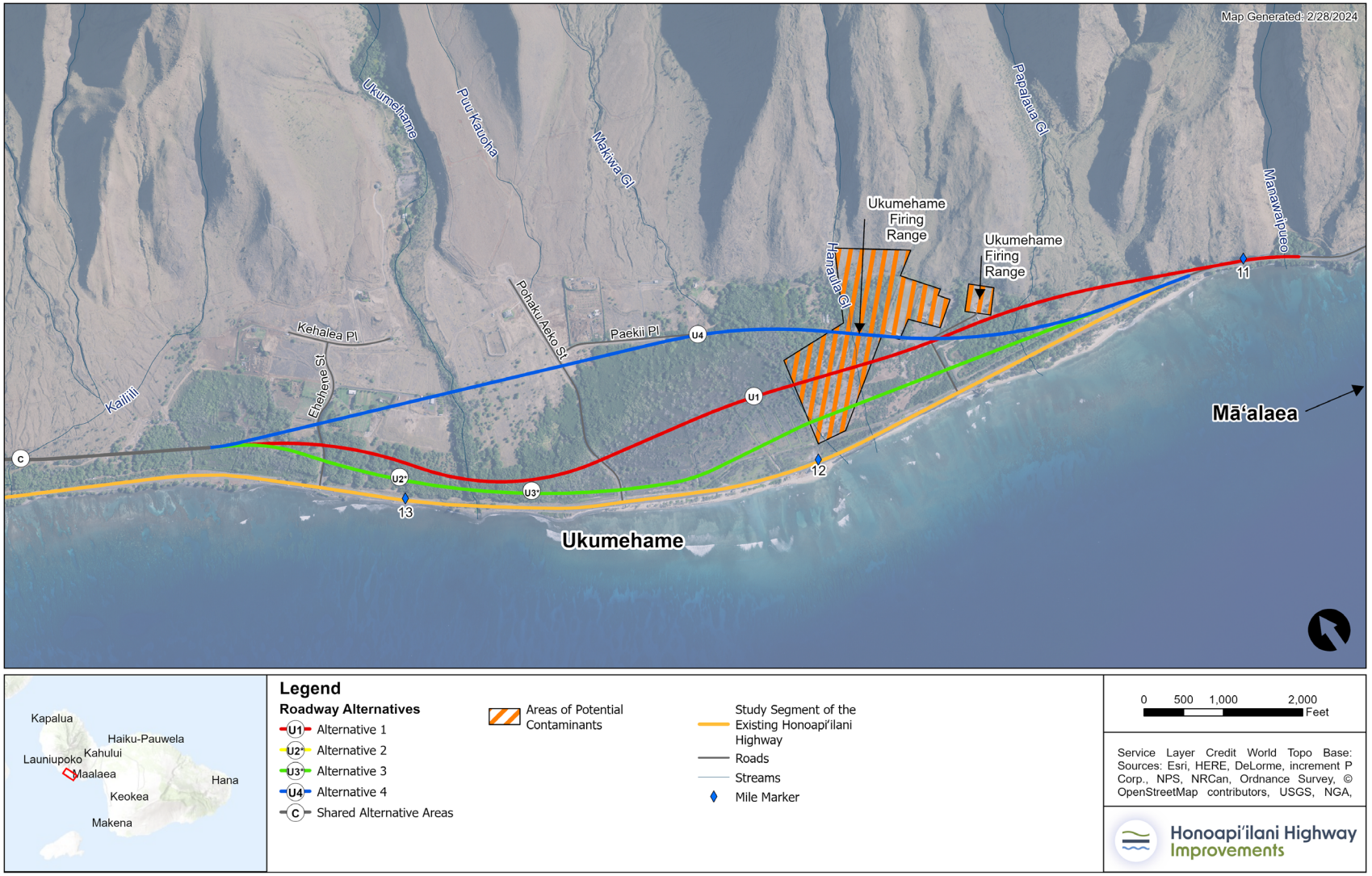


FIGURE 3.18-2. **Observed Areas of Potential Contaminated Materials - Ukumehame**



3.18.3.3 Historical Records

Aerial Photographs

TABLE 3.18-2 provides details from the project-area aerial photographs that HDOT reviewed. These photos—dated 1950, 1965, 1976, 1977, 1992, 2001, 2010, 2015, and 2017—were obtained from EDR and used to clarify past land uses. Appendix 3.18, Hazardous Materials: Additional Documentation, includes copies of the aerial photographs.

TABLE 3.18-2. **Listing and Assessment of Aerial Photographs**

YEAR	AERIAL PHOTOGRAPH ASSESSMENT
1950 to 1977	• The photograph from 1950 shows the properties in and along the project area mostly undeveloped land with some farming land north and south of the project area. • The photograph from 1965 shows the first indication of ground disturbance at the former landfill. • Land clearing and access roads to Ukumehame Firing Range are first visible in the aerial photographs from 1976 and 1977.
1992 to 2010	Photographs from 1992 to 2010 show the project area mostly unchanged, with more residential and commercial development within and around the Build Alternatives. A large vehicle and materials storage yard first appears at 814 Olowalu Village Road, located within Build Alternative 1.
2015 to 2017	Photographs from 2015 to 2017 show land use and development patterns around the Build Alternatives similar to existing site conditions.

3.18.3.4 Sanborn Fire Insurance Maps

While HDOT requested Sanborn Fire Insurance Maps from EDR, the project location is unmapped. Appendix 3.18 includes a copy of the Sanborn Report.

3.18.3.5 Historical Topographic Maps

HDOT reviewed historical topographic maps provided by EDR dated 1923, 1954, 1955, 1956, 1961, 1983, 1992, 1996, 1997, 2013, and 2017. Appendix 3.18 includes these maps.

3.18.4 Reverse Directories

HDOT reviewed reverse city directories published by EDR dated 1992, 1995, 2000, 2005, 2010, 2014, 2017, and 2020, to identify past land uses. Appendix 3.18 includes city directories for the target property as well as adjoining streets.

3.18.4.1 Environmental Records Review

Known Hazardous Waste Sites

HDOT reviewed available State records for identified hazardous waste sites using the EDR Area/Corridor Report, which provides State and tribal nation listings of known hazardous waste facilities (Appendix 3.18). TABLE 3.18-3 shows that five State-listed hazardous waste facilities are within 1 mile of the Project. Two of these locations (the Luawai Road Transformer and Ukumehame Firing Range) are on or adjacent to the existing highway and one or more of the Build Alternatives.

TABLE 3.18-3. **EDR Identified Hazardous Waste Sites**

FACILITY NAME AND LOCATION	FACILITY ID#	DISTANCE	DIRECTION	LATEST INCIDENT STATUS
Ukumehame Rifle Range (Hawai'i Army National Guard)	1750	0.050 mile	Northeast	No status reported
Luawai Road Transformer	2758	0.053 mile	South	No further action
Olowalu Company Sugar Mill	610	0.148 mile	South	No status reported
Olowalu Shaft Transformer Substation	2776	0.277 mile	Northeast	No further action
Olowalu Transfer Station (HID980497283)	2204	0.421 mile	North – Northeast	No status reported

3.18.5 Environmental Consequences

3.18.5.1 No Build Alternative

With the No Build Alternative, there would be no change to the existing highway corridor, and there would be little or no potential disturbance of prior areas of contamination with potential community exposure. Based on the continuing degradation of the existing highway corridor and the anticipated effects of sea level rise, ongoing maintenance, and emergency repairs would be regular occurrences within or immediately adjacent to the existing and previously disturbed highway right-of-way. It is assumed that adherence to a *Construction Health and Safety Plan* would avoid potential adverse effects from unexpected subsurface conditions.

3.18.5.2 Build Alternatives

The Build Alternatives have the potential to disturb locations where potentially hazardous materials and contaminated soil conditions exist. In these specific areas, adherence to a *Construction Health and Safety Plan* would avoid potential adverse effects from subsurface conditions. The discussion of Build Alternatives is separated between Olowalu and Ukumehame.

Olowalu

Common to All Build Alternatives

The Olowalu Recycling and Refuse Convenience Center is near the northern terminus of the Build Alternatives. The site is identified as a potential contaminant site because it is adjacent to the common alignment of the Build Alternatives in this area and includes the former Olowalu Landfill tipping station that would be removed as part of project construction. Potential sources of contamination resulting from the former landfill tipping station include asbestos and lead-based paint.

The current temporary action to reopen the former landfill for Lāhainā wildfire debris would be temporary and its use, closure, and capping would be regulated by the Hawai'i Department of Land and Natural Resources. The reopened areas are mauka and at a higher elevation than the Build Alternatives and would therefore not be directly disturbed by project construction. Wildfire debris collected at the temporary site is now in the process of being relocated to the permanent disposal site in Central Maui, which is expected to be complete by November 2025.

This site and the other known hazardous waste sites identified in TABLE 3.18-3 pose limited exposure or potential to have an adverse effect for any of the Build Alternatives based on the nature of the operations and the lack of recorded contamination.

Build Alternative 1

Pole-mounted transformers are present along Olowalu Village Road adjacent to Build Alternative 1 in the area of Olowalu Village. Whether or not these transformers contain regulated levels of PCBs or if timber support includes hazardous materials such as creosote, is undetermined. Therefore, the transformers and timber support are identified as potential contaminant sources.

Containers that are commonly used to store hazardous substances are on property behind the stores at the Olowalu Center. These containers are identified as potential sources of contamination. The property is used as a storage area and service lot for the Mauna Kahālāwai Watershed Partnership and appears to be used for heavy-vehicle and materials storage. There are approximately a half-dozen containers visible from Olowalu Village Road. The property is identified as a potential contaminant site because of its historical use as a storage yard. While no known releases or spills into the environment have been documented at the property, on-site contamination could include a variety of oils, hydraulic fluids, and heavy metals. This possibility is based on past and current aerial photos that show vehicles and storage stockpiles.

Ukumehame

Common to All Build Alternatives

The only known hazardous waste site identified is Ukumehame Firing Range. In general, there is limited potential for exposure based on the nature of the operations. This includes the temporary use of portions of Ukumehame Firing Range for storage of contaminated materials collected as part of the Lāhainā wildfire clean-up effort.

While generally true for all Build Alternatives, Build Alternatives 1 and 4 traverse closer to the active shooting areas of the firing range. Any disturbance of the existing soil would require adherence to construction protocols (Section 3.18.6) and regulatory compliance with the applicable State or County agencies in order to avoid potential adverse effects of exposure to soil contaminants (inlcuding lead contamination in the soil). This may include activities such as excavation to support roadway infrastructure potentially including installation of piers for a viaduct structure.

3.18.6 Construction Effects

As evaluated in this section, while some potentially sensitive sites were observed at Ukumehame Firing Range and the property behind the Olowalu village center, there are no known contaminated sites in the project area that would be affected by any of the Build Alternatives.

Nonetheless, a *Construction Health and Safety Plan* would provide guidance if any potential contamination is encountered during construction. Construction personnel should be alert and looking for signs of potential petroleum contamination when soil is excavated. If contamination is identified, the contractor should report it to HDOT immediately. As a requirement, any potential handling of

hazardous materials or site remediation would be in accordance with applicable State and federal laws specifying the handling, treatment, and disposal of contaminated materials. With conformance to State and federal laws, no adverse effects from exposure to contaminated materials are anticipated.

3.18.7 Indirect Effects

The management of instances of contamination during construction are not expected to result in indirect effects that would create new (or change existing) potential exposures to contaminated materials.

3.18.8 Mitigation

Prior to construction activities, a *Construction Health and Safety Plan* would be developed by the design-build contractor in coordination with HDOT. Specific measures to address potential encounters with contaminants during construction would be identified as part of that plan. Compliance with these measures would eliminate the potential for the Build Alternatives to have adverse effects related to hazardous wastes or contaminated materials. Therefore, no additional mitigation would be required for the Project.

3.18.9 Build Alternatives Comparative Assessment

Olowalu

Build Alternative 1 has the greatest potential for disturbance of potential hazardous materials in Olowalu at the Storage Truck and Materials Handling Yard and Olowalu Recycling and Refuse Center. Build Alternatives 2, 3, and 4 would result in the least potential for disturbance to potential hazardous materials in Olowalu at the Olowalu Recycling and Refuse Center. Based on the potential for additional remediation requirements, this could result in cost variations but would not have an overall effect in terms of potential adverse effects. Overall, no adverse effects would be anticipated in Olowalu with the Build Alternatives.

Ukumehame

Build Alternatives 1 and 4 have the greatest potential for disturbance of potential hazardous materials in Ukumehame at Ukumehame Firing Range. Build Alternatives 2 and 3 would result in the least potential for disturbance to potential hazardous materials in Ukumehame by avoiding the Ukumehame Firing Range. Based on the potential for additional remediation requirements, this could result in cost variations but would not have an overall effect in terms of potential adverse effects. Overall, no adverse effects would be anticipated in Ukumehame with the Build Alternatives.

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3.19 ENVIRONMENTAL JUSTICE AND SOCIOECONOMIC CONDITIONS

This section provides an analysis of the potential adverse and beneficial effects of the Honoapi‘ilani Highway Improvements Project (the Project) and the Build Alternatives on low-income and minority populations (collectively referred to as environmental justice populations). This section also provides an analysis of whether the Project would result in disproportionately high and adverse effects on these populations. The analysis is based on the assessment of effects presented in previous sections of the ~~Draft~~ Final Environmental Impact Statement (EIS) as well as concerns raised during public outreach to the community and direct outreach to local businesses.

3.19.1 Regulatory Context

~~The U.S. Department of Transportation (USDOT) Order 5610.2C defines environmental justice as "the fair treatment and meaningful involvement of all people, regardless of race, ethnicity, income, national origin, or educational level with respect to the development, implementation and enforcement of environmental laws, regulations, and policies. For the purpose of DOT's Environmental Justice Strategy, fair treatment means that no population, due to policy or economic disempowerment, is forced to bear a disproportionate burden of the negative human health and environmental impacts, including social and economic effects, resulting from transportation decisions, programs and policies made, implemented and enforced at the Federal, State, local or tribal level.[1]" Similarly, the U.S. Environmental Protection Agency (USEPA) defines environmental justice as "the just treatment and meaningful involvement of all people, regardless of income, race, color, national origin, Tribal affiliation, or disability, in agency decision making and other Federal activities that affect human health and the environment so that people:~~

- ~~are fully protected from disproportionate and adverse human health and environmental effects (including risks) and hazards, including those related to climate change, the cumulative impacts of environmental and other burdens, and the legacy of racism or other structural or systemic barriers; and~~
- ~~have equitable access to a healthy, sustainable, and resilient environment in which to live, play, work, learn, grow, worship, and engage in cultural and subsistence practices."[2]~~

~~Executive Order (EO) 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (1994), directs federal agencies to identify and address, as appropriate, disproportionately high and adverse effects of federal actions on low income and minority populations. Its purpose is to focus federal attention on the environmental and human health effects of federal actions on low income and minority populations with the goal of achieving environmental protection for all communities.~~

~~[1] https://www.phmsa.dot.gov/sites/phmsa.dot.gov/files/2021-06/DOT%20Order%205610.2C.pdf~~

~~[2] U.S. Environmental Protection Agency. Accessed November 11, 2024. https://www.epa.gov/environmentaljustice/learn-about-environmental-justice.~~

EO 14096, Revitalizing Our Nation's Commitment to Environmental Justice for All (2023), further emphasizes that environmental justice is achieved through meaningful engagement and collaboration with underserved and overburdened communities to address the adverse conditions they experience and ensure they do not face additional disproportionate burdens or underinvestment. Per the Council on Environmental Quality, EO 14096 does not rescind EO 12898. However, until further guidance on implementing EO 14096 is available, the Federal Highway Administration (FHWA) is using existing guidance in the current USDOT and FHWA Environmental Justice Orders (USDOT Order 5610.2C and FHWA Order 6640.23A).

USDOT Order 5610.2C and FHWA Order 6640.23A define low-income people as having median household incomes at or below the U.S. Department of Health and Human Services poverty guidelines and defines the following individuals as minorities:

- Black: a person with origins in any of the Black racial groups of Africa
- Hispanic or Latino: a person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race
- Asian American: a person with origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent
- American Indian or Alaskan Native: a person with origins in any of the original people of North America, Central America, or South America, and maintain cultural identification through tribal affiliation or community recognition
- Native Hawaiian and Other Pacific Islander: a person with origins in any of the original peoples of Hawai‘i, Guam, Samoa, or other Pacific Islands

USDOT Order 5610.2C also defines minority and low-income populations as readily identifiable groups of minority or low-income persons “who live in geographic proximity, and if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who will be similarly affected by a proposed USDOT program, policy, or activity.” In addition, low-income people are defined as having median household income at or below the U.S. Department of Health and Human Services poverty guidelines.

The following federal regulatory and guidance documents were used for the environmental justice analysis:

- EO 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (February 1994)
- EO 14096, Revitalizing Our Nation's Commitment to Environmental Justice for All (April 2023)
- USDOT Order 5610.2C, Department of Transportation Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (May 2021)
- USDOT, Environmental Justice Strategy (November 2016)
- FHWA Order 6640.23A, FHWA Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (June 2012)

- ~~FHWA, Guidance on Environmental Justice and the National Environmental Policy Act (NEPA) (December 2011)~~
- ~~FHWA, Environmental Justice Reference Guide (April 2015)~~
- ~~Federal Interagency Working Group on Environmental Justice & NEPA Committee, Promising Practices for Environmental Justice Methodologies in NEPA Reviews (March 2016)~~
- ~~2021 The White House Office of Science and Technology Policy and the White House Council on Environmental Quality Memorandum on Indigenous Traditional Ecological Knowledge and Federal Decision Making (November 2021)~~

On January 20, 2025, President Trump signed Executive Order (E.O.) 14148 –Initial Rescissions of Harmful Executive Orders and Actions and E.O. 14154 – Unleashing American Energy. The E.O.s revoked E.O. 14096 – Revitalizing Our Nation’s Commitment to Environmental Justice for All (April 21, 2023). Subsequently on January 21, 2025, President Trump signed E.O. 14173 – Ending Illegal Discrimination and Restoring Merit-Based Opportunity. This E.O. revoked E.O. 12898 – Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (February 11, 1994). On February 25, 2025, the Council on Environmental Quality (CEQ) published an Interim Final Rule removing the CEQ’s National Environmental Policy Act (NEPA) implementing regulations, effective April 11, 2025 (90 Fed. Reg. 10610). As a result of these actions, all federal environmental justice requirements are revoked and no longer apply to the federal environmental review process. FHWA, FTA and FRA’s Joint NEPA regulations (23 CFR part 771) and the agencies Interim Final Guidance on “Section 139 Environmental Review Process: Efficient Environmental Reviews for Project Decision-making and One Federal Decision” (12/17/2024) do not require an environmental justice analysis. Any purported environmental justice impacts were not considered in the federal decision. Social, economic, and community impacts will continue to be disclosed where applicable in accordance with 23 CFR 771.

The regulatory guidance that was cited as part of the analysis prepared for the Draft EIS has since been rescinded and all federal environmental justice requirements are revoked and no longer apply to the federal environmental review process. However, consistent with the State of Hawai‘i Department of Transportation Title VI Program,[3] the environmental justice analyses prepared as part of the Draft EIS are retained in this Final EIS in an effort to further “the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.”

3.19.2 Methodology

This section provides a broad socioeconomic overview of the project area and its regional setting and presents the methodology used to identify communities with environmental justice populations. ~~The assessment method is consistent with the FHWA 2011 Guidance on Environmental Justice and NEPA, USDOT Order 5610.2C, and FHWA Order 6640.23A.~~ The FHWA and the Hawai‘i Department of

[3] Administration | Title VI/Environmental Justice/Language Access Programs (Date Accessed: July 2025)

Transportation (HDOT) conducted extensive public outreach, including direct outreach to environmental justice populations, during preparation of this ~~Draft~~ Final EIS.

The following methodology was used to conduct the environmental justice analysis:

- Identify appropriate study areas
- Identify existing low-income and minority (environmental justice) populations in the study area
- Determine if the Project would result in any effects (beneficial or adverse) on the environmental justice populations. This includes the following:
  - Consider measures to avoid, minimize, and mitigate any adverse effects of the Project
  - Consider potential offsetting benefits to the affected environmental justice populations
  - Determine if the Project would result in disproportionately high and adverse effects on environmental justice populations[4]
  - If disproportionately high and adverse effects on environmental justice populations are likely, determine if a mitigation measure or alternative would avoid or reduce these effects
  - Provide meaningful opportunities for environmental justice populations to provide input and help identify potential effects of the Project and potential mitigation

3.19.2.1 Data Sources

Demographic Analysis

The primary source of data used for this analysis is the U.S. Census Bureau's 2018-2022 American Community Survey (ACS) 5-Year Estimates, which was the most current data available at the time. The ACS data provides estimates by census tract averaged across a 5-year span collected between official U.S. Census Bureau decennial counts.

HDOT collected the ACS data for four levels of geography for comparison (FIGURE 3.19-1):

- The State of Hawai'i
- Maui County, which comprises the islands of Maui, Molokai, and Lāna'i
- West Maui Census Tracts 314.02, 314.04, 314.05, 315.01, 315.03, 315.04, 315.05, and 320[5]
- The project area (Census Tract 320)

HDOT included additional data from the USEPA EJScreen Tool (Version 2.2 – which has been discontinued), which includes summary data related to low-income and minority communities.

[4] These are effects that would be predominately borne by environmental justice populations—or are appreciably more severe or greater in magnitude on these populations—than the adverse effects borne by populations that are not defined as low-income or minority.

[5] Although Census Tract 308 is sometimes considered part of the geography of West Maui, much of its population is geographically isolated and situated north of Kahului and is therefore unlikely to use the project area for access. Therefore, Census Tract 308 was not included in the statistics for West Maui.

Although there can be some variation in the data, U.S. Decennial Census information is also used in setting some of the broader demographic characteristics where applicable.

Native Hawaiian Outreach

Though other minorities live in the project area, Native Hawaiians are recognized as key stakeholders. During early scoping—before the NEPA/HEPA process officially began—Native Hawaiians who live in the project area or who have a cultural connection to it were invited to small group meetings. This expanded to a more formal public dialogue during project scoping that has continued as part of the Section 106 consulting process (Section 3.6, Archaeological and Architectural Historic Properties).

From this outreach and other comments received from public participants during the scoping process, community themes emerged:

- Respect the rich cultural history and require a thorough evaluation through the Section 106 process
- Recognize the potential for unmarked burials and the presence of cultural resources
- Place an emphasis on land rights and access and the protection of cultural resources and practices
- Communicate with local families with history in the community
- Preserve the rural character and views and do not create new development opportunities
- Protect the shoreline, the reef, streams, and avoid shoreline hardening
- Provide a clear explanation of what would happen to the existing highway
- Address the homeless encampments along the highway corridor

Because the NEPA, HEPA, and Section 106 consultations for the Project are concurrent, meetings with Section 106 stakeholders continued during the NEPA/HEPA process. While this coordination has been heavily focused on historic properties and cultural practices, discussions also included potential impacts to properties used by or owned by Native Hawaiians, concerns about area development, and the preservation of views and natural resources.

Business Outreach

For the small number of businesses in the project area, the assessment relied on field observations and direct interviews with the business operators.

3.19.2.2 Environmental Justice Analysis Areas

The environmental justice analysis evaluates local and regional potential effects of the Project (FIGURE 3.19-1):

- **Local (neighborhood) effects** are direct, indirect, and cumulative effects on local communities. The Project's local effects study area includes the people and communities within the ahupua'a that may be directly affected by the Build Alternatives. This includes the areas from the southern end

of Ukumehame near Pāpalaua Wayside Park to the beginning of the existing Lāhainā Bypass in Launiupoko.

- **Regional effects** are direct, indirect, and cumulative effects on regional mobility. For the Project, regional effects occur in West Maui and primarily for users of Honoapi‘ilani Highway, which includes both West Maui residents and those who commute to West Maui from other parts of Maui. Most notably this includes the population centers of Kahului, Wailuku, and Kīhei.

3.19.3 Affected Environment and Demographic Profile

3.19.3.1 Overview

TABLE 3.19-1 provides an overview of the population of the State of Hawai‘i, Maui County, West Maui Region, and Census Tract 320. TABLE 3.19-2 provides an overview of the housing profile for the State of Hawai‘i, Maui County, West Maui Region including Census Tract 320 which encompasses the project area (red hatching on FIGURE 3.19-1, with blue hatching showing the approximate project area). Census Tract 320 is the smallest level of demographic information available given the very low population of this rural area and there are no block groups defined within this census tract. As shown on FIGURE 3.19-2, the geographical boundaries of Census Tract 320 extend beyond the project area to include Southeast Lāhainā and the Central Maui communities of Mā‘alaea and Kīhei. As a result, most of the population and economic activity in the census tract is located well outside the project area.

While Census Tract 320 has a reported population of about 1,000 residents, the project area population is likely between 100 and 150 residents (with almost all in Olowalu). This estimate is based on an average household size of between two and three people per household and the presence of approximately 21 pre-subdivision homes and approximately ~~22~~ 26 homes that were constructed more recently, with 38 houses in Olowalu and ~~five~~ nine houses in Ukumehame (as estimated from the most recent available aerial imagery).

FIGURE 3.19-1. **Local and Regional Areas of Effect**

FIGURE 3.19-2. **Census Tract 320 Compared to Project Area**

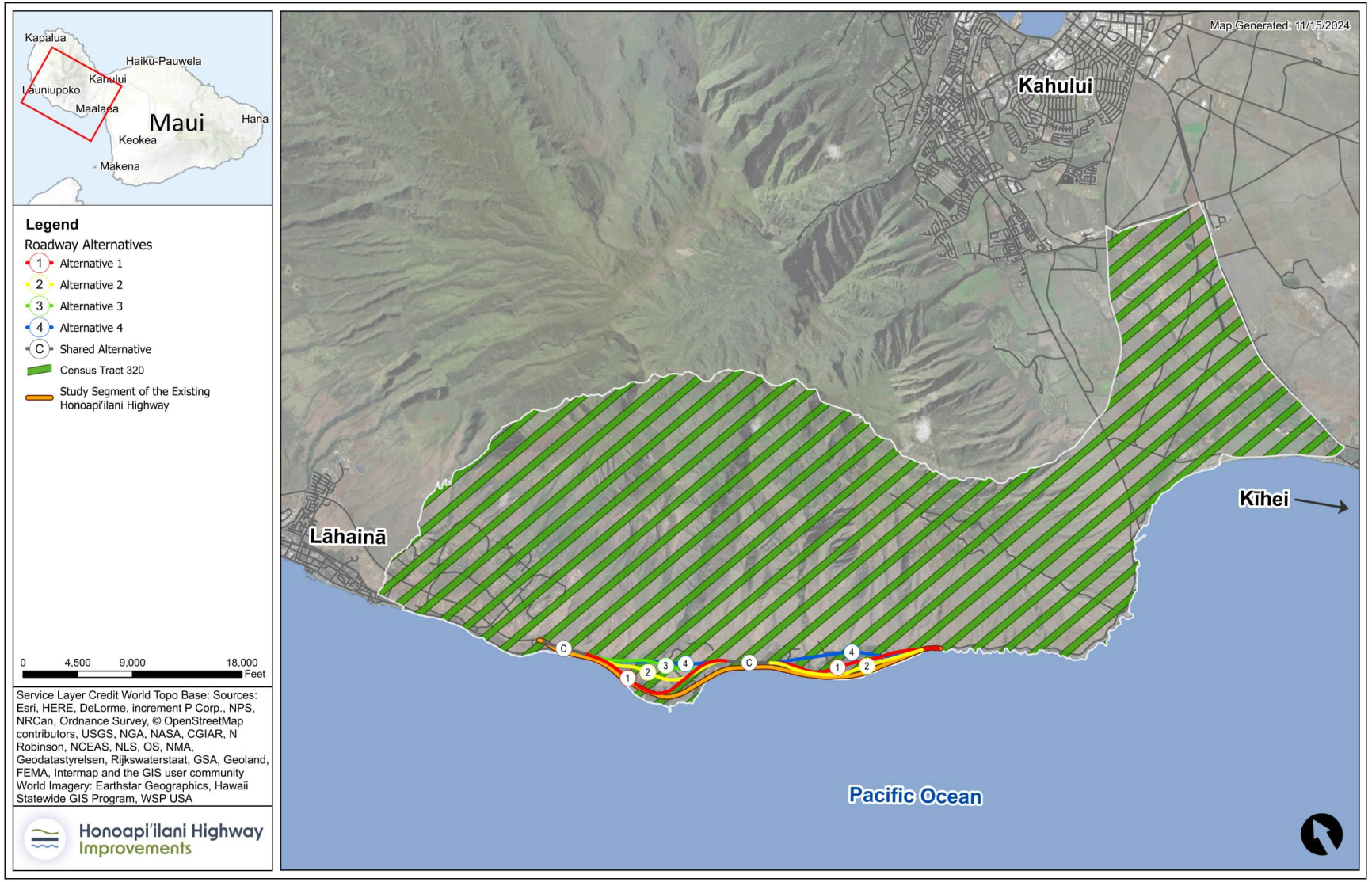

TABLE 3.19-1. **Population Overview**

CATEGORY	STATE OF HAWAI'I	MAUI	WEST MAUI[4]	PROJECT AREA (TRACT 320)
Total Population 2020[1]	1,453,498	164,568	23,477	1,112
Total Population 2010[2]	1,360,301	154,834	22,508	994
Percentage change	6.98%	6.41%	4.31%	11.87%
Average Household Size[3]	2.92	2.96	3.16	2.26
Median Age[1]	40.8	42.4	44.1	54.6
Age Distribution (Percentage)[1]				
Less Than 5 Years	5.32%	5.27%	5.21%	3.78%
5 to 19 Years	17.50%	18.07%	17.00%	10.79%
20 to 64 Years	57.78%	57.46%	60.04%	57.73%
65 or More Years	19.41%	19.20%	17.75%	27.70%

[1] Data derived from Table DP1 (Decennial Census – 2020)
[2] Data derived from Table P1 (Decennial Census – 2010)
[3] Data derived from Table S1101 (ACS 5-Year Estimates – 2022)
[4] West Maui includes Census Tracts: 314.02, 314.04, 314.05, 315.01, 315.02, 315.03, and 320. CT 315.02 was divided into 315.04 and 315.05 for 2020 Census data.

TABLE 3.19-2. **Housing Overview**

CATEGORY	STATE OF HAWAI'I	MAUI	WEST MAUI	PROJECT AREA (TRACT 320)
Total units	561,066	71,439	12,971	1,001
Percentage Owner Occupied	58.8%	58.6%	52.6%	67.1%
Percentage Renter Occupied	41.2%	41.4%	47.4%	32.9%
Percentage Vacant	12.6%	21.5%	38.7%	53.0%

Source: Table DP1 (Decennial Census – 2020)

Maui has a population of about 165,000 people, with 23,500 living in West Maui and about 1,000 living in Census Tract 320. Like the state overall, Maui's population grew about 7% between the 2010 and 2020 U.S. Decennial Census, while West Maui and Census Tract 320 grew by 4.3% and 11.9%, respectively. Residential development in the Lāhainā area provided the most significant growth in the area. The population of Lāhainā and growth patterns have been fundamentally altered by the devastating wildfires that destroyed most of the community in 2023. The near-term rebuilding and the long-term stabilization of the community and its growth and development pattern would be expected to eventually bring the regional population back to the pre-wildfire baseline. Tract 320 itself is primarily outside of the wildfire area's core.

Census Tract 320 has a household size of 2.26 people per household and a median age of 54.6. This reflects an older population with more empty nest households compared with West Maui (3.16 people per household and a median age of 44.1), Maui County (2.96 people per household and a median age of 42.4), and the state (2.92 people per household and a median age of 40.8).

Household characteristics generally indicate that more than half of Hawai'i households own their home. And this percentage is much greater within Tract 320, where over two-thirds of the homes are owner-occupied. Census Tract 320's much higher percentage of vacant housing units (53% compared to just over 12% for the state as a whole) indicates that there are a high number of vacation homes in the project area.

TABLE 3.19-3 summarizes labor force and economic characteristics for the same levels of geography, which generally indicates that Tract 320 has a population that has more education, higher incomes, and a lower level of people below the poverty level than West Maui, Maui, or Hawai'i as a whole.

TABLE 3.19-3. **Labor Force Characteristics**

CATEGORY	STATE OF HAWAI'I	MAUI	WEST MAUI	PROJECT AREA (CENSUS TRACT 320)
Total Labor Force (Age 16+)	760,387	86,911	13,234	460
Percentage High School Education	95.72%	95.52%	95.78%	97.73%
Percentage Higher Education	41.98%	36.90%	34.43%	48.80%
Percentage Private Sector/Self Employed	78.90%	86.20%	92.32%	87.50%
Percentage Public (local, State, federal)	21.10%	13.80%	7.68%	12.50%
Average commute time (minutes)	22.6	22.7	18.61	21.8
Median Household Income	$94,814	$95,379	$102,438	$121,667
Per Capita Income	$42,683	$42,607	$53,034	$74,464
Persons Below Poverty Level	9.60%	9.30%	8.81%	7.00%

Source: Table DP03 (ACS 5-Year Estimates – 2022)

TABLE 3.19-4 provides information on employment by occupation. This information underscores the significance of the tourism economy in West Maui as well as for the county and state.

TABLE 3.19-4. **Employment by Sector**

CATEGORY	STATE OF HAWAI'I	MAUI	WEST MAUI	PROJECT AREA (CENSUS TRACT 320)
Agriculture	1.23%	1.44%	0.55%	0.44%
Construction	6.90%	7.16%	4.46%	15.01%
Manufacturing/Wholesale Trade	4.74%	3.71%	2.31%	2.43%
Retail Trade	10.43%	11.33%	9.74%	8.39%
Transportation, Warehousing, Utilities	6.16%	5.23%	2.41%	11.26%
Information	1.42%	1.18%	1.48%	0.66%
Finance, Insurance, Real Estate	6.14%	6.38%	8.11%	7.28%
Professional Services	10.04%	10.08%	11.30%	9.27%
Education, Health, Social Services	20.97%	17.54%	11.68%	11.26%
Accommodation, Food Services, Recreation, Arts and Entertainment	14.69%	21.31%	33.81%	18.10%
Other Services, Public Administration	4.05%	4.50%	4.74%	3.31%
Public Administration	8.19%	4.74%	2.82%	2.65%

Source: Table DP03 (ACS 5-Year Estimates – 2022)

3.19.3.2 Identification of Environmental Justice Populations in the Study Area

~~Following methodologies drawn from the Federal Interagency Working Group on Environmental Justice's *Promising Practices for EJ Methodologies in NEPA Reviews*,~~ The project area and regional demographics were assessed to determine the presence of identifiable environmental justice populations.

A Meaningfully Greater assessment for the larger regional area was completed through an assessment of demographics ~~as well as application of the USEPA EJScreen Tool (Version 2.2)~~. Meaningfully Greater indicates that low-income and minority populations in a given community are larger than or comparable to the broader population. This type of analysis helps determine if identified environmental justice populations are large enough to trigger additional agency attention, which is not the case for the immediate project area.

A No Threshold basis was also used to determine the presence of environmental justice populations within the project's study area to account for instances where statistical analysis does not indicate the presence of EJ populations sufficient to trigger a threshold analysis. Because the number of residents and businesses in the project area is small, project outreach has been conducted at the individual and small group level. This outreach confirms that environmental-justice populations are known to be in the project area and are considered in this Environmental Justice analysis.

Defining Minority and Low-Income Populations

~~USDOT Order 5610.2C and FHWA Order 6640.23A define low-income and minority populations as follows:~~

- **Low-Income:** A person whose household income is at or below the U.S. Department of Health and Human Services poverty guidelines.[6] The federal poverty threshold varies by family size, number of children, and number of people over age 65. In 2021, the poverty threshold for a three-person household was an income of $21,559.[7] For the purposes of this analysis, and to reflect the higher cost of living in Hawai'i, low-income populations were identified using a poverty threshold of twice the federal poverty threshold.
- **Minority:** A person who is Black or African American (not Hispanic), American Indian, Alaskan Native, Asian American, Native Hawaiian or another Pacific Islander, and Hispanic or Latino. This analysis also includes people who identified themselves as "some other race" or "two or more races" in the U.S. Census. In addition, "minority population" is any readily identifiable groups of minority people who live in geographic proximity, and, if circumstances warrant, geographically dispersed/transient people who would be similarly affected by a proposed FHWA program, policy, or activity. Beyond these definitions, HDOT, in its Title VI Plan, further specifies additional racial groups to include Japanese, Chinese, Filipino, Korean, Samoan, and Vietnamese. As described below, a No Threshold Analysis was used for minority populations; therefore, a statistical threshold for identifying a "meaningfully greater" minority population was not established for this analysis since the project area minority population is at a percentage well below reference communities of West Maui, Maui, and the State of Hawai'i.

Low-Income Populations

As shown in TABLE 3.19-5, the 2018-2022 ACS 5-Year Estimates indicate that 7.0% of the Census Tract 320 population lives below the poverty level, which is lower than West Maui (8.81%), Maui County (9.3%), and the state (9.6%). The 2021 U.S. Department of Health and Human Services Poverty Guidelines for Hawai'i lists an annual income of $25,260 as the threshold for a household of one person to be classified as in "poverty."[8]

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6 The analysis for the Project used information related to the annual poverty threshold established by the U.S. Census Bureau rather than the U.S. Department of Health and Human Services poverty guidelines. The U.S. Department of Health and Human Services poverty guidelines are a simplified version of those federal poverty thresholds that are used for administrative purposes—for example, determining financial eligibility for certain federal programs.

7 The 2021 Federal Poverty threshold is used in order to be consistent with the available data for this analysis. In addition, as described in TABLE 3.19-1, the average household size in Hawai'i is approximately three persons.

8 U.S. Office of the Assistant Secretary for Planning and Evaluation. Accessed September 7, 2022. https://aspe.hhs.gov/topics/poverty-economic-mobility/poverty-guidelines/prior-hhs-poverty-guidelines-federal-register-references/2021-poverty-guidelines).

TABLE 3.19-5. **Low Income Demographics (2017 to 2021)**

CATEGORY	STATE OF HAWAIʻI	MAUI	WEST MAUI	PROJECT AREA (CENSUS TRACT 320)
Number of Households	483,906	54,728	7,006	420
Income by Household				
Median Income	$94,814	$95,379	$102,438	$121,667
Lower Than $10,000	4.25%	3.46%	2.88%	2.14%
From $10,000 to $14,999	2.60%	2.66%	1.64%	2.62%
From $15,000 to $24,999	4.89%	5.04%	5.50%	4.52%
From $25,000 to $34,999	5.18%	4.46%	5.08%	11.67%
From $35,000 to $49,999	8.51%	9.13%	7.18%	5.24%
From $50,000 to $74,999	14.08%	13.85%	15.89%	10.48%
From $75,000 to $99,999	12.98%	13.21%	14.67%	5.24%
From $100,000 to $149,999	19.89%	20.71%	17.01%	11.67%
From $150,000 to $199,999	11.73%	11.71%	13.17%	15.00%
$200,000 and above	15.89%	15.77%	16.97%	31.43%
Persons Below Poverty Level (Percentage)	9.60%	9.30%	8.81%	7.00%
Individuals Below 200% of the Poverty Level (Percentage)	22.01%	22.06%	21.96%	22.40%

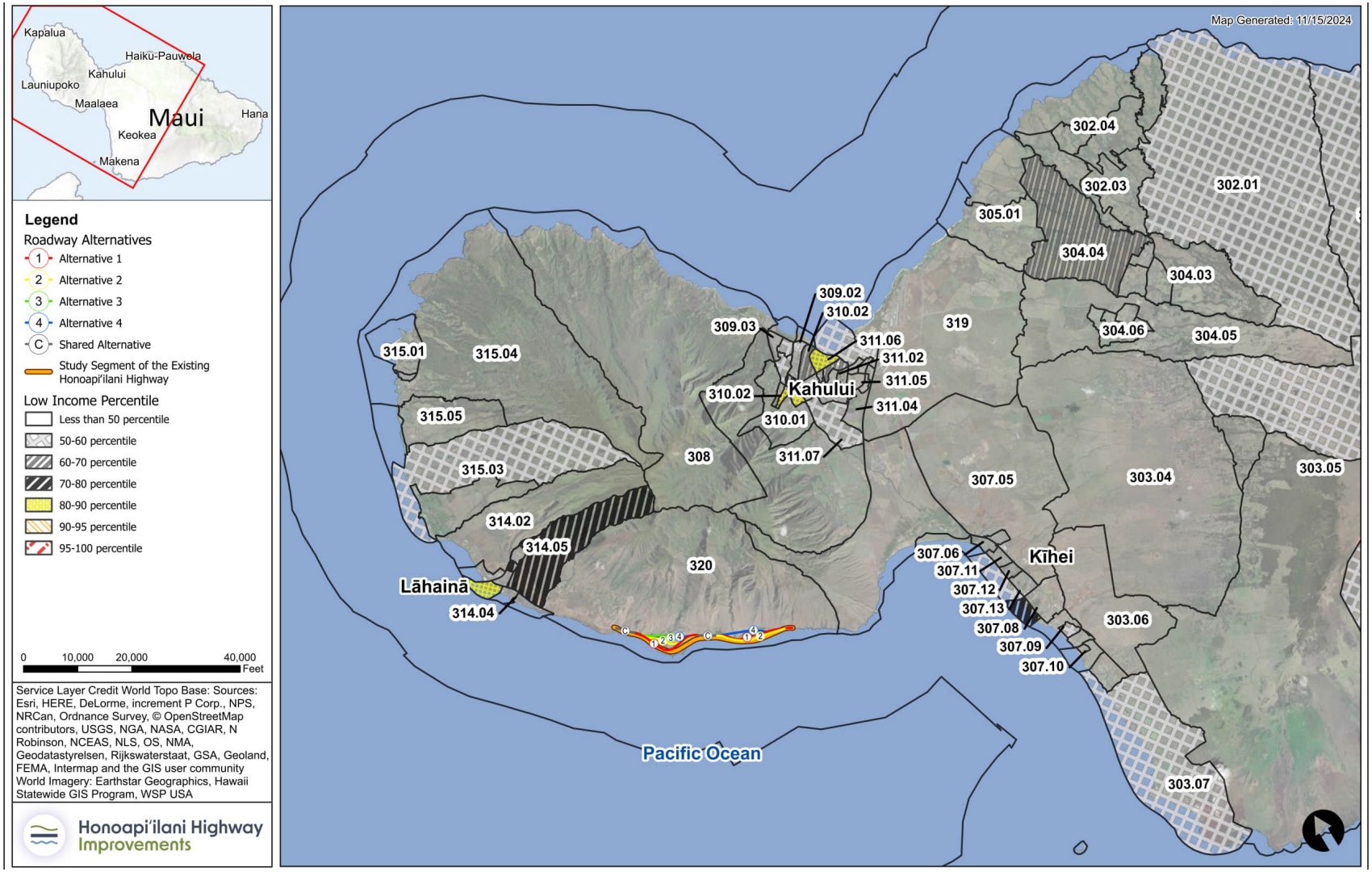
Source: 2018 to 2022 ACS 5-Year Estimates Data. https://www.census.gov/programs-surveys/acs/

According to ACS data ~~and the USEPA EJScreen Tool,[9]~~ the project area is not a Meaningfully Greater threshold environmental justice community for low-income populations below 200% of the poverty rate (FIGURE 3.19-3). ~~The EJScreen Tool results indicate that~~ In the larger West Maui area outside of the project area and the Central Maui area, there are census block groups and tracts that show a higher proportion of low-income populations as compared to the national average that would be considered environmental justice populations. While these areas contain a higher proportion of low-income populations as compared to the national average, they are generally comparable with the proportion of low-income populations in Hawaiʻi.

While the ACS ~~and EJ Screen Tool~~ data indicate that the immediate project area is not a Meaningfully Greater EJ community, a No Threshold analysis indicates the presence of EJ populations, which are considered in this Environmental Justice analysis.

~~[9] https://ejscreen.epa.gov/mapper/.~~

FIGURE 3.19-3. **Low-Income Communities**



Source: U.S. Environmental Protection Agency EJScreen Tool (https://www.epa.gov/ejscreen/download-ejscreen-data).

FIGURE 3.19-3 illustrates areas in West and Central Maui where the percentage of the population belonging to a household with less than or equal to twice the federal poverty level. The areas are ranked by percentile where 50th percentile is approximately equal to the national average. The higher the percentile, the higher the percentage of low-income households in the area as ranked against the national average. These Maui residents are an important component of the regional workforce using Honoapi‘ilani Highway to access employment in West Maui.

Minority Populations

As summarized in TABLE 3.19-6, the population for Census Tract 320 is less diverse than the state, West Maui, and Maui County. The population of Census Tract 320 is nearly 73% white, which is substantially higher than in West Maui (42%), Maui County (33%), and the state (24%).

TABLE 3.19-6. **Minority Demographics**

CATEGORY	STATE OF HAWAI‘I	MAUI	WEST MAUI	PROJECT AREA (CENSUS TRACT 320)
White	23.7%	32.9%	42.0%	72.9%
TOTAL MINORITY	76.3%	67.1%	58.0%	27.1%
African American	1.9%	0.7%	0.2%	1.3%
American Indian/Alaskan Native	0.3%	0.3%	0.1%	0.1%
Asian	37.5%	29.3%	24.95%	5.7%
Native Hawaiian/Other Pacific Islander	10.6%	11.2%	7.68%	6.2%
Two or More Races	18.9%	23.5%	23.34%	13.2%
Other	7.10%	2.10%	1.71%	0.60%

Source: Table DP1 (Decennial Census – 2020)

Minority populations make up 27.1% of the total population of Census Tract 320, which is uncharacteristically low compared to the state average of 76.3%. Compared to the overall U.S. population, Hawai‘i is unusual in that traditionally defined “minority” populations make up the majority of the state population. The U.S. Census Bureau’s 2021 population estimates for the State of Hawai‘i identifies peoples of Asian descent as representing the single largest racial group with 37.8% of the population, which includes people of Filipino (15.1%), Japanese (12.0%), and Chinese (3.9%) descent. Beyond the Asian racial grouping, no single racial group exceeded 25% of the overall estimated state population, and those who classify themselves as “two or more races” made up about 24% of the state population.

Due to Hawai‘i’s unique circumstances, an understanding of community characteristics must be put into context by comparing the population against state, county, and regional norms. In addition, due to the very small population in the project area, outreach initiated through local Native Hawaiian organizations helped understand which families may experience direct or indirect effects from the Project. Since the Project would not directly affect or displace existing residents in the project area, these potential effects would primarily be on cultural resources. Therefore, these individual families have participated in the discussion of potential project effects on access to land rights and on cultural resources, as well as participating in overall project scoping and information meetings. All participants

had access to Hawaiian translation services. In summary, while the project area does not reach a meaningfully greater definition of environmental justice populations, a No Threshold Analysis demonstrates that there are environmental justice populations present in the project area and they are considered as part of the assessment of potential disproportionately high and adverse effects as well as beneficial effects of the proposed project.

3.19.4 Environmental Consequences and Potential Disproportionately High and Adverse Effects

As shown in FIGURE 3.19-3 and FIGURE 3.19-4, the Build Alternatives do not directly pass through identified environmental justice populations. TABLE 3.19-7 summarizes the environmental justice effects (beneficial or adverse) identified in each section of this ~~Draft~~ Final EIS, the identified potential avoidance and mitigation measures for those effects, and any potential disproportionately high and adverse effects on environmental justice populations.

3.19.4.1 Local Study Area

The Project would likely benefit Native Hawaiian residents and other environmental justice populations in the project area. Like the region as a whole, the increased reliability and resilience of this critical transportation connection to the communal, civic, and commercial centers of West and Central Maui would benefit local residents. Additionally, the homes clustered along the highway in Olowalu would have substantially less traffic on the adjacent roadway, which would reduce noise and congestion although certain alignments could increase noise levels (though no adverse effects to adjacent residences were identified in Section 3.16, Noise).

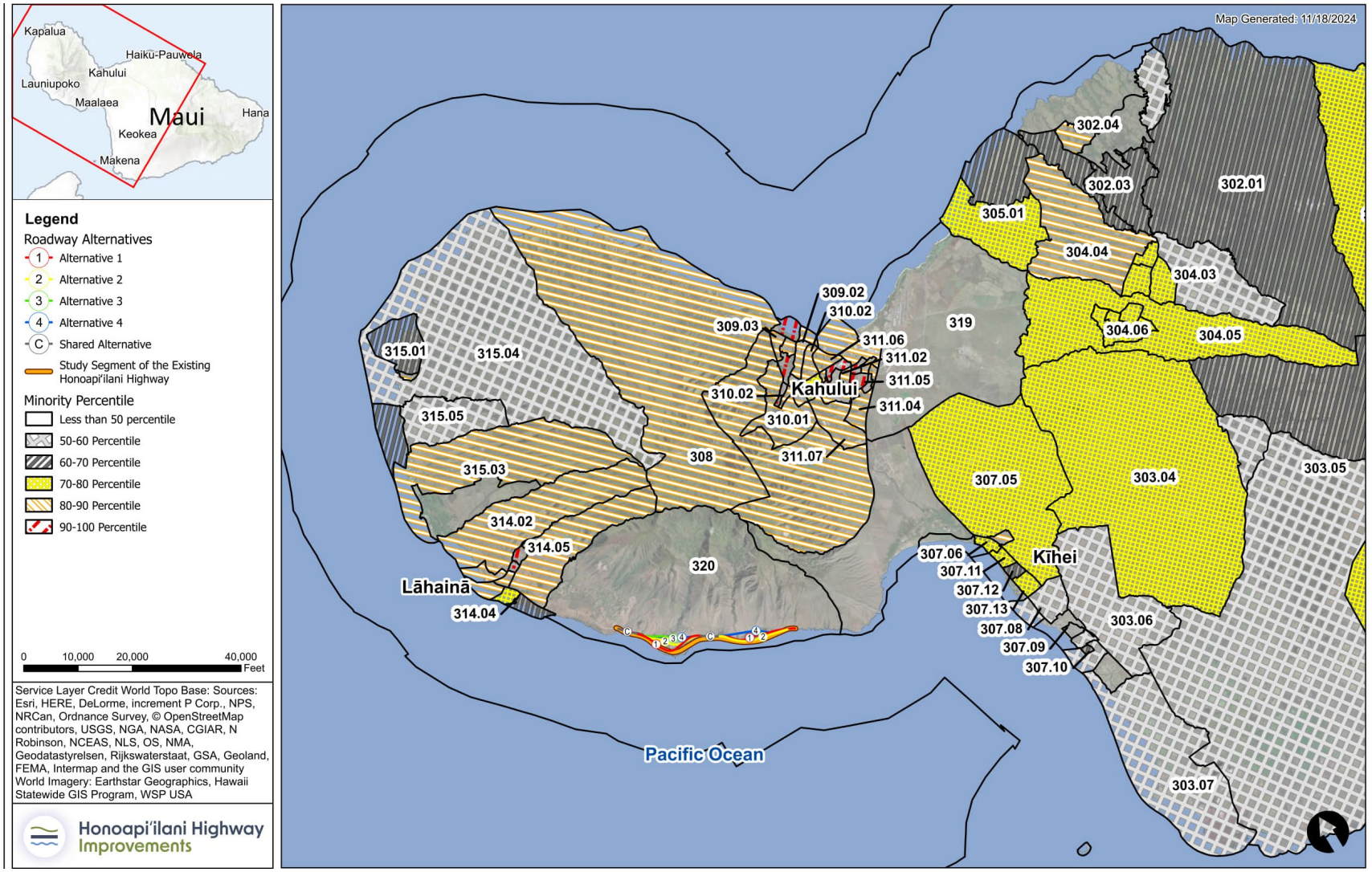
As analyzed in Section 3.4, Land Acquisition, Displacement, and Relocation, a potential adverse effect that would have a direct relationship to Native Hawaiian residents in the project area is the potential infringement or displacement from Kuleana land rights. The level of taking would be determined in final design (that is, determining if there is functional utility of the remaining parcel such that a temporary or permanent easement would allow for the continued ownership and use of the larger parcel) and based on the title research conducted by HDOT as part of their obligations to provide fair market valuation of property to be acquired.

In addition to this required level of mitigation, for Kuleana lands in particular, an additional mitigation requirement would be to ensure continued access to these lands for personal use, water rights, and for cultural practices (that is, relocation or creation of new local roads to ensure continued access properties). With these mitigation measures, no disproportionately high and adverse effects would be anticipated. The minimal adverse effects result in part from early and direct consultation with the community where the alternative alignments developed for the Notice of Intent and ~~this~~ the Draft EIS were modified to minimize potential effects on Kuleana lands and proximity to residential areas in general.

As summarized in Section 3.6, Archaeological and Architectural Historic Properties, and Section 3.7, Cultural Resources, the potential adverse effect on archaeological resources is also specific to Native Hawaiians. It affects those living in the project area as well as those with lineal ties to the project area and all participants that were invited to participate in Section 106 consultation. This consultation was

focused primarily on gathering information about the history of the area, historic sites and features, and traditional cultural practices. However, participants were encouraged to share their input on broader issues, including land rights and environmental stewardship of land and sea resources—the latter was expressed by most public participants and is not specific to environmental justice populations.

FIGURE 3.19-4. **Minority Communities Map**



Source: U.S. Environmental Protection Agency EJScreen Tool (https://www.epa.gov/ejscreen/download-ejscreen-data).

TABLE 3.19-7. **Environmental Justice Effects**

IMPACT ASSESSMENT AREA	BENEFICIAL EFFECTS	ADVERSE EFFECTS	MITIGATION	DISPROPORTIONATELY AND HIGH ADVERSE EFFECT
Land Use and Zoning	Existing homes clustered along existing highway in Olowalu would see a decrease in traffic adjacent to their residences. These homes include residences that are likely to include some environmental justice populations but would be a mix of residents.	▪ The Build Alternatives would move the highway farther mauka, placing the new road alignment closer to homes in the Olowalu Subdivision and other pre-subdivision homes. A majority of these mauka residences would not be considered to disproportionately affecting environmental justice populations. ▪ Build Alternative 1 in Olowalu would be closer to one residence known to be owned by a Native Hawaiian family.	No mitigation required.	No disproportionately high and adverse effect on environmental justice populations.
Agriculture and Farmlands	No beneficial effects.	▪ No overall impact based on Natural Resources Conservation Service scoring. ▪ All Build Alternatives could displace agricultural uses that are on properties with a mix of ownership and not disproportionately affecting environmental justice populations. Workers would more likely reflect a high representation by environmental justice persons.	Provide mitigation in terms of ensuring access to allow for continued use or potentially require partial or full acquisition and relocation assistance to affected farm operations as required by the Uniform Relocation Act and Hawaiʻi Eminent Domain Laws	The mitigation pursuant to Uniform Relocation Act would ensure that there would be no disproportionately high and adverse effect on environmental justice populations.
Community Facilities and Services	No beneficial effects.	No adverse effects.	No mitigation required.	No disproportionately high and adverse effect on environmental justice populations.
Land Acquisition	No beneficial effects.	▪ Of the land parcels with potential partial or full acquisition for the Build Alternatives, environmental justice people do not own the majority. Most are undeveloped lots within the Olowalu or Ukumehame subdivisions. Overall, could affect between 15 and 16 privately owned tax parcels in Olowalu and between 1 and 3 parcels for Ukumehame Build Alterantives 1 and 2/3 and up to 20 parcels for Build Alternative 4. ▪ There are 3 to 8 Kuleana parcels in Olowalu and 5 to 7 in Ukumehame that may be affected by the Build Alterantives. This would predominately affect Native Hawaiians. ▪ There could be one potential residential displacement in Olowalu for Alterantives 3 and 4 and one in Ukumehame for Build Alternatives 1 and 2/3. In each case, the parcel acquisition may allow for subdivision of the parcel such that the residence does not require relocation. These residences are presumed to be environmental justice households.	Provide fair and just compensation for acquired property per federal Uniform Relocation Act and Hawaiʻi's Eminent Domain laws.	▪ Adverse effects from Kuleana displacements or easements would primarily affect Native Hawaiian land rights. ▪ The provision of fair and just compensation and alternative means of access to Land Commission Award land rights would mitigate the potential acquisition impacts. ▪ Through adherence to the Uniform Relocation Act and Hawaiʻi's Eminent Domain laws, there would be no potential disproportionately high and adverse effect on environmental justice populations. Specifically, for Build Alternatives 1 and 2/3, this would include the ability to provide access to one Kuleana parcel on existing County-owned land or land acquired as part of the project.
Parklands	With transfer of jurisdiction of existing highway to the County of Maui, there can be enhanced access, parking, and reduced pass-by traffic at existing beaches and parks.	All Build Alternatives would cross the grounds of Ukumehame Firing Range, but design parameters would allow for continued use of the firing range activities.	No mitigation required beyond alternative alignment designs to avoid displacement of Ukumehame Firing Range.	No disproportionately high and adverse effect on environmental justice populations.

IMPACT ASSESSMENT AREA	BENEFICIAL EFFECTS	ADVERSE EFFECTS	MITIGATION	DISPROPORTIONATELY AND HIGH ADVERSE EFFECT
Archaeological and Architectural Resources	There are beneficial effects in the research that has provided new information and new access to previously hidden resources that can be developed with stewardship programs by Native Hawaiian groups.	▪ **Archaeological:** There are several archaeological resources that could be adversely affected by one or more Build Alternatives. This could displace eligible archaeological resources associated with Native Hawaiian culture (that is, religious, ceremonial, residential, and agricultural activities). ▪ **Architectural:** There are no locations where the Build Alternatives could displace eligible architectural resources.	▪ The FHWA and HDOT would be signatories to a Programmatic Agreement developed as part of the Section 106 consulting process. ▪ The Programmatic Agreement would prescribe the additional testing required for the Preferred Alternative and would provide a framework for mitigation commitments for potential adverse effects to identified archaeological or architectural resources. ▪ Avoidance of adverse effects are priority of Programmatic Agreement and would be incorporated into the Preferred Alternative.	▪ **Archaeological:** Unmitigated adverse effects to resources would result in disproportionately high and adverse effects on Native Hawaiian populations. Avoidance of resources can be achieved through refinements of the Preferred Alternative. Commitments developed as part of the Programmatic Agreement would mitigate potential disproportionately high and adverse effects. ▪ **Architectural:** Unmitigated adverse effects to potential architectural resources would not result in disproportionately high and adverse effects because these historic features are not specifically associated with environmental justice populations.
Cultural Resources and Practices	There are beneficial effects in the research that has provided new information and new access to previously hidden resources that can be developed with stewardship programs by Native Hawaiian groups.	Changes to surface water topography, light, and noise could adversely affect cultural practices.	Adherence to environmental commitments identified in this environmental review process including: the Section 106 Programmatic Agreement, stormwater Best Management Practices, consideration of ecologically sensitive areas, and highway design features (for example, lighting).	While specifically a concern for Native Hawaiian populations, adherence to the mitigation measures would avoid potential disproportionately high and adverse effects on this environmental justice population.
Visual and Scenic Resources	Not applicable.	No overall adverse effects	No mitigation identified beyond best design practices.	No disproportionately high and adverse effect on environmental justice populations.
Water Resources	New highway would incorporate stormwater Best Management Practices design features that would minimize potential sediment loading to adjacent coastal waters.	Some wetlands filling would occur, which the U.S. Army Corps of Engineers has indicated would be limited to nationwide permitting.	No mitigation required beyond commitments to incorporate extensive conservation measures and best practice methods.	No disproportionately high and adverse effect on environmental justice populations.
Flora and Fauna	Areas of landscape restoration from highway construction would utilize native species.	▪ No adverse effects anticipated. ▪ In the area of Ukumehame Firing Range, the threatened and endangered species (nēnē and stilts) were encountered but potential effect would be minimized or avoided through commitment to conservation measures and best management practices.	No mitigation required beyond commitments to incorporate extensive conservation measures and best practice methods.	No disproportionately high and adverse effect on environmental justice populations.
Geology, Soils, and Natural Hazards	New highway would provide opportunities for resilient roadway that would be designed to modern seismic and geotechnical standards as well as to provide potential wildfire breaks and fire-resistant vegetation.	No adverse effects	No mitigation required beyond commitments to incorporate extensive best practices design measures.	No disproportionately high and adverse effect on environmental justice populations.
Coastal Zone Management and Sea Level Rise	Consistent with the Project's purpose and need, new highway alignments would generally be located mauka of the 3.2-foot sea level rise coastal erosion line, which would provide a more resilient roadway in light of future climate changes and seal level rise.	No adverse effects.	No mitigation required.	No disproportionately high and adverse effect on environmental justice populations.
Transportation	All Build Alternatives would result in a more resilient and reliable transportation corridor linking West Maui with Central Maui.	No adverse effects.	No mitigation required	No disproportionately high and adverse effect on environmental justice populations.
Air Quality and Energy	Not applicable.	No adverse effects.	No mitigation required.	No disproportionately high and adverse effect on environmental justice populations.

IMPACT ASSESSMENT AREA	BENEFICIAL EFFECTS	ADVERSE EFFECTS	MITIGATION	DISPROPORTIONATELY AND HIGH ADVERSE EFFECT
Noise	Existing homes along the existing roadway in Olowalu would have reduced traffic and reduced noise levels.	▪ All of the Build Alternatives in Olowalu and Ukumehame would not result in adverse effects to sensitive receptors except as noted below. ▪ Build Alternative 4 in Olowalu would be proximate to the Olowalu Cultural Reserve in the area of the Olowalu Petroglyphs and would result in an increase of greater than 15 dBA and therefore result in an adverse impact.	There would be no viable mitigation for the adverse noise impact generated by Build Alternative 4 in Olowalu. Otherwise, there is no mitigation required.	▪ If Build Alternative 4 in Olowalu were selected as part of the Preferred Alternative, the potential unmitigated impact would have a disproportionately high and adverse effect on environmental justice populations, because the land of the Cultural Reserve and the Olowalu Petroglyphs are important cultural resources to Native Hawaiians. ▪ If Build Alternative 4 is not selected as part of the Preferred Alternative, there would be no disproportionately high and adverse effect on environmental justice populations.
Infrastructure and Utilities	Not applicable.	No adverse effects but would require relocation of the Olowalu Recycling and Refuse Convenience Center	No mitigation required.	No disproportionately high and adverse effect on environmental justice populations.
Hazardous Materials	Not applicable.	No adverse effects	No mitigation required.	No disproportionately high and adverse effect on environmental justice populations.
Socioeconomic Conditions	Regional economy has a strong emphasis on the connectivity of West Maui with the population and commerce centers of Central Maui. Honoapiʻilani Highway is a critical linkage in the movement of workers, visitors, and goods. The regional economy would benefit from improved reliability and resilience of the highway per the Project Purpose and Need.	▪ The local businesses that rely on pass-by traffic for customers (Leoda's Kitchen and Pie Shop, Olowalu General Store, Olowalu Farmers Market) expressed concern over potential customer losses. They also expressed optimism that congestion and difficult traffic conditions at their stores would be greatly reduced and allow for more customers to find and safely access their shop ▪ Business owners include a mix of environmental justice and non-environmental justice persons. Workers would more likely reflect a high representation by environmental justice persons.	Business owners request signage on the realigned highway directing traffic to and from the village center and that the local road be mapped as a scenic bypass or other designation.	No disproportionately high and adverse effect on environmental justice populations.

Regional Effects

From a broader regional context for Maui County environmental justice populations, the critical potential effect of the Project is related to transportation mobility. Like all Maui residents, a substantial proportion of these communities rely on the existing highway for their daily commute, for accessing the beaches and resources of West Maui, and for accessing the commercial, government, and transportation hub of Central Maui.

Commuting (Journey to Work) census data emphasizes the demand for this transportation route by environmental populations. As shown in TABLE 3.19-8, workers living in the key tracts and block groups representing the environmental justice populations in Central Maui are a critical part of the West Maui employment base. Census data estimates show that for the West Maui area, about 3,327 workers (about 25%) are commuting from the Central Maui census tracts that were identified ~~by the EJScreen Tool~~ as environmental justice populations.

TABLE 3.19-8. **Central Maui Environmental Justice Population Communities Commuting to West Maui**

WEST MAUI CENSUS TRACT OF EMPLOYMENT	TOTAL WORKERS	CENTRAL TO WEST MAUI COMMUTERS	PERCENTAGE WEST MAUI	PERCENTAGE DRIVE BY CAR
Census Tract 314.02	2,145	498	23.22%	94.0%
Census Tract 314.04	3,495	645	18.45%	82.8%
Census Tract 314.05	770	169	21.95%	55.6%
Census Tract 315.02	870	130	14.94%	95.4%
Census Tract 315.03	5,155	1,700	32.98%	79.9%
Census Tract 320	650	185	28.46%	99.5%
TOTAL	13,085	3,327	25.43%	83.0%

Note: Workers are those from the following census tracts:
Kahului: 319, 311.03, 311.01, 311.02
Wailuku: 310, 309.01, 309.02, 309.03
Kihei: 307.06, 307.05, 307.07, 307.08, 307.09, 307.10

All commuters, and particularly the environmental justice populations that have to commute to West Maui, would benefit from the Project's overall purpose in creating a more reliable and sustainable transportation link to West Mau. As a result, there is no disproportionately high and adverse effect on the regional environmental justice populations.

Project Area Business Effects

There are a small number of businesses in the project area that could be affected by the one or more of the Build Alternatives. While two of the businesses are minority-owned, none have owners or employees that live in the project area. Potential beneficial effects include traffic reduction, less congestion, and easier left turns in and out of businesses, particularly for those that are already destination locations with users who pre-plan their trips. Potential adverse effects include the loss of pass-by customers. Certain agricultural businesses could be displaced by one or more Build Alternatives, which would require acquisition of the parcel where the use is occurring.

TABLE 3.19-9 summarizes the businesses that were identified in the project area and their likelihood of potential adverse effects. This excludes home-based businesses or remote workers who would not be affected by the Project because there is no residential displacement.

TABLE 3.19-9. **Project Area Business**

BUSINESS	SECTOR	LOCATION	POTENTIAL ADVERSE EFFECT	POTENTIAL ENVIRONMENTAL JUSTICE DISPROPORTIONATELY HIGH AND ADVERSE EFFECT
Leoda's Kitchen and Pie Shop	Food/Retail	Olowalu	Yes	No
Olowalu General Store	Retail	Olowalu	Yes	Yes
Farmers Market/Olowalu Juice/Butterfly Farm	Retail	Olowalu	Yes	Yes
Kamala's Kitchen	Food Truck/Retail	Olowalu	Yes	No
Olowalu Plantation House	Hotel/Banquets	Olowalu	No	No
Camp Olowalu	Camping/Rentals	Olowalu	No	No
Maui Paintball	Active recreation	Olowalu	Yes	No
Living Earth Systems Farm	Agricultural	Olowalu	Yes	No
Ukumehame/Maui Sod	Agricultural	Ukumehame	Yes	TBD
El Toro Soysia Turf - Maui Grass Farm	Agricultural	Ukumehame	Yes	TBD
Mauna Kahālāwai Watershed Partnership	Light Industrial	Olowalu	Yes	No

HDOT interviewed the owners and managers of businesses that have the potential to be adversely affected by the Project (if they responded to agency requests for an interview). The interviews were conducted in July 2023 and gathered general information on the business, the number of employees, environmental justice populations represented by owners and employees, and how the highway could negatively or positively affect their businesses. HDOT discussed the potential business decisions (for example, relocating a mobile food truck) or possible mitigation measures to offset project impacts with owners or managers who expressed concerns about negative impacts.

The property and business owners of the local businesses are a mix of larger business groups and small businesses and would have a mix of environmental justice and non-environmental justice persons. The workforce would reflect a higher representation of environmental justice populations based on typical retail and food service wages as well as the majority minority population characteristics in Hawaii.

Leoda's Kitchen and Pie Shop

Leoda's Kitchen and Pie Shop is a popular roadside destination for Honoapi'ilani Highway travelers. It has a strong brand and web presence and is a unique tourist attraction in West Maui. The shop is owned by a prominent Maui restaurant group that owns three other restaurants in Lāhainā. All the restaurants, including Leoda's, remained temporarily closed after the devastating Lāhainā wildfire until early in 2024.

Leoda's has about 30 employees who all live outside of Olowalu. When the shop is open, it operates seven days a week from 10 a.m. to 6 p.m.

HDOT met with the general manager and corporate owners of the restaurant. Overall, they felt that the Project would benefit the operations and continued success of their restaurant. While they acknowledged that the current highway brings a high volume of prospective customers by Leoda's front door, a more orderly and less congested road frontage would offset the current lack of visibility for all through-drivers and improve safety. The restaurant owners shared that a local "scenic route" status would be the best outcome related to the Project. They preferred the mauka alignments (and specifically identified Build Alternative 1 as their least favorite) to emphasize the separation. They would like to see wayfinding signage that directs interested drivers to the Olowalu scenic route and also preferred that drivers should be able to use the existing highway from both the north and the south.

Olowalu General Store

The Olowalu General Store is the only convenience retail store between Lāhainā and Mā'alaea. The busy shop serves through-travelers, locals, beach visitors, and customers from Leoda's Kitchen and Pie Shop and the Farmers Market. Immediately adjacent to Leoda's and anchoring the shared retail building, the independently owned general store has about 12 employees. It is open seven days a week between 5 a.m. and 6 p.m., Monday through Saturday, and from 6 a.m. to 5 p.m. on Sunday.

The Olowalu General Store is owned by a local family who took over the store directly from the original owner, who opened the store to serve plantation workers in 1932. HDOT met with the owner and a co-worker family member as well as the property manager to discuss the Project and its potential effects on the store. Since the traffic on the existing highway is their primary source of customers, there is immediate concern that all Build Alternatives could reduce the number of pass-by travelers who are attracted to the store. On the other hand, they felt that the reduction in pass-by traffic would be offset by reduced traffic congestion as a

result of the Project. They felt turning in and out of the parking area for the store is very difficult and the road has too many crashes in this area. For any new highway alignment, the store owners requested that wayfinding signage would be provided to direct interested customers to Olowalu shops.

The store owners expressed other concerns, including current and future road disruptions and closures, the status of the proposed fire station in Olowalu (there is no official plan at this time), and the homeless encampments in the area. They would like to see the Project improve these conditions.

Farmers Market, Olowalu Juice, and Butterfly Farm

The Farmers Market attracts a steady customer base of through and local visitors as a roadside attraction along Honoapi‘ilani Highway. The market serves a mix of pass-by and local traffic customers including users of Camp Olowalu, ~~T~~the Olowalu Plantation House, area beaches, and customers from Leoda’s Kitchen and Pie Shop or Olowalu General Store. The Farmers Market has a broad inventory of local, Maui, and Hawaiian products, including some produce, with a more extensive offering of prepared foods and other goods. The operators also run a food truck-style juice stand, and a small tourist attraction, Butterfly Farm. The business has an active website including e-commerce.

While HDOT was not able to have an in-person interview with the operators of the Farmers Market, they were able to share some of their thoughts in initial telephone conversations. They expressed concerns that the Project’s Build Alternatives would have an adverse effect on attracting pass-by customers to their facility. Because the market is not a permanent structure, the operators indicated the market could potentially be relocated to a more favorable location to improve access and visibility.

Kamala’s Kitchen

This is a pizza food truck vendor co-locating with other roadside retailers in Olowalu Center. It is owned and operated by Da Kine Maui, LLC, which is based in Pā‘ia in Central Maui and has other business interests in Maui-based food production and retail. Because business records indicate that the food truck is affiliated with the Olowalu Development organization, the business is not considered to be owned by an environmental justice population. The owners did not respond to a request to meet with HDOT.

The food truck serves a mix of pass-by and local traffic customers including users of Camp Olowalu, The Olowalu Plantation House, area beaches, and customers visiting Leoda's Kitchen and Pie Shop and the Olowalu General Store. Because Kamala's Kitchen is a mobile business that could adapt to potential market changes resulting from the Project, adverse effects are not likely.

Olowalu Plantation House Banquet Facility

Owned by the Olowalu Development organization, the historic Olowalu Plantation House is an oceanfront destination wedding and banquet facility located makai of the existing highway. While the facility's driveway is directly across from the main entrance of Leoda's Kitchen and Pie Shop and the Olowalu General Store, the facility itself is not visible from the road. All the Build Alternatives would improve access to the facility by reducing side-street congestion and difficulty in making turns—most notably improving left turns into the site from the south and northbound left turns out of the site.

Camp Olowalu

Camp Olowalu is a destination/reservation-based camping and cabin rental facility in Olowalu located makai of the highway and accessed from the same side road that serves the Olowalu Plantation House (both facilities are owned by the Olowalu Development organization). For the same reasons noted for the Olowalu Plantation House, there would be no adverse effect resulting from the Project.

Maui Paintball

Maui Paintball is an active recreational use providing a pay-for-use paintball-controlled environment. The business serves visitors to the region as well as locals, families, and businesses (that is, company outings). Maui Paintball is a day-to-day tenant on the property that is owned by Olowalu Mauka. It is a destination use and it is not directly accessible from the existing highway. Customers access the site from the cane haul road at its access point to the Olowalu Recycling and Refuse Convenience Center.

Build Alternative 1 would occupy the makai edge of the parcel. This would likely allow for continued use of the business but require a new access point. If there is a displacement of the use, the relocation assistance provided by the Uniform Relocation Act (Section 3.4, Land Acquisition, Displacement and Relocation) would be available to the property owners and tenants without discrimination. Build Alternative 2 would be mauka of the active paint ball area, so it would not likely affect its use or access. Build Alternatives 3 and 4 would cross the mauka edge of the property and would not affect the active area of the business or its existing access. While the environmental justice status of the landowner or tenant farmer is not fully known, the mitigation associated with the appropriate legal process would be applicable to all.

Regenerative Education Center/Living Earth Systems Farm

Regenerative Educational Center operates the Living Earth Systems farm just at the north end of Olowalu just south of the Olowalu recycling center. The farm is an agricultural and educational facility for sustainable food production. The farmer is a tenant of the Olowalu Development organization. Like Maui Paintball, the farm is accessed by the cane haul road that connects to the Olowalu Recycling and Refuse Convenience Center driveway.

All the Build Alternatives would require acquisition of a right-of-way across the properties where the farm operates, though not necessarily in a manner that would preclude its continued operation. Build Alternative 1 would occupy the makai edge of the parcel, which would allow for continued use of the business if an alternative access point were provided. Build Alternative 2 crosses just mauka of this point and would skirt the back side of the Maui Paint Ball facility but would leave much of the agricultural use intact. Build Alternatives 3 and 4 would cross the middle of the property in a manner that could allow for uses on either side assuming access was provide for both sides of the new alignment. As discussed in Section 3.4, Land Acquisition, Displacement and Relocation, the extent of property acquisition, compensation to the property owner, and any relocation assistance to the farm operator would follow the procedural requirements of the federal and State regulations. While the environmental justice status of the property owner or tenant farmer is not known, the mitigation associated with the appropriate legal process would be applicable to all.

Ukumehame/Maui Sod Farm

In Ukumehame, two active sod farms with additional agricultural uses are located along Ehehene Street. Active use occurs on three to four parcels on either side of the street, although parcel records and direct outreach with the property owner and agricultural business owner would be required to fully define the extent of active uses. Build Alternatives 1, 2, and 3 would not affect these active sod farm properties. Build Alternative 4 would bisect these properties and could disrupt its continued operation unless there is a reconfiguration of the property and possibly adjacent properties. As set in Section 3.4, Land Acquisition, Displacement and Relocation, the extent of property acquisition, compensation to the property owner, and any relocation assistance to the farm operator would follow the procedural requirements of the federal and State regulations. While the environmental justice status of the property owner or tenant farmer are not known, the mitigation associated with the appropriate legal process would be applicable to all.

El Toro Soysia Turf - Maui Grass Farm

El Toro Soysia Turf - Maui Grass Farm is located on an approximately 12.77-acre parcel (48002115) off of Pōhaku 'Aeko Street in Ukumehame. Direct outreach during the right-of-way acquisition process with the property owner and agricultural business owner would be required to fully define the extent of active uses in the determination of land value. Build Alternative 1 would bisect this parcel and the property would likely require full acquisition. As described in Section 3.4, Land Acquisition, Displacement and Relocation, the extent of property acquisition, compensation to the property owner, and any relocation assistance to the farm operator would follow the procedural requirements of the federal and State regulations. While the environmental justice status of the property owner or tenant farmer are not known, the mitigation associated with the appropriate legal process would be applicable to all.

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3.20 CUMULATIVE EFFECTS

The assessment of potential cumulative effects considers other independent projects that may have similar timeframes or occur in the surrounding area, regardless of the implementing agency or entity pursuing a project. These independent projects include various local and regional transportation infrastructure projects, as well as private land use development.

3.20.1 Regulatory Context

According to Hawaiʻi Administrative Rules Chapter 200.1, cumulative impacts are impacts on the environment that result from the incremental impact of a proposed action when added to other past, present, and reasonably foreseeable future actions, whether undertaken by an agency or person. Cumulative impacts can result from individual minor actions that may become cumulatively significant over time. Cumulative impacts are described here in order to connect other separate actions that are reasonably foreseeable and the cumulative impacts those actions may have in conjunction with the Honoapiʻilani Highway Improvements Project (the Project).

3.20.2 Independent Projects Occurring within a Similar Timeframe or Geography

3.20.2.1 Projects within Project Area

Reopening of the Olowalu Landfill

As noted in Section 3.1, Land Use and Zoning, the closed Olowalu Landfill at the northern end of the project area has temporarily been reopened to accommodate debris removal from the Lāhainā wildfire clean-up and rebuilding effort. This is a short-revocable use authorized by the State of Hawaiʻi Department of Land and Natural Resources; the landfill would not be in use during the Project and would not have a cumulative effect in addition to the Project, specifically that there would be no incremental truck traffic associated with the landfill in the general traffic stream. ~~Transporting the debris to the landfill is expected to be completed in January 2025~~ Transporting the debris to the landfill was completed in January 2025, and all wildfire debris is now in the process of being relocated to the permanent disposal site in Central Maui, which is expected to be complete by November 2025.[1]

Subdivision of Olowalu Lands

In May 2000, a Final Environmental Assessment (FEA) was published to facilitate the Subdivision of Olowalu Lands project.[2] The project consisted of the consolidation and subsequent subdivision of approximately 733 acres of land within the vicinity of Olowalu, both mauka and makai of the existing Honoapiʻilani Highway, which created 41 distinct parcels. This subdivision is separate from a much larger proposal for about 1,500 dwelling units that was not approved. The project also created a cultural reserve surrounding the Olowalu Stream, and approximately 60 acres of privately owned greenway within the subdivision area. The project is permitted to allow development of approximately

[1] https://www.mauirecovers.org/debris-containment (Date Accessed: July 2025) ~~https://www.mauirecovers.org/. Accessed February 2024.~~

[2] https://files.hawaii.gov/dbedt/erp/EA_EIS_Library/2000-06-23-MA-FEA-Subdivision-Olowalu.pdf. Accessed July 2023.

22 single family dwellings and 21 recreational dwelling units, for a total of 43 dwelling units. The project was anticipated to be complete by 2005; however, it has only been partially constructed.

Ukumehame Subdivision – Phase I and II

In May 2005, an FEA was published to facilitate the Ukumehame Subdivision – Phase I and II project.[3] The project consisted of the consolidation and subsequent subdivision of approximately 439 acres of land within the vicinity of Ukumehame, mauka of the existing Honoapi‘ilani Highway, which created 48 distinct parcels. The project designated parcels fronting the existing Honoapi‘ilani Highway, totaling approximately 100 acres, for a future County of Maui park and future State highway right-of-way, and one 77-acre river corridor lot encompassing the Ukumehame Stream owned by the Ukumehame Homeowners Association serving as a cultural buffer. The remaining 45 agricultural lots were anticipated to be developed with approximately 90 dwelling units. While the project was anticipated to be complete by 2010, it has only been partially constructed.

Olowalu Reef Restoration

In 2017, West Maui’s Olowalu reef was declared a Mission Blue Hope Spot – a place that is critical to the health of the ocean. The reef at Olowalu is regularly inundated with soil sediments carried to the ocean from nearby streams. These sediments smother live corals and prevent new corals from growing, making the reef more vulnerable to other stressors such as algal growth, disease, and marine heat waves.

The Nature Conservancy is working with the National Oceanic and Atmospheric Administration, the Hawai‘i Divisions of Aquatic Resources (DAR) and Forestry and Wildlife (DOFAW), County, State, and private landowners, and the broader community to identify and implement actions to reduce harmful sediments on the reef.[4]

Currently, the Olowalu Reef Restoration project is developing solutions to improve resilience along the Olowalu coast. These measures may include the restoration of natural features including, beaches, dunes, and wetlands. While the implementation of these measures has not yet occurred, the project recognizes the Honoapi‘ilani Highway Improvements Project may provide an opportunity to reduce sediments from upland areas.

3.20.2.2 Projects Outside the Project Area

Villages of Leiali‘i – Village 1-B Subdivision

In December 2022, a draft Environmental Assessment was published for the Villages of Leiali‘i – Village 1-B Subdivision project, which would consist of the development of up to a maximum of approximately 250 dwelling units designated for Department of Hawaiian Home Lands (DHHL) Native Hawaiian beneficiaries, across 51 acres in Lāhainā, Maui.[5] This project has been fastracked as part

[3] https://files.hawaii.gov/dbedt/erp/EA_EIS_Library/2005-05-23-MA-FEA-Ukumehame-Subdivision-Phase-1-and-2.pdf. Accessed July 2023.

[4] https://www.nature.org/en-us/get-involved/how-to-help/places-we-protect/olowalu/. Accessed November 2024.

[5] https://files.hawaii.gov/dbedt/erp/Doc_Library/2022-12-23-MA-DEA-DHHL-Villages-of-Leialii-Village-1-B.pdf. Accessed July 2023.

of the Lāhainā redevelpment and is anticipated to be complete and occupied by 2030. Therefore, it is considered in this assessment of cumulative effects.

Department of Hawaiian Home Lands Honokōwai Master Plan

In February 2022, a Finding of No Significant Impact was issued for the DHHL Honokōwai Master Plan project, which would consist of the development of up to a maximum of approximately 1,181 dwelling units across 777 acres in Honokōwai ahupuaʻa, north of Kāʻanapali and the project area.[6] Phased development facilitated by the DHHL Honokōwai Master Plan project is anticipated to occur after 2028. The first phase would consist of approximately 56 subsistence agricultural homesteads, and the second phase would consist of approximately 394 single-family and subsistence agricultural homesteads. The remaining dwelling units would be anticipated to be constructed and occupied after Phases I and II. This project has been fastracked as part of the Lāhainā redevelpment and for purposes of this assessment, it is anticipated to be complete and occupied by 2045 and is therefore considered in this assessment of cumulative effects.

Honoapiʻilani Highway, Puamana to Honokōwai (Lāhainā Bypass)

The Honoapiʻilani Highway, Puamana to Honokōwai project would facilitate construction of a major bypass road (Lāhainā Bypass) parallel and mauka to the existing Honoapiʻilani Highway.[7] The project is anticipated to be completed in five phases to address regional traffic congestion within Lāhainā but is not listed in the State Transportation Improvement Program. The first two phases (1A and 1B-1) were completed in 2013 with a connection from Keawe Street to Hokiokio Place. Phase 1B-2 was completed in 2018 and extended the bypass from Hokiokio Place to its current southern terminus with the existing Honoapiʻilani Highway. The future Phase 1-C would extend the bypass farther north from its current terminus at Keawe Street to Kakaalaneo Drive, with a midway connection to Honoapiʻilani Highway via a "Kāʻanapali Connector Road" in an area south of Kāʻanapali Parkway. The future Phase 1-D would extend the bypass farther north beyond Honokōwai.

Rebuilding Lāhainā

Beginning on August 8, 2023, in response to wildfires in West Maui, including the areas of Lāhainā, the Acting Governor of Hawaiʻi declared a State of Emergency.[8] The wildfires burned thousands of acres of land and caused significant loss of life and property in West Maui. On August 10, 2023, President Biden declared these wildfires a major disaster, which made individual assistance, requested by the Governor of Hawaiʻi, available to affected individuals and households in Maui County.[9] Since then, the Governor of Hawaiʻi has issued several additional emergency proclamations related to the wildfires, and the Legislature of the State of Hawaiʻi has appropriated funding for expenditure by or under the direction of the Governor for the immediate relief of the conditions created

6 https://files.hawaii.gov/dbedt/erp/Doc_Library/2022-02-08-MA-FEA-DHHL-Honokowai-Master-Plan.pdf. Accessed July 2023.

7 https://hidot.hawaii.gov/wp-content/uploads/2018/01/Lahaina-Bypass-FEIS.pdf. Accessed July 2023.

8 https://governor.hawaii.gov/wp-content/uploads/2023/08/2307199-1.pdf#new_tab. Accessed October 2023.

9 https://www.whitehouse.gov/briefing-room/presidential-actions/2023/08/10/president-joseph-r-biden-jr-approves-hawaii-disaster-declaration-3/. Accessed October 2023.

by the emergency.[10] In the immediate future, efforts would be focused on emergency relief to individuals and households affected by the wildfires, followed by clean-up and recovery.

Given its significance for both history and economic opportunity, Lāhainā redevelopment is the focus of considerable public policy as well as public and private investment. Therefore, over the long term, it is anticipated that West Maui would return to pre-fire levels of economic activity and travel demand, and would ultimately resume the anticipated long-range growth forecasts established by the Maui County Metropolitan Planning Organization. For the purposes of this assessment, Lāhainā would be anticipated to be substantially rebuilt by the 2045 analysis year of this ~~Draft~~ Final Environmental Impact Statement.

3.20.3 Cumulative Effects

3.20.3.1 Potential Effects of the Project Contributing to Cumulative Effects

As set forth in Chapter 3, Affected Environment and Environmental Consequences, the Project would not be anticipated to generate changes in traffic or additional population and economic growth beyond what is already known or anticipated as part of long-term growth forecasts. Though the newly realigned highway in the project area would generally be designed to allow for four lanes in the future (areas of potential viaduct use may remain as a two-lane single structure), the regional capacity of the highway is constrained by the Pali section between Mā'alaea and Ukumehame, which is characterized by cut rock where the cost of widening is prohibitive and there are no plans for capacity enhancement. Additionally, the Project does not include land use actions or create access to undeveloped lands that would change regional development patterns. As a result, the Project alone would not generate demand for water supply, sanitary sewage, electricity and telecommunications, or solid waste and sanitation services.

3.20.4 Cumulative Effects Assessment

As described in the FEA for the Subdivision of Olowalu Lands project, temporary potential construction-related impacts to noise and air quality were identified, but no significant long-term impacts were determined to be expected as a result of that project.[11]

As described in the FEA for the Ukumehame Subdivision – Phase I and II project, temporary potential construction-related impacts to noise and air quality were identified, but no significant long-term impacts were determined to be expected as a result of that project.[12] In addition, a new stormwater drainage system was proposed to manage stormwater runoff generated in the analysis area.

As described in the draft Environmental Assessment for the Villages of Leiali'i – Village 1-B Subdivision project, temporary potential construction-related impacts to noise and air quality were identified, which would be mitigated through the implementation of construction best management practices (BMPs).

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10 https://governor.hawaii.gov/wp-content/uploads/2023/09/2309064.pdf#new_tab. Accessed October 2023.

11 https://files.hawaii.gov/dbedt/erp/EA_EIS_Library/2000-06-23-MA-FEA-Subdivision-Olowalu.pdf. Accessed July 2023.

12 https://files.hawaii.gov/dbedt/erp/EA_EIS_Library/2005-05-23-MA-FEA-Ukumehame-Subdivision-Phase-1-and-2.pdf. Accessed July 2023.

The project identified long-term environmental impacts in the form of changes to existing landforms related to ground-altering construction activities. However, the identified impacts, in consideration of the project's benefit of providing needed affordable housing, were not considered significant.[13]

As part of the Olowalu Reef Restoration project, the restoration of natural features including, beaches, dunes, and wetlands would be anticipated to result in a beneficial effect to natural resources. While it is possible the restoration of natural features would result in new habitat for threatened or protected species, such as nēnē, ae'o, and Hawaiian coot, the primary purpose of the project is to reduce sediment discharge from upland areas. No significant adverse long-term impacts would be anticipated as a result of the Olowalu Reef Restoration project. As described in Section 3.10, Flora and Fauna, Endangered Species~~, coordination with the USFWS is ongoing, the results of which would allow for the adoption of additional~~ avoidance and minimization measures were developed in coordination with USFWS.~~, if necessary, and will be reported in the Final EIS.~~

Research by Lepczyk, et al. indicates that strategies to reduce vehicle strikes for nēnē should combine attempts to change driver behavior and change animal behavior (Lepczyk et al., 2019).[14] Among the study's recommendations to change driver behavior, high visibility signage, such as proposed permanent signage in the Ukumehame area, alerts drivers to potential presence of birds, reducing vehicle strikes. Among the study's recommendations to change animal behavior, is to have vegetation management on road shoulder and edges to reduce herbivory by birds. As part of routine maintenance, HDOT will maintain vegetation-free shoulders up to 15-feet from road guardrails, which provide an additional deterrence to nēnē crossing. Furthermore, underpasses are recommended as useful to allow nēnē to traverse beneath the roadbed, as nēnē are among the most terrestrial of all geese species (USGS, 2019).[15] The proposed viaduct structure would allow nēnē to safely travel across potential wetland habitats underneath the roadway. Therefore, no significant adverse long-term impacts would be anticipated for potential increases in nēnē populations as a result of the Olowalu Reef Restoration project.

In a *Report to the U.S. Fish and Wildlife Service for Hawaiian Stilt* by the University of Hawaii-Manoa, it was reported that proximity to urban areas were associated with increased risks of depredation as predators, such as cats, preferred urban areas. Proximity to roads was not an important predictor of nest abandonment and proximity to interior roads within wetlands were not associated with an increase in depredation risk (University of Hawaii-Manoa, 2021).[16] As the Project is not anticipated to result in an increase in additional population growth, and predatory species management practices, such as the removal of cat feeding stations, are proposed, no significant adverse long-

[13] https://files.hawaii.gov/dbedt/erp/Doc_Library/2022-12-23-MA-DEA-DHHL-Villages-of-Leialii-Village-1-B.pdf. Accessed July 2023.

[14] Lepczyk CA, Fantle-Lepczyk JE, Misajon K, Hu D, Duffy DC (2019) Long-term history of vehicle collisions on the endangered Nēnē (*Branta sandvicensis*). PLOS ONE 14(2): e0210180. https://doi.org/10.1371/journal.pone.0210180

[15] https://www.usgs.gov/pacific-island-ecosystems-research-center/science/tracking-nene-movements-across-park-boundaries . Accessed November 2011.

[16] https://scholarspace.manoa.hawaii.edu/server/api/core/bitstreams/2acba449-4c64-45c9-a30f-8e98e0e334cc/content. Accessed November 2024.

term impacts would be anticipated for potential increases in ae‘o populations as a result of the Olowalu Reef Restoration project.

According to the USFWS *Recovery Plan for Hawaiian Waterbirds, Second Revision*, predation by introduced animals may be the greatest threat to Hawaiian coot populations (USFWS, 2011).[17] The Project has committed to a multitude of invasive species control protocols, including those provided by the USFWS and the Culture Collection of Algae and Protozoa. Examples, such as the prohibition of cat feeding stations noted above, would help to reduce predators throughout the project area. Additionally, spanning of potential wetland habitat in Ukumehame with the proposed viaduct structure minimizes effects to potential wetlands to the greatest extent possible, preserving potentially suitable habitat for Hawaiian coot. Therefore, no significant adverse long-term impacts would be anticipated for potential increases in Hawaiian coot populations as a result of the Olowalu Reef Restoration project.

As described in the FEA for the DHHL Honokōwai Master Plan project, temporary potential construction-related impacts to noise and air quality were identified, which would be mitigated through the implementation of construction BMPs. No significant long-term impacts were determined to be expected as a result of that project.[18]

As described in the Final Environmental Impact Statement for the Honoapi‘ilani Highway, Puamana to Honokōwai project, temporary potential construction-related impacts to noise and air quality were identified, which would be mitigated through the implementation of construction BMPs. Potential long-term impacts were identified to ambient air quality and noise; however, both would be anticipated to remain acceptable based on State standards, and additional noise mitigation was identified through the installation of noise barriers at specific locations.

Based on this information, the potential impacts of those past, present, and reasonably foreseeable actions are primarily localized, temporary in duration, and would largely be mitigated through implementation of BMPs for each project noted above. While these temporary conditions may occur concurrently with the Honoapi‘ilani Highway Improvements Project, they would be localized or occur in the same areas as active highway construction. In addition, the Project would result in potential effects of a similar nature and would implement construction BMPs for air quality and noise during construction, as well as include procedures for protecting archaeological and historic resources. The Project would not result in potential unmitigated significant adverse impacts, and the potential impacts of past, present, and reasonably foreseeable actions would be mitigated; therefore, the Project would not be anticipated to result in potential cumulative effects.

[17] https://www.federalregister.gov/documents/2012/01/19/2012-926/endangered-and-threatened-wildlife-and-plants-recovery-plan-for-hawaiian-waterbirds-second-revision. Accessed November 2024.

[18] https://files.hawaii.gov/dbedt/erp/Doc_Library/2022-02-08-MA-FEA-DHHL-Honokowai-Master-Plan.pdf. Accessed July 2023.

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4. Section 4(f) Evaluation

Section 4(f) of the Department of Transportation Act of 1966 (now 49 United States Code [U.S.C.] §303 and 23 U.S.C. §138) (U.S. Department of Transportation [USDOT] Act)—as implemented by Federal Highway Administration (FHWA) regulations found in 23 Code of Federal Regulations (CFR) Part 774—applies to the use of publicly or privately owned historic sites that are determined eligible for or listed on the National Register of Historic Places, and significant publicly owned parks, recreation areas, and wildlife and waterfowl refuges (collectively, Section 4[f] properties). The requirements of Section 4(f) apply to the FHWA and other USDOT agencies.

As part of this Final Environmental Impact Statement (EIS) and Section 4(f) Evaluation, two *de minimis* determinations for this project have been made:

- A *de minimis* determination regarding the Ukumehame Firing Range has been made pursuant to 23 CFR §774.3(b). In accordance with 23 CFR 774.5(b)(2), the official with jurisdiction, Maui County Department of Parks and Recreation, concurred with FHWA that the impacts of the Honoapiʻilani Highway Improvements Project on the Ukumehame Firing Range qualify for a Section 4(f) *de minimis* determination (see Appendix 4).

- A *de minimis* determination regarding the Olowalu Sugar Plantation Historic District has been made pursuant to 23 CFR §774.3(b). In accordance with 23 CFR 774.5(b)(2), the official with jurisdiction, the State Historic Preservation Officer at SHPD, concurred with FHWA that the impacts of the Honoapiʻilani Highway Improvements Project on the Olowalu Sugar Plantation Historic District qualify for a Section 4(f) *de minimis* determination (see Appendix 3.6).

4.1 REGULATORY CONTEXT

Section 4(f) of the USDOT Act stipulates that the FHWA and other USDOT operating administrations may not approve the use of Section 4(f) properties unless they have determined that the following conditions apply:

- There is no feasible and prudent alternative that would avoid the use of the Section 4(f) property; and

- The project includes all possible planning to minimize harm to that property resulting from such use (see also 23 CFR §774.3[a]); or

- The use of the Section 4(f) property, including any measures(s) to minimize harm (such as any avoidance, minimization, mitigation, or enhancement measures) will have a *de minimis* impact, as defined in 23 CFR §774.17, on the property.

Pursuant to 23 CFR §774.17, a project uses a Section 4(f) property when:

- Land from the Section 4(f) property is permanently incorporated into a transportation facility;

- There is a temporary occupancy of land that is adverse in terms of the statute's preservation purpose, as determined by the criteria in 23 CFR §774.13(d) (for example, when all or part of the Section 4[f]) property is required for a project's construction-related activities); or

- There is a "constructive" use of a Section 4(f) property, as determined by the criteria defined in 23 CFR §774.15(a).

Under Section 4(f), the permanent incorporation of land into a transportation facility occurs when land from a Section 4(f) property is purchased outright as a transportation right-of-way, or when a project acquires a property interest that allows permanent access onto a property, such as a permanent easement for maintenance. Per 23 CFR §774.13(d), an exception for temporary occupancy results when a Section 4(f) property is required for a project's construction activities and the land is not permanently incorporated into a transportation facility.

Constructive use occurs when there is no permanent incorporation or temporary occupancy of land, but the proximity impacts (for example, visual and noise) of a project are so severe that the protected activities, features, or attributes that qualify a resource for protection under Section 4(f) are substantially impaired.

A *de minimis* impact involves the use of Section 4(f) property that is generally minor in nature. A *de minimis* impact—after considering avoidance, minimization, mitigation, and enhancement measures that are committed to by the applicant—results in no adverse effect to a historic site or does not adversely affect the activities, features, or attributes qualifying a park, recreation area, or refuge for protection under Section 4(f). As set forth in the Section 4(f) regulations (23 CFR Part 774), once the FHWA determines that a transportation use of a Section 4(f) property results in a *de minimis* impact, an analysis of avoidance alternatives is not required, and the Section 4(f) evaluation process is complete.

As defined under 23 CFR §774.5(b)(1), the FHWA may make a finding of *de minimis* impact on a historic site when the following have occurred:

- The FHWA has considered the views of any Consulting Parties participating in the Section 106 consultation process, as established by the National Historic Preservation Act and its implementing regulation (36 CFR Part 800).
- The Section 106 process results in a determination of no adverse effect or no historic properties affected with the written concurrence of the State Historic Preservation Office and the Advisory Council on Historic Preservation (if this agency is participating in the Section 106 consultation).
- The State Historic Preservation Office and the Advisory Council on Historic Preservation (if this agency is participating in the Section 106 consultation) are informed of the FHWA's intent to make a *de minimis* impact finding based on their written concurrence in the Section 106 determination of no adverse effect or no historic properties affected.

Under 23 CFR §774.5(b)(2), the FHWA may determine that the impacts of a transportation project on a publicly owned park, recreation area, and wildlife or waterfowl refuge that qualifies for Section 4(f) protection may be *de minimis* if the following criteria are met:

- The transportation use of the Section 4(f) property, together with any impact avoidance, minimization, and mitigation or enhancement measures incorporated into a project, does not adversely affect the activities, features, or attributes that qualify the resource for protection under Section 4(f).
- The public has been afforded an opportunity to review and comment on the effects of a project on the protected activities, features, or attributes of the Section 4(f) property.
- The official(s) with jurisdiction over a property are informed of the FHWA's intent to make the *de minimis* impact finding and concur in writing that a project will not adversely affect the activities, features, or attributes that qualify the property for protection under Section 4(f).

The following sections identify the potential for the Honoapiʻilani Highway Improvements Project (the Project) to use Section 4(f) properties in accordance with Section 4(f) regulations.

4.2 DESCRIPTION OF THE PROJECT

The Project is in Maui County, Hawaiʻi, and would create a new alignment of approximately 6 miles of the Honoapiʻilani Highway. The State of Hawaiʻi Department of Transportation (HDOT) considered four Build Alternatives in the Olowalu segment of the corridor and three Build Alternatives in the Ukumehame segment. The primary purpose of the Project is to provide a reliable transportation facility in West Maui and to improve Honoapiʻilani Highway's resilience by reducing vulnerability to coastal hazards. Specifically, the Project is intended to address existing coastal erosion and flooding, as well as future coastal erosion and flooding caused by anticipated sea level rise. HDOT established the high priority need for the Project through its *Hawaii Highways Climate Adaptation Action Plan: Exposure Assessments*[1] and *Statewide Coastal Highway Program Report*.[2]

4.3 ARCHAEOLOGICAL AND ARCHITECTURAL HISTORIC PROPERTIES

As set forth in the Section 4(f) regulations (23 CFR §774.11[e]), Section 4(f) applies to historic sites (including any prehistoric or historic district, site, building, structure, or object) that are listed on or eligible for listing on the National Register of Historic Places. These sites are identified through the consultation process established under Section 106 of the National Historic Preservation Act and its implementing regulations (36 CFR Part 800).

The principal Section 106 participants (FHWA, HDOT, and the Hawaiʻi State Historic Preservation ~~Office~~ Division ~~Advisory Council on Historic Preservation) intend to~~ executed a Programmatic Agreement that

[1] https://hidot.hawaii.gov/wp-content/uploads/2021/07/HDOT-Climate-Resilience-Action-Plan-Exposure-Assessments-April-2021.pdf. Accessed May 2023.

[2] https://hidot.hawaii.gov/highways/files/2019/09/State-of-Hawaii-Statewide-Coastal-Highway-Program-Report_Final_2019.pdf. Accessed May 2023.

~~would~~ established subsurface investigation and overall mitigation requirements for the Preferred Alternative. A Draft Programmatic Agreement ~~is~~ was provided in the Draft Environmental Impact Statement (EIS) ~~while the executed Programmatic Agreement is anticipated to be included in the Final EIS and Record of Decision.~~ The ~~Draft~~ Executed Programmatic Agreement is found in Appendix 3.6 and a description of the Selected ~~Preferred~~ Alternative is presented in Chapter 5, Selected ~~Preferred~~ Alternative.

4.3.1 Archaeological Historic Properties

4.3.1.1 Resource Description

Section 4(f) applies to archaeological historic resources on or eligible for the National Register of Historic Places that are also recommended to be preserved in place (23 CFR 774.13[b]). As presented in Section 3.6, Archaeological and Architectural Historic Properties, there are several areas where archaeological resources are present and could be adversely affected by one or more Build Alternatives in both Olowalu and Ukumehame. Previously and newly identified archaeological sites are listed in Section 3.6 in Tables 3.6-2, -3, and -4. The FHWA has determined that none of those sites warrant preservation in place because the FHWA found these sites are important~~, mainly~~ because of what can be learned by data recovery.

4.3.1.2 Section 4(f) Applicability

None of the listed and eligible archaeological resources identified in Section 3.6 (either in Olowalu or in Ukumehame) are recommended for preservation in place by the FHWA. Per 23 CFR § 774 (13)(b), ~~B~~ because no archaeological resources are recommended for preservation in place, and the official with jurisdiction, SHPD did not object to that finding, no archaeological resources identified in Section 3.6 are eligible for Section 4(f) protections.

4.3.1.3 NEPA and Section 106 Effects

~~While~~ FHWA has not yet made effect determinations for archaeological sites as part of the Section 106 process, ~~(which will be presented in the Final EIS),~~ and the initial eligibility findings indicate that there are no archaeological sites recommended by the FHWA for preservation in place. Pursuant to the Programmatic Agreement for this project, FHWA will make Section 106 effect determinations for archaeological sites during the Design-Build phase of the project after the Archaeological Inventory Survey (AIS) is completed.

4.3.1.4 Uses of Section 4(f) Resources

Since there are no archaeological sites recommended for preservation in place, there is not a use of Section 4(f) archaeological resources by the Project. Should any additional archaeological resources qualifying for Section (4f) protection be identified after the Final EIS/ Record of Decision (ROD) and through construction, the Section 4(f) process will be expedited and any required evaluation of feasible and prudent avoidance alternatives will take account of the level of investment already made. In addition, the Section 106 Programmatic Agreement (Appendix 3.6) will govern compliance for the Project after the Final EIS/ROD and into final design, including identification of archaeological historic properties within the limits of disturbance for the complete Preferred Alternative.

4.3.2 Architectural Historic Properties

4.3.2.1 Olowalu

Resource Description

As presented in Section 3.6, Archaeological and Architectural Historic Properties, the Section 106 evaluation of potential architectural historic resources recommended that, based on the presence of eligible resources, the existing Olowalu Company Sugar Mill Complex be expanded to areas mauka of the existing highway to form a larger Olowalu Sugar Plantation Historic District. The expanded district contains 10 contributing resources, of which two are individually eligible. There is one individually eligible resource that is not part of the district.

Section 4(f) Applicability

The Olowalu Sugar Plantation Historic District and its individually eligible and contributing resources are subject to Section 4(f). As set forth in Section 3.6, Archaeological and Architectural Historic Properties, there are three individually eligible resources and 10 architectural elements identified as contributing resources to the historic district, including individual buildings and remains of the architectural infrastructure of the plantation (TABLE 4-1 and FIGURE 4-1).

NEPA and Section 106 Effects

On August 8, 2025, the State Historic Preservation Officer at SHPD, as the Official with Jurisdiction, was informed of FHWA's determination that the Project's Preferred Alternative constitutes No Adverse Effect on architectural historic resources. On August 13, 2025, SHPO concurred with the FHWA with the determination that the Project constitutes No Adverse Effect on architectural historic properties. ~~None of the historic district's individually eligible or contributing resources would be adversely affected or displaced by any of the Build Alternatives. This is expected to result in a No Adverse Effect finding for Section 106.~~

Uses of Section 4(f) Resources

Build Alternatives 1 and 2 are within the mauka boundary of the Olowalu Sugar Plantation Historic District, but the two alternatives do not affect any contributing resources to the historic district. On August 8, 2025, the State Historic Preservation Officer at SHPD, as the Official with Jurisdiction, was informed of FHWA's determination that the Project's Preferred Alternative constitutes No Adverse Effect on architectural historic resources and was informed of FHWA's intent to make a *de minimis* impact determination for the Olowalu Sugar Plantation Historic District. The SHPO concurred with the No Adverse Effect determination on August 13, 2025 ~~Therefore, there are no architectural historic sites that would be considered a Section 4(f) use by any of the Build Alternatives~~ (TABLE 4-1). There would be no direct, temporary, or constructive use of the 4(f) resources within the Olowalu Sugar Plantation Historic District or of the individually eligible and contributing resources ~~in~~ within the Olowalu Sugar Plantation Historic District.

4.3.2.2 Ukumehame

As assessed in Section 3.6, Archaeological and Architectural Historic Properties, there are no eligible architectural historic properties in Ukumehame and, as a result, there are no architectural historic sites that qualify for Section 4(f) protection.

TABLE 4-1. ~~Potential~~ **Architectural Resources in Olowalu**

RESOURCE NAME	OFFICIAL WITH JURISDICTION	4(F) APPLICABILITY AND ~~POTENTIAL~~ EFFECT TO RESOURCE	SECTION 106 ~~POTENTIAL~~ EFFECT FINDING[3]	~~POTENTIAL~~ SECTION 4(f) USE	AVOIDANCE OPTIONS
Olowalu Company Sugar Mill Complex ~~*(NRHP Eligible, district expansion recommended) (SIHP #01602/Survey #AR 8 SIHP 01602) / Olowalu Sugar Plantation Historic District (NRHP Eligible)*~~	SHPD	• ~~The resource is eligible for the NRHP and an expansion of the district is eligible for the NRHP.~~ The resource is eligible for Section 4(f) protection. • No Build Alternatives touch the existing mill complex district which is makai of the existing Honoapi'ilani Highway and not in the APE. ~~1 and 4 avoid the historic district.~~ • ~~Build Alternatives 2 and 3 are within the mauka boundary of the historic district, but neither alternative affects contributing resources to the historic district.~~	No ~~Adverse~~ Effect	No Section 4(f) use~~: No contributing elements to the historic district are affected~~.	N/A
Olowalu Sugar Plantation Historic District *(NRHP Eligible, district expansion SIHP #01602)*	SHPD	• The expansion of the district is eligible for the NRHP. The resource is eligible for Section 4(f) protection • Build Alternatives 3 and 4 avoid the historic district. • Build Alternatives 1 and 2 are within the mauka boundary of the historic district • Build Alternative 1 potentially affects two contributing resources to the historic district (This alternative was not selected as the Preferred) • Build Alternative 2 (Preferred Alternative) does not affect contributing resources to the historic district	No Adverse Effect (Preferred Alternative)	*de minimis* use for Build Alternative 2 (Preferred): No contributing elements or individually eligible resources to the historic district are used.	N/A
Lanakila Historic Church (Olowalu Church and Cemetery) *(SIHP #01603/AR 17)*	SHPD	• The resource is eligible for the NRHP and is eligible for Section 4(f) protection. • The Build Alternatives do not affect the property.	No ~~Adverse~~ Effect	No Section 4(f) use	N/A

[3] SHPO concurred with FHWA's finding of no adverse effect for the Preferred Alternative on August 13, 2025 (see Appendix 3.6).

RESOURCE NAME	OFFICIAL WITH JURISDICTION	4(F) APPLICABILITY AND ~~POTENTIAL~~ EFFECT TO RESOURCE	SECTION 106 ~~POTENTIAL~~ EFFECT FINDING[3]	~~POTENTIAL~~ SECTION 4(f) USE	AVOIDANCE OPTIONS
Awalua Cemetery *(SIHP #04758/ (Survey #AR 1 SIHP 04758)*	SHPD	• The resource is eligible for the NRHP and is eligible for Section 4(f) protection. • The Build Alternatives do not affect the contributing resource.	No ~~Adverse~~ Effect	No Section 4(f) use	N/A
807 Olowalu Road (plantation/bungalow) *(Survey #AR 4 SIHP 01602)*	SHPD	• The resource is eligible for the NRHP and is eligible for Section 4(f) protection. • The Build Alternatives do not affect the contributing resource.	No ~~Adverse~~ Effect	No Section 4(f) use	N/A
808 Olowalu Road (plantation/bungalow) *(Survey #AR 5 SIHP 01602)*	SHPD	• The resource is eligible for the NRHP and is eligible for Section 4(f) protection. • The Build Alternatives do not affect the contributing resource.	No ~~Adverse~~ Effect	No Section 4(f) use	N/A
810 Olowalu Road (Olowalu Plantation House) *(Survey #AR 6 SIHP 01602)*	SHPD	• The resource is eligible for the NRHP and is eligible for Section 4(f) protection. • The Build Alternatives do not affect the contributing resource.	No ~~Adverse~~ Effect	No Section 4(f) use	N/A
810 Olowalu Road (plantation/bungalow) *(Survey #AR 7 SIHP 01602)*	SHPD	• The resource is eligible for the NRHP and is eligible for Section 4(f) protection. • The Build Alternatives do not affect the contributing resource.	No ~~Adverse~~ Effect	No Section 4(f) use	N/A
802 Olowalu Road (plantation/bungalow) *(Survey #AR 16)*	SHPD	• The resource is eligible for the NRHP and is eligible for Section 4(f) protection. • The Build Alternatives do not affect the contributing resource.	No ~~Adverse~~ Effect	No Section 4(f) use	N/A
Water Tower *(Survey #AR 19)*	SHPD	• The resource is eligible for the NRHP and is eligible for Section 4(f) protection. • The Build Alternatives do not affect the contributing resource.	No ~~Adverse~~ Effect	No Section 4(f) use	N/A

RESOURCE NAME	OFFICIAL WITH JURISDICTION	4(F) APPLICABILITY AND ~~POTENTIAL~~ EFFECT TO RESOURCE	SECTION 106 ~~POTENTIAL~~ EFFECT FINDING[3]	~~POTENTIAL~~ SECTION 4(f) USE	AVOIDANCE OPTIONS
Bridge ***(Survey #AR 20)***	SHPD	• The resource is eligible for the NRHP and is eligible for Section 4(f) protection. • The Build Alternatives do not affect the contributing resource.	No ~~Adverse~~ Effect	No Section 4(f) use	N/A
Reservoir ***(Survey #AR 31 CSH-4)***	SHPD	• The resource is eligible for the NRHP and is eligible for Section 4(f) protection. • The Build Alternatives do not affect the contributing resource.	No ~~Adverse~~ Effect	No Section 4(f) use	N/A

4.4 PUBLICLY OWNED WILDLIFE AND WATERFOWL REFUGES, PARKS, AND RECREATION AREAS

4.4.1 Wildlife and Waterfowl Refuges

4.4.1.1 Wildlife and Waterfowl Refuges

No designated wildlife and waterfowl refuges are within the project area, and the Project would not result in the use of any such resources.

4.4.2 Publicly Owned Parks and Recreational Facilities

FIGURE 4-1 presents the total publicly owned parks and recreational facilities for the Project in both Olowalu and Ukumehame.

The publicly owned parks and recreation areas in the study area were assessed to identify those that qualify for Section 4(f) consideration and any potential use of Section 4(f) parks and recreation sites, using the following measures:

- Study area parks and recreation facilities that qualify for Section 4(f) consideration (per 23 CFR 774.11)
- How each of the 4(f) properties are affected by project alternatives, as documented by NEPA
- If the property qualifies for Section 4(f) consideration, the anticipated use of the 4(f) facility by the Project (per 23 CFR 774.3)

4.4.2.1 Planned Parks and Recreational Facility – Planned Beachside Greenbelt Park

<u>Olowalu and Ukumehame</u>

Resource Description

The County of Maui *Pali to Puamana Parkway Master Plan* (2005) identifies the opportunity to create open space and recreational facilities in conjunction with realigning Honoapiʻilani Highway. Specifically, the plan calls for areas to be designated as open space in the 2022 *West Maui* Community Plan, setting the foundation for future open space and recreational facility development. The plan identifies opportunities to create a beachside green belt park from Puamana Park (which is located just south of the Lāhainā center and is currently closed after the wildfire) to Pāpalaua Wayside Park. This coastal open space concept was further established in 2022 as policy goals in both the Maui Municipal Planning Organization's *West Maui Greenway Plan* and the County of Maui's *West Maui Community Plan*. In addition to coordination with the Honoapiʻilani Highway, the plan identifies several independent actions that would be required to facilitate the development of this proposed park, including obtaining Special Management Area permits, an environmental assessment, and a modification to the existing zoning.

Section 4(f) Applicability

The County of Maui Parks Department is planning the future beachside greenbelt parks jointly with HDOT as FHWA/HDOT complete the Honoapi‘ilani Highway Improvements Project EIS, as reflected in the March 2006 quitclaim deed for properties transferred to the County. The deed states that “the property shall never be used for any purpose other than as a park for public recreation and exclusively for the purposes and uses set forth… provided, however, as to the portion of the property which is not subdivided and dedicated as a public road or highway, the foregoing limitation to use of the property as a park for public recreation shall apply and remain in full force and effect.”[4] The County of Maui’s planning process is based on working with HDOT to designate the highway improvements and then utilizing the remaining land in this area for the future beachside park areas.

Pursuant to 23 CFR 774.11(i) the future beachside park does not qualify as a Section 4(f) resource, due to the joint development of the proposed parkland and the highway and coordination between County of Maui Parks and HDOT.

NEPA Effect

All Build Alternatives would extend across the areas considered for the planned beachside greenbelt park. All Build Alternatives are expected to extend across areas considered for the planned park in the common shared alignment where the Build Alternatives connect to the Lāhainā Bypass in the Olowalu section. Where the Olowalu and Ukumehame sections meet, the common Build Alternative alignment extends through areas considered for the planned park near Ka‘ili‘ili Beach (FIGURE 4-1). Build Alternatives 1, 2, and 3 would extend through the areas considered for the planned park through the Ukumehame section, and all Build Alternatives will extend across the planned park where the alternatives connect to the existing Honoapi‘ilani Highway near the Pali.

Use of Section 4(f) Resource: The planned beachside greenbelt park is being jointly developed between Maui County and HDOT. Pursuant to 23 CFR 774.11(i), the planned beachside greenbelt park ~~reserve expansion~~ is not eligible for Section 4(f) protections and therefore would have no use of Section 4(f) resources.

4.4.2.2 Olowalu

Publicly Accessible Shoreline Beaches – Awalua, Olowalu, Ka‘ili‘ili

Resource Description

As noted in TABLE 4-2, there are three publicly accessible shoreline beaches (Awalua, Olowalu, and Ka‘ili‘ili) that are not specifically designated as County parks, are not managed by Maui County Department of Parks and Recreation, and do not contain public amenities. Each of these beaches are owned by the State of Hawai‘i under the jurisdiction of the Department of Land and Natural Resources (DLNR) Land Division and are classified as unencumbered lands with no specific purpose.~~:~~

[4] State of Hawaii Bureau of Conveyances Recorded, Quitclaim Deed for TMK numbers (2) 4-8-002: 009 (por.), 028, 048 (por.), 068 (por.) and 070 (por.), Document number 2006-041618, 3 March 2006

Section 4(f) Applicability

The three beaches are publicly owned, open to the public, and ~~their major purpose and significance is for recreation.~~ are classified as unencumbered lands with no specific purpose. These facilities are not applicable for Section 4(f) protections.

NEPA Effect

There would be no direct effect on any of the three beaches with any of the Build Alternatives. The shoreline would continue to have access along the old highway (the highway is proposed to be transferred to Maui County). While there would be no noticeable change for Olowalu Beach, access to Awalua Beach could be more limited under Build Alternative 1 as this alignment would likely require a break in the old highway. Build Alternative 1 would not provide continuous north-south travel on the existing roadway, and beach users would access the beaches from the north or the south but not on a continuous basis.

TABLE 4-2. **~~Potential~~ Section 4(f) Parks, Recreational, and Refuge Facilities in Olowalu**

RESOURCE NAME	OFFICIAL WITH JURISDICTION	4(F) APPLICABILITY AND ~~POTENTIAL~~ EFFECT TO RESOURCE	NEPA ASSESSMENT	~~POTENTIAL~~ SECTION 4(f) USE	AVOIDANCE OPTIONS
Planned Beachside Greenbelt Park	County of Maui	• The planned beachside park is being planned jointly with the highway project per 23 CFR 774.11(i). The park will be sited around the highway's Preferred Alternative after the Project is constructed. The planned park is not eligible for Section 4(f) protection.	All Build Alternatives would extend across the areas considered for the planned park.	N/A	N/A
Awalua Beach	State of Hawai'i	• The resource is not eligible for Section 4(f) protection. • The Build Alternatives would allow for continued access to publicly accessible shoreline. • The highway project will not permanently incorporate any of the beach site.	There would be no direct effect on any of the three beaches with any of the Build Alternatives. The shoreline would continue to have access along the old highway (the highway is proposed to be transferred to Maui County), although the old highway may become discontinuous with the Preferred Alternative.	N/A ~~No Section 4(f) use. The Project will not permanently incorporate any of the beach site.~~	N/A
Olowalu Beach	State of Hawai'i	• The resource is not eligible for Section 4(f) protection. • The Build Alternatives would allow for continued access to publicly accessible shoreline. • The highway project will not permanently incorporate any of the beach site.	There would be no direct effect on any of the three beaches with any of the Build Alternatives. The shoreline would continue to have access along the old highway (the highway is proposed to be transferred to Maui County).	N/A ~~No Section 4(f) use. The Project will not permanently incorporate any of the beach site.~~	N/A

RESOURCE NAME	OFFICIAL WITH JURISDICTION	4(F) APPLICABILITY AND ~~POTENTIAL~~ EFFECT TO RESOURCE	NEPA ASSESSMENT	~~POTENTIAL~~ SECTION 4(f) USE	AVOIDANCE OPTIONS
Ka‘ili‘ili Beach	State of Hawai‘i	• The resource is not eligible for Section 4(f) protection. • The Build Alternatives would allow for continued access to publicly accessible shoreline. • The highway project will not permanently incorporate any of the beach site.	There would be no direct effect on any of the three beaches with any of the Build Alternatives. The shoreline would continue to have access along the old highway (the highway is proposed to be transferred to Maui County), although the old highway may become discontinuous with the Preferred Alternative.	N/A ~~No Section 4(f) use. The Project will not permanently incorporate any of the beach site.~~	N/A

FIGURE 4-1. **~~Potential~~ Section 4(f) Facilities**

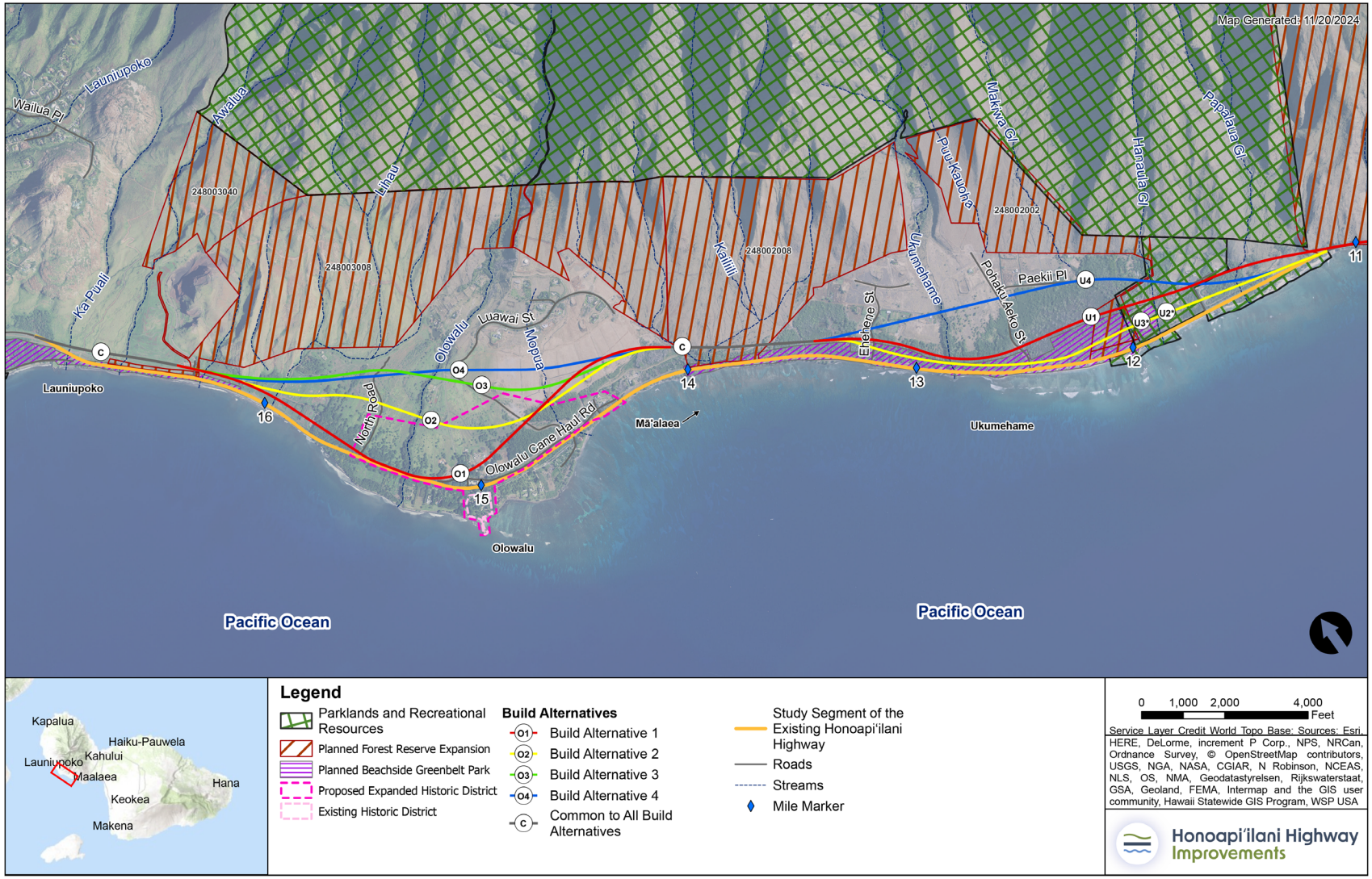

**figure does not include archaeology sites eligible for National Register recommended for preservation in place*

4.4.2.3 Ukumehame

Resource Description

As noted in TABLE 4-3 the project area includes three Maui County parks in Ukumehame:

- Ukumehame Beach Park is a 3.5-acre park makai of the existing Honoapiʻilani Highway under jurisdiction of the County of Maui Department of Parks and Recreation.
- Pāpalaua Wayside Beach Park is a 6.7-acre park makai of the existing Honoapiʻilani Highway under jurisdiction of the County of Maui Department of Parks and Recreation.
- Ukumehame Firing Range is an 84.1-acre facility mauka of the existing Honoapiʻilani Highway under jurisdiction of the County of Maui Department of Parks and Recreation.

Section 4(f) Applicability

- Ukumehame Beach Park and Pāpalaua Wayside Beach Park are publicly owned, open to the public, and their major purpose and significance is for recreation. These facilities are applicable for Section 4(f) protections.
- The Build Alternatives would not physically affect the two beach park properties. The Build Alternatives affect regional access to Pāpalaua Wayside Beach Park and Ukumehame Beach Park.
- Ukumehame Firing Range has various use areas (Figure 3.5-2), some of which are applicable for Section 4(f) protections and some which are not:
  - Applicable for Section 4(f): Portions of the firing range property that have active recreation uses include the two pistol ranges, the rifle range, the skeet range, classrooms, and the parking lot.
  - Not applicable for Section 4(f): Some makai portions of the firing range property parcel have no public access or active recreational uses. As established in 23 CFR 774.11 (d), these areas would not be considered Section 4(f) protected resources.

NEPA Effect

Ukumehame Beach Park and Pāpalaua Wayside Beach Park: The Build Alternatives would not physically affect the two park properties. The Build Alternatives affect access to Pāpalaua Wayside Beach Park and Ukumehame Beach Park. Access would be maintained along the existing Honoapiʻilani Highway (the highway is proposed to be transferred to Maui County). Travelers to and from the south (Central Maui) would access the existing Honoapiʻilani Highway via Pōhaku ʻAeko or Ehehene Streets, which would have connecting intersections with the new alignment and the existing Honoapiʻilani Highway. Travelers to and from the north (toward Olowalu and Lāhainā) would access the beaches as they do today (using the existing highway) or from the new highway using the intersection with Pōhaku

'Aeko or Ehehene Streets.[5] (Section 3.5, Parklands and Recreational Resources/Beach Access, Figure 3.5-3).

- Ukumehame Firing Range: The Build Alternatives affect access to and the physical property of the firing range.

  - Access: Build Alternatives 1 and 4 would similarly require that northbound travelers use Pōhaku 'Aeko Street to loop back to the firing range to access the existing driveway that would continue to connect to the firing range by passing under the viaduct structure. For Build Alternatives 2 and 3, it is anticipated that the location of the alignment would allow for the existing driveway to be regraded to provide access from the raised elevation. As with the beach parks access, this change in access by itself is not considered a change of the park use protected by Section 4(f).

  - Physical Property Effects:

    - All the Build Alternatives cross portions of the County-owned Ukumehame Firing Range parcel on viaduct in areas that have no public access or active recreational uses.
    - Build Alternatives 1 and 4 would extend through active use areas of the firing range such that viaduct piers and columns could possibly be located along makai portions of the parking lot. The recreational use is expected to remain fully intact, as the new highway would be on a tall viaduct over firing range property over makai portions of the parking lot area.
    - Build Alternatives 2 and 3 would not physically affect the active use areas of the firing range.

Use of Section 4(f) Resource

- Ukumehame Beach Park and Pāpalaua Wayside Beach Park: Since there is no transportation use of the current beach parks and the park uses remains in their entirety, and in consideration of the applicability regulations set forth in 23 CFR 774.11, the modification in travel routes to and from the facilities is not considered a change of the park use protected by Section 4(f).

- Ukumehame Firing Range:

  - All the Build Alternatives cross portions of the County-owned Ukumehame Firing Range parcel in areas that have no public access or active recreational uses and would not be considered Section 4(f) protected resources.

  - Build Alternatives 1 and 4 would require building piers and columns for the viaduct that would occupy active use areas of this facility (a parking lot) while not disrupting the recreational use. Build Alternatives 1 and 4 would be considered as a *de minimis* impact and would not adversely affect the features, attributes, or activities qualifying the property for protection

[5] Over time, continuous access along the existing highway may no longer be feasible based on coastal erosion and sea level rise. If that occurs, beach access would be through the connector roads from the new Honoapi'ilani Highway.

under Section 4(f). Per 23 CFR 774.5(b)(2), a *de minimis* impact determination for the Ukumehame Firing Range requires coordination with and future concurrence from the Officials with Jurisdiction for the firing range, Maui County. As documented in Appendix 4, Maui County Parks was informed of the FHWA's intent to make a *de minimis* impact determination for the firing range with a letter transmitted to Maui County April 9, 2025, with agency concurrence received on May 15, 2025. ~~during a meeting on August 5, 2024, and will be asked for their written concurrence on the *de minimis* impact determination following the Project's public hearing.~~ In addition, options to shift the initial alignment farther makai, which would not overlap the active use areas of the facility, are evaluated in Chapter 5, Selected ~~Preferred~~ Alternative. For the Preferred Alternative, FIGURE 4-2 provides a flow map showing the new access routes for these Maui County facilities.

– Build Alternatives 2 and 3 would not physically affect active use areas of the firing range that are eligible for Section 4(f) protections.

FIGURE 4-2. **Preferred Alternative Traffic Access to Maui County Beach Parks and Firing Range – Ukumehame**

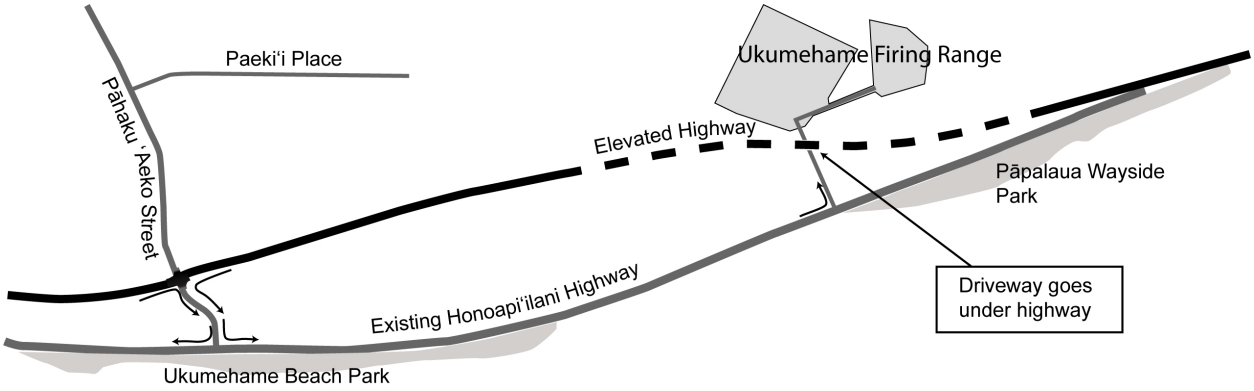

TABLE 4-3. **~~Potential~~ Section 4(f) Parks, Recreational, and Refuge Facilities in Ukumehame**

RESOURCE NAME	OFFICIAL WITH JURISDICTION	4(F) APPLICABILITY AND POTENTIAL EFFECT TO RESOURCE	NEPA ASSESSMENT	~~POTENTIAL~~ SECTION 4(F) USE	AVOIDANCE OPTIONS
Planned Beachside Greenbelt Park	County of Maui	The planned beachside park is being planned jointly with the Project. The park will be sited around the highway's Preferred Alternative after the Project is constructed. The planned park is not eligible for Section 4(f) protection.	All Build Alternatives would extend across the areas considered for the planned park.	N/A (Not protected by 4(f))	N/A
Ukumehame Firing Range	County of Maui	• The resource is eligible for Section 4(f) protection. • Build Alternatives 1 and 4 extend across makai edges of parking lots for active firing ranges but would be on tall viaducts. • Build Alternatives 2 and 3 are makai of active use area but would require relocation of access driveway.	• Build Alternatives 1 and 4: piers and columns for viaduct could be in areas used for parking; no loss of use but less direct access. • Build Alternatives 2 and 3: No Adverse Effect.	• Build Alternatives 1 and 4: *de minimis* impact (may be shifted makai to minimize use) • Build Alternatives 2 and 3: No Section 4(f) use	N/A
Ukumehame Beach Park	County of Maui	• The resource is eligible for Section 4(f) protection. • The Build Alternatives would not permanently incorporate any of the beach site and would allow for continued use of the public beach. • For all Build Alternatives, access would be along the existing highway with connections to the new highway at the intersection of Pōhaku 'Aeko or Ehehene Streets.	No loss of use, but less direct access	No Section 4(f) use	N/A

RESOURCE NAME	OFFICIAL WITH JURISDICTION	4(F) APPLICABILITY AND POTENTIAL EFFECT TO RESOURCE	NEPA ASSESSMENT	~~POTENTIAL~~ SECTION 4(F) USE	AVOIDANCE OPTIONS
Pāpalaua Wayside Beach Park	County of Maui	• The resource is eligible for Section 4(f) protection. • The Build Alternatives would not permanently incorporate any of the beach site and would allow for continued use of the public beach park. • For all Build Alternatives, access would be along existing highway with a connection to the new highway at the intersection of Pōhaku 'Aeko or Ehehene Streets.	No loss of use, but less direct access	No Section 4(f) use	N/A

4.5 MULTIPLE-USE PROPERTIES

Section 4(f) also provides protections for publicly owned "multiple use properties" such as National Forests, State Forests, or Bureau of Land Management Forests.

4.5.1.1 Planned Multiple-Use Property – DLNR Planned West Maui Forest Reserve Expansion

(Olowalu and Ukumehame)

Resource Description

The DLNR West Maui Natural Area Reserve is located within the districts of Lāhainā and Wailuku, and the West Maui Forest Reserve currently consists of twelve separate sections of Mauna Kahālāwai. The State uses the West Maui Forest Reserve for multiple uses, including habitat conservation, recreation, and threatened and endangered species protections. The section of the West Maui Forest Reserve closest to the Project is the Līhau Section, approximately 1 mile from the Project. The Līhau Section contains a rare grassland and shrubland, several rare plants, and also has recreational trails.[6] As noted in TABLE 4-4, none of the Build Alternatives (including the Preferred Alternative) ~~The Preferred Alternative footprint does not~~ affect these resources. The West Maui Forest Reserve is open to the public.

As noted in Sections 3.4, Land Acquisition, Displacement, and Relocation, and 3.5, Parklands and Recreational Resources/Beach Access, the DLNR has jurisdiction over three large parcels (TMK 48003008 in Olowalu and TMK 48002008 and TMK 48002002 in Ukumehame) that are conditionally approved by the Board of Land and Natural Resources (BLNR) to be designated as future forest reserves part of the West Maui Forest Reserve, which would be formally designated by a governor of Hawai'i Executive Order. The area of forest reserve expansion within the project area is approximately 1 mile makai of the Līhau section of the West Maui Forest Reserve. FIGURE 4-1 distinguishes these parcels from the larger forest reserve lands mauka of the expansion areas by color (red) and overlay pattern (diagonal striping).

Board approval for the future expansion of the West Maui Forest Reserve in Ukumehame was made in coordination with planning for the Project, which would cover a small portion of these parcels along their makai edge. The Board affirmed that formal designation by Executive Order would proceed after HDOT defines and acquires the land it needs for the proposed new highway alignment and that this road right-of-way would be excluded from the newly designated reserve area.

Section 4(f) Applicability

The planned West Maui Forest Reserve expansion is not applicable for Section 4(f) protection. ~~Under Section 4(f).~~ As established by 23 CFR Part 774.11(d), multiple-use properties are eligible for protection only in portions of the property that are designated by statute or identified in an official management plan as designated primarily for public park, recreation, or wildlife and waterfowl refuge purposes, and are determined to be significant for such purposes. Section 4(f) also applies to any

[6] State of Hawaii Department of Land and Natural Resources. West-Maui-Fact-Sheets-and-Topographical-Maps.pdf (hawaii.gov), Accessed October 2024.

historic site within the multiple-use property that is on or eligible for the National Register of Historic Places.

The planning process for the proposed West Maui Forest Reserve expansion into the project area has not yet started because the reserve is being jointly planned with the Honoapiʻilani project. The forest reserve expansion does not yet have a management plan or other planning document, so the uses within the future planned reserve are not known and the property is not eligible for Section 4(f) protection.

NEPA Effect

All Build Alternatives would extend across the areas considered for the planned forest reserve expansion. All Build Alternatives will extend across the planned forest preserve extension in the common shared alignment where the Build Alternatives connect to the Lāhainā Bypass in the Olowalu section. Where the Olowalu and Ukumehame sections meet, the common Build Alternative alignment extends where the planned forest reserve extension widens makai to Kaʻiliʻili Beach (FIGURE 4-1). In the Ukumehame section, all Build Alternatives will extend across the planned forest reserve extension where the alternatives connect to the existing Honoapiʻilani Highway near the Pali.

Use of Section 4(f) Resource

As documented in a letter from the BLNR on March 27, 2024 (see Appendix 4), the board is planning the forest reserve expansion jointly with HDOT as the FHWA and HDOT complete the Honoapiʻilani Highway Improvements Project EIS. The BLNR planning process is based on HDOT first completing the planning, designation, and right-of-way acquisition for the highway project before formally designating the lands that will be in the forest reserve. As coordinated between the BLNR and HDOT, the planned preserve would exclude the right-of-way for the highway, and the planned reserve is not eligible for Section 4(f) protections as there would be no use of Section 4(f) resource.

This planned forest reserve is a multiple-use property ~~is~~ not applicable for Section 4(f) protection (as documented above). ~~Further, because the reserve expansion is being jointly planned by BLNR and HDOT there is no 4(f) use of the property because it is excepted under 774.11 due to joint development.~~ The State of Hawaiʻi has not yet formally designated the forest reserve expansion in the project area because ~~they~~ it intends to do so after the highway corridor is identified. The state would then designate ~~their~~ its expansion area as forest reserve, excluding ~~minus~~ the highway corridor ~~as forest reserve use~~. There is currently no management plan for the reserve expansion and there is no statute yet that designates the reserve expansion. See Appendix 4 for more information.

TABLE 4-4. **~~Potential~~ Multiple-Use Properties in Olowalu and Ukumehame**

RESOURCE NAME	OFFICIAL WITH JURISDICTION	4(F) APPLICABILITY AND ~~POTENTIAL~~ EFFECT TO RESOURCE	NEPA ASSESSMENT	~~POTENTIAL~~ SECTION 4(f) USE	AVOIDANCE OPTIONS
Planned West Maui Forest Reserve Expansion	Board of Land and Natural Resources	The planned forest reserve expansion is not eligible for Section 4(f) protection as a multiple-use property because the individual uses within the future forest reserve are not yet planned.	All Build Alternatives would extend across the areas considered for the planned forest reserve expansion (but not including the highway itself).	The planned West Maui Forest Reserve expansion ~~is being jointly planned by the BLNR and HDOT. The forest reserve expansion~~ would not be a 4(f) use because to date there is no formal designation of reserve expansion and there is no management plan for the reserve expansion. ~~it is excepted under 774.11 due to joint development.~~	N/A

4.6 SECTION 4(F) APPLICABILITY AND USE SUMMARY

TABLE 4-5 and TABLE 4-6 summarize the applicability of Section 4(f) on resources in ~~the~~ Olowalu and Ukumehame as well as ~~study area,~~ any effects to these resources as analyzed ~~noted~~ in the NEPA document, and any use of Section 4(f) resources. There would be one *de minimis* impact determination for the expanded Olowalu Sugar Plantation Historic District in Olowalu and ~~no uses of areas protected by Section 4(f) in the Olowalu section of the Project, and the Ukumehame section is expected to have~~ one *de minimis* impact determination at the Ukumehame Firing Range in Ukumehame~~, pending concurrence by the official with jurisdiction~~. Because all uses of Section 4(f) areas are anticipated to be *de minimis* uses or less, no alternatives analysis or avoidance alternatives are required. A *de minimis* impact determination ~~would be documented in the Final EIS/ROD for the Project~~ for these identified resources are provided in Appendix 4.

TABLE 4-5. **~~Potential~~ Section 4(f) Resources and Use in Olowalu**

RESOURCE NAME	OFFICIAL WITH JURISDICTION	~~POTENTIAL~~ SECTION 4(F) APPLICABILITY	NEPA EFFECT	~~POTENTIAL~~ SECTION 4(F) USE
Archaeological Resources				
Olowalu Company Sugar Mill Complex *(NRHP eligible, ~~district expansion recommended~~) (SIHP #01602 / Survey #AR 8 SIHP 01602)~~/Olowalu Sugar Plantation Historic District~~*	SHPD	The resource is eligible for the NRHP ~~and an expansion of the district is eligible for the NRHP. The resource~~ and is eligible for Section 4(f) protection.	The Build Alternatives do not affect the resource. • ~~Build Alternatives 1 and 4 avoid the historic district.~~ • ~~Build Alternatives 2 and 3 are within the mauka boundary of the historic district, but neither alternative affects contributing resources to the historic district.~~	No Section 4(f) use~~: No contributing resources to the historic district are affected.~~
Olowalu Sugar Plantation Historic District *(NRHP Eligible, district expansion SIHP #01602)*	SHPD	The expansion of the district is eligible for the NRHP and is eligible for Section 4(f) protection.	Build Alternative 2 (Preferred Alternative) is within the expanded historic district but does not affect contributing resources to the historic district.	*de minimis* use for Build Alternative 2 (Preferred): No contributing elements or individually eligible resources to the historic district are used.
Lanakila Historic Church (Olowalu Church and Cemetery) *(SIHP #01603/AR 17)*	SHPD	The resource is eligible for the NRHP and is eligible for Section 4(f) protection.	The Build Alternatives do not affect the resource ~~property~~.	No Section 4(f) use
Awalua Cemetery *(SIHP #04758 / (Survey #AR 1 SIHP 04758)*	SHPD	The resource is eligible for the NRHP and is eligible for Section 4(f) protection.	The Build Alternatives do not affect the contributing resource.	No Section 4(f) use
807 Olowalu Road (plantation/bungalow) *(Survey #AR 4 SIHP 01602)*	SHPD	The resource is eligible for the NRHP and is eligible for Section 4(f) protection.	The Build Alternatives do not affect the contributing resource.	No Section 4(f) use
808 Olowalu Road (plantation/bungalow) *(Survey #AR 5 SIHP 01602)*	SHPD	The resource is eligible for the NRHP and is eligible for Section 4(f) protection.	The Build Alternatives do not affect the contributing resource.	No Section 4(f) use

RESOURCE NAME	OFFICIAL WITH JURISDICTION	~~POTENTIAL~~ SECTION 4(F) APPLICABILITY	NEPA EFFECT	~~POTENTIAL~~ SECTION 4(F) USE
810 Olowalu Road (Olowalu Plantation House) *(Survey #AR 6 SIHP 01602)*	SHPD	The resource is eligible for the NRHP and is eligible for Section 4(f) protection.	The Build Alternatives do not affect the contributing resource.	No Section 4(f) use
810 Olowalu Road (plantation/bungalow) *(Survey #AR 7 SIHP 01602)*	SHPD	The resource is eligible for the NRHP and is eligible for Section 4(f) protection.	The Build Alternatives do not affect the contributing resource.	No Section 4(f) use
802 Olowalu Road (plantation/bungalow) *(Survey #AR 16)*	SHPD	The resource is eligible for the NRHP and is eligible for Section 4(f) protection.	The Build Alternatives do not affect the contributing resource.	No Section 4(f) use
Water Tower *(Survey #AR 19)*	SHPD	The resource is eligible for the NRHP and is eligible for Section 4(f) protection.	The Build Alternatives do not affect the contributing resource.	No Section 4(f) use
Bridge *(Survey #AR 20)*	SHPD	The resource is eligible for the NRHP and is eligible for Section 4(f) protection.	The Build Alternatives do not affect the contributing resource.	No Section 4(f) use
Reservoir *(Survey #AR 31 CSH-4)*	SHPD	The resource is eligible for the NRHP and is eligible for Section 4(f) protection.	The Build Alternatives do not affect the contributing resource.	No Section 4(f) use
Parks, Recreation Areas, and Refuges				
Planned Forest Reserve Expansion	Board of Land and Natural Resources	The planned forest reserve expansion is being planned jointly with the highway project. The forest reserve expansion will be sited around the highway's Preferred Alternative after the Project is constructed. The planned forest reserve expansion is not eligible for Section 4(f) protection.	All Build Alternatives would extend across the areas considered for the planned forest reserve expansion.	N/A (Not protected by 4(f))

RESOURCE NAME	OFFICIAL WITH JURISDICTION	~~POTENTIAL~~ SECTION 4(F) APPLICABILITY	NEPA EFFECT	~~POTENTIAL~~ SECTION 4(F) USE
Planned Beachside Greenbelt Park	County of Maui	The planned beachside park is being planned jointly with the highway project. The park will be sited around the highway's Preferred Alternative after the Project is constructed. The planned park is not eligible for Section 4(f) protection.	All Build Alternatives would extend across the areas considered for the planned park.	N/A (Not protected by 4(f))
Awalua Beach	State of Hawai'i	The resource is not eligible for Section 4(f) protection.	• The shoreline would continue to have access along the old highway (the highway is proposed to be transferred to Maui County), although old highway may become discontinuous with the Preferred Alternative. • No direct effect	N/A (Not protected by 4(f)) • ~~The Build Alternatives would allow for continued access to publicly accessible shoreline.~~ • ~~No Section 4(f) use~~
Olowalu Beach	State of Hawai'i	The resource is not eligible for Section 4(f) protection.	• The shoreline would continue to have access along the old highway (the highway is proposed to be transferred to Maui County). • No direct effect	N/A (Not protected by 4(f)) • ~~The Build Alternatives would allow for continued access to publicly accessible shoreline.~~ • ~~No Section 4(f) use~~

RESOURCE NAME	OFFICIAL WITH JURISDICTION	~~POTENTIAL~~ SECTION 4(F) APPLICABILITY	NEPA EFFECT	~~POTENTIAL~~ SECTION 4(F) USE
Ka‘ili‘ili Beach	State of Hawai’i	The resource is not eligible for Section 4(f) protection.	• The shoreline would continue to have access along the old highway (the highway is proposed to be transferred to Maui County), although the old highway may become discontinuous with the Preferred Alternative. • No direct effect	N/A (Not protected by 4(f)) • ~~The Build Alternatives would allow for continued access to publicly accessible shoreline.~~ • ~~No Section 4(f) use~~

TABLE 4-6. **~~Potential~~ Section 4(f) Resources and Use in Ukumehame**

RESOURCE NAME	OFFICIAL WITH JURISDICTION	~~POTENTIAL~~ SECTION 4(F) APPLICABILITY	NEPA EFFECT	~~POTENTIAL~~ SECTION 4(F) USE
Archaeological Resources				
None				
Parks, Recreational Areas, and Refuges				
Planned Beachside Greenbelt Park	County of Maui	The planned beachside park is being planned jointly with the highway project. The park will be sited around the highway's Preferred Alternative after the Project is constructed. The planned park is not eligible for Section 4(f) protection.	All Build Alternatives would extend across the areas considered for the planned park.	N/A (Not protected by 4(f))
Ukumehame Firing Range	County of Maui	The resource is eligible for Section 4(f) protection.	• Build Alternatives 1 and 4 extend across makai edges of parking lots for active firing ranges but would be on tall viaducts. • Build Alternatives 2 and 3 are makai of active use area but would require relocation of access driveway.	• Build Alternatives 1 and 4: *de minimis* impact • Build Alternatives 2 and 3: No Section 4(f) use
Ukumehame Beach Park	County of Maui	The resource is eligible for Section 4(f) protection.	• The Build Alternatives would allow for continued use of the public beach. • For all Build Alternatives, access would be along existing highway with connections to new highway at Pōhaku 'Aeko Street or Ehehene Street.	No Section 4(f) use

RESOURCE NAME	OFFICIAL WITH JURISDICTION	~~POTENTIAL~~ SECTION 4(F) APPLICABILITY	NEPA EFFECT	~~POTENTIAL~~ SECTION 4(F) USE
Pāpalaua Wayside Beach Park	County of Maui	The resource is eligible for Section 4(f) protection.	• The Build Alternatives would allow for continued use of the public beach park. • For all Build Alternatives, access would be along existing highway with connection to new highway Pōhaku 'Aeko Street or Ehehene Street.	No Section 4(f) use
Multiple-Use Properties				
Planned West Maui Forest Reserve Expansion	Board of Land and Natural Resources	The planned forest reserve expansion is not eligible for Section 4(f) protection as a multiple-use property because the individual uses within the future forest reserve are not yet planned.	All Build Alternatives would extend across the areas considered for the planned forest reserve expansion (excluding the highway itself).	No Section 4(f) use. ~~The planned West Maui Forest Reserve expansion is being jointly planned by the BLNR and HDOT. The forest reserve expansion would not be a 4(f) use because it is excepted under 774.11 due to joint development.~~

4.7 PUBLIC INVOLVEMENT AND SECTION 4(f) COORDINATION

Before the FHWA can make a *de minimis* impact finding for a park identified as a Section 4(f) property, the FHWA must notify the Officials with Jurisdiction over the park of their intent to make a *de minimis* impact finding, then provide the public an opportunity to comment. The public review requirement can be satisfied in conjunction with other public involvement procedures, such as a comment period required by the NEPA process. For the Project, the opportunity for public review and comment on FHWA's proposed *de minimis* impact finding for the potential use of a portion of Ukumehame Firing Range ~~would occur~~ occurred concurrent with the public review and comment period for ~~this~~ the Draft EIS (Chapter 8, Public Involvement and Agency Coordination). Following the public review period, the Officials with Jurisdiction ~~must provide~~ provided written concurrence that the Project will not adversely affect the activities, features, and attributes of the park that qualify it for Section 4(f) protection.

The FHWA ~~would consider any~~ considered public input on its proposed finding, and the analysis that resulted in the identification of the Preferred Alternative presented in Draft EIS Chapter 5, Preferred Alternative, during the public review period for ~~this~~ the Draft EIS.

4.8 OFFICIAL WITH JURISDICTION CONCURRENCE AND DE MINIMIS DETERMINATION

A *de minimis* impact involves the use of Section 4(f) property that is generally minor in nature. A *de minimis* impact—after considering avoidance, minimization, mitigation, and enhancement measures that are committed to by the applicant—results in no adverse effect to a historic site or does not adversely affect the activities, features, or attributes qualifying a park, recreation area, or refuge for protection under Section 4(f). As set forth in the Section 4(f) regulations (23 CFR Part 774), once the FHWA determines that a transportation use of a Section 4(f) property results in a *de minimis* impact, an analysis of avoidance alternatives is not required. Following public review (for parks, recreation areas, or refuges) and concurrence from the Officials with Jurisdiction for the property, the Section 4(f) evaluation process is complete.

4.8.1 Expanded Olowalu Plantation Historic District

On August 8, 2025, the State Historic Preservation Officer at SHPD, as the Official with Jurisdiction, was informed of FHWA's determination that the Project's Preferred Alternative constitutes No Adverse Effect on architectural historic resources and was informed of FHWA's intent to make a *de minimis* impact determination for the Olowalu Sugar Plantation Historic District. The SHPO concurred with the No Adverse Effect determination on August 13, 2025. Consulting parties for the Section 106 process included SHPD and other agencies, Native Hawaiian Organizations, and the public.

4.8.2 Ukumehame Firing Range

The Section 4(f) *de minimis* impact determination for this project for the Ukumehame Firing Range has been made pursuant to 23 CFR §774.5(b)(2), in which the FHWA has determined that the impacts of the Honoapi‘ilani Highway Improvements Project on the firing range qualifies for Section 4(f) *de minimis* determination because the following criteria have been met:

- The transportation use of the Section 4(f) property, together with any impact avoidance, minimization, and mitigation or enhancement measures incorporated into a project, does not adversely affect the activities, features, or attributes that qualify the Ukumehame Firing Range for protection under Section 4(f).

- The public has been afforded an opportunity to review and comment on the effects of a project on the protected activities, features, or attributes of the Ukumehame Firing Range. The Draft EIS and Draft Section 4(f) Evaluation were subject to a public comment period including two public hearings to facilitate public input (Final EIS Chapter 8, Public Comments and Responses).

- The official with jurisdiction over the property has been informed of the FHWA's intent to make the *de minimis* impact finding and concurred in writing that the project will not adversely affect the activities, features, or attributes that qualify the Ukumehame Firing Range for protection under Section 4(f). The Maui County Parks and Recreation Department was presented with the initial Section 4(f) findings prior to publication of the Draft EIS and the Department provided written formal concurrence to the *de minimis* finding (see Appendix 4).

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TABLES

FIGURES

5. Selected Alternative

This chapter describes the ~~Preferred~~ Selected Alternative and summarizes the comparative evaluation of the Build Alternatives for the Honoapiʻilani Highway Improvements Project (the Project). Sections 5.1 and 5.2 restate the initial determination of the Preferred Alternative from the Draft Environmental Impact Statement (EIS) along with limited corrections and updated information which are noted with double underlined text.

Based on the continued evaluation of the Preferred Alternative since completion of the Draft EIS (including public comments, agency consultation, additional design development, completion of the Section 106 process for historic resources through an Executed Programmatic Agreement with the State Historic Preservation Officer, and completion of the Biological Opinion by the U.S. Fish and Wildlife Service) the Federal Highway Administration (FHWA) and Hawaiʻi Department of Transportation (HDOT) have selected the Preferred Alternative as the "Selected Alternative" for the Project which will be carried forward into the design build process.

Sections 5.3 and 5.4 of this Final EIS identify refinements to the Selected Alternative and additional assessment of reasonably foreseeable effects based on those refinements. Section 5.5 provides the comprehensive environmental commitments and mitigation for the Project.

5.1 PRELIMINARY IDENTIFICATION OF DRAFT EIS PREFERRED ALTERNATIVE

~~Based on environmental assessment of~~ The Draft EIS evaluated the four Build Alternatives and the No Build Alternative (FIGURE 5-1), and ~~in consideration of public and agency input during the scoping process and other consultation opportunities, the Hawaiʻi Department of Transportation (HDOT) and Federal Highway Administration (FHWA) have~~ identified the Preferred Alternative as a combination of Build Alternative 2 in Olowalu and Build Alternative 1 in Ukumehame (FIGURE 5-2). In consideration of the environmental, social, and economic effects of the Project, this combination was determined in the Draft EIS to provide the best opportunity to meet the Project's purpose and need while minimizing potential adverse environmental effects.

5.1.1 Draft EIS Refinements to the Preferred Alternative

While the Preferred Alternative provides the best overall alignment, certain adverse effects were identified in ~~this~~ the Draft ~~Environmental Impact Statement (~~EIS~~)~~. In identifying the Preferred Alternative, refinements ~~have been~~ were developed to avoid and minimize these adverse effects. ~~The Preferred Alternative may require additional evaluation between this Draft EIS and the Final EIS. This evaluation would consider public and agency comments on this Draft EIS. Additionally, it would reflect a limited number of potential permanent BMP set asides and small areas of alignment refinements that are outside the study area of this Draft EIS. The Final EIS/ROD will report effects of the complete refined Preferred Alternative, inclusive of any design modifications between the Draft EIS and Final EIS.~~

In Olowalu, one section of the Preferred Alternative has been refined to avoid and minimize adverse effects to cultural resources. In Ukumehame, refinements to two sections of the alignment can avoid and minimize adverse effects on cultural and environmental resources, optimize constructability, and lower costs. ~~The final design and the design-build process may provide additional opportunities to further refine the Preferred Alternative to optimize constructability, lower costs, and minimize environmental effects.~~

5.1.1.1 Olowalu – Northern Connection to Existing Lāhainā Bypass

At the north end of Olowalu leading into Launiupoko, the Preferred Alternative alignment is based on the common alignment for all build alternatives and the connection point to the existing Lāhainā Bypass that was originally established would result in a disturbance and loss of an extensive complex of cultural resources. As summarized in Section 3.6, Archaeological and Architectural Historic Properties, this includes areas of traditional agriculture and settlement and other important ritual elements.

FIGURE 5-3 shows the Draft EIS ~~new~~ alignment makai of the originally established right-of-way and the application of a narrow right-of-way configuration. Figure 2-3 in Chapter 2, Alternatives, shows the typical section for this two or four-lane narrow section to minimize or avoid adverse effects.

By remaining outside the Sea Level Rise Exposure Area (SLR-XA) in an area without other potentially environmentally sensitive features, this refined alignment would not ~~be anticipated to~~ result in new or different adverse effects compared to the Build Alternatives already analyzed in ~~this~~ the Draft EIS.

FIGURE 5-1. **Draft EIS Build Alternatives**

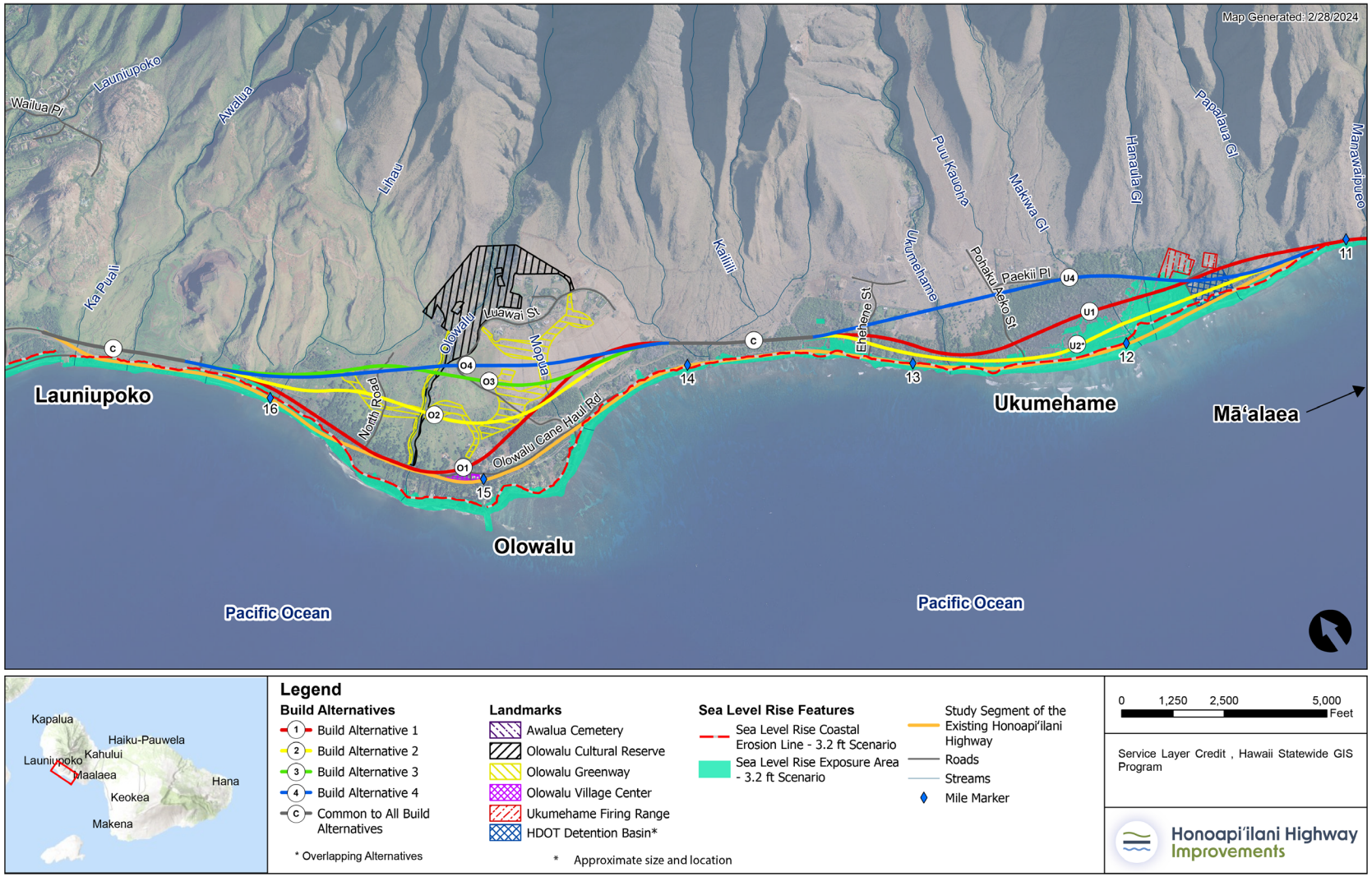


FIGURE 5-2. **Draft EIS Preferred Alternative**

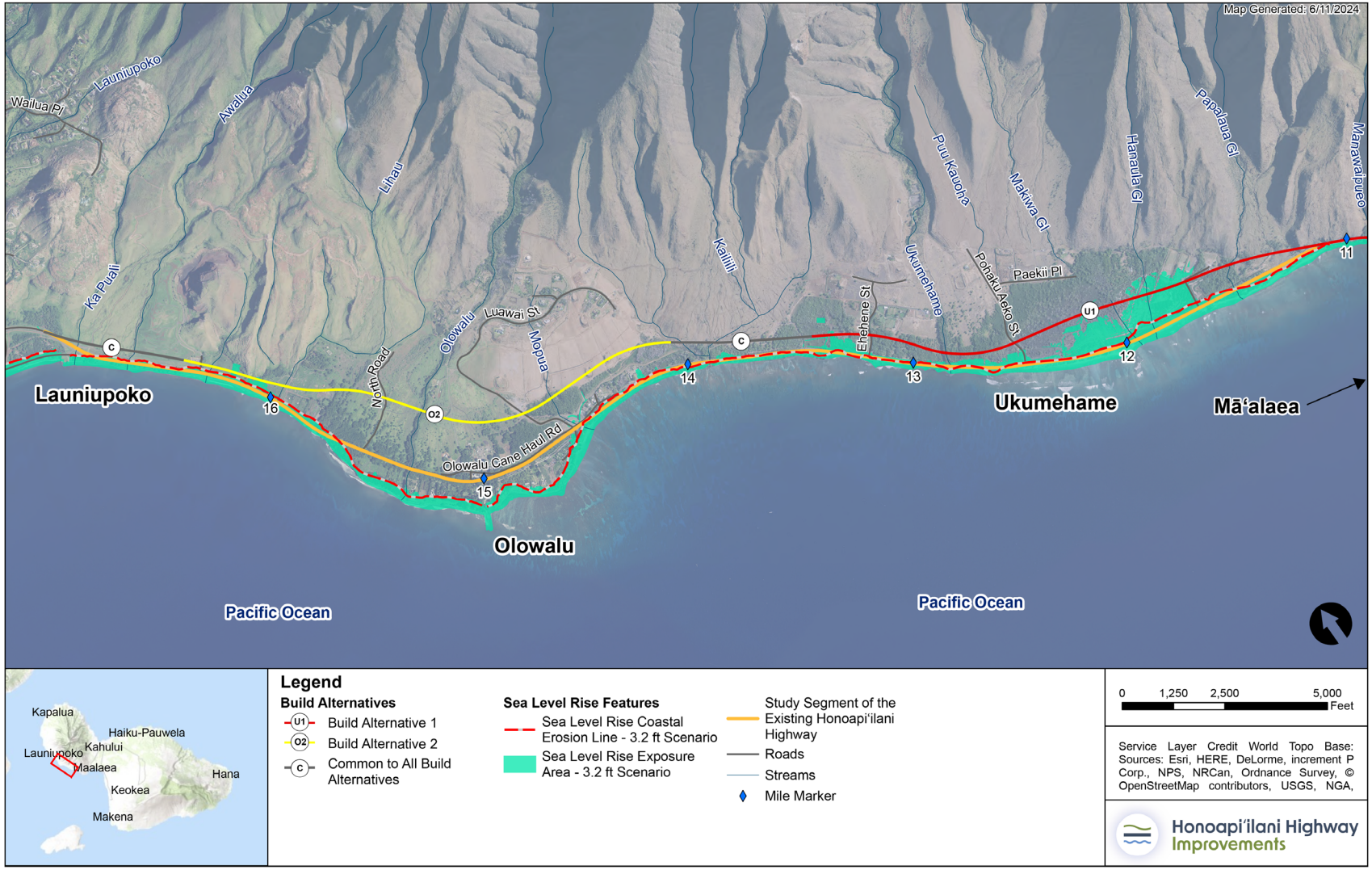
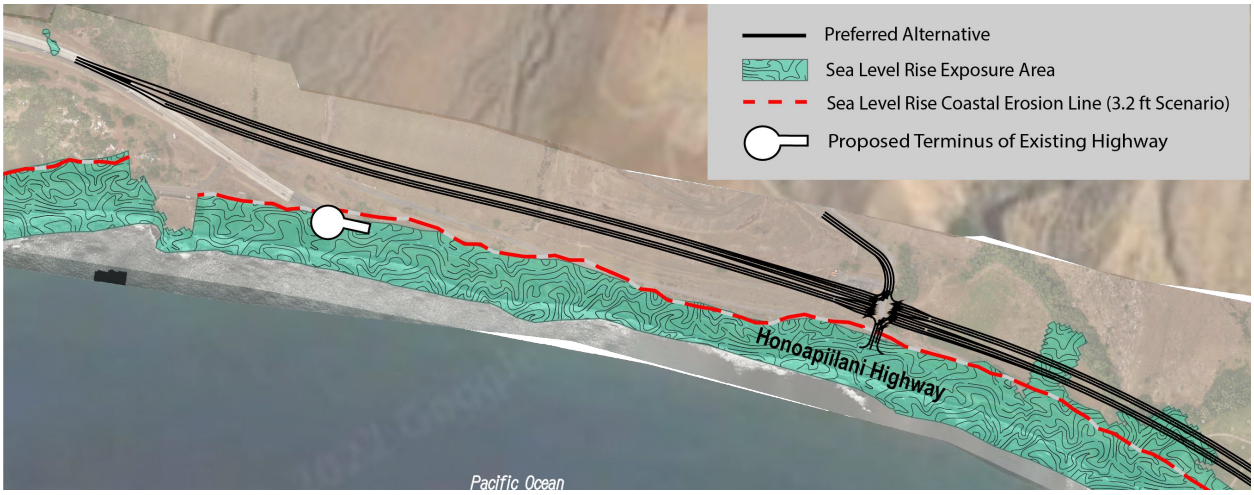
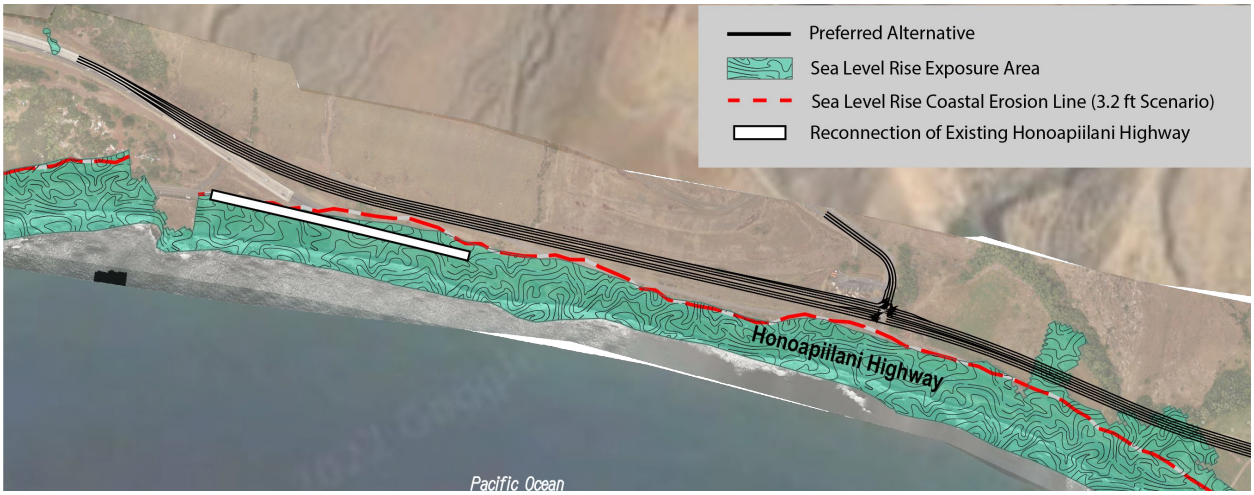


FIGURE 5-3. **Olowalu – Draft EIS Refinement at Northern Connection to Existing Lāhainā Bypass**

(a) Original Alignment



(b) Refined Alignment



5.1.1.2 Ukumehame–Northern Connection to Olowalu

In the northernmost section of Ukumehame where the Preferred Alternative (and common to all the Build Alternatives) crosses into Olowalu, Draft EIS analyses ~~have~~ determined that the originally established alignment would disturb and eliminate an extensive complex of cultural resources. This includes areas of traditional agriculture and settlement as well as one or more heiau and other important ritual elements.

FIGURE 5-4 shows the Draft EIS Preferred Alternative refinement, which would bring the roadway alignment more makai and would use a narrow configuration to minimize the required area of disturbance ~~(FIGURE 2-3)~~ while still allowing a potential future four-lane configuration. While closer to the shoreline, the new alignment would still be mauka of the SLR-XA (only touching one small corner of the modeled inundation area) and does not cross into or impact environmentally sensitive resources.

Therefore, the change in alignment would meet the purpose, need, and secondary objectives for the Project and ~~would~~ are not ~~be~~ anticipated to result in new or different adverse effects compared to the Build Alternatives ~~already analyzed in this Draft EIS. The refined Preferred Alternative will continue to be assessed through the development of the Final EIS as well as the Section 106 Programmatic Agreement. This agreement will govern Section 106 compliance for the Project after National Environmental Policy Act (NEPA) analysis and into final design, including identification of archaeological historic properties within the limits of disturbance for the complete Preferred Alternative~~.

5.1.1.3 Ukumehame–Pali Connection through Ukumehame Firing Range

As originally established in the Draft EIS, Build Alternative 1 would have the most mauka alignment at the southern end of the project area. This alternative was intended to minimize intrusion to the SLR-XA and remain mostly mauka of the existing HDOT detention basin. But it also resulted in the following adverse environmental effects and overall constructability concerns:

- The alignment would directly affect a large cultural resource area identified and defined through field investigations and research conducted by the Draft EIS archaeology team (Section 3.6, Archaeological and Architectural Historic Properties).

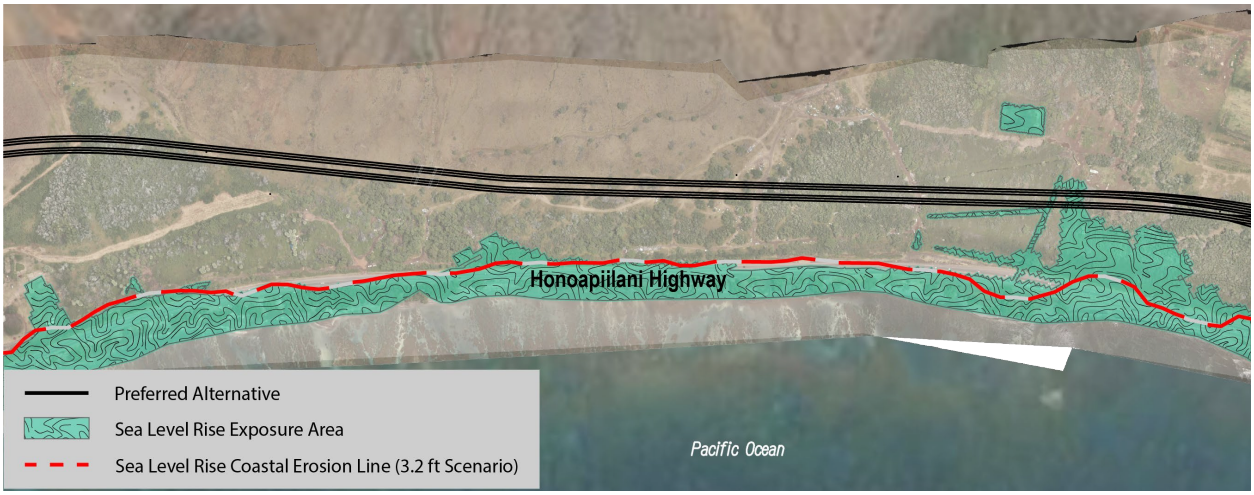
- In addition to the direct alignment of the highway right-of-way, roadway construction in this area would require extensive grading and rock stabilization that would adversely affect even more of the archaeological resource and create a larger area of overall disturbance while still requiring measures to prevent future shoreline erosion to the highway due to the presence of erodible soils in this area.

- The alignment also led to a preliminary conceptual design with 3,100 to 3,700 linear feet of elevated viaduct north of the Pali connection. This includes the necessary elevation to cross over the mauka area of the HDOT detention basin, then to cross over the parking lot and active use areas of Ukumehame Firing Range, and then remain elevated above low-lying areas of the firing range within the SLR-XA.

- Originally designed to meet the Project's objective of providing right-of-way that is suitable for four lanes of traffic, the conceptual alignment required two parallel viaduct structures that add substantially to the overall cost of the Project.

FIGURE 5-4. **Ukumehame – Draft EIS Refinement at Northern Connection to Olowalu**

(a) Original Alignment



(b) Refined Alignment

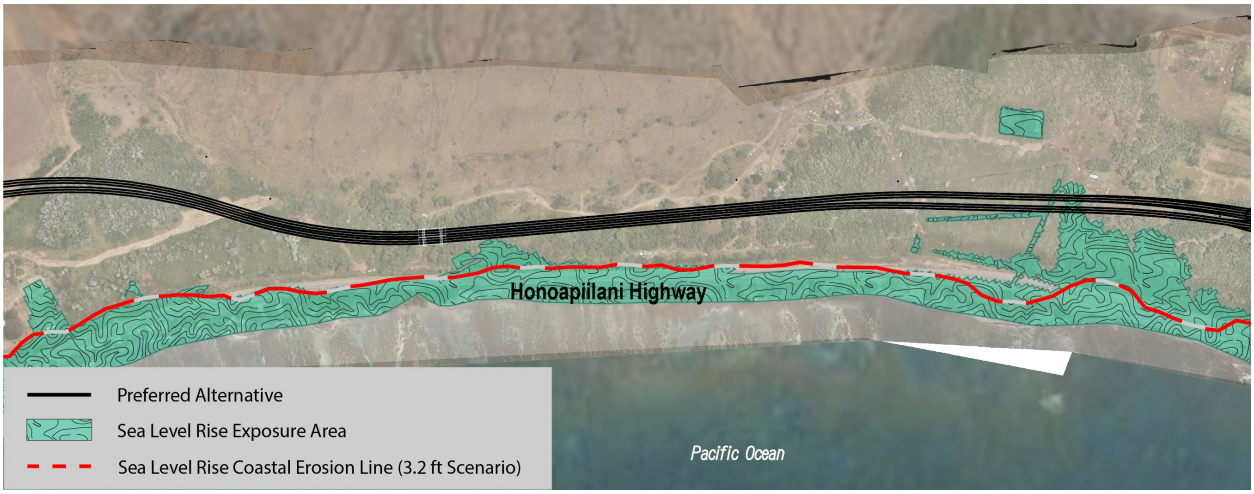


FIGURE 5-5 shows the Draft EIS refinements to the Preferred Alternative, which include the following features:

- By creating a new and more makai alignment, the refinement avoids most of the sensitive archaeological resources and would have a less ~~of~~ direct overlap with parking lot areas of the firing range. Common to all alternatives, shoreline erosion mitigation measures such as cutoff walls constructed under the existing highway makai shoulder are anticipated to address erodible soil conditions that exist along the highway and under the existing highway. This design commitment would avoid encroachment on existing beaches and would be intended to address potential future shoreline erosion.

- The refinement would use a two-lane viaduct alignment from the southern Pali connection through to the north side of the firing range using a single structure viaduct. With no driveways or intersections, the extension of two lanes farther north into the project area would not adversely affect future operating conditions.

- A single viaduct structure carrying the new highway across the HDOT detention basin and the firing range would minimize potential adverse effects on the detention basin's capacity or operation because the viaduct would permit maintenance vehicles to work within the detention basin. Additionally, the viaduct would allow for the continued use of the firing range driveway from the existing highway, which would pass underneath the viaduct structure (see Chapter 2, Alternatives, for a description and typical section of a viaduct structure).

- The viaduct structure would be designed for a height that would allow for observed, Endangered Species Act listed bird species to safely traverse wetland habitat underneath rather than potentially fly over and on to the proposed highway, reducing the potential for car strikes. Additionally, guardrails on either side of the viaduct structure would deter birds from crossing further reducing the potential for car strikes.

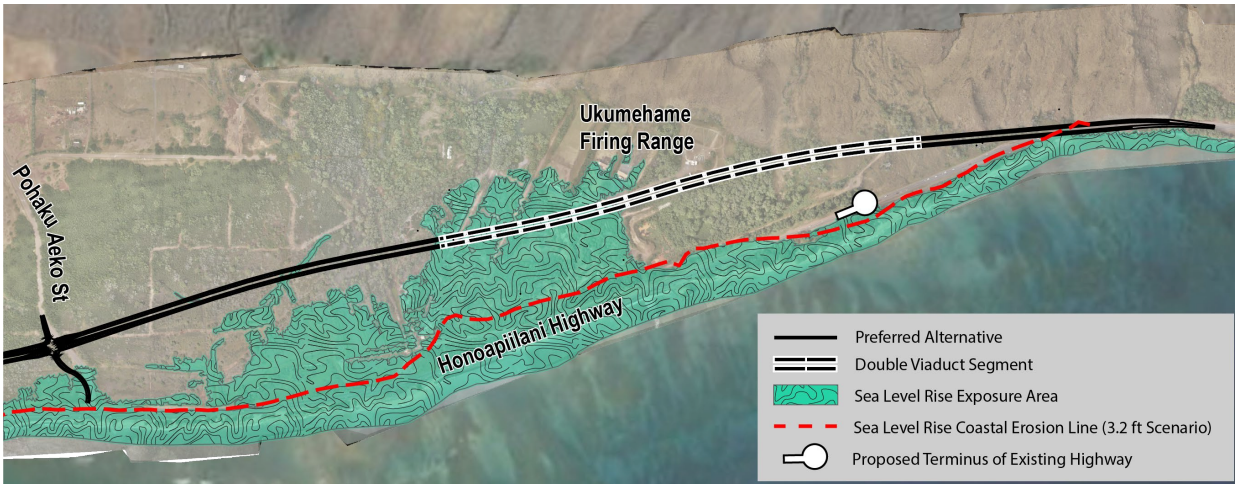
- Within the HDOT detention basin, the refinement would cross over the Papalaua Gulch and other water features on the viaduct structure, minimizing adverse effects to wetlands and waters (Section 3.9, Water Resources, Wetlands, and Floodplains, provides descriptions of wetlands and waters).

- A preliminary evaluation of the potential for using an at-grade embankment for the Preferred Alternative indicated that it would be less effective at meeting the Project's overall purpose and need and would result in substantially greater environmental effects (Chapter 2, Alternatives, and Appendix 5.1).

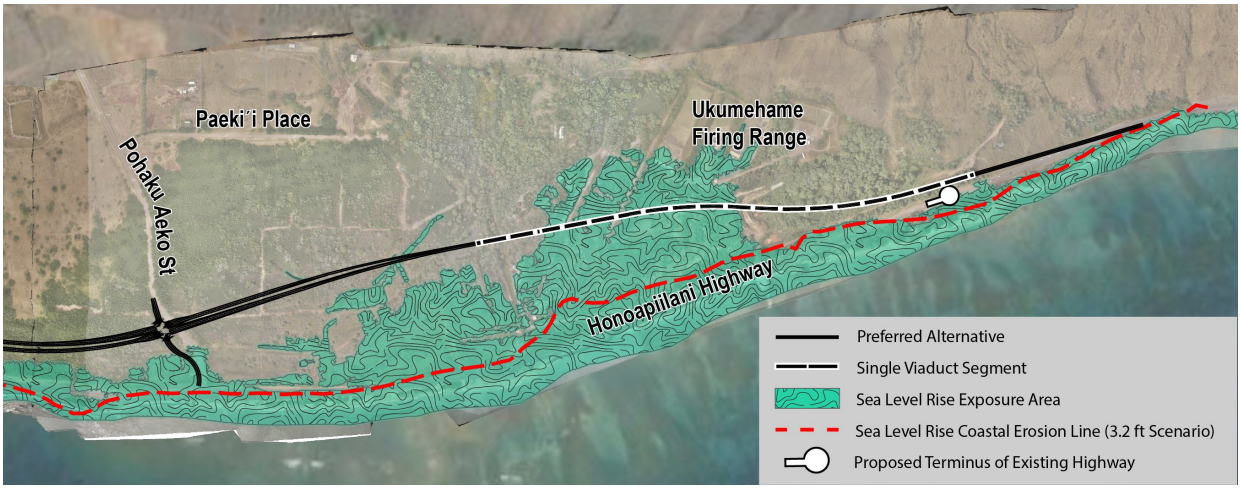
- Like the originally proposed Alternative 1, accessing the firing range and public beaches would be from the new highway's intersections with existing cross streets in Ukumehame (Pōhaku 'Aeko and Ehehene Streets).

FIGURE 5-5. **Ukumehame – Draft EIS Refinement at Pali Connection through Ukumehame Firing Range**

(a) Original Alignment



(b) Refined Alignment



~~5.1.2 Preliminary Cost Estimate for the Preferred Alternative~~

~~TABLE 5-1 summarizes the preliminary construction cost estimate for the Preferred Alternative. This includes the alternative refinements described above, including the use of a two-lane extension of the highway from its connection at the southernmost end at the Pali to just north of the Ukumehame Firing Range. As a result of these refinements, the total preliminary construction costs are slightly more than those presented in Chapter 2, Alternatives, where the sum of the Olowalu and Ukumehame preferred segments is approximately $158.8 million.~~

~~TABLE 5-1. **Preliminary Cost Estimate for the Preferred Alternative**~~

~~SEGMENT~~	~~PREFERRED ALTERNATIVE (MILLIONS)~~
~~Olowalu~~	~~$71.1~~
~~Ukumehame~~	~~$89.7~~
~~Total~~	~~$160.8~~

5.2 DRAFT EIS EVALUATION SUPPORTING SELECTION OF PREFERRED ALTERNATIVE

The four Build Alternatives analyzed in ~~this~~ the Draft EIS were included because they met the threshold criteria of supporting the overall purpose, need, and secondary objectives of the Project (see Chapter 1, Introduction, Purpose and Need) and are therefore largely consistent with related government plans and policies. Other than the common alignment areas noted in the impact assessment, the Build Alternatives have a range of environmental effects that have been compared and evaluated in order to determine a Preferred Alternative for the Olowalu and Ukumehame segments of the project area.

5.2.1 Olowalu

Across the technical assessments presented in ~~this~~ the Draft EIS, TABLE 5-2 provides a visual comparison of the four Build Alternatives and indicates how refinements to the Preferred Alternative change the effects ~~outcome~~. Further, TABLE 5-3 provides a summary of the findings of the impact assessment. Overall, Build Alternative 2 was found to be the Preferred Alternative in Olowalu based on this evaluation.

Notable considerations include the following:

- Build Alternative 2 meets the purpose and need because it provides for a new highway alignment that is almost entirely out of the 3.2-foot SLR-XA and is consistent with regional land use and transportation plans while minimizing environmental effects compared with the other Build Alternatives.
- Build Alternative 2 is the most compatible with overall existing land use and development patterns. For current residences that are located near the existing highway, there would be a reduction in traffic volumes. The alignment of Build Alternative 2 does not come as close to mauka residences,

as is the case with houses along the existing highway. Build Alternative 2 would result in less disruption to the existing Olowalu village center (compared to Build Alternative 1) and does not affect properties with an existing residence (compared to Build Alternatives 3 and 4).

- The land acquisition requirements, including the potential reallocation of easement area and realignment of the multiuse path, ~~would be~~ were refined for the Preferred Alternative as part of the Final EIS. ~~(Section 3.4, Land Acquisition, Displacement, and Relocation).~~
- As analyzed in Section 3.8, Visual and Scenic Character, Build Alternative 2 would be the most visually compatible alternative for the Project considering the following: Build Alternative 1 is close to Olowalu village center, overlaps the existing right-of-way, and would result in the loss of a portion of the iconic monkeypod tree canopy; while Build Alternatives 3 and 4 are close to the Olowalu Petroglyphs and to mauka residences. Build Alternatives 2, 3, and 4 all require rerouting the private multiuse path.
- Like all the Build Alternatives, Build Alternative 2 would provide a reliable transportation link that can accommodate future traffic demands. ~~But~~ Build Alternative 2 would not create disruptions to traffic circulation in Olowalu village center (as Build Alternative 1 would) and would have no adverse effects on air quality or noise levels (compared with Build Alternative 4, which would result in an adverse noise effect at the site of the Olowalu Petroglyphs). Further, Build Alternative 2 provides the optimum level of potential fire-break compared to the other Build Alternatives.

TABLE 5-2. **Draft EIS Evaluation of No Build Alternative and Build Alternatives in Olowalu**

TOPIC	NO BUILD ALTERNATIVE	BUILD ALTERNATIVE 1	BUILD ALTERNATIVE 2	BUILD ALTERNATIVE 3	BUILD ALTERNATIVE 4	PREFERRED ALTERNATIVE
Preliminary Construction Cost Estimates	◕	◑	◑	◑	◑	◑
Land Use and Zoning	◑	◕	●	◕	◕	●
Agriculture and Farmlands	◕	◕	◕	◑	◑	◕
Community Services	◕	●	●	●	●	●
Land Acquisition, Displacement, and Relocation	●	◑	◑	◔	◔	◑
Parklands and Recreational Resources	●	◕	●	●	●	●
Archaeological and Architectural Historic Properties	●	◕	◕	◕	◔	●
Cultural Resources	●	◑	◕	◑	◔	●
Visual and Scenic Character	◑	◑	◕	◑	◔	◕
Water Resources, Wetlands, and Floodplains	○	◕	◕	◕	◕	◕
Flora and Fauna, Endangered Species	◑	◕	◕	◕	◕	◕
Geology, Soils, and Natural Hazards	◔	◕	●	●	●	●
Coastal Zone Management/Hawai'i Special Management Areas	○	◕	●	●	●	●
Climate Change and Sea Level Rise	○	●	●	●	●	●
Transportation	○	◕	●	●	●	●
Air Quality and Energy	◕	●	●	●	●	●
Noise	◑	●	●	●	◔	●
Infrastructure and Utilities	◕	●	●	●	●	●
Hazardous Materials	●	◕	●	●	●	●
Environmental Justice/Socioeconomic Conditions	◕	●	●	●	●	●
OLOWALU OVERALL ASSESSMENT	◔	◕	●	◕	◑	●

○= Worst; ◔ = Poor; ◑ = Neutral; ◕ = Good; ● = Best

TABLE 5-3. **Draft EIS Summary of Effects Assessment in Olowalu**

TOPIC	NO BUILD ALTERNATIVE	BUILD ALTERNATIVE 1	BUILD ALTERNATIVE 2 (PREFERRED)	BUILD ALTERNATIVE 3	BUILD ALTERNATIVE 4
~~**Preliminary Construction Costs**~~	~~Ongoing maintenance and repair would continue to require funding and would disrupt Honoapi'ilani Highway traffic conditions.~~	~~Approximately $63.8 million.~~	~~Approximately $68.2 million.~~	~~Approximately $62.9 million.~~	~~Approximately $64.0 million.~~
Land Use and Zoning	• No changes to land use, development patterns, or zoning. • No displacement of residences, commercial establishments, or agricultural uses.	• Converts land to highway use but no overall changes to land uses, development patterns, or zoning. • No displacement of residences, but could affect access to or take a portion of Maui Paintball, Living Earth Systems farm, and the Mauna Kahālāwai Watershed Partnership Storage Yard.	• Converts land to highway use but no overall changes to land uses, development patterns, or zoning. • No displacement of residences or business, but could affect access to Maui Paintball and could take a portion of the Living Earth Systems farm. • Crosses greenway easements on five lots and could require relocation or elimination of portions of the private multiuse path.	• Similar to Build Alternative 2 regarding Maui Paintball and Living Earth Systems farm. • One residential lot requires right-of-way acquisition that may displace a residence. • Alignment closer to Olowalu Petroglyphs and mauka residences. • Crosses greenway easement on one lot and could require relocation or elimination of portions of the private multiuse path.	• Similar to Build Alternative 3 overall • Alignment is closest to Olowalu Petroglyphs and mauka residences. • Crosses greenway easement on one lot, and could require relocation or elimination of portions of the private multiuse path
Agriculture and Farmlands	No changes to agricultural designations or uses.	• No changes to agricultural designations. • Does not trigger Agricultural Lands of Importance to the State of Hawai'i or Farmland Protection Policy Act analysis. • A makai portion of the two land parcels encompassing the Living Earth Systems farm as well as smaller leased farm lots would be acquired. For the frontage lots that are not part of the Living Earth Systems farm, this could require mitigation to ensure continued access as well as relocation in conformance with the Uniform Relocation Act.	• No changes to agricultural designations. • Similar to Build Alternative 1 in terms of crossing the land parcel with active farming, but with more mauka alignment towards the center of the parcel compared to Build Alternative 1. This would also potentially require mitigation to ensure continued access as well as relocation in conformance with the Uniform Relocation Act.	Similar to Build Alternative 2 but farther towards the mauka portion of the parcel with active farmland, which would more directly affect the Living Earth Systems farm.	Similar to Build Alternative 2 but farther towards the mauka portion of the parcel with active farmland, which would more directly affect the Living Earth Systems farm.
Community Services	• No community services in project area. • As road deteriorates and becomes less reliable into the future, could adversely affect use of corridor to access services.	• No community services in project area. • More resilient transportation corridor to help ensure continued access to services.	Same as Build Alternative 1.	Same as Build Alternative 1.	Same as Build Alternative 1.

TOPIC	NO BUILD ALTERNATIVE	BUILD ALTERNATIVE 1	BUILD ALTERNATIVE 2 (PREFERRED)	BUILD ALTERNATIVE 3	BUILD ALTERNATIVE 4
Land Acquisition, Displacement, and Relocation	No ~~additional~~ land acquisition required.	• May affect up to 15 private parcels primarily comprised of undeveloped parcels within the Olowalu subdivision, but including two parcels with active agricultural uses as noted above and one parcel with a commercial business (Maui Paintball). • Mitigation may be required to ensure access to these businesses and could require relocation in conformance with the Uniform Relocation Act. • Requires land agreements with County of Maui and State of Hawai‘i on 4 parcels. • Affects 3 Land Commission Award/ Kuleana parcels.	• May affect up to 15 private parcels primarily comprised of undeveloped parcels within the Olowalu subdivision, but including two parcels with active agricultural uses as noted above and one parcel with a commercial business (Maui Paintball). • Mitigation may be required to ensure access to these businesses and could require relocation in conformance with the Uniform Relocation Act. • Requires land agreements with County of Maui and State of Hawai‘i on 3 parcels. • Affects 5 Land Commission Award/ Kuleana parcels.	• May affect up to 15 private parcels primarily comprised of undeveloped parcels within the Olowalu subdivision, but including the two parcels with active agricultural uses as noted above as well as the one parcel with an existing residence. • Mitigation may be required to protect existing residence or could require relocation in conformance with the Uniform Relocation Act. For the farm and commercial businesses, mitigation may be required to ensure access to these businesses and could require relocation in conformance with the Uniform Relocation Act • Requires land agreements with County of Maui and State of Hawai‘i on 3 parcels. • Affects 8 Land Commission Award/ Kuleana parcels.	• May affect up to 16 private parcels primarily comprised of undeveloped parcels within the Olowalu subdivision, but including the two parcels with active agricultural uses as noted above as well as the one parcel with an existing residence. • Mitigation may be required to protect existing residence or could require relocation in conformance with the Uniform Relocation Act. For the farm and commercial businesses, mitigation may be required to ensure access to these businesses and could require relocation in conformance with the Uniform Relocation Act • Requires land agreements with County of Maui and State of Hawai‘i on 3 parcels. • Affects 5 Land Commission Award/ Kuleana parcels.
Parklands and Recreational Resources/Beach Access	• No changes to parklands or access. • Road disruptions and closures could affect beach access.	• All existing parks and public shoreline remain accessible via the existing highway. • Access to Awalua and Kaʻiliʻili beaches would be potentially limited with no through local road.	All existing parks and public shoreline remain accessible via the existing highway.	Same as Build Alternative 2.	Same as Build Alternative 2.
Archaeological and Architectural Historic Properties	No changes that would have direct or indirect adverse effects in the Area of Potential Effects. Based on archeological study, expanded Olowalu Historic District was found to be an eligible resource.	• Programmatic Agreement would define additional investigations and mitigation commitments. • Common alignment elements disturb archaeological resources at the Launiupoko connection with the Lāhainā Bypass. • Passes through and has potential adverse effect to historic district	~~Same as Build Alternative 1.~~ • Programmatic Agreement would define additional investigations and mitigation commitments. • Common alignment elements disturb archaeological resources at the Launiupoko connection with the Lāhainā Bypass. • Passes through and has no adverse effect to historic district	• Same as Build Alternative 1 in terms of Programmatic Agreement and common alignment elements. • Does not pass through historic district	~~Same as Build Alternative 1, except located closest to Olowalu Petroglyphs with adverse effects on visual character and noise levels.~~ • Same as Build Alternative 1 in terms of Programmatic Agreement and common alignment elements • Located closest to Olowalu Petroglyphs with adverse effects on visual character and noise levels. • Does not pass through historic district
Cultural Resources	No changes that would have direct or indirect adverse effects to resources or practices.	Limited effects on cultural resources and practices based on alignment and environmental design best practices.	Same as Build Alternative 1.	Similar to Build Alternative 1 but closer to Olowalu Petroglyphs	Similar to Build Alternative 1 but closest to Olowalu Petroglyphs.
Visual and Scenic Character	No direct changes. Continued deterioration of existing highway based on storm and sea level rise, and its effects in terms of hardening and other temporary construction would likely deteriorate visual character.	• Overall Visual Impact Assessment of critical viewpoints show marginal improvements to viewers compared to the No Build Alternative. • Partial loss of monkeypod tree canopy detracts from visual character.	• No impact to the visual character of the monkeypod tree canopy. • Potentially visible to subdivision residents; however, the alignment would be largely screened from the Olowalu Petroglyphs.	Changes viewer perspectives based on roadway location and elevation, raising the visual awareness for mauka residences and cultural viewers at Olowalu Petroglyphs.	Same as Build Alternative 3, except closer and more visually disruptive at Olowalu Petroglyphs.

TOPIC	NO BUILD ALTERNATIVE	BUILD ALTERNATIVE 1	BUILD ALTERNATIVE 2 (PREFERRED)	BUILD ALTERNATIVE 3	BUILD ALTERNATIVE 4
Water Resources, Wetlands, and Floodplains	• No changes to current conditions on water resources, wetlands, or floodplains and the existing roadway would continue to be within the low-lying areas with floodplain exposure. • No Build Alternative has no established stormwater management infrastructure and is comparatively worse for overall water quality than the Build Alternatives. • Maintaining current highway as a regional arterial would require continued repairs and coastal hardening of entire corridor.	• Crosses the most flood hazard areas, and approximately 0.72 acre of wetlands and other waters. • Closest to the Pacific Ocean connections of the Līhau and Olowalu Streams. • Construction best management practices used to minimize the potential for water quality effects to the streams and wetlands.	• Crosses over the flood hazard zone along the Olowalu Stream and near the mouth of the Mōpua Stream. • Crosses approximately 0.53 acre of wetlands and other waters and overlaps the least with the Mōpua Stream. • Construction best management practices used to minimize the potential for water quality effects to the streams and wetlands.	• Crosses over the flood hazard zone along the Olowalu Stream and approximately 0.54 acre of wetlands and other waters. • Construction best management practices used to minimize the potential for water quality effects to the streams and wetlands.	• Crosses over the flood hazard zone along the Olowalu Stream and approximately 0.61 acre of wetlands and other waters. • Construction best management practices used to minimize the potential for water quality effects to the streams and wetlands.
Flora and Fauna, Endangered Species	No changes to current conditions and effects to flora and fauna, or endangered species.	• Partial loss of monkeypod tree canopy; would have adverse effect per their status as "exceptional trees." • No adverse effects anticipated with best management practices and recommended conservation measures.	Same as Build Alternative 1, except no loss of monkeypod tree canopy.	Same as Build Alternative 2.	Same as Build Alternative 2.
Geology, Soils, and Natural Hazards	• No changes to geology or soils. • No potential to serve as a wildfire break. • Not compliant with current seismic standards. • 89% within tsunami evacuation zone. • Increased susceptibility to hurricane and tropical storms.	• No geologic or soil constraints. • Firebreak benefit by alignment through hot spot. • Compliant with current seismic standards. • 53% within tsunami evacuation zone. • Decreased susceptibility to hurricanes and tropical storms. • Similar susceptibility to volcanic hazards.	Similar to Build Alternative 1, except: 52% within tsunami evacuation zone; most mauka alignment still within mapped wildfire hotspot.	Similar to Build Alternative 1, except: 37% within tsunami evacuation zone; reduced fire break value as alignment is not in mapped hot spot.	Similar to Build Alternative 1, except: 35% within tsunami evacuation zone; reduced fire break value as alignment is not in mapped hot spot.
Coastal Zone Management and Hawai'i Special Management Areas	• Inconsistent with Coastal Zone Management policies. • Within Special Management Areas, currently adversely affecting coastal processes.	• Generally consistent with Coastal Zone Management policies with less consistency regarding scenic and open space resources (due to the limited access to Awalua and Ka'ili'ili beaches) compared with the other Build Alternatives. • Potential for a small area of the alignment to fall within Special Management Areas near Launiupoko.	• Generally consistent with Coastal Zone Management policies. • With the exception of an area within the vicinity of the Olowalu Recycling and Refuse Convenience Center, the alignment would be outside of the Special Management Areas.	Same as Build Alternative 2.	Same as Build Alternative 2.

TOPIC	NO BUILD ALTERNATIVE	BUILD ALTERNATIVE 1	BUILD ALTERNATIVE 2 (PREFERRED)	BUILD ALTERNATIVE 3	BUILD ALTERNATIVE 4
Climate Change and Sea Level Rise (SLR)	• 38% makai of the coastal erosion line. • 29% within annual high-wave flooding area. • 5% within annual passive flooding area. • 5% within 6-foot SLR scenario (High Confidence). • 9% within 6-foot SLR scenario (Low Confidence). • 51% within overall SLR-XA.	• 0% makai of the coastal erosion line. • 3% within annual high-wave flooding area. • 0% within annual passive flooding area. • 0% within 6-foot SLR scenario (High Confidence). • 1% within 6-foot SLR scenario (Low Confidence). • 3% within overall SLR-XA.	• 0% makai of the coastal erosion line. • 2% within annual high-wave flooding area. • 0% within annual passive flooding area. • 0% within 6-foot SLR scenario (High Confidence). • 1% within 6-foot SLR scenario (Low Confidence). • 2% within overall SLR-XA.	• 0% makai of the coastal erosion line. • 1% within annual high-wave flooding area. • 0% within annual passive flooding area. • 0% within 6-foot SLR scenario (High Confidence). • 1% within 6-foot SLR scenario (Low Confidence). • 1% within overall SLR-XA.	• 0% makai of the coastal erosion line. • 1% within annual high-wave flooding area. • 0% within annual passive flooding area. • 0% within 6-foot SLR scenario. • 1% within 6-foot SLR scenario (Low Confidence). • 1% within overall SLR-XA.
Transportation	• No change to current highway configuration. • Access to existing businesses solely reliant on Honoapi'ilani Highway. • No improvements to highway safety. • No improvements to level of service or delays. • Limited to two-lane highway, least able to provide a reliable evacuation route.	• Improved regional reliability. • Maintains access to existing businesses. • Improves highway safety. • Improves level of service and delays over the No Build Alternative. • Potentially disrupts continuous use of old highway. • Ready for four-lane configuration to accommodate future demand.	Same as Build Alternative 1 except no disruption to use of old highway.	Same as Build Alternative 2.	Same as Build Alternative 2.
Air Quality and Energy	No changes in air quality or energy.	No adverse effects to air quality and energy.	Same as Build Alternative 1.	Same as Build Alternative 1.	Same as Build Alternative 1.
Noise	No change in noise levels other than background growth in traffic.	No adverse effects to noise levels.	No adverse effects to noise levels.	No adverse effects to noise levels.	One adverse effect due to a 15 A-weighted decibels (dBA_ increase at the Olowalu Petroglyphs.
Infrastructure and Utilities	No changes to existing infrastructure and utilities present in the project area.	• No adverse effect to infrastructure and utilities; however, the Olowalu Recycling and Refuse Convenience Center would require relocation. • Water mains in Olowalu where the alignment overlaps with the existing highway may require relocation. • No anticipated relocation of utilities to new alignment, but future utility use of right-of-way could be coordinated with HDOT and utilities.	Similar to Build Alternative 1, except no potential water main relocation in Olowalu village.	Same as Build Alternative 2.	Same as Build Alternative 2.
Hazardous Materials	• No change or adverse effect to hazardous materials. • Temporary use of former landfill expected to be closed prior to start of construction.	• No adverse effect to hazardous materials. • Alignment would have the potential to disturb potentially contaminated materials at the Mauna Kahālāwai Watershed Partnership Storage Yard.	• No adverse effect to hazardous materials. • Temporary use of former landfill expected to be closed prior to start of construction.	Same as Build Alternative 2.	Same as Build Alternative 2.

TOPIC	NO BUILD ALTERNATIVE	BUILD ALTERNATIVE 1	BUILD ALTERNATIVE 2 (PREFERRED)	BUILD ALTERNATIVE 3	BUILD ALTERNATIVE 4
Environmental Justice and Socioeconomic Conditions	Less reliable transportation infrastructure could limit workforce mobility, adversely affecting both environmental justice and general populations.	• No disproportionate high and adverse effects. • Benefit to regional environmental justice population through improvement and more resilient regional mobility. • May result in disruption or displacement of Maui Paintball and Living Earth Systems farm, which may be environmental-justice owned.	Same as Build Alternative 1.	Same as Build Alternative 1.	Same as Build Alternative 1.
Indirect Effects	Reduced reliability could indirectly contribute to adverse regional effects by disrupting workforce mobility, goods and services, and tourist mobility.	No indirect effects.	Same as Build Alternative 1.	Same as Build Alternative 1.	Same as Build Alternative 1.
Cumulative Effects	Disruption from reduced reliability and increased congestion could be worsened by cumulative effects from outside project area.	No cumulative effects.	Same as Build Alternative 1.	Same as Build Alternative 1.	Same as Build Alternative 1.

5.2.2 Ukumehame

Across the technical assessments presented in ~~this~~ the Draft EIS, TABLE 5-4 provides a visual comparison of the four Build Alternatives and indicates how refinements to the Preferred Alternative change certain outcomes. Further, TABLE 5-5 provides a summary of the findings of the impact assessment. Overall, Build Alternative 1 was found to be the Preferred Alternative in Ukumehame based on this evaluation (particularly in consideration of the refinements to the alignment presented in this chapter).

Notable considerations include the following:

- Build Alternative 1 meets the purpose and need because it provides for a new highway alignment that is mostly out of the 3.2-foot SLR-XA and is consistent with regional land use and transportation plans while minimizing environmental effects compared with the other Build Alternatives. In comparison, Build Alternatives 2 and 3 (which have the same alignment in Ukumehame) have a greater area of the right-of-way within the SLR-XA with fewer design options to avoid adverse effects. While Build Alternative 4 has slightly more ability to avoid the SLR-XA, it results in substantially more adverse effects on land use, property acquisition, and visual quality.
- Build Alternative 1 is largely on public property and therefore avoids the acquisition of private property (compared with Build Alternative 4). Public policy supports the use of the County land the right-of-way traverses as both appropriate for the relocated highway as well as to secure public open space makai of the revised highway alignment.

The refinements proposed as part of the Preferred Alternative provided for opportunities to avoid adverse cultural resources effects in the northern connection point with Olowalu as well as in the Pali at the southern connection point. Cultural resources ~~will continue to be~~ were further assessed for the refined ~~Preferred~~ Selected Alternative through the development of the Final EIS (see Sections 5.3 and 5.4) as well as the Section 106 Programmatic Agreement, which governs Section 106 compliance for the Project after ~~NEPA~~ environmental review and into final design through the design build process.

TABLE 5-4. **Draft EIS Evaluation of the No Build Alternative and the Build Alternatives in Ukumehame**

TOPIC	NO BUILD ALTERNATIVE	BUILD ALTERNATIVE 1	BUILD ALTERNATIVES 2 AND 3	BUILD ALTERNATIVE 4	PREFERRED ALTERNATIVE
Preliminary Construction Cost Estimates	◕	◑	◑	◑	◑
Land Use and Zoning	◑	●	●	◔	●
Agriculture and Farmlands	◕	●	●	◔	●
Community Services	◑	●	●	●	●
Land Acquisition, Displacement, and Relocation	●	◕	◕	○	◕
Parklands and Recreational Resources	◕	●	●	●	●
Archaeological and Architectural Historic Properties	●	◔	◑	◑	●
Cultural Resources	●	◔	◑	◑	●
Visual and Scenic Character	◑	◕	◕	◔	◕
Water Resources, Wetlands, and Floodplains	◔	◑	○	◕	◑
Flora and Fauna, Endangered Species	◕	●	●	●	●
Geology, Soils, and Natural Hazards	◔	◕	●	●	●
Coastal Zone Management/Hawai'i Special Management Areas	○	●	◕	●	●
Climate Change and Sea Level Rise	○	◕	◔	◕	◕
Transportation	○	●	●	●	●
Air Quality and Energy	◕	●	●	●	●
Noise	◕	●	●	◕	●
Infrastructure and Utilities	◕	●	●	●	●
Hazardous Materials	●	●	●	●	●
Environmental Justice/Socioeconomic Conditions	◑	●	●	●	●
UKUMEHAME OVERALL ASSESSMENT	◔	●	◕	◑	●

○ = Worst; ◔ = Poor; ◑ = Neutral; ◕ = Good; ● = Best

TABLE 5-5. **Draft EIS Summary of Effects Assessment in Ukumehame**

TOPIC	NO BUILD ALTERNATIVE	BUILD ALTERNATIVE 1 (PREFERRED)	BUILD ALTERNATIVES 2 AND 3	BUILD ALTERNATIVE 4
~~**Preliminary Construction Costs**~~	~~Ongoing maintenance and repair would continue to disrupt to Honoapi‘ilani Highway traffic conditions.~~	~~$90.6 million~~	~~$91.3 million~~	~~$88.2 million~~
Land Use and Zoning	No changes to land use or zoning.	• Converts land to highway use but no overall changes to land uses, development patterns, or zoning. • Potential acquisition/relocation of one residence. • No displacement of businesses.	Same as Build Alternative 1.	• No residential displacement but could displace two active sod farms. • Would eliminate development potential of several undeveloped lots in Ukumehame Subdivision. • Could eliminate much of Paeki‘i Place, requiring new access to two existing homes.
Agriculture and Farmlands	No changes to agricultural designations or uses.	• No changes to agricultural designations or displacement of agricultural uses. • Does not trigger Agricultural Lands of Importance to the State of Hawai‘i or Farmland Protection Policy Act analysis.	Same as Build Alternative 1.	• Alignment would partially or fully displace two active sod farm uses. • Similar to Build Alternative 1, does not trigger Agricultural Lands of Importance to the State of Hawai‘i or Farmland Protection Policy Act analysis.
Community Services	• No community services in project area. • As road deteriorates and becomes less reliable into the future, could adversely affect use of corridor to access services.	• No community services in project area. • More resilient transportation corridor would help ensure continued access to services.	Same as Build Alternative 1.	Same as Build Alternative 1.
Land Acquisition, Displacement, and Relocation	No ~~additional~~ land acquisition required.	• May affect up to three private parcels, all of which are undeveloped parcels of the Ukumehame subdivision. • Requires land agreements with County of Maui and State of Hawai‘i on 14 parcels. • Affects five Land Commission Award/Kuleana parcels. • One residence located on Kuleana and County land may require mitigation to ensure access and could require relocation in conformance with the Uniform Relocation Act.	• May affect up to one private parcel, which is an undeveloped parcel of the Ukumehame subdivision. • Would require land agreements with County of Maui and State of Hawai‘i on 16 parcels. • Affects six Land Commission Award/Kuleana parcels. • One residence located on Kuleana and County land may require mitigation to ensure access and could require relocation in conformance with the Uniform Relocation Act.	• May affect up to 20 private parcels, which are primarily undeveloped parcels in the Ukumehame subdivision, except for two parcels that are active use agricultural uses (Maui Sod and Ukumehame Sod). This could require mitigation to ensure access to all of the private parcels and for the active agricultural uses could require relocation in conformance with the Uniform Relocation Act. • Would require land agreements with County of Maui and State of Hawai‘i on 12 parcels. • Affects seven Land Commission Award/Kuleana parcels.
Parklands and Recreational Resources/Beach Access	• No changes to parklands or access. • Road disruptions and closures could affect beach access.	• Existing parks and public shoreline would remain accessible via the existing highway. The existing highway’s use into the future will be assessed by The Nature Conservancy. • Access to the Ukumehame and Pāpalaua Wayside Park beaches and Ukumehame Firing Range would be through the new highway’s intersections with Pōhaku ‘Aeko or Ehehene Streets and along the existing highway with a viaduct crossing over the firing range driveway.	• Existing parks and public shoreline would remain accessible via the existing highway but would be through the new highway’s intersections with Pōhaku ‘Aeko or Ehehene Streets and along the existing highway. The existing highway’s use into the future will be assessed by The Nature Conservancy. • Access to the Ukumehame Firing Range would be provided through a new driveway connected to the new highway alignment.	Same as Build Alternative 1.

TOPIC	NO BUILD ALTERNATIVE	BUILD ALTERNATIVE 1 (PREFERRED)	BUILD ALTERNATIVES 2 AND 3	BUILD ALTERNATIVE 4
Archaeological and Architectural Historic Properties	No changes that would have direct or indirect adverse effects in the Area of Potential Effect.	• Programmatic Agreement would define additional investigations and mitigation commitments. • Potentially adversely affects archaeological resources, primarily at two locations: where alignment joins the existing highway (Pali connection), and at the northernmost area of Ukumehame leading into Olowalu.	Similar to Build Alternative 1, except less intrusion and minimized impact potential in the Pali area compared to Build Alternative 1.	Similar to Build Alternative 1, except less intrusion and minimized impact potential in the Pali area compared to Build Alternative 1.
Cultural Resources	No changes that would have direct or indirect adverse effects to resources or practices.	Overall, the alignment and environmental design best practices limit effects on cultural resources and practices. The cultural practices of one known family in the project area may be impacted by limiting access to a lot, which would be mitigated by ensuring continued access.	Same as Build Alternative 1.	Same as Build Alternative 1.
Visual and Scenic Character	• No direct changes. • Continued deterioration of existing highway based on storm and sea level rise and its effects in terms of hardening and other temporary construction would likely deteriorate visual character.	Overall Visual Impact Assessment of critical viewpoints show marginal improvements to viewers compared to No Build Alternative due to removing the highest traffic flows from the existing highway, thereby improving the visual environment for beach users.	Same as Build Alternative 1.	Substantial visual change due to the displacement of portions of Paeki'i Place, proximity to mauka residences, and the potential to displace the active sod farms present in the subdivision north of the Ukumehame Stream.
Water Resources, Wetlands, and Floodplains	~~No change in location of highway.~~ • No changes to current conditions on water resources, wetlands, or floodplains and the existing roadway would continue to be largely low-lying areas with floodplain exposure. • No Build Alternative has no established stormwater management infrastructure and is comparatively worse for overall water quality than the Build Alternatives. • Maintaining current highway as a regional arterial would require continued repairs and coastal hardening of entire corridor.	• Crosses approximately 6.36 acres of wetlands and other waters. • Construction best management practices would be used to minimize the potential for water quality effects to the streams and wetlands.	• Crosses approximately 15.877 acres of wetlands and other waters. • Greatest water resource disturbance. • Construction best management practices would be used to minimize the potential for water quality effects to the streams and wetlands.	• Crosses approximately 1.96 acres of wetlands and other waters. • Least water resource disturbance. • Construction best management practices would be used to minimize the potential for water quality effects to the streams and wetlands.
Flora and Fauna, Endangered Species	No changes to current conditions and effects to flora and fauna, or endangered species.	• With best management practices and recommended conservation measures, no anticipated adverse effects. • Viaduct construction in the vicinity of the Ukumehame Firing Range would minimize potential conflicts with stilts and nēnē loafing areas.	Similar to Build Alternative 1.	Similar to Build Alternative 1.

TOPIC	NO BUILD ALTERNATIVE	BUILD ALTERNATIVE 1 (PREFERRED)	BUILD ALTERNATIVES 2 AND 3	BUILD ALTERNATIVE 4
Geology, Soils, and Natural Hazards	• No changes to geology or soils. • No potential to serve as a wildfire break. • 100% within tsunami evacuation zone. • Not compliant with current seismic standards. • Increased susceptibility to hurricane and tropical storms.	• More slope stabilization required in Pali. • Firebreak benefit by alignment through hot spot. • 95% within tsunami evacuation zone. • Compliant with current seismic standards. • Decreased susceptibility to hurricanes and tropical storms. • Similar susceptibility to volcanic hazards.	Similar to Build Alternative 1; however, Build Alternative 3 would be 100% within tsunami evacuation zone.	• Similar to Build Alternative 1; however, Build Alternative 4 would be 87% within tsunami evacuation zone. • Mauka alignment offer additional hot spot fire break.
Coastal Zone Management and Hawai'i Special Management Areas	• Inconsistent with Coastal Zone Management policies. • Within Special Management Areas, currently adversely affecting coastal processes.	Portions of the alignment would fall within the Special Management Areas, particularly at the Pali where the alignment would connect with the existing highway.	Similar to Alternative 1; however, an additional portion of the alignments would fall within the Special Management Areas in the vicinity of Pōhaku 'Aeko Street.	Same as Build Alternative 1.
Climate Change and Sea Level Rise (SLR)	• 42% makai of the coastal erosion line. • 62% within annual high-wave flooding area. • 14% within annual passive flooding area. • 11% within 6-foot SLR scenario (High Confidence). • 27% within 6-foot SLR scenario (Low Confidence). • 73% within overall SLR-XA.	• 0% makai of the coastal erosion line. • 9% within annual high-wave flooding area. • 9% within annual passive flooding area. • 8% within 6-foot SLR scenario (High Confidence). • 12% within 6-foot SLR scenario (Low Confidence). • 12% within overall SLR-XA.	• 1% makai of the coastal erosion line. • 32% within annual high-wave flooding area. • 24% within annual passive flooding area. • 13% within 6-foot SLR scenario (High Confidence). • 17% within 6-foot SLR scenario (Low Confidence). • 35% within overall SLR-XA.	• 1% makai of the coastal erosion line. • 6% within annual high-wave flooding area. • 5% within annual passive flooding area. • 3% within 6-foot SLR scenario (High Confidence). • 9% within 6-foot SLR scenario (Low Confidence). • 8% within overall SLR-XA.
Transportation	• Access to existing businesses solely reliant on Honoapi'ilani Highway. • No improvements to highway safety. • No improvements to level of service or delays. • Least able to accommodate future growth.	• Improved regional reliability. • Access to existing beaches and parks would ~~be~~ remain only along existing highway. • Access to beaches and firing range would be through the new highway's intersections with Pōhaku 'Aeko or Ehehene Streets and along the existing highway. • Improvements to highway safety. • Improvements to level of service and delays. • Same driveway but new access route for Ukumehame Firing Range.	Similar to Build Alternative 1, except driveway to firing range would be rebuilt to meet new highway in same location.	Same as Build Alternative 1.
Air Quality and Energy	No changes in air quality or energy.	No adverse impacts to air quality and energy.	Same as Build Alternative 1.	Same as Build Alternative 1.
Noise	No change in noise levels other than background growth in traffic.	No adverse effect on noise levels.	Same as Build Alternative 1.	Same as Build Alternative 1.
Infrastructure and Utilities	No changes to existing infrastructure and utilities present in the project area.	• No adverse effect to infrastructure and utilities. • No anticipated relocation of utilities to new alignment, but future utility use of right-of-way could be coordinated with HDOT and utilities.	Same as Build Alternative 1.	Same as Build Alternative 1.

TOPIC	NO BUILD ALTERNATIVE	BUILD ALTERNATIVE 1 (PREFERRED)	BUILD ALTERNATIVES 2 AND 3	BUILD ALTERNATIVE 4
Hazardous Materials	• No change or adverse effect to hazardous materials. • USEPA will continue to temporarily use a portion of the Ukumehame Firing Range as storage for contaminated debris from the wildfire.	• No adverse effect to hazardous materials. • Alignment would have the potential to disturb potentially hazardous materials at Ukumehame Firing Range (that is, lead contamination). • USEPA temporary use of Ukumehame Firing Range for storage would not be affected by alignment.	No adverse effect to hazardous materials; alignments would avoid potential to disturb potentially hazardous materials at Ukumehame Firing Range.	Same as Build Alternative 1.
Environmental Justice and Socioeconomic Conditions	• No potential benefit to regional environmental justice populations through improved mobility. • Relocation of encampments of unhoused people in the project area is being addressed by a consortium of County and State agencies independent of the proposed action.	• No disproportionate high and adverse effects with mitigation to ensure continued access to one family's kuleana parcel and local cultural practice. • Benefit to regional environmental justice population through improvement and more resilient regional mobility. • Relocation of encampments of unhoused people in the project area is being addressed by a consortium of County and State agencies independent of the proposed action.	Same as Build Alternative 1.	Similar to Build Alternative 1, except may result in displacement of Ukumehame and Maui sod farms, which may be environmental-justice owned.
Indirect Effects	Reduced reliability could indirectly contribute to adverse regional effects by disrupting workforce mobility, goods and services, and tourist mobility.	No indirect effects.	Same as Build Alternative 1.	Same as Build Alternative 1.
Cumulative Effects	Disruption from reduced reliability and increased congestion could be worsened by cumulative effects from outside project area.	No cumulative effects.	Same as Build Alternative 1.	Same as Build Alternative 1.

5.2.3 Summary Assessment

The combined Preferred Alternative is the alignment that would minimize or avoid potential adverse environmental effects from the construction and future operation of the completed highway through the project area, most notably the following:

- The potential adverse effects of the Preferred Alternative would be minimized by HDOT's agreement to adhere to a range of environmental commitments, best practices, and mitigation (Section 5.5 ~~3~~, ~~Preliminary Identification of~~ Environmental Commitments and Mitigation for the Preferred Alternative).
- The Preferred Alternative would be built with protective best management practices in terms of stormwater and sediment control both during construction and into the future with a completed highway alignment (Chapter 2, Alternatives, and Section 3.9, Water Resources, Wetlands, and Floodplains).
- With adherence to environmental commitments developed in coordination with resource agencies, there would be no anticipated adverse effects on flora and fauna and, specifically, on threatened and endangered species (Section 3.10, Flora and Fauna, Endangered Species).
- With refinements to the Preferred Alternative alignment, the Project would avoid or minimize adverse effects on the majority of ~~preliminarily~~ identified eligible archaeological ~~and architectural~~ historic properties ~~resources~~. After publication of the Draft EIS, FHWA determined, and SHPO concurred, that the Selected Alternative would result in No Adverse Effects on architectural historic properties. A Programmatic Agreement ensures that testing, mitigation, and procedures for unexpected occurrences are part of the Project's environmental commitments (Section 3.6, Archaeological and Architectural Historic Properties).
- The Preferred Alternative would result in no direct residential or business displacement but could take a portion of lots in Olowalu that are used for a paintball facility and the Living Earth Systems farm in Launiupoko, where the Project would require new access (Section 3.1, Land Use and Zoning). Conditional upon final design, the Preferred Alternative may require a small land acquisition from the Ukumehame Sod Farm but is not anticipated to affect sod farm operations. Access to the sod farm on either side of Ehehene Street is located on the mauka end of the parcel, away from the preferred alternative footprint, and is not anticipated to be affected by the Project.
- The Preferred Alternative would affect up to 15 private parcels that are undeveloped or used for storage or other uses. Up to eight kuleana land parcels could be affected. For all affected parcels and land rights, the level of taking and appropriate compensation and mitigation would be determined in further analysis and outreach through HDOT right-of-way procedures (Section 3.4, Land Acquisition, Displacement, and Relocation).
- The Preferred Alternative would have no adverse effects on infrastructure and utilities, and the new alignment would provide additional ability to accommodate future relocation of regional and local energy lines.
- The Preferred Alternative is not anticipated to result in indirect and cumulative effects because the Project would not create a new regional transportation link or expanded regional capacity

(beyond the improved operating conditions in the immediate project area). In addition, because there would be no changes to development regulations as a result of the Project, increases in traffic are unlikely. There are no foreseeable changes in the project area or elsewhere that would result in indirect or cumulative effects. Project construction is likely to overlap with rebuilding Lāhainā after the devastating 2023 wildfire, although the majority of the highway construction would be isolated from construction worker/materials through-traffic (Section 3.14, Transportation).

- As analyzed in Section 3.19, Environmental Justice and Socioeconomic Conditions, the Preferred Alternative would not directly displace or cause a disproportionate and adverse effect on any environmental justice populations that may be living in the project area. (The immediate project area is not specifically identified as an environmental justice community, but it is assumed to include some environmental justice populations.) Relocation of encampments of unhoused people in the project area is being addressed by a consortium of County and State agencies independent of the proposed action. Regionally, the Preferred Alternative would benefit environmental justice populations because the transportation link is an essential connector of employment centers of West Maui and higher proportions of environmental justice populations in Central Maui.
- The Section 4(f) Evaluation (Chapter 4) has determined ~~a~~ *de minimis* effects on the Ukumehame Firing Range and, as determined after publication of the Draft EIS, the Olowalu Sugar Plantation Historic District. ~~parklands and~~ Overall, the refined alignment to the Preferred Alternative avoids and minimizes adverse effects on archaeological resources at the northern connection in Olowalu, in the area between Olowalu and Ukumehame, and at the southernmost connection point at the Pali in Ukumehame. There are no adverse effects on architectural historic properties ~~resources~~. ~~Overall, there are no Section 4(f) historic properties.~~ In addition, the Programmatic Agreement incorporates required testing and mitigation for other identified ~~archaeological and architectural~~ historic properties ~~resources~~ (or for unanticipated discoveries during construction).

5.3 REFINEMENTS TO THE SELECTED ALTERNATIVE FOR THE FINAL EIS[1]

Since the Draft EIS was published, and in response to public and agency comments, design refinements have been incorporated into the Selected Alternative to prepare the Project for final design and implementation. The refinements are also intended to further minimize and avoid adverse effects of the Project and are presented below. The final design and the design-build process may provide additional opportunities to further refine the Selected Alternative to optimize constructability, lower costs, and be responsive to unforeseen conditions that would result in changes to environmental impacts.

5.3.1 Full Corridor Refinements

The design refinements to the Selected Alternative address multi-modal considerations, right-of-way requirements, intersection design, implementation of avoidance and minimization measures for archeological and natural resources, and refinement of stormwater Best Management Practices

[1] This section is new text for the Final EIS. For ease of reading, the new text is not double underlined

(BMPs). FIGURE 5-6 and FIGURE 5-7 present the current alignment of the Selected Alternative compared with the Draft EIS alternatives for Olowalu and Ukumehame. Design refinements are summarized below.

5.3.1.1 Addition of Shared-Use Pathway within New Highway Right-of-Way

For the entire length of the proposed new highway segment, the Selected Alternative now includes a bi-directional paved 10-feet wide shared-use pathway along the makai edge of the roadway, separated from the roadway by a buffer area of 12 feet including a guardrail zone and an eight-foot drainage-way. FIGURE 5-8 shows a typical detail of the proposed roadway with the shared-use path. This change is based on public comments and HDOT policy initiatives to ensure multimodal opportunities for the new roadway. The change would also address public comments by setting the groundwork for future multimodal transportation network connections to the planned West Maui Greenway, which could be constructed adjacent to the existing highway.

5.3.1.2 Intersection Refinements

For each of the five intersections along the corridor, the design concepts were refined based on operational requirements, incorporating the shared-use path, and consideration of roundabouts and other intersection design options. This includes one signalized intersection in both Olowalu and Ukumehame to facilitate bicycle and pedestrian crossings. One or more roundabouts remain an option that FHWA and HDOT are requesting the design-build contractor (Contractor) evaluate as part of final design.[2] Reduced conflict intersections were evaluated but determined to be impractical primarily based on the right-of-way requirements. In summary, from south to north, intersection refinements are as follows:

- At Pōhaku 'Aeko Street, the Selected Alternative would continue with the originally planned unsignalized, four-leg intersection with stop-sign controls for the side-street approaches. There would be turning lanes and merging lanes to facilitate turning movements.

- At Ehehene Street, the Selected Alternative would install a signalized, four-leg intersection that would be demand responsive to bicycle and pedestrian traffic as well as side-street vehicular traffic.

- At Luawai Street, the Selected Alternative would continue with the originally planned signalized, four-leg intersection. The geometry and location of the intersection has been adjusted slightly based on modification to the roadway alignment (described below).

- At North Street, the Selected Alternative would continue with the originally planned unsignalized, four-leg intersection with stop-sign controls for the side-street approaches. There would be turning lanes and merging lanes to facilitate turning movements.

- At the Olowalu Landfill entrance, the Selected Alternative would continue the originally planned unsignalized, three-leg intersection with stop control for the landfill driveway. There would be turning lanes and merging lanes to facilitate turning movements.

[2] The evaluation of roundabouts would require additional environmental analysis completed through a NEPA Revaluation.

FIGURE 5-6. **Selected Alternative Compared to Draft EIS Alternatives - Olowalu**

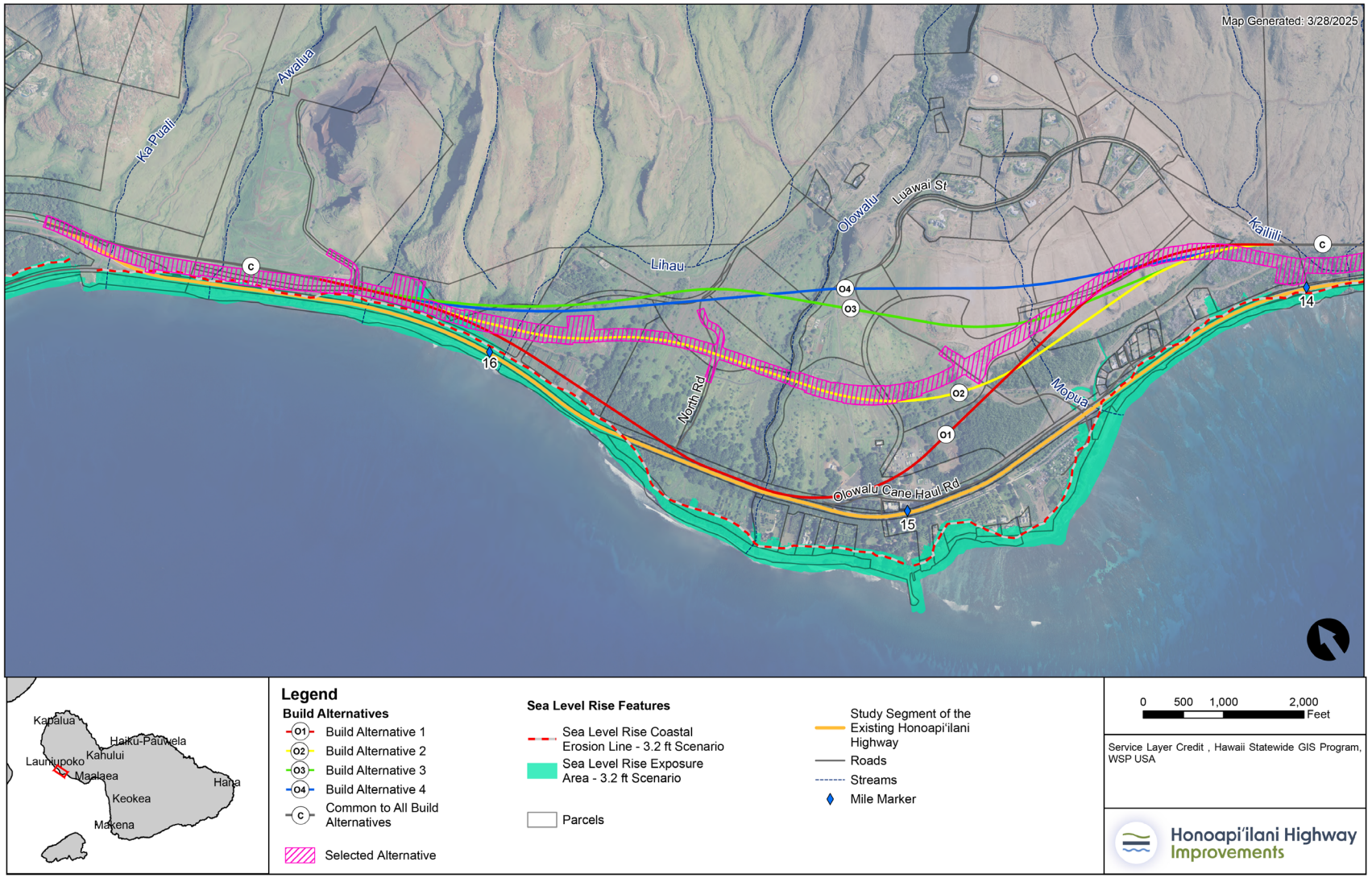


FIGURE 5-7. **Selected Alternative Compared to Draft EIS Alternatives - Ukumehame**

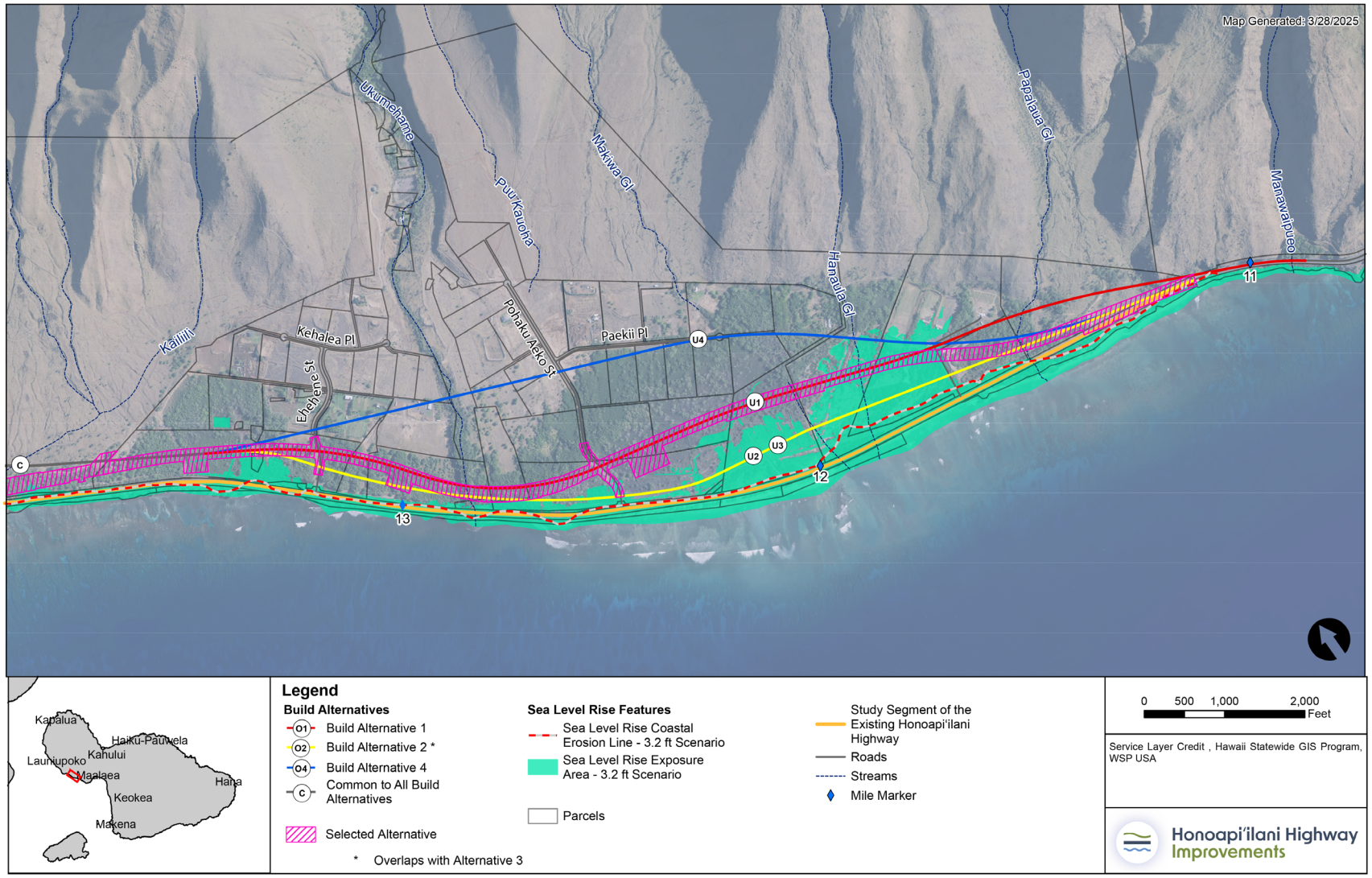
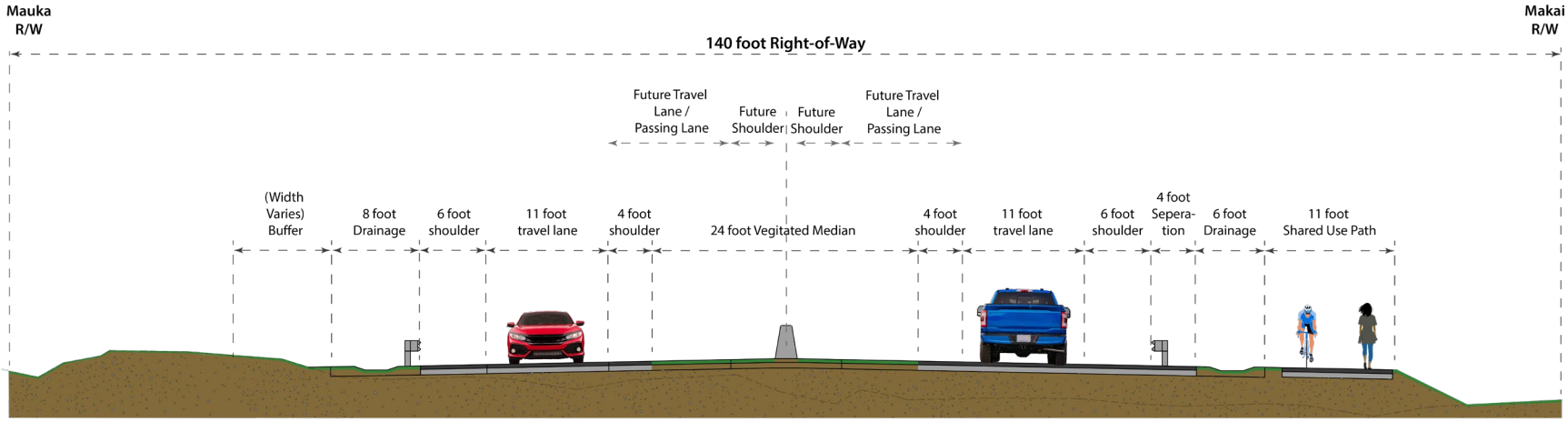


FIGURE 5-8. **Cross Section with Shared-Use Path**



5.3.1.3 Passing Lanes

As initially presented in the Draft EIS, the Project is intended to be constructed as a two-lane highway. The Project will include clearing, grading, and infrastructure (bridges and culverts other than the proposed viaduct structure in Ukumehame) to facilitate a future four-lane configuration, should there be demand and available funding. Should HDOT pursue a four-lane configuration in the future, an additional NEPA/HEPA assessment would be undertaken. In Ukumehame, the Selected Alternative would continue to provide a two-lane viaduct structure across the HDOT detention basin and the Ukumehame Firing Range, although sufficient right-of-way would be acquired to build a second viaduct (if required in the future).

Based on comments raised at the public hearings and in writing, there was public interest in a full four-lane roadway configuration or, at a minimum, provision of passing lanes to allow higher-speed traffic to pass slower vehicles. In response to these concerns, HDOT considers the addition of passing lanes as an optional element that would be determined during final design. If passing lanes are implemented, it is anticipated they would be centrally located in the area between Ehehene Street and Luawai Street, and would not result in additional right-of-way or other potential impacts not evaluated in this Final EIS.

5.3.1.4 Rights-of-Way Adjustments

Along the corridor, smaller adjustments optimize the location of right-of-way to minimize effects on adjacent properties, location and sizing of BMP facilities for stormwater, and interim construction staging area locations. Most notably this includes the identification of an area for construction staging within Ukumehame where the right-of-way is constrained and narrow.

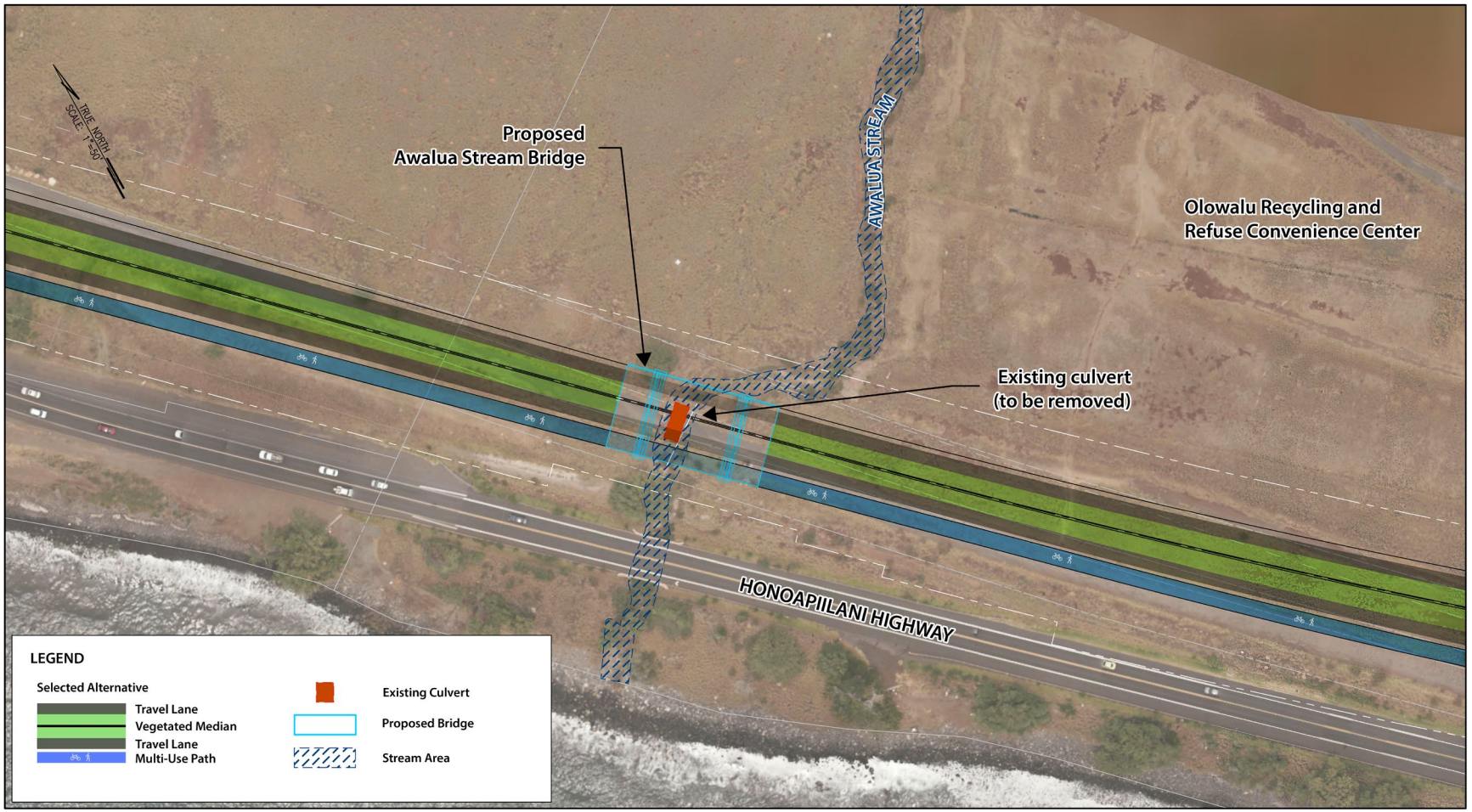
5.3.2 Refinements in Olowalu

In Olowalu, the Selected Alternative has been refined compared to the Draft EIS in two locations to avoid archaeological sites, minimize potential effects on property owners by moving the alignment slightly mauka, and to optimize the design in terms of intersection alignment and location of detention basins.

5.3.2.1 Awalua Stream Crossing

The Draft EIS identified that a portion of the Preferred Alternative was narrowed and moved more makai of the original alignment to avoid and minimize potential effects to archeological resources identified just mauka of the proposed roadway. To implement this refinement, the Final EIS Selected Alternative would include a bridge crossing across the intermittent Awalua Stream instead of a culvert as originally proposed. The stream crossing was refined to be located more makai and now occurs at a bend in the stream. A bridge allows for a longer span that remains fully out of the stream and would allow for removal of the existing culvert under the cane-haul road that would be eliminated by the new roadway. Overall, this allows for an opportunity to improve and naturalize this small section of the Awalua Stream. FIGURE 5-9 provides a conceptual presentation of this new crossing. The final configuration would be determined in final design by a Contractor who would also confirm and obtain the necessary level of applicable permitting, if required.

FIGURE 5-9. **Refined Awalua Stream Crossing from a Culvert to a Bridge**



5.3.2.2 Alignment Adjustment near Luawai Street

Between Luawai Street and the southern end of the Olowalu Subdivision, the Selected Alternative alignment has been shifted slightly mauka. The design consideration was incorporated based on public comments to optimize the alignment's vertical profile with existing topography, improve the layout of the Luawai Street intersection, and provide the most flexibility of use for adjacent property owners. In addition, the change in alignment allows the Selected Alternative to be routed just mauka of two push-piles that would have been displaced by the original alignment. The push-piles are not eligible for listing on the National Register of Historic Places but were noted by the public as locally important. FIGURE 5-10 provides detail of this alignment change.

5.3.3 Ukumehame

5.3.3.1 Alignment Adjustment between Pōhaku 'Aeko Street and Ehehene Street

The Selected Alternative has been slightly adjusted makai in this area to maximize distances from the closest residences. As depicted in FIGURE 5-11**,** it is also anticipated that the Selected Alternative would include a culvert adjacent to the Ukumehame Stream bridge to allow for a driveway to the kuleana parcel east of Ukumehame Stream.

5.3.4 Final EIS Revised Cost Estimate for the Preferred Alternative

As summarized in TABLE 5-6, the initial construction costs (exclusive of property acquisition and other non-construction costs) presented in the Draft EIS for the Preferred Alternative $160.8 million. In finalizing the Selected Alternative in the Final EIS, the current construction estimate is $298 million. This increase of $138 million is primarily to accommodate the addition of the shared-use path, the second signalized intersection at Ehehene Street, potential passing lanes between Ehehene and Luawai Streets, adding a culvert to maintain access to a kuleana parcel in Ukumehame, and the switch from a culvert to a bridge across the Awalua Stream. In addition, continued refinement has advanced cost estimate for other factors including mobilization, labor costs, materials (actual costs and transportation costs to import materials and equipment to Maui), as well as escalation and contingencies. Initial property acquisition for Right-of-Way is estimated at $18 million but will not be finalized until negotiations with property owners are completed.

TABLE 5-6. **Preliminary Construction Cost Estimate for the Draft EIS Preferred Alternative and Final EIS Selected Alternative**

SEGMENT	PREFERRED ALTERNATIVE (MILLIONS)
Draft EIS Preferred Alternative Preliminary Cost Estimate	$160.8
Final EIS Selected Alternative Revised Cost Estimate	$298.0

FIGURE 5-10. **Olowalu Mauka Shift**

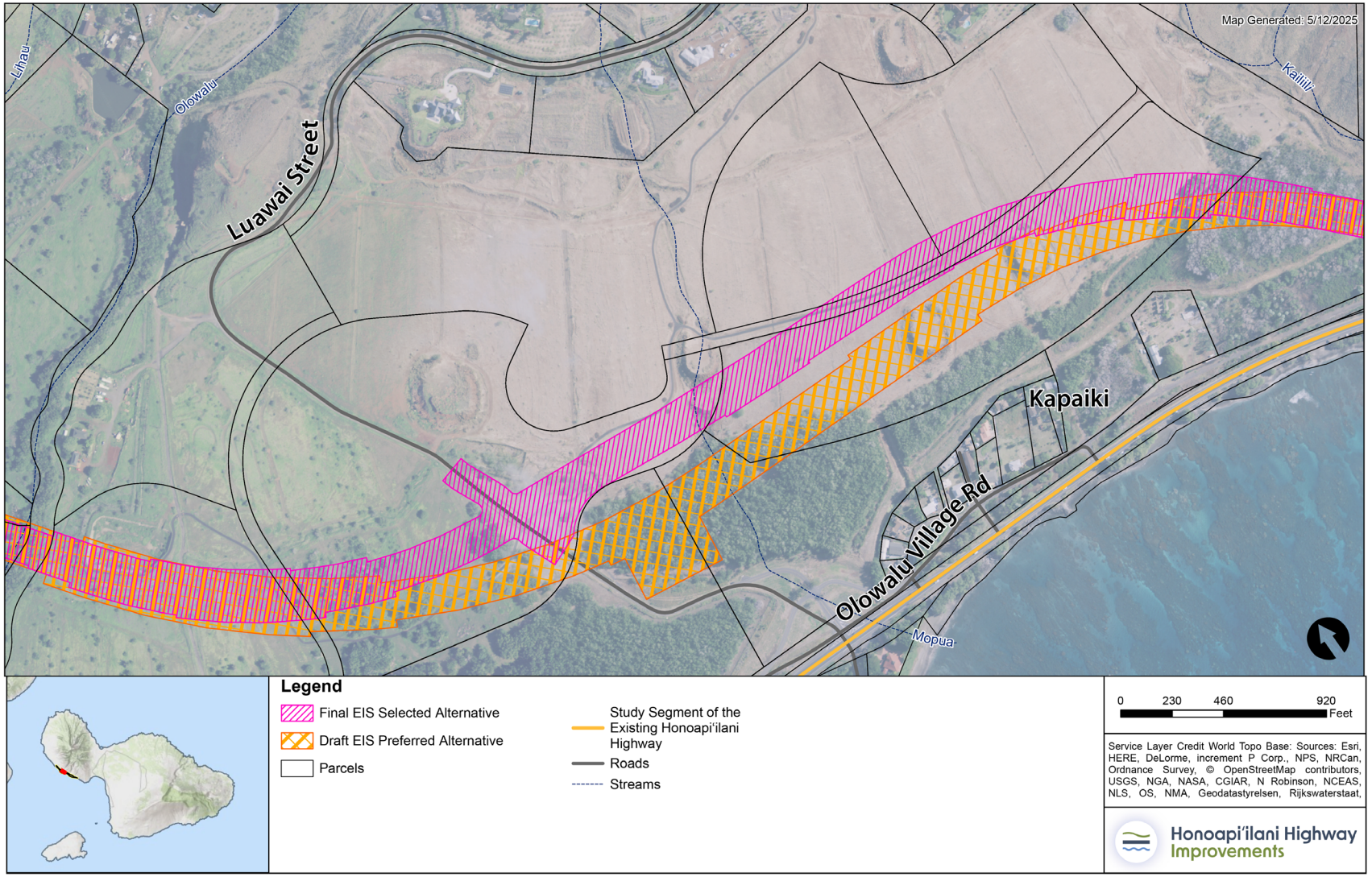
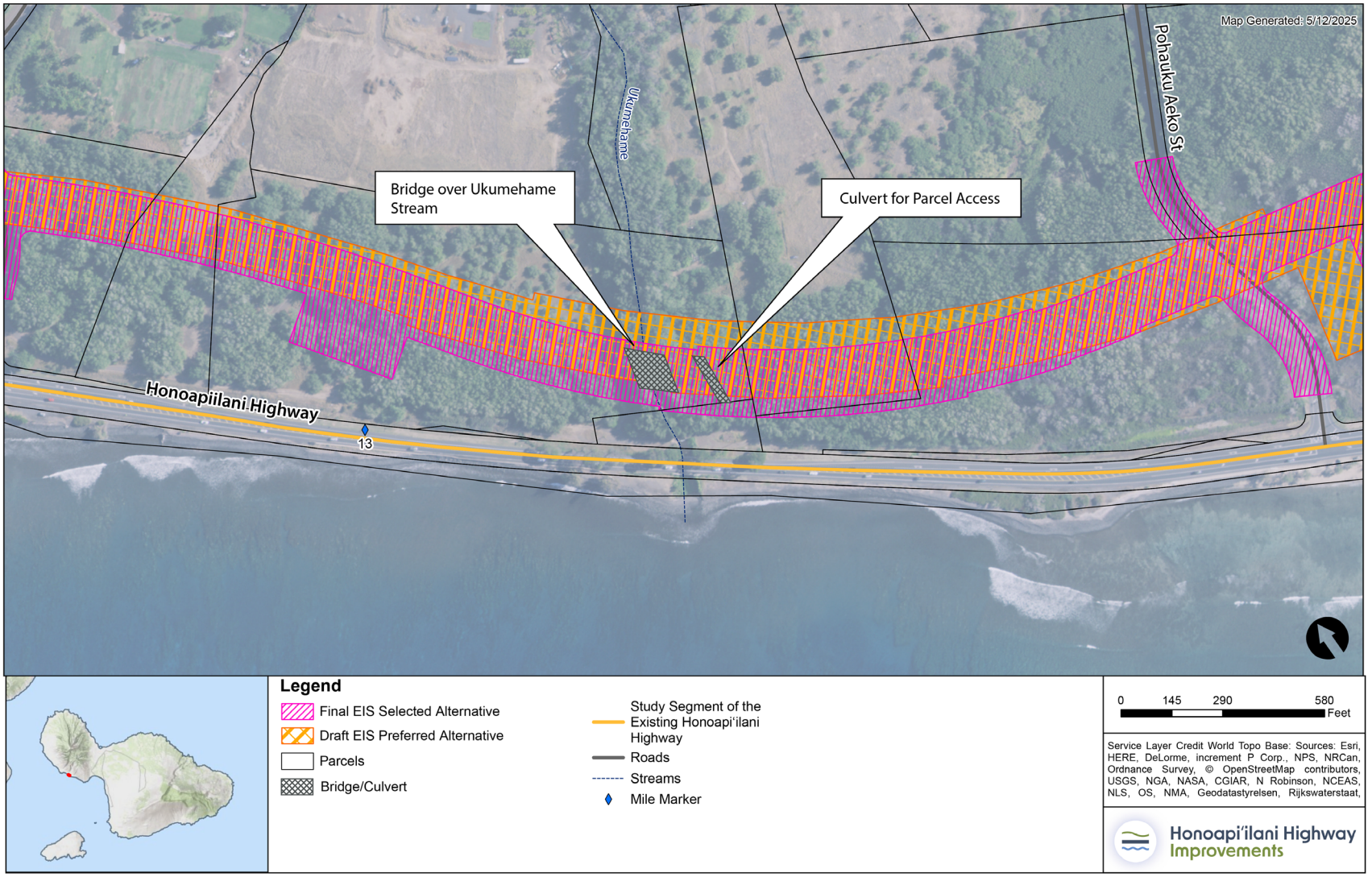


FIGURE 5-11. **Ukumehame Makai Shift**



5.4 ENVIRONMENTAL EVALUATION OF FINAL EIS REFINEMENTS[3]

HDOT and the FHWA evaluated refinements to the Selected Alternative for any new or different environmental effects (most importantly, any new adverse effects). Because the refinements are responsive to the goal of further minimizing and avoiding environmental constraints, the general effect is of "no change" or "improved change" compared to what was presented in the Draft EIS.

Of the technical evaluations conducted as part of the Draft EIS, there are only a few environmental assessment areas where the refinements in the Selected Alternative, in combination with new analyses for this Final EIS, have changed the initial evaluation. While no new adverse effects were identified, assessment areas with a change in environmental impact are summarized below.

5.4.1 Land Use

The change in land use to accommodate the refinements incorporated into the Selected Alternative for this Final EIS remains the same as reported for the Preferred Alternative in the Draft EIS.

Between the publication of the Draft EIS and completion of this Final EIS, there were changes within the study area in Ukumehame, notably where four new houses are now being constructed. Effects on these new houses have been considered in this Final EIS; the Selected Alternative would not displace the houses, nor would the alternative require property acquisition from these parcels. Further, one property owner—whose property would require acquisition for the Selected Alternative—informed HDOT and the FHWA that this property was being actively used as a sod farm and was not vacant, as was first reported in the Draft EIS. The refinements to the Selected Alternative do not change the reasonably foreseeable effects of the Project.

5.4.2 Land Acquisition, Displacement, and Relocation

Modest shifts to the Selected Alternative alignment would affect two additional private parcels in Olowalu and two parcels in Ukumehame (a land parcel is identified by its Tax Map Key, abbreviated as TMK). There would be no change in the potential effects on kuleana parcels.

5.4.2.1 Background

As established in the Draft EIS, property acquisition would be carried out during the design-build phase of final design when right-of-way configurations would be fully identified. The HDOT Right-of-Way Branch has primary responsibility for the acquisition and management of lands, right-of-way easements, and other real property interests. The branch also provides right-of-way cost estimates and monitors real property acquisition and relocation activities conducted by local public agencies.

A federally funded project must adhere to the Uniform Standards of Professional Appraisal Practice and the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (Uniform Act), as codified in 42 United States Code Sections 4601 et seq., and the applicable

[3] This section is new revised text for the Final EIS. For ease of reading, the new text is not double underlined

implementing regulations set forth in Title 49 CFR Part 24. The Uniform Act protects the rights of owners and tenants of property that is acquired to implement a project without discrimination.

In Hawai'i, the acquisition of real property must adhere to the Hawaii State Eminent Domain Law (2022 Hawaii Revised Statues, Title 9 Public Property, Purchasing, and Contraction, Section 101, Eminent Domain), which establishes the public purpose and procedures for private property acquisition by the State, and Hawaii Revised Statues, Title 12 Conservation and Resources, Chapter 171, Public Lands, Management, and Disposition. In addition, the HDOT Highways Division established property acquisition procedures in its 2011 Right-of-Way Manual, as amended, including the agency's compliance with federal and State of Hawai'i regulations and guidance.

The limits of disturbance (including permanent BMPs) identified in the Final EIS for the Selected Alternative were used to identify any changes to or additional properties where land acquisition or easements would most likely be required for either the Project's construction or operation. The land area of each affected lot is identified with a preliminary level of acquisition (partial or full) with the acknowledgment that the level of acquisition is ultimately determined by completion of the HDOT right-of-way process.

The ultimate determination of the extent of the property acquisition is based on the right-of-way requirements of the anticipated final design as well as completion of the State's acquisition process in terms of property appraisal (including any condominium parcelization of a larger parcel), evaluation of residual value or use for remaining portions of a property, and negotiation with parcel owners. In some cases, negotiations with parcel owners could yield parcel acquisition extents that exceed the specific right of way required just to build the project due to various unforeseen circumstances. HDOT initiates the formal acquisition after completion of the NEPA and Hawai'i Environmental Policy Act reviews. Therefore, the final parcel acquisition program or disposition of residual parcels could require limited additional environmental review that would be determined in the future as needed. This could be limited to State actions subject to Section 343 compliance or a NEPA Reevaluation of this Final EIS and ROD.

5.4.2.2 Changes to Land Acquisition Requirements Resulting from Refinements to the Preferred Alternative or New Information

FIGURE 5-12 shows the Olowalu TMK parcels that would be affected by the refined Selected Alternative alignment, which would shift mauka by approximately 200 feet and would touch the makai edge of two lots previously not affected (TMKs 48003098 and 48003099). Each of these lots is about 15 acres, and the total area of required acquisition would be less than 0.6 acres, or around 3.5% to 4.4% of the total lot area, indicating that a partial acquisition would likely be required. These are undeveloped lots, and the extent of the required acquisition (partial or full) would be determined during the final design and in coordination with HDOT Right-of-Way specialists. One parcel (TMK 48003102) would no longer require any right-of-way acquisition.

In Ukumehame, there would be a small area of three TMK parcels (TMKs 48002075 and 48002091 along Ehehene Street and TMK 48002093 along Pōhaku 'Aeko Street) that would require acquisition to allow for the construction of the new intersections with the refined Selected Alternative (see FIGURE 5-13). The acquisition area for each of these lots is less than 0.06 acres and well less than

1% of the total lot area. This reflects a minor property acquisition, though the extent of the property acquisition requirements would be determined as part of the final design.

The land use status of a property that requires acquisition in Ukumehame (Parcel 48002115) has changed from vacant to an active sod farm based on public comment from the property owner. This would primarily change the valuation of the parcel as part of the future land acquisition process and may result in a change of status of applicability and conformance with the Uniform Act. The refinements to the Selected Alternative do not change the basic context of the Project’s alignment on the property with this new information.

FIGURE 5-12. **Change in Private TMK Parcels with Refined Preferred Alternative – Olowalu**

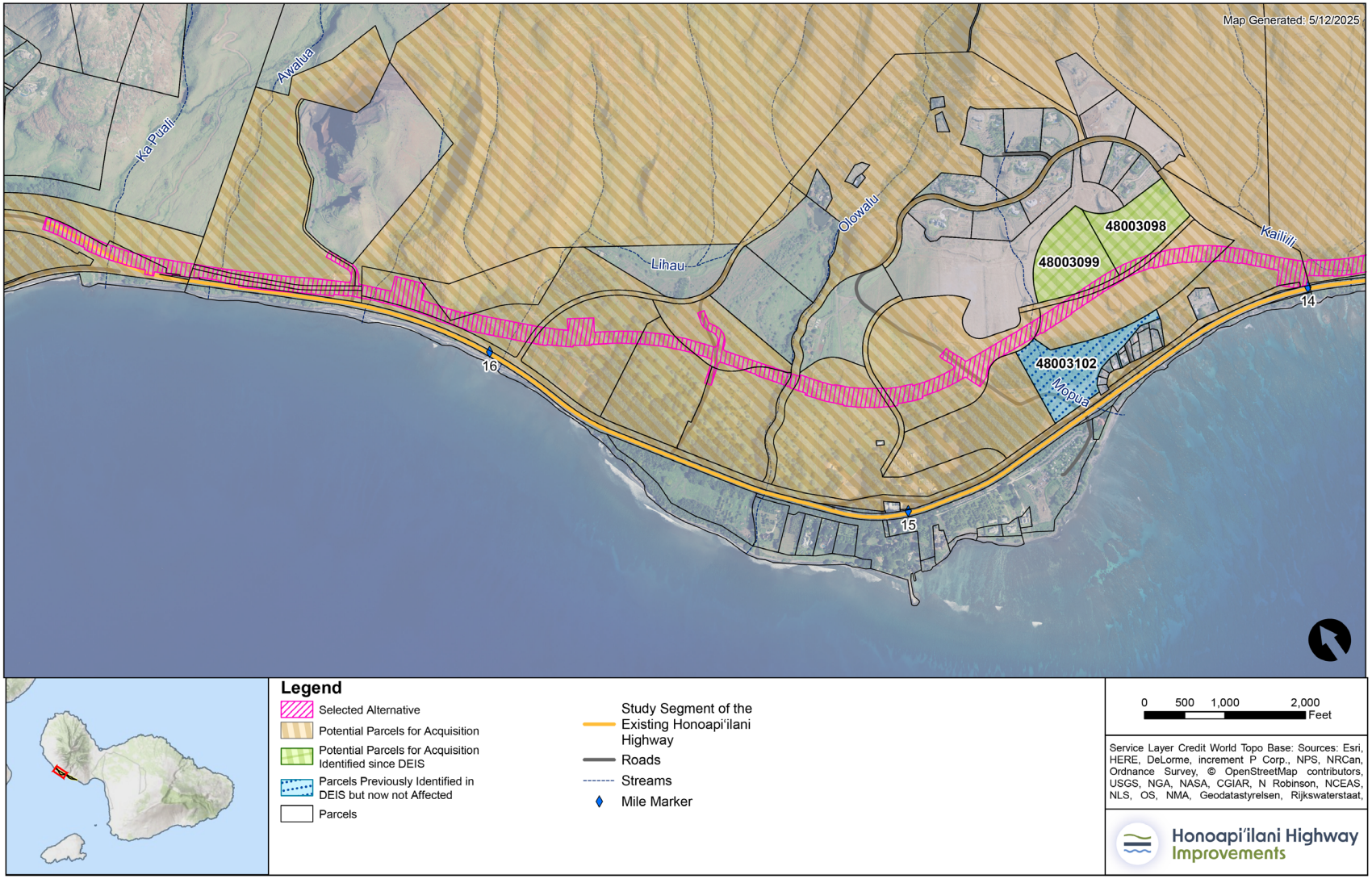
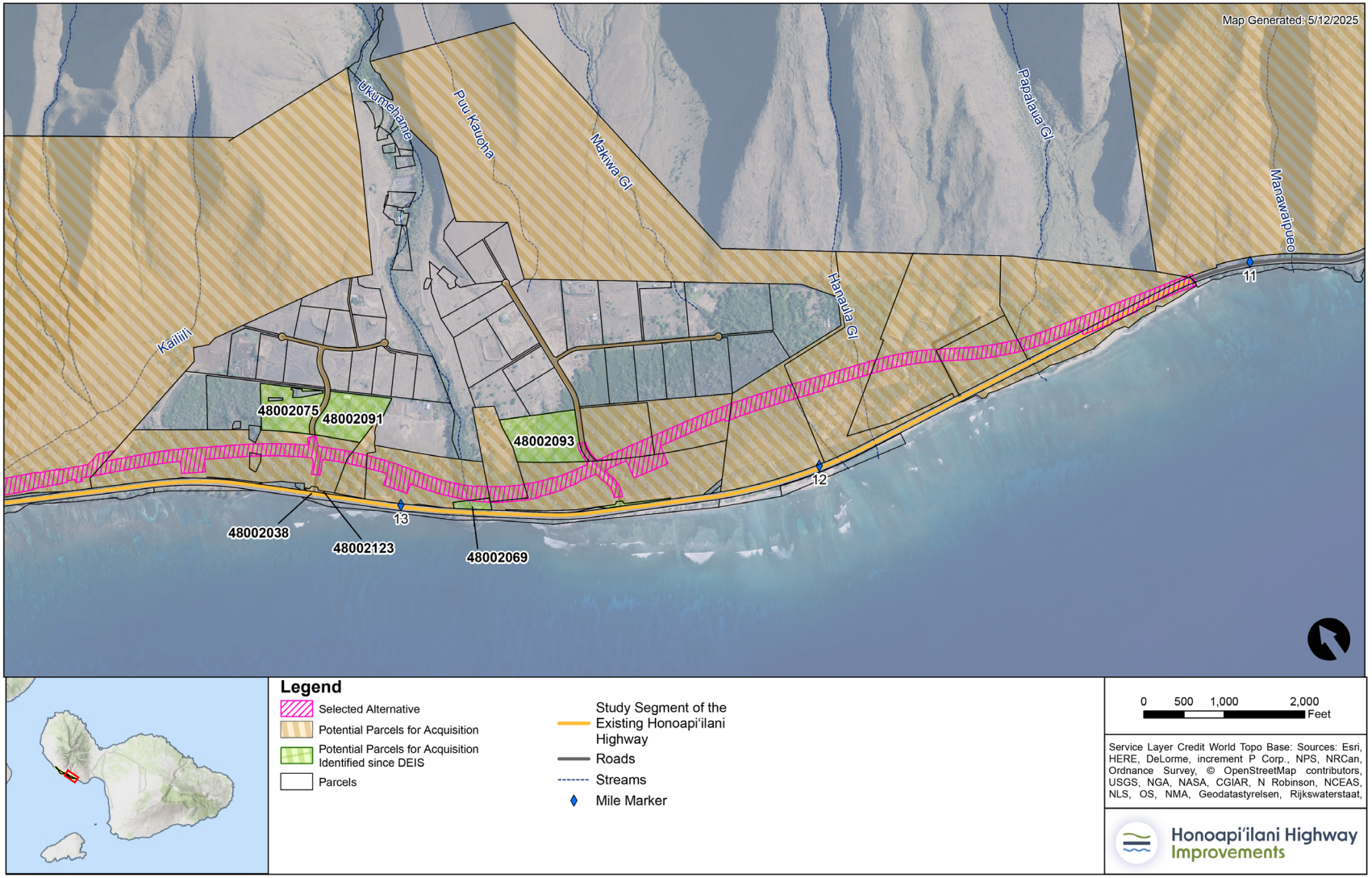


FIGURE 5-13. **Change in Private TMK Parcels with Refined Preferred Alternative – Ukumehame**



5.4.3 Archeological and Architectural Historic Resources

Refinements to the Selected Alternative (such as roadway realignment to avoid effects, addition of stormwater permanent BMPs) resulted in several locations where the Selected Alternative extended beyond the Draft EIS environmental survey limits. An additional environmental survey for archaeological and architectural resources was completed for these areas in March and April 2025 (see Appendix 3.6). Effects to architectural historic properties (identified in Chapter 3.6) were assessed based on the Selected Alternative and refinements thereto; FHWA determined the Project (the Selected Alternative) would result in no adverse effect on architectural historic properties and SHPO concurred with that determination in a letter dated August 13, 2025.

Appendix 3.6 of this Final EIS includes the Executed Programmatic Agreement, which provides the basis for future investigations and evaluation through the Archaeological Inventory Survey and mitigation of potential adverse effects on historic properties. The Programmatic Agreement also commits the Project to complete measures necessary to evaluate any areas of the final design which were not fully surveyed as part of the Draft or Final EIS; this work must be completed after NEPA but prior to construction. FHWA will assess the Project's effects on archaeological historic properties, and determine appropriate treatment measures to resolve any adverse effects, following completion of the Archaeological Inventory Survey and pursuant to the Programmatic Agreement.

5.4.3.1 Archeological Historic Resources

The March and April 2025 archaeological surveys identified three new potentially eligible archaeological resources in Olowalu within the Selected Alternative right-of-way. As presented in Appendix 3.6, these archaeological resources are documented in the *Addendum Archaeological Reconnaissance Report for the Honoapi'ilani Highway Realignment Project Ukumehame, Olowalu, and Launiupoko Ahupua'a, Lāhainā Moku, Lāhainā Modern Tax District, Maui Island*. Based on the refinement to the Selected Alternative as described in the Final EIS, TABLE 5-7 identifies the five previously identified archaeological historic resources and the three new potentially eligible archaeological resources (shown in bold), pending further investigation pursuant to the Programmatic Agreement. In Ukumehame, the supplemental survey from March and April 2025 found no new potentially eligible archaeological resources within the Selected Alternative, and the Selected Alternative continues to potentially affect five eligible archeological resources (see TABLE 5-8).

In summary, the Final EIS Selected Alternative reduces the number of eligible or potentially eligible archaeological resources that could be affected by the Project in comparison with the Draft EIS Preferred Alternative (Alternative 2 in Olowalu and Alternative 1 in Ukumehame).

In Olowalu, the Selected Alternative avoids potentially adverse effects on five of the 10 archaeological sites found to be potentially eligible in the Draft EIS. Three new archaeological resources were added from the March and April 2025 surveys for a total of eight archaeological resources with potential adverse effects. The Final EIS alignment changes also avoid and minimize effects to the most intact archaeological resources identified in the Draft EIS.

In Ukumehame, the Selected Alternative refinements reduce potential adverse effects from 22 archaeological resources to five archaeological resources.

5.4.3.2 Architectural Historic Resources

For architectural resources, the March and April 2025 survey work identified remnants of plantation-era irrigation infrastructure previously identified during the original architectural survey of the Area of Potential Effects. The March and April 2025 survey also identified remnants of a road segment in the northern portion of the study area between Olowalu and Launiupoko. This road segment was subsequently evaluated and determined not eligible. This evaluation is documented in the *Addendum Report to the Reconnaissance Level Architectural Historic Resource Survey (RLS) for the Honoapiʻilani Highway Improvements, West Maui, from Launiupoko to Ukumehame, Lāhainā District, Hawaiʻi* (Appendix 3.6) and was submitted to SHPD on June 3, 2025. The Selected Alternative will traverse through the Olowalu Sugar Plantation Historic District, although none of the contributing resources within the historic district or the three individually eligible architectural historic properties identified in the Draft EIS are adversely affected by the Selected Alternative.

FHWA assessed the Selected Alternative's effects on architectural historic properties and determined the Project would result in no adverse effect on the Olowalu Sugar Plantation Historic District and no effect on the remaining architectural historic properties, including the contributing resources within the historic district. FHWA submitted its determination to SHPO in a letter dated August 8, 2025, and SHPO concurred with FHWA's determination in a letter dated August 13, 2025. These letters are included in Appendix 3.6.

TABLE 5-7. **Archaeological Resources with Potential Effects with the Preferred Alternative - Olowalu Segment (including Launiupoko)**

AHUPUAʻA	SURVEY NO.	FORMAL TYPE
Olowalu	AA2216-023	Alignment, C-shape, Enclosure, Mound, Terrace
Olowalu	AA2216-028	Wall, Fenceline
Olowalu	AA2216-106	Terraces, Circular Alignments, Small Semi-Circular Terraces, Enclosures
Olowalu	AA2216-107	Alignment, C- Shape, Enclosure, Modified Outcrop, Terrace
Olowalu	**AA2216-111**	**Surface Scatter**
Olowalu	**AA2216-115**	**Surface Scatter**
Olowalu	**AA2216-116**	**Surface Scatter**
Olowalu	SIHP -04700	Rock Shelters, C-shape, Wall

Note: **Bold** text reflects information added based on March 2025 Survey

TABLE 5-8. **Archaeological Resources with Potential Effects with the Preferred Alternative – Ukumehame Segment**

AHUPUAʻA	SURVEY NO.	FORMAL TYPE
Ukumehame	AA2216-017	Surface Scatter
Ukumehame	AA2216-018	Surface Scatter
Ukumehame	AA2216-022	Stone Well
Ukumehame	AA2216-072	Enclosure, Mound, Wall
Ukumehame	AA2216-091	Surface Scatter

5.4.4 Water Resources, Wetlands, and Floodplains

Additional environmental surveys for water resources and wetlands were completed in April 2025 to account for the several locations where the Selected Alternative extended beyond Draft EIS environmental survey limits. The addendum surveys identified an expansion of the previously delineated wetland within the Selected Alternative’s viaduct footprint near the Ukumehame Firing Range, and a previously un-delineated ditch just mauka of the existing highway through the common alignment area between Olowalu and Ukumehame. This additional wetland resulted in a slight increase in total wetlands within the project area and in potential wetland effects where viaduct piers may be placed. The additional ditch resulted in a slight increase in total water resources within the project area and in potential effects to waterways where permanent BMPs may be located. These findings are not anticipated to modify future Section 404 permitting requirements for the project as presented in the Draft EIS.

5.4.5 Flora and Fauna, Endangered Species

Addendum environmental surveys for flora and fauna and Threatened and Endangered Species were completed in April 2025 to account for the several locations where the Selected Alternative extended beyond Draft EIS environmental survey limits. The addendum surveys did not observe any of the ESA-protected endangered plant taxa or endangered fauna species (including nēnē and aeʻo) that the Draft EIS noted may occur in the study area. The survey also did not observe any associated critical habitats.

The refinements to the Selected Alternative do not alter the impact assessment as provided in the Draft EIS because the slight adjustments to the alignment do not change the Project’s basic routing in the context of observed Threatened and Endangered species and potential habitat.

In response to U.S. Fish and Wildlife Service concerns regarding the nēnē and aeʻo, Endangered Species Act Section 7 consultation was completed and the Service has issued a Biological Opinion for the project (see Appendix 3.10).

5.4.6 Transportation

The refinements to the Selected Alternative do not change the overall results of the Draft EIS transportation analyses, which found that the Project would result in a road with improved regional reliability, improved levels of service and delays, and reduce accident rates. Further, the Project would continue to provide local access to residences, businesses, and parks via the existing highway.

Final EIS refinements would further improve transportation infrastructure in the project area by adding a second signalized intersection. The refined Selected Alternative would incorporate a dedicated shared-use pathway, which would provide additional multimodal options along the corridor in combination with anticipated future construction of the West Maui Greenway to be located along the existing highway. Based on comments on the Draft EIS, HDOT will also consider the option of adding a segment of passing lanes along a portion of the Selected Alternative which would have no adverse effects on traffic operations and does not require additional highway right-of-way.

5.4.7 Noise

The Final EIS refinements to the Selected Alternative resulted in slight adjustments to the alignment, most notably in Olowalu near Luawai Street, where the alignment is slightly more mauka, and in Ukumehame, where the alignment is slightly more makai in the area of the Ukumehame Stream and Pōhaku ‘Aeko Street. These alignment shifts have a modest change in modeled noise levels, and in no instance does the change result in noise levels that are considered an adverse increase of 15 dBA or more or in noise levels above the established threshold of 66 dBA (Chapter 3.16 provides a detailed explanation of noise criteria and impact methodologies). TABLE 5-9 presents a comparison of the noise level results for the Preferred Alternative in the Draft EIS and Selected Alternative in this Final EIS (and includes the new residences identified between the Draft and Final EIS).

In Ukumehame, all but one of the originally modeled sites have a slight reduction in noise levels based on the refinements to the Selected Alternative. The one location where the increment is higher is at Pāpalaua Wayside Park, where the Selected Alternative is still anticipated to have a net reduction in worst-case noise levels.

In Olowalu, the majority of the sites experience a slight decrease in noise levels. Where the alignment is slightly mauka of the Draft EIS Preferred Alternative, there are several small incremental increases associated with the refined alignment. Overall, the noise increases and noise levels remain well below threshold levels that indicate an adverse effect.

TABLE 5-9. **Predicted Existing and Future Build Worst-Hour Traffic Noise Levels (Leq dBA[4])**

SITE ID	LOCATION/DESCRIPTION	MODELED EXISTING 2023 WORST-HOUR LEQ, DBA	MODELED DRAFT EIS PREFERRED ALT 2045 WORST-HOUR LEQ, DBA	LEQ, DBA INCREASE (+) OR DECREASE (-)	MODELED FINAL EIS REFINED SELECTED ALT 2045 WORST-HOUR LEQ, DBA	LEQ, DBA INCREASE (+) OR DECREASE (-)	CHANGE DRAFT EIS TO FINAL EIS	IMPACT TYPE (S, A/E, OR NONE)
Ukumehame								
M1	Pāpalaua Wayside Park	60	52	-8	57	-3	4	None
M2	Ukumehame Beach Park	62	49	-13	47	-15	-2	None
M3	Ukumehame Firing Range	46	55	9	56	10	1	None
M4	Residence at Paeki'i Pl.	41	45	4	43	2	-2	None
M5	Residence at Pōhaku 'Aeko St.	41	43	2	42	1	-1	None
M6	SOD Farm at Ehehene St.	46	51	5	50	4	-1	None
M7	Residence at Ehehene St.	44	45	1	45	1	0	None
M8	Residence beyond Ehehene St.	39	40	1	40	1	0	None
M9	Ukumehame Cultural Sites	38	39	1	38	0	-1	None
M61	Residence - north end Ehehene St.	42	44	2	44	2	0	None
M62	Residence - Ukumehame Stream	51	57	6	55	4	-2	None
M63	Residence at Pōhaku 'Aeko St.	49	56	7	54	5	-2	None
M64	Residence at Pōhaku 'Aeko St.	46	52	6	50	4	-2	None
M65	Residence at Pōhaku 'Aeko St.	44	48	4	47	3	-1	None
M66	Residence at Pōhaku 'Aeko St.	43	46	3	45	2	-1	None
Olowalu								
M10	Olowalu Lanakila Hawaiian Church	56	53	-3	52	-4	-1	None
M11	Residence at Olowalu Village Rd.	54	53	-1	50	-4	-3	None
M12	Residence at Olowalu Village Rd.	59	50	-9	48	-11	-2	None
M13	Residence at Olowalu Village Rd.	58	50	-8	48	-10	-2	None
M14	Residence at Olowalu Village Rd.	57	51	-6	49	-8	-2	None

[4] Leq = Equivalent Continuous Sound Level), dBA = A-weighted decibels

SITE ID	LOCATION/DESCRIPTION	MODELED EXISTING 2023 WORST-HOUR LEQ, DBA	MODELED DRAFT EIS PREFERRED ALT 2045 WORST-HOUR LEQ, DBA	LEQ, DBA INCREASE (+) OR DECREASE (-)	MODELED FINAL EIS REFINED SELECTED ALT 2045 WORST-HOUR LEQ, DBA	LEQ, DBA INCREASE (+) OR DECREASE (-)	CHANGE DRAFT EIS TO FINAL EIS	IMPACT TYPE (S, A/E, OR NONE)
M15	Residence at Olowalu Village Rd.	57	51	-6	49	-8	-2	None
M16	Residence at Olowalu Village Rd.	57	51	-6	49	-8	-2	None
M17	Residence at Olowalu Village Rd.	60	51	-9	48	-12	-3	None
M18	Residence at Olowalu Village Rd.	54	52	-2	50	-4	-2	None
M19	Residence at Olowalu Village Rd.	55	51	-4	49	-6	-2	None
M20	Residence at Olowalu Village Rd.	53	52	-1	50	-3	-2	None
M21	Residence at Olowalu Village Rd.	53	53	0	50	-3	-3	None
M22	Residence at Olowalu Village Rd.	60	50	-10	49	-11	-1	None
M23	Olowalu Beach	50	46	-4	46	-4	0	None
M24	Camp Olowalu	56	49	-7	48	-8	-1	None
M25	Residence at Olowalu Village Rd.	48	44	-4	44	-4	0	None
M26	Residence at Olowalu Village Rd.	48	45	-3	45	-3	0	None
M27	Residence at Olowalu Village Rd.	49	45	-4	44	-5	-1	None
M28	Olowalu Landing	47	44	-3	43	-4	-1	None
M29	Commercial – Plantation House	48	44	-4	43	-5	-1	None
M30	Residence at Kuahulu Pl.	51	45	-6	44	-7	-1	None
M31	Residence at Kuahulu Pl.	49	45	-4	44	-5	-1	None
M32	Residence at Kuahulu Pl.	48	45	-3	44	-4	-1	None
M33	Commercial – Leoda's	66	55	-11	55	-11	0	None
M34	Residence/Commercial – Store	65	54	-11	54	-11	0	None
M35	Commercial –Maui Butterfly Farm	65	53	-12	53	-12	0	None
M36	Commercial – Olowalu Juice Stand	69	58	-11	58	-11	0	None
M37	Residence at Luawai St.	41	44	3	47	6	3	None
M38	Residence at Luawai St.	43	47	4	50	7	3	None

SITE ID	LOCATION/DESCRIPTION	MODELED EXISTING 2023 WORST-HOUR LEQ, DBA	MODELED DRAFT EIS PREFERRED ALT 2045 WORST-HOUR LEQ, DBA	LEQ, DBA INCREASE (+) OR DECREASE (-)	MODELED FINAL EIS REFINED SELECTED ALT 2045 WORST-HOUR LEQ, DBA	LEQ, DBA INCREASE (+) OR DECREASE (-)	CHANGE DRAFT EIS TO FINAL EIS	IMPACT TYPE (S, A/E, OR NONE)
M39	Residence at Luawai St.	43	46	3	50	7	4	None
M40	Residence at Luawai St.	43	46	3	49	6	3	None
M41	Residence at Luawai St.	42	47	5	49	7	2	None
M42	Residence at Luawai St.	43	46	3	49	6	3	None
M43	Residence at Luawai St.	43	46	3	49	6	3	None
M44	Residence at Luawai St.	42	46	4	47	5	1	None
M45	Residence at Luawai St.	41	43	2	44	3	1	None
M46	Residence at Kalai Pl.	41	43	2	47	2	0	None
M47	Residence at Kalai Pl.	41	43	2	45	4	2	None
M48	Residence at Kalai Pl.	43	45	2	48	5	3	None
M49	Residence at Luawai St.	42	44	2	47	5	3	None
M50	Residence at Luawai St.	42	45	3	49	7	4	None
M51	Residence at Kalai Pl.	41	43	2	43	2	0	None
M52	Residence at Kalai Pl.	40	43	3	43	3	0	None
M53	Olowalu Cultural Reserve	35	39	4	41	6	2	None
M54	Residence at Luawai St.	36	40	4	40	4	0	None
M55	Olowalu Petroglyphs	36	41	5	41	5	0	None
M56	Residence at Luawai St.	41	53	12	52	11	-1	None
M57	Residence at Luawai St.	41	54	13	54	13	0	None
M58	Awalua Cemetery	46	51	5	50	4	-1	None
M59	Commercial – Paintball	49	53	4	52	3	-1	None
M60	Residence at Olowalu Village Rd	45	51	6	51	6	0	None

5.5 ENVIRONMENTAL COMMITMENTS AND MITIGATION FOR THE PREFERRED ALTERNATIVE[5]

This section provides a complete summary of the anticipated environmental commitments and mitigation identified in the technical analyses of the Final and Draft EIS. Consistent with 23 CFR 771.105(e), these measures are based on consultation with resource agencies, built from HDOT policies and best practices, and identified based on the impact assessment. Combined with the benefits of the Selected Alternative, these commitments ensure that the Project would provide the best opportunity to minimize, avoid, and mitigate adverse effects to the extent practicable. (TABLE 5-10).

[5] This section is fully revised text for the Final EIS. For ease of reading, the new text is not double underlined

TABLE 5-10. **Environmental Commitments and Mitigation Measures**

TECHNICAL AREA	ENVIRONMENTAL COMMITMENTS
Land Use/Land Acquisition	HDOT will continue to consult with property owners and business tenants to ensure the following: • Continued access to land parcels is maintained during construction and once Project is complete to the extent practicable • Adhere to the applicable process requirements of the Uniform Standards of Professional Appraisal Practice, the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, the Hawai'i State Eminent Domain Law, and the Hawai'i Revised Statues, Title 12 Chapter 171; and • For extended right-of-way acquisitions, conduct supplemental environmental assessment (if necessary).
Archaeological and Historic Resources	• HDOT will implement all stipulations specified in the Project's Section 106 Programmatic Agreement. The Programmatic Agreement provides treatment measures to avoid, minimize, and mitigate adverse effects to historic properties; provides protocols for continued consultation during project implementation; and describes processes for project changes and unanticipated discoveries.[6] • The Programmatic Agreement includes: roles and responsibilities of signatories (Stipulation I); qualifications for individuals completing work pursuant to the Programmatic Agreement (Stipulation II); Identification and evaluation of historic properties, process, surveys, reviews, and consultation requirements (Stipulation III); Archaeological Inventory Survey (AIS) plan, investigations, reporting and consultation requirements for subsurface archaeological surveys (Stipulation IV); assessment of effects on identified historic properties and seeking ways to avoid, minimize, or mitigate adverse effects through consultation (Stipulation V); proposed treatment measures to resolve adverse effects on historic properties (Stipulation VI); consultation with Native Hawaiians and consulting parties (Stipulation VII); changes in project scope (Stipulation VIII); post review discoveries of architectural and archaeological historic properties as well as burials and human remains, and required consultation and reporting requirements (Stipulation IX); and, administrative provisions covering confidentiality, Programmatic Agreement annual reporting, dispute resolution, amendments to the Programmatic Agreement, termination of the Programmatic Agreement, and Programmatic Agreement duration (Stipulations X through XV). • The HRS § 6E Memorandum of the Programmatic Agreement includes: roles and responsibilities of HDOT, FHWA, and SHPD; qualifications for individuals completing work pursuant to HRS § 6E; consultation requirements; inadvertent effects to known historic properties within the right-of-way; identification and evaluation of historic properties, including a phased archaeological inventory survey; determining effects to historic properties under HRS § 6E; mitigation options for effects to significant historic properties including preservation (avoidance), data recovery, access and stewardship; and, archaeological monitoring, cultural monitoring, pre-construction training, unanticipated discoveries and effects on significant historic properties, and burials and iwi kupuna.
Cultural Resources	• HDOT will implement all stipulations specified in the Project's Section 106 Programmatic Agreement. • HDOT will continue consultation with the FHWA, the State Historic Preservation Division, and Consulting Parties for final design and though construction. • As a part of the public outreach during construction, HDOT will notify the local communities who depend on stream water and marine resources at the muliwai (stream mouth) regarding the onset and status of construction activities. • HDOT and the FHWA will commit to continued dialogue with the community throughout the design process and up through completion of construction for the purposes of (1) obtaining more information about the cultural practices and history of the area and (2) mitigating any impacts the Project's design, construction, or both may have on those practices. This effort will be memorialized as a Continued Community Dialogue Plan in a Programmatic Agreement prepared pursuant to the National Historic Preservation Act Section 106 process. The Continued Community Dialogue Plan will describe details and manage logistics of the continued community engagement. • HDOT will include language in the design build agreement requiring the selected contractor to provide a culturally focused training program prior to fieldwork. This will be in addition to any standard safety or project-related training in the procurement notice. • HDOT will include language in the procurement notice and design build agreement requiring that the selected contractor provide a cultural monitoring program including pre-construction awareness training led by HDOT's lead archaeologist, archaeological monitors, and cultural monitors for anyone with access to the construction site, including all laborers, skilled construction workers, vehicle operators, management, and visitors. • HDOT will require the selected contractor to develop and commit to a construction cultural monitoring plan that is compliant with HAR § 13-279 • <u>To protect natural resources associated with Native Hawaiian cultural practices, HDOT will provide funding for annual water quality monitoring connected to Ukumehame and Olowalu Reefs, as well as Ukumehame and Olowalu Streams. Monitoring will be managed by HDOT, conducted by qualified water quality specialists, will start no later than one year prior to the start of physical roadway construction, and have a duration of at least three years.</u>
Visual and Scenic Character	HDOT commits to completing the following items to minimize visual prominence: • Shield streetlights to direct light to roadway surfaces, minimize light spill to surrounding areas, and minimize light and glare impacts, particularly where visible from the Olowalu Petroglyphs (HDOT would identify such areas, as needed, on construction plans); and • Provide or expand opaque fencing and visual screening for adjacent residential and commercial viewers as a part of final design (if applicable). HDOT commits to completing the following items during construction: • Preserve existing vegetation and minimize clearing for storage and laydown areas, using existing hard/paved areas for project staging where practical; • Restore landscaping disturbed by construction-related activities after completion of work; • Limit construction to daylight hours whenever possible;

[6] The Programmatic Agreement and HRS 6E Memorandum are included as part of this Final EIS and establish required procedures during development of the final design and throughout construction of the Project.

TECHNICAL AREA	ENVIRONMENTAL COMMITMENTS
	• Include directional work and safety lighting and direct lights away from residential areas where nighttime construction is necessary; • Reduce temporary construction light and glare impacts by shielding and aiming light sources downward and toward work areas to avoid light spillover; and • Screen views of construction equipment and materials from pedestrians and residential areas, as practical.
Water Resources	• HDOT will comply with National Pollutant Discharge Elimination System General Permit • If required with an individual permit, HDOT would prepare a Stormwater Pollution Prevention Plan • If necessary and prior to ground disturbance, HDOT will obtain and comply with Clean Water Act Section 404 permits for water crossings that would discharge dredge or fill material into Waters of the U.S. • If necessary, HDOT will obtain a Section 401 Water Quality Certification • HDOT will obtain and comply with Stream Channel Alteration Permit for each occurrence where activities occur within a streambed or on the banks below the ordinary high-water mark. • HDOT will ensure the Contractor adheres to HDOT Construction Best Management Practices Field Manual (January 2008) or superseding manual. • HDOT will ensure the Contractor adheres to HDOT Storm Water Post-Construction Best Management Practices Manual (February 2022) • HDOT will ensure the Contractor adheres to the HDOT Standard Specifications for Road and Bridge Construction, Section 209 Temporary Water Pollution, Dust, and Erosion Control • HDOT will monitor for construction work that may impact water resources important to traditional and customary practices • Contractor will prioritize previously disturbed and bare areas for use as staging and lay-down yards, disposal and borrow sites, and concrete batch plants • Contractor shall protect project construction-related materials from erosion (for example, with filter fabric) to prevent materials from being carried into waters by wind, rain, or high surf • All deliberately exposed soil or under-layer materials used in the Project near water shall be protected from erosion and stabilized by the Contractor as soon as possible with geotextile, filter fabric, or native vegetation matting, hydroseeding, or something similar • Contractor will minimize disturbances to stream banks. Seek to maintain baseline water flow volume and velocity within the system • Concrete wastes, solid wastes, and any sanitary/septic wastes will be located away from and managed by the Contractor to ensure there will be no contamination to ocean or critical habitats • Site-specific stormwater Best Management Practices would be implemented and/or installed at the staging and work areas by the Contractor to prevent water quality degradation associated with stormwater runoff. • Contractor shall enact stormwater Best Management Practices such as maintaining equipment in good working order, storing equipment and materials away from the ocean or stream bank with strategic placement of absorbent material, such as fiber rolls, as a buffer between equipment and nearby waterbodies. • Contractor will maintain drip pans beneath construction equipment. • Contractor will prevent any debris from falling into the water. • Stockpiling, storage, and equipment staging by the Contractor will utilize appropriate Best Management Practices to prevent potential surface runoff from entering the stream. No stockpiling, storage, or heavy equipment will be placed in the streams. • Turbidity and sediment from project-related work will be minimized and contained to the immediate vicinity of the Project by the Contractor through the appropriate use of effective sediment containment devices and the curtailment of work during adverse tidal and weather conditions. • All silt fences, curtains, and other structures will be installed properly by the Contractor and maintained in a functioning manner for the life of the construction period by the Contractor and until the impact area is permanently stabilized, self-sustaining, and/or turbidity levels, elevated due to construction, return to ambient levels. • Contractor will install sediment, turbidity, and/or pneumatic curtains, and use real-time monitoring (automated or manual) to detect failure and implement stop-work processes if predetermined project thresholds are reached (use standards from Clean Water Act 401 water quality certification). In areas of soft sediment, Contractor will consider partial length turbidity curtains to reduce resuspension of sediment during high winds and currents. • Contractor will maintain baseline water flow, volume, and velocity of the waterbody. • Contractor will use natural or bio-engineered solutions when feasible. • Contractor will fully stabilize disturbed upland areas prior to removing silt fences and erosion prevention measures. • Temporary fills must be removed in their entirety by the Contractor and the affected areas returned to pre-construction conditions and elevations by the Contractor. • Contractor will minimize disturbances to stream banks, and place abutments outside of the floodplain whenever possible. • Contractor will design the structure to maintain or replicate natural stream channel and flow conditions to the greatest extent practicable. • Contractor will revegetate shoreline areas with appropriate native species and fully stabilize disturbed upland areas prior to removing silt fences and erosion prevention measures. • For anticipated stream crossings, Contractor will remove all temporary structures at the completion of in-water work. • For anticipated stream crossings, Contractor will not stockpile or stage materials in the marine environment unless necessary. • Contractor is not authorized to use treated wood for in-water work.
Flora and Fauna	• Contractor will prepare a construction lighting plan for HDOT approval prior to start of construction

TECHNICAL AREA	ENVIRONMENTAL COMMITMENTS
Flora and Fauna (continued)	• All permanent lighting by the Contractor will adhere to the 2022 Maui Dark Skies Ordinance 5434. • The Contractor will utilize DLNR seabird-friendly light styles for all permanent lighting design. • Night work by the Contractor is not allowed during the sea turtle nesting/hatching and seabird fledgling period (May 1 – December 15). • Contractor design of bridge, culvert, and viaduct structures will avoid fill to wetland habitats. • Contractor will, in coordination with and approved by HDOT, avoid placing staging areas in or directly adjacent to delineated wetland habitat and streambanks to avoid and minimize adverse effects to habitat that may support listed waterbirds and nēnē. • Drilled shaft foundations will be used by the Contractor for pier bents, as appropriate, to minimize potential construction-related noise and vibrations. • Fueling of project-related vehicles and equipment by Contractor shall take place at least 50 feet, or the maximum distance possible, away from the aquatic environment and within a containment area, preferably over an impervious surface. A contingency plan will be prepared by the Contractor for HDOT approval prior to start of construction to control petroleum products accidentally spilled during the Project. The plan shall be retained on-site by the Contractor with the person responsible for its compliance. Absorbent pads and containment booms shall be stored on-site by the Contractor to facilitate the clean-up of accidental petroleum releases. • All vehicles and equipment cleaning, maintenance, and refueling done by the HDOT or the Contractor will be located away from and managed to assure no contamination to critical habitats. Notably, there is no critical habitat in the project area. • Contractor's project manager or heavy equipment operators will perform daily pre-work equipment inspections for leaks. Detection of leaks will result in postponing or halting the use of heavy equipment until the leak is repaired and the equipment cleaned. • Contractor's worksite will have sufficient materials to contain and clean possible spills. • Contractor's equipment storage will occur in an appropriate staging area designed to prevent unexpected spills when equipment is not in use or during fueling. • HDOT and FHWA will ensure that a monitoring plan developed by the Contractor prior to start of construction identifies the methods, equipment, communication, and all necessary measures to adequately observe ESA-listed species in the affected areas and communicate with workers. • Contractor will ensure that trained competent observers are exclusively looking for ESA-listed marine species at the work site during active construction adjacent to marine habitat and not assigned to other tasks – Trained competent observers shall report to the Contractor when motile ESA-listed marine species are within 50 meters (54.7 yards, 164 feet) of the proposed work and halt work and shall only begin/resume after the animals have voluntarily departed the area. – If Hawaiian green sea turtle, Hawksbill sea turtle, or Hawaiian monk seal are noticed in the area after work has already begun, that work may continue only if, in the best judgment of the Contractor's project supervisor, there is no way for the activity to adversely affect the animal(s) – Contractor will ensure that project-related personnel will NOT attempt to disturb, touch, ride, feed, or otherwise intentionally interact with any protected species. • Contractor will incorporate permanent highly visible signs placed along the new Honoapi'ilani Highway through Ukumehame during construction and operation of the new roadway. These signs would alert workers and drivers to the presence of listed birds known to be in the area to reduce the chance of vehicle collisions. • Contractor will also secure all temporary structures to avoid them blowing over during heavy winds and hitting listed bird species. • Speed limits of 15 miles per hour (mph) on active const ruction roadways within the project site will be posted by HDOT through the Olowalu area and 10 mph within the Ukumehame area. These speed limits are applicable to all construction access roads within the Project Area and do not apply to the existing Honoapi'ilani Highway alignment. All construction personnel including contractors, cultural monitors, and subcontractors shall adhere to the posted speed limits at all times. • Contractor will ensure that prior to the initial clearing and grubbing phase of the Project, the State's qualified biologist would be on-site to perform visual surveys for listed species and nests. Should individuals or nests be observed, then species specific buffers and protocol would apply. • Contractor will ensure that the State's qualified biologist would be on-call throughout the duration of construction to assist in monitoring, surveys, and in an advisory capacity. • Contractor will ensure that prior to the start of any construction activities, a qualified biologist would produce a handout on listed species that occur within the Action Area and present a mandatory Environmental Awareness Program (developed by HDOT) to on-site personnel, including contractors, contractor's employees, supervisors, inspectors, and all subcontractors that educates Project personnel about the presence of endangered species on-site and associated avoidance and minimization measures. • A list of Environmental Awareness Program attendees will be produced by the Contractor to ensure comprehensive compliance. A hard-hat sticker will be produced by the Contractor to display completion of HDOT's Environmental Awareness Program. • HDOT's Environmental Awareness Program will contain, at minimum, information concerning the biology and distribution of Hawaiian geese, Hawaiian stilt, Hawaiian coot, and Least Terns including recognition of various behaviors, such as nesting, breeding, and molting; their occurrence in the area; measures to avoid impacts; and procedures to follow if encounters with these species occur. • HDOT's Environmental Awareness Program will also have information on invasive species and predator species including Best Management Practices to reduce the likelihood of predators being attracted to the construction footprint. • HDOT will contact the U.S. Fish and Wildlife Service to review the awareness program prior to the Contractor administering to on-site personnel. The State's qualified on-call biologist will be present on-site once every three weeks, or as needed, to provide training to new on-site personnel. • No portable jobsite radios or other music equipment shall be used within the construction footprint at anytime and enforced by the Contractor.

TECHNICAL AREA	ENVIRONMENTAL COMMITMENTS
Flora and Fauna (continued)	• Feeding any wildlife or feral cats shall be prohibited in all active work areas and enforced by Contractor-dedicated personnel during daily monitoring. • Contractor shall maintain and require a copy of the approved Biological Assessment and the approved Biological Opinion in the on-site construction office. • Following initial clearing and grubbing phases, if any ESA-listed species is observed the State's on-call biologist will be contacted by the Contractor to evaluate and advise on next steps in accordance with the Biological Opinion. • If nēnē or aeʻo (or other listed species) become injured in the Action Area, Contractor's on-site staff will contact the State's on-call biologist immediately who will arrange for the bird(s) (or other listed animal species) to be picked up by the Division of Forestry and Wildlife and provide guidance on temporary handling prior to Division of Forestry and Wildlife pickup. Injuries to listed animals (e.g., nēnē or aeʻo) resulting from project actions may require care from the Hawaiʻi Wildlife Center on the island of Hawaiʻi. Should transport to and care at the Hawaiʻi Wildlife Center be necessary, HDOT will provide funds to facilitate necessary and appropriate actions. – The State's on-call biologist will use the U.S. Fish and Wildlife Service Standard Operating Procedure for handling and transporting injured birds or other listed animal species. – The State's on-call biologist will complete the U.S. Fish and Wildlife Service Avian Injury/Mortality Form (Appendix D of the BO) and submit it to the U.S. Fish and Wildlife Service within 72 hours of the incident. • When engaging in activities that have a high risk of starting a wildfire—like welding in/near tall grass, the Contractor will wet down the area before starting the task, continuously wet down the area as needed, have a fire extinguisher on hand, and in the event that vision is impaired, (i.e. welding goggles) have a spotter to watch for fire ignitions. • Contractor will install permanent bird diversion poles along both sides of the viaduct. Poles will extend approximately 6 feet (1.8 meters) above the 54-inch (137 centimeters) rail and spaced approximately 12 feet (3.7 meters) apart, a maximum pole height of 9 feet above the 54-inch-tall rails will be applied, which corresponds to the typical height of a tractor trailer truck of 13.5 feet. With regard to the Hawaiian Hoary Bat: • To the greatest extent possible, large [> 15 foot tall (4.6m)] trees will be preserved in place by Contractor. If Contractor must remove large trees, they will be cut down outside of the bat birthing and pup rearing season of June 1 to September 15. • Neither HDOT nor the Contractor will use barbed wire for fencing With regard to the Hawaiian Goose (nēnē): • On-site workers will not approach, feed, or disturb Hawaiian geese, if observed in the project area, to be enforced by the Contractor. • Prior to the initial clearing and grubbing phase of the Project, the State's qualified biologist will be on-site to perform visual surveys for nēnē nests. Should individuals or nests be observed, then species specific buffers and protocol would apply. The State's on-call biologist shall be contacted by the contractor to repeat surveys within 72 hours of initial clearing and grubbing phase of the Project, and after any subsequent delay of work of 72 or more hours. • Whether during initial surveys prior to initiating work, after a delay of 72 hours or more, or in the middle of construction, if nēnē are observed loafing or foraging within the project area during the breeding season (September through April), a 150-ft (45.7 m) buffer will be established by the Contractor and maintained around the bird(s) and no work will occur within the buffer zone until the birds leave on their own. • If not already on site, the State's on-call biologist familiar with nēnē nesting behavior will be contacted by the contractor to survey for nests in and around the buffer zone prior to the resumption of any work in the area. • If a nest or active brood is discovered, the Contractor will immediately establish and maintain a 150-foot buffer around all active nests and/or broods until the chicks have fledged. No work would occur within this buffer: • The State's on-call biologist would be contacted by the Contractor, who would then contact the U.S. Fish and Wildlife Service and Division of Forestry and Wildlife within 48 hours upon discovery for further guidance. • The project site will be adequately signposted by HDOT with high-visibility signs alerting crew to the presence of Hawaiian geese in Ukumehame. • HDOT will install temporary signs that will be orange during construction and then permanent operating signs in yellow following protocols for warning signs in the Manual on Uniform Traffic Control Devices. • To prevent nesting, the State's on-call biologist (not construction crew) may perform hazing or other deterrent measures as long as such actions conform to the nēnē 4(d) rule (84 FR 69918; December 19, 2019, 50 CFR 17.41). Any hazing that occurs to nēnē must follow the 4(d) rule. The Contractor will maintain and require a copy of the 4(d) regulations on-site. • Work within 150 feet (45.7 meters) of a loafing or foraging Hawaiian goose can begin only after the birds have left on their own, to be enforced by the Contractor. With regard to the Hawaiian stilt (aeʻo) and Hawaiian coot: • Crew will not approach, feed, or disturb Hawaiian stilt or Hawaiian coot, if observed in the project area, to be enforced by the Contractor. • Prior to the initial clearing and grubbing phase of the Project, the State's on-call biologist familiar with the species' biology will perform visual surveys for Hawaiian waterbird nests where appropriate habitat occurs within the vicinity of the proposed project site (Ukumehame wetlands). Surveys will be repeated by the State's on-call biologist within 72 hours of initial clearing and grubbing phase of the Project and after any subsequent delay of work of 72 or more hours. If a nest or active brood is found at any time during the duration of the Project, the following measures would apply: • The State's on-call biologist will be contacted by the Contractor, who will then contact the U.S. Fish and Wildlife Service and Division of Forestry and Wildlife within 48 hours upon discovery for further guidance; • Contractor will immediately establish and maintain a 100-foot buffer around all active nests and/or broods until the chicks have fledged. No potentially disruptive activities or habitat alteration will be conducted within this buffer; and

TECHNICAL AREA	ENVIRONMENTAL COMMITMENTS
Flora and Fauna (continued)	• Contractor's biological monitor or State's on-call biologist that is familiar with the species' biology will be present on the project site during all construction or earth moving activities until the chicks fledge to ensure that Hawaiian waterbird and nests are not adversely impacted. • If a Hawaiian stilt or Hawaiian coot is observed exhibiting nesting behavior within the Action Area during the nesting season (mid-February to August), then the State's on-call biologist familiar with Hawaiian stilt or Hawaiian coot nesting behavior will be contacted by the Contractor to advise on next steps. • If observed after work has begun, work in the vicinity of a loafing or foraging Hawaiian stilt or Hawaiian coot can begin only after the birds have left on their own and a 100-foot buffer maintained by the contractor until that time. • Border slopes of the permanent Best Management Practices will be designed by the Contractor to have a slope greater than 6:1 to deter Hawaiian stilt or Hawaiian coot from nesting adjacent to the ponds. With regard to Hawaiian Ducks: • To the greatest extent possible, the Contractor will preserve suitable habitat such as wetlands, streams, and open water features in their natural condition. • Through the Environmental Awareness Program, the State's on-call biologist will inform project personnel and contractors about the potential presence of endangered species on-site. • HDOT will post and enforce speed limits in areas where waterbirds are known to be present. • Contractor will incorporate the U.S. Fish and Wildlife Service Best Management Practices for Work in Aquatic Environments into the project design. • If a nest or active brood is discovered, the Contractor will immediately establish and maintain a 100-foot buffer around all active nests and/or broods until the chicks have fledged. No work would occur within this buffer. • The State's on-call biologist will be contacted by the Contractor, who will then contact the U.S. Fish and Wildlife Service and Division of Forestry and Wildlife within 48 hours upon discovery for further guidance. With regard to Hawaiian Seabirds: • Night work will not be allowed during seabird fledgling periods (September 15 to December 15), to be enforced by the Contractor. • Should night work be required (outside of seabird fledgling periods and sea turtle nesting/hatching periods), then lighting will be configured by the Contractor to be "dark sky friendly," in compliance with Hawai'i Revised Statute § 201-8.5. These additional measures will be incorporated into the Project by the Contractor if night time work is required to avoid and minimize potential project effects to Hawaiian seabirds: • Contractor will fully shield all outdoor lights so the bulb can only be seen from below; • Contractor will install automatic motion sensor switches and controls on all outdoor lights or turn off lights when human activity is not occurring in the lighted area; and, • To avoid collisions for seabirds, where fences extend above vegetation, the Contractor will integrate three strands of polytape into the fence. For powerlines, guy-wires and other cables, the Contractor will minimize exposure above vegetation height and vertical profile as best as practicable. With regard to Sea Turtles: • There will be no vehicle use on or modification of the beach/dune environment during the sea turtle nesting or hatching season (May to December), to be enforced by the Contractor. Notably, there was no such habitat observed in the project area. • Contractor will not remove native dune vegetation. Prior to any dune vegetation removal, a botanist familiar with native species will be consulted to identify native dune vegetation. Notably, there was no dune vegetation observed in the project area. • Contractor will incorporate applicable best management practices regarding Work in Aquatic Environments into the project design. • Contractor will not stockpile project-related materials in the intertidal zone, reef flats, sandy beach and adjacent vegetated areas, or stream channels. Notably, there are no such resources observed in the project area. • Contractor will remove any project-related debris, trash, or equipment from the beach or dune daily, if not actively being used. Notably, there was no such habitat observed within the project area. • When mechanical or construction activities are performed directly adjacent to or on top of the existing Honoapi'ilani Highway, the Contractor will assign a competent observer who has undergone Environmental Awareness Program training to perform visual surveys for basking sea turtles. • If a basking sea turtle is observed within the project area, the Contractor will not permit mechanical or construction activities within 164 feet (50m) of the animal, and no such activities will be permitted in the area between the basking sea turtle and the ocean. Construction activities will not resume in such areas until the animal voluntarily leaves the area, to be enforced by the Contractor. • Night work will not be allowed by the Contractor during the sea turtle nesting/hatching period and seabird fledgling period (May 1 -December 15). • Should night work be required (outside of sea turtle nesting/hatching periods and seabird fledgling periods), then lighting will be configured by the Contractor to be "dark sky friendly," in compliance with Hawai'i Revised Statute § 201-8.5. These additional measures will be incorporated into the Project to avoid and minimize potential project effects to sea turtles: – Contractor will minimize the use of lighting on or near beaches and shield all project-related lights so the light is not visible from any beach; – If lights cannot be fully shielded or if headlights must be used, the Contractor will fully enclose the light source with light filtering tape or filters; – Contractor will reduce the height of exterior lighting to below 3 feet (0.9 meters) and point downward or away from the beach; and – Contractor will minimize light intensity to the lowest level feasible and, when possible, include timers and motion sensors. • Contractor will incorporate the following design measures into the construction or operation of buildings adjacent to the beach to reduce ambient outdoor lighting. Notably there will be no buildings constructed adjacent to the beach:

TECHNICAL AREA	ENVIRONMENTAL COMMITMENTS
Flora and Fauna (continued)	– Tinting or using automatic window shades for exterior windows that face the beach; – Reducing the height of exterior lighting to below 3 feet and pointed downward or away from the beach; and – Minimize light intensity to the lowest level feasible and, when possible, include timers and motion sensors. With regard to Blackburn’s Sphinx Moth: • The State’s biologist familiar with Blackburn’s Sphinx Moth will survey for the species and its larval host plants during the wettest portion of the year (November to April or several weeks after a significant rain) and within four to six weeks prior to construction. Surveys will include searches for eggs, larvae, and signs of larval feeding (chewed stems, frass, or leaf damage). • If moths, eggs, larvae, or native ‘aiea or tree tobacco over 3 feet tall, are found during the survey, then the State’s on-call biologist will be informed by the Contractor who would then inform the U.S. Fish and Wildlife Service within 48 hours for additional guidance. Sometimes the pupating larvae are less visible on mature plants and when uprooting the mature plant larvae could also dislodge and remain in the ground typically within 33 feet (10m) of the parent plant. In this scenario, the Contractor will create a 33-foot (10m), disturbance-free buffer where no work activities at all will be performed around the woody host plant to prevent disturbance to any pupating larvae. The plant roots will be removed by the Contractor with guidance from the State’s on-call biologist 90 days following the initial survey to prevent resprouting. • If no Blackburn’s Sphinx Moth, ‘aiea, or tree tobacco are found during survey, then the Contractor will take measures to ensure that tree tobacco plants do not establish in the project site. If tree tobacco grows more than 3 feet (0.9 meters) tall, it may become a host plant for Blackburn’s Sphinx Moth larvae, which can occur in as few as six weeks. Therefore, to ensure that tree tobacco does not get established in the project site, dedicated staff with prior completion of the State’s Environmental Awareness Program training and visual aids of tree tobacco at various life stages, will survey for tree tobacco every six weeks before, during, and after ground disturbing construction activities within a 33-foot (10 meters) buffer. If tree tobacco is found, the dedicated staff will remove and dispose of the pulled tree tobacco per guidance provided by the State’s on-call biologist. With regard to Assimulans Yellow-faced Bee: • If yellow-faced bee nests are observed by the State’s on-call biologist during pre-construction surveys, the State’s on-call biologist will contact the U.S. Fish and Wildlife Service for further guidance. • If any ground disturbing activities will occur in or adjacent to known occupied habitat (on the beach or makai side of the highway), a buffer area around the habitat will be required and determined on a site-specific basis through consultation with the U.S. Fish and Wildlife Service. Contractor will inform HDOT who will consult the U.S. Fish and Wildlife Service for this site-specific buffer area. • Contractor will not collect wood nor have any fires. • Contractor will restrict vehicles to existing and temporary construction roads and trails. • Following completion of the Environmental Awareness Program training, the Contractor will post educational signs to inform people of the presence of sensitive species. The Project will implement the following Reasonable and Prudent Measures to minimize the potential for injury and mortality of nēnē and ae‘o during project activities, as listed in the Biological Opinion (See Appendix 3): • The State’s on-call biologist will be notified by telephone and email immediately by the Contractor upon the discovery of an injured or dead nēnē or ae‘o in the Action Area. • The State’s on-call biologist will arrange for the bird(s) (or other listed animal species) to be picked up by the Division of Forestry and Wildlife and provide guidance on temporary handling prior to Division of Forestry and Wildlife pickup. • The State’s on-call biologist will use the U.S. Fish and Wildlife Service Standard Operating Procedure for handling and transporting injured birds or other listed animal species. • The State’s on-call biologist will provide the Pacific Islands Fish and Wildlife Office with a written notification using the Avian Injury/Mortality Form in Appendix D of the Biological Opinion, summarizing the event, within 3 calendar days and will contact and arrange for care from the Hawai‘i Wildlife Center or other permitted rehabilitation facility for any injured bird. • Should transport to and care at the Hawai‘i Wildlife Center or other permitted rehabilitation facility be necessary, HDOT will provide funds to facilitate necessary and appropriate actions. Care must be taken in handling any dead or injured specimens of proposed or listed species to preserve biological material in the best possible state. • In conjunction with the preservation of any dead specimens, the finder has the responsibility to ensure that evidence intrinsic to determining the cause of death of the specimen is not unnecessarily disturbed. The finding of dead or injured specimens does not imply enforcement proceedings pursuant to the Endangered Species Act. • FHWA shall submit an annual report, to be drafted by HDOT in coordination with the Contractor, to the Pacific Islands Fish and Wildlife Office within 45 calendar days after each year-end in which Project actions occur. This reporting requirement enables the U.S. Fish and Wildlife Service to determine if take has been reached or exceeded and to ensure that the terms and conditions are appropriate and effective. – Annual reports will include all nēnē hazing activities, including the number of birds hazed during each hazing incident, the date and time, banding information (if available), and any other noteworthy behavioral observations and/or physical features and environmental conditions at the time. – Annual reports will also include all observations of nēnē, ae‘o, and/or other listed birds (and any other listed species) in the Action Area, including number of individuals and/or nests, life stage, banding information (if relevant), brood structure (if relevant), date and time, any noteworthy behavioral observations or physical features on the species, environmental conditions at the time, and a detailed description of any incident(s) that resulted in take in the form of harm (injury), mortality, and capture using the Injury/Mortality Form in Appendix D of the Biological Opinion. – Lastly, the annual reports will include all of the conservation measures implemented each year. – Upon the final year during which Project actions occur, FHWA will submit a final report to the Pacific Islands Fish and Wildlife Office within 45- calendar days after the Project has been completed containing the annual report for the last year, followed by an analysis and summary of all the annual reports combined.

TECHNICAL AREA	ENVIRONMENTAL COMMITMENTS
Flora and Fauna (continued)	– The depository designated to receive specimens that are found is the B.P. Bishop Museum, 1525 Bernice Street, Honolulu, Hawai‘i, 96817 (telephone: 808/847-3511). If the B.P. Bishop Museum does not wish to accession the specimens, contact the U.S. Fish and Wildlife Service Division of Law Enforcement in Honolulu, Hawai‘i (telephone: 808/861-8525; fax: 808/861-8515) for instructions on disposition. The Contractor will implement the following Best Management Practices related to invasive species: • Prior to entry into a project site, project materials, vehicles, machinery, and equipment will be pressure-washed by the Contractor thoroughly (preferably with hot water) in a designated cleaning area. Project materials, vehicles, machinery, and equipment will be visibly free of mud/dirt (excluding aggregate), seeds, plant debris, insects, spiders, frogs (including frog eggs), other vertebrate species (e.g., rodents, mongoose, feral cats, reptiles, etc.), and rubbish. Areas of particular concern include bumpers, grills, hood compartments, wheel wells, undercarriage, cabs, and truck beds. Truck beds with accumulated material are prime sites for hitchhiking invasive species. • Contractor will ensure the interior and exterior of vehicles, machinery, and equipment be free of rubbish and food, which can attract pests (i.e., rodents and insects). The interiors of vehicles and the cabs of machinery should be vacuumed clean particularly for any plant material or seeds. • Following Contractor cleaning and/or treatment, project materials, vehicles, machinery, and equipment, will be visually inspected by its user, and be free of mud/dirt (excluding aggregate), debris, and invasive species prior to entry into a project site. For example, careful visual inspection of a vehicle’s tires and undercarriage is recommended for any remaining mud that could contain invasive plant seeds. • All materials imported to the project area will be certified weed-free. Contractor will ensure that any project materials, vehicles, machinery, or equipment found to contain invasive species (e.g., plant seeds, invertebrates, rodents, mongoose, cats, reptiles, etc.) must not enter the project site until those invasive species are properly removed/treated. • Prior to entry into the project site, all on-site personnel will visually inspect and clean their clothes, boots or other footwear, backpack, radio harness, tools and other personal gear and equipment for insects, seeds, soil, plant parts, or other debris. Seeds found on clothing, footwear, backpacks, etc., will be placed in a secure bag or similar container and discarded in the trash rather than being dropped to ground at the project site or elsewhere. • Only weed-free seed mixtures will be used for hydroseeding and hydromulching on the project area. The State’s qualified botanist will inspect each seeded area once a minimum of 60 calendar days after application of hydroseed/hydromulch. Any species of plant other than those intended to be in the hydroseed/hydromulch will be removed. In particular, plant species that are not known to occur on Maui and those that are actively being controlled on the island will be removed. • Vegetation and landscaping will follow all applicable guidelines set forth in the HDOT Highway Manual for Sustainable Landscape Maintenance including an annual comprehensive inspection (HDOT 2011). • Revegetation and landscaping will include native plants found in the action area during biological surveys, native plants historically known from the area, as well as native and possibly nonnative plants not considered invasive species that are fire resistant and recommended by the Pacific Fire Exchange, Plant Pono website, and following County of Maui Planting Guidelines. These species include, but are not limited to ‘iliahialo‘e (*Santalum ellipticum*), ‘a‘ali‘i (*Dodonaea viscosa*), hoary abutilon (*Abutilon incanum*), akulikuli (*Sesuvium portulacastrum*), milo (*Thespesia populnea*), ‘ilima (*Sida fallax*), naupaka (*Scaevola taccada*), and uhaloa (*Waltheria indica*). An additional three species are included for consideration in revegetation: Pōhinahina (*Vitex rotundifolia*), ‘Ūlei (*Osteomeles anthyllidifolia*), and ‘Āweoweo (*Chenopodium oahuense*). • As best as practicable, disturbance to endemic plant species such as ‘iliahialo‘e will be avoided by the Contractor. • Only plants grown locally on Maui will be used for landscaping purposes to the extent practicable. If locally grown plants are unavailable, then imported plants may be used, but they will be thoroughly inspected or quarantined if necessary to ensure that they are free from invasive pests, such as little fire ants, and invasive plant seeds and seedlings that could arrive inadvertently. • A litter-control plan shall be developed and implemented by the Contractor prior to start of construction to prevent attraction and introduction of nonnative species. • Vehicles infested with little fire ants will be treated by the Contractor following recommendations by the Hawaii Ant Lab outlined in the 2024 Pacific Islands Fish and Wildlife Office Biosecurity Protocols. • Contractor will adhere to little fire ant baiting recommendations for vehicles, materials, and storage areas as outlined in the 2024 Pacific Islands Fish and Wildlife Office Biosecurity Protocols. • If little fire ants are detected, the Contractor will report it to 808-643-PEST. • Contractor will adhere to Hawaii Department of Agriculture Plant Quarantine Interim Rule 24-1 prohibiting the movement of Coconut Rhinoceros Beetle host material from the island of O‘ahu. • If felling or trimming palms, the Contractor will contact Coconut Rhinoceros Beetle Response for a free inspection ((808) 679-5244 or email at info@crbhawaii.org). • Contractor will keep green waste whole until it is ready to be treated and removed. Green waste will be chipped on site and transported on the same day to a secure and managed green waste disposal site/facility. • Contractor will minimize accumulations of green waste by regularly treating mulch piles or depositing it in sealed green waste bins. • If injured or dying coconut palm trees are observed or if Coconut Rhinoceros Beetle are detected, Contractor will contact the State’s on-call biologist who will then contact Coconut Rhinoceros Beetle Response at (808) 679-5244 or email at info@crbhawaii.org or online at https://www.crbhawaii.org/report. With regard to predator control: • In areas of known nēnē and ae‘o habitat (Ukumehame near firing range), the Contractor will be responsible for predator trapping and will develop a predator control plan for approval by HDOT. • On-site staff will practice good project-site hygiene to avoid litter and garbage from attracting rodents, feral cats, mongoose, and other wildlife. • Contractor will provide covered waste bins and ensure they are emptied weekly. • Contractor will ensure that all food waste is properly disposed of in covered waste bins. • Contractor will monitor for construction work that may impact flora and fauna resources important to traditional and customary practices. With regard to reinitiation of Endangered Species Act Section 7 Consultation:

TECHNICAL AREA	ENVIRONMENTAL COMMITMENTS
	• Any significant changes made during final design will be evaluated by the State's on-call biologist in coordination with the Contractor and HDOT for any impacts not previously considered in the Biological Assessment. HDOT will work with FHWA to coordinate with the U.S. Fish and Wildlife Service and reinitiate Section 7 Consultation if needed. • If take is exceeded, reinitiation of consultation and review of reasonable and prudent measures is required by FHWA in coordination with HDOT. See Biological Opinion for Incidental Take Statement.
Traffic, Right-of-way, Pedestrians/Bicycles	• Contractor will maintain signs, lights, barricades, and other safety equipment for motorists and pedestrians. • HDOT will inform the public of planned construction activities that may affect service on the existing roadways. • During construction, the Contractor will develop a transportation management plan for HDOT's approval to minimize traffic congestion and maintain traffic, bicycle, and pedestrian safety in the project area.
Air Quality and Energy	• Airborne, visible fugitive dust during construction will be controlled at the project site by the Contractor in accordance with the provisions of HAR Chapter 11-60.1-33, Fugitive Dust, HDOT's Standard Specifications, and HDOT's *Construction Best Management Practices Field Manual* (BMP SM-18). • Exhaust emissions and energy consumption from construction vehicles and equipment will be reduced through the following control measures to be enforced by the Contractor: – Keeping construction equipment and vehicles properly tuned and maintained; – Avoiding idling of diesel equipment, particularly near the air intake of any building heating, ventilation, and air conditioning systems; – Avoiding the use and routing of construction equipment near residential areas and clusters of sensitive receptors like hospitals, schools, day care facilities, elderly housing, and convalescent facilities; and – Timing the assembly of construction crews, equipment, and work to minimize conflicts with typical commuting hours. • Contractor will implement controls to limit fugitive dust, including watering (as appropriate), wind screens, and proper material transport and storage techniques.
Noise	• Contractor will comply with HDOT Standard Specifications and local sound control and noise level rules, regulations, and ordinances. • Contractor will obtain a Noise Permit from the State of Hawai'i Department of Health in order to comply with community noise control standards (Hawai'i Administrative Rules [HAR] §11 46) during construction. • During construction, noise control measures will be implemented by the Contractor to minimize construction noise and the effect on existing noise sensitive land uses including the following: – During the early stages of construction plan development, strategic placement of stationary equipment, such as compressors and generators, will be considered for shielding against construction noise; – Contractor will comply with HDOT Standard Specifications and all local sound control and noise level rules, regulations, and ordinances which apply to work performed pursuant to the contract. Each internal combustion engine used for any purpose on the job, or related to the job, will be equipped with a muffler of a type recommended by the manufacturer. No internal combustion engine will be operated without a muffler; – At community meetings, project representatives by HDOT and the Contractor will explain the work, schedule, and planned noise control measures related to construction; and – The aforementioned measures will be incorporated by the Contractor into site-specific construction plans, and additional noise emission limits could be developed as well,
Infrastructure and Utilities	• Contractor will coordinate with the affected utilities, and private water supply systems, as applicable for relocation.
Hazardous Materials	• Prior to construction activities, Contractor will develop a construction Health and Safety Plan • Contractor will comply with HAR §12-110 (Construction Standards – General Safety and Health Requirements) • Contractor will perform lead and asbestos surveys prior to construction and provide to HDOT, as applicable • If contamination is identified, the Contractor will report it to HDOT immediately. • Any potential handling of hazardous materials or on-site remediation by the Contractor or HDOT will be in accordance with applicable State and federal laws specifying the handling, treatment, and disposal of contaminated materials.

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6. Irreversible/Short-Term Effects

6.1 INTRODUCTION

This chapter evaluates the short-term uses of the environment and the maintenance and enhancement of long-term productivity associated with the Honoapiʻilani Highway Improvements Project (the Project) as well as its potential irreversible and irretrievable commitments of resources.

6.2 REGULATORY CONTEXT

Consistent with Federal Highway Administration (FHWA) Technical Advisory T6640.8a, which provides guidance on the preparation of FHWA environmental documents, an environmental impact statement should generally discuss a proposed action's irreversible and irretrievable commitment of resources.

Pursuant to Hawaiʻi Administrative Rules (HAR) §11-200.1-24(m), this section discusses the relationship between local short-term uses of the environment and the maintenance and enhancement of long-term productivity associated with the Project. The extent to which the Project involves trade-offs between short- and long-term gains and losses is also presented. The discussion further includes the extent to which the Project forecloses future options, narrows the range of beneficial uses of the environment, or poses long-term risks to health and safety. In this assessment, short- and long-term do not necessarily refer to fixed periods but are viewed in terms of the environmentally significant consequences of the Project.

As required by HAR §11-200.1-24(n), this section also includes a description of all irreversible and irretrievable commitments of resources that would be involved in the Project, should it be implemented. Unavoidable impacts and the extent to which the Project makes use of nonrenewable resources, or irreversibly curtails the range of potential uses of the environment, is also identified. In addition, the possibility of environmental accidents resulting from any phase of the Project is considered.

6.3 SHORT-TERM USES AND LONG-TERM PRODUCTIVITY

Short-term uses for the Project are associated with construction, which is anticipated to occur over approximately four years and planned for completion in 2030. The impacts associated with the use of resources during construction would be temporary and are not anticipated to have a significant adverse impact on the Project's relationship with the surrounding environment. Construction activities for all Build Alternatives would be anticipated to result in temporary and periodic increases in ambient noise levels, air quality, and traffic within the surrounding area. Short-term uses and long-term productivity of flora and fauna, and health, safety, and well-being are also summarized below.

The long-term productivity of the Project would provide a reliable transportation facility in West Maui and improve Honoapiʻilani Highway's resilience by reducing its vulnerability to coastal hazards. In

addition, the long-term productivity of the Project would provide regional transportation system linkages that support the safe movement of people and goods and support regional land use and transportation plans. Failing to relocate Honoapi‘ilani Highway would negatively affect the community and the region due to increased service disruptions and roadway closures resulting from climate change effects. Accordingly, the short-term uses associated with the Project would be consistent with the maintenance and enhancement of long-term productivity for West Maui and Maui County.

6.3.1 Flora and Fauna

The project area generally consists of undeveloped land, historic agricultural uses, open space, rural residential, and State conservation land uses. In general, the vegetation of the project area can be characterized as a mix of coastal dry community. The vegetation throughout the project area has been heavily modified by prehistoric and modern human activities and is now largely dominated by alien species. Vegetative clearing, grubbing, and grading would be required to facilitate the Project, which could have a short-term effect on flora and fauna during construction and a diminished effect over time once the new roadway is constructed.

According to the Biological ~~Survey Report~~ Assessment prepared as part of this ~~Draft~~ Final EIS and the Biological Opinion prepared by USFWS, the Project is unlikely to result in adverse effects to plant species that are State or federally listed as threatened or endangered, or rare native plant species of concern. Hawaiian goose or nēnē (*Branta sandvicensis*) and Hawaiian stilt or ae‘o (*Himantopus mexicanus knudseni*) are two bird species that are State or federally listed as threatened or endangered. These species were observed during and outside of the point counts (that is, standing in a specific location and counting birds) taken for the Project. Based on additional findings, it is highly unlikely that the project area contains the nine endangered plant taxa on the United States Fish and Wildlife Service Information for Planning and Consultation (IPaC) List (which identified threatened and endangered species that may potentially occur in the project area or may be affected by the Project). No terrestrial critical habitat has been identified in the highly disturbed environment of the project area.

A total of 57 plant species were observed in the project area, of which 47 are nonnative species, seven are native species, and three are Polynesian introductions. The native species observed within the project area are found elsewhere on Maui and in Hawai‘i. In addition, as a majority of the plant species observed were predominantly nonnative species or Polynesian introductions, it is not anticipated that the construction of the Project would have an adverse effect on flora. To keep native plants and resources accessible, the Project would introduce native plants to the extent feasible, particularly those already observed or that may have occurred historically within the project area.

The endangered Hawaiian hoary bat (*Lasiurus cinereus semotus*) is found on Maui. This is the only terrestrial mammal native to Hawai‘i. For the purpose of this assessment, it is assumed that Hawaiian hoary bats may use the project area, although none were observed during the biological survey. Surveys did observe evidence of feral mammals such as deer, pigs, mongoose, and cats. Furthermore, because the Project does not include any coastal, nearshore, or offshore marine environments, marine turtles (*Chelonia mydas* and *Eretmochelys imbricata*) and Hawaiian monk seals (*Neomonachus schauinslandi*) are not anticipated to experience any direct exposure due to Project activities.

Point count avian surveys identified 301 individuals representing 17 species. Appendix 3.10 contains the full list, which includes common and scientific names of the individual species, the legal regulatory status, the average number of individuals detected per count station, and how many count stations were occupied. These last two metrics were used to provide a qualitative relative abundance of observed bird species. Of these species, 14 are nonnative and three are native. Of the three native species, two are State or federally listed as threatened or endangered. Two Endangered Species Act listed bird species were observed in the project area: Hawaiian goose or nēnē (*Branta sandvicensis)* and Hawaiian stilt or aeʻo (*Himantopus mexicanus knudseni).* These species were observed during and outside of the point count stations.

To avoid potential effects from construction activities and over the long term (once the Project is complete and operational), the best management practices (BMPs) described in Section 3.10, Flora and Fauna, Endangered Species, (as well as the Biological Opinion) would be implemented. These include HDOT Construction and Post Construction BMPs[1] as well as avoidance and minimization measures.

6.3.2 Air Quality

Construction of the Project may result in temporary construction-related effects on the surrounding air quality. To minimize these effects, fugitive dust control measures would be incorporated as discussed in Section 3.15.5, Construction Effects. These measures could consist of frequent watering of exposed soil, the use of wind screens, limiting the total area of disturbance at any given time, and reestablishing landscaping as early as possible. On-site mobile and stationary construction equipment are anticipated to emit air pollutants from engine exhausts. However, due to the limited concentration of emissions and the distance from sensitive receptors (residential dwellings in the project area), no adverse effects to air quality from construction are anticipated.

In addition, the Project is not anticipated to change travel demand, vehicle mix, or the annual average daily traffic. Accordingly, no adverse effects to operational air quality as a result of the Project are anticipated. With low generation of ground-level ozone, the low concentration of pollutant emissions associated with project operations, and the existing low background pollutant concentrations, the Project is anticipated to comply with applicable State Ambient Air Quality Standards and National Ambient Air Quality Standards requirements.

6.3.3 Noise

Construction of the Project may result in temporary construction-related increases to the surrounding ambient noise levels. Section 3.16.5, Construction Effects, describes the areas that would have the potential to be affected by construction noise. High noise levels generated by construction activities may potentially impact one sensitive receptor location at the entrance to the Olowalu Petroglyphs.

Based on the anticipated noise levels at the nearest sensitive receptors, the State of Hawaiʻi Department of Health Community Noise Control criteria is anticipated to be periodically exceeded

1 Construction BMP Training (https://www.stormwaterhawaii.com/).

throughout construction of the Project; therefore, a noise permit would be required. To mitigate the potential construction noise impacts that may exceed the “maximum permissible” property line noise levels, the construction contractor would submit a noise permit application to the State of Hawai‘i Department of Health. This application would describe the BMPs needed to mitigate noise to the maximum extent practicable, which could include using mufflers on diesel and gasoline engines and using properly tuned and balanced machines.

As described in Section 3.16, Noise, Build Alternative 4 is anticipated to result in an operational adverse noise effect to one sensitive receptor, the Olowalu Petroglyphs. The other Build Alternatives, including the Selected ~~Preferred~~ Alternative (Chapter 5, Selected ~~Preferred~~ Alternative), are not anticipated to result in operational adverse noise effects.

6.3.4 Traffic

The Project is in a section of Honoapi‘ilani Highway designated as rural principal arterial that has limited multimodal infrastructure and transit accessibility. During project construction, the existing highway would remain open and operational because the Build Alternatives are not on the existing alignment—with the exception of Build Alternative 1 in the Olowalu area.

Build Alternative 1 differs from the other Build Alternatives in that its alignment would overlap a segment of the existing Honoapi‘ilani Highway north of Olowalu. Approximately 2.5 miles of Build Alternative 1 will be constructed in sub-phases, with lane closures causing traffic congestion along the highway corridor. These lane closures would be required for Build Alternative 1 because it uses and crosses the existing Honoapi‘ilani Highway.

Additionally, all the Build Alternatives would have phased construction and lane closures at intersections as well as at the north and south ends of the project area, where the new roadway would connect to the existing roadway.

As described in Section 3.14, Transportation, construction of intersections, bridges and viaducts (where proposed) would cause temporary disruption of traffic on the cross streets. Accordingly, best practices for traffic maintenance would be employed during construction. While construction-related vehicles (including for commuting) would temporarily increase traffic on the existing Honoapi‘ilani Highway, there would be measures in place to optimally focus these increases during non-peak-hour periods. Further, the design-build contractor would develop a traffic management plan to be implemented during project construction. The purpose of this plan would be to minimize traffic congestion and maintain the efficiency of the highway corridor.

6.3.5 Health, Safety, and Well-Being

Nearby residents and businesses may experience increased noise, fugitive dust, or emissions associated with construction of the Project. However, these potential increases are not anticipated to constitute a significant threat to the health, safety, and well-being of the public. The Project would relocate Honoapi‘ilani Highway closer to several sensitive receptors and would therefore increase noise to these receptors. While an increase in noise levels is anticipated, this would not constitute an

adverse effect (with the exception of one sensitive receptor, the Olowalu Petroglyphs under Build Alternative 4).

The Project would result in a positive impact on the health, safety, and well-being of the local community, West Maui, and Maui County by providing a reliable transportation facility in West Maui and improving Honoapi‘ilani Highway’s resilience by reducing its vulnerability to coastal hazards. In addition, the Project would provide regional transportation system linkages that support the safe movement of people and goods and support regional land use and transportation plans. Further, the Project would maintain access to parklands, recreational facilities, and publicly accessible shoreline within the project area.

Based on this information, considerations of short-term uses of the environmental resources and the maintenance and enhancement of long-term productivity support implementing the Project.

6.4 EXTENT TO WHICH THE PROJECT FORECLOSES FUTURE OPTIONS

The Project is not anticipated to foreclose future options, narrow the range of beneficial uses of the environment, or pose a long-term risk to health and safety. To the maximum extent practicable, in consideration of several factors—including sea level rise and climate change, historic and cultural resources, and constructability—the Project would be constructed on land that is owned by the State of Hawai‘i or the County of Maui.

6.5 POTENTIAL IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

An irreversible or irretrievable commitment of resources refers to impacts on or losses to resources that cannot be reversed or recovered. Under the context of the commitment of resources, “irreversible” refers to eliminating future options for a resource, primarily the impacts of using nonrenewable resources (for example, minerals and raw materials). “Irretrievable” refers to using a resource that is nonrenewable and therefore cannot be recovered for future use.

The Project would use nonrenewable resources during construction and operations. The irreversible and irretrievable commitments of resources during construction may include the following:

- Using fossil fuels for construction vehicles and equipment, including excavators, dump trucks, bulldozers
- Using construction labor and materials (for example, concrete and steel)
- Excavating and disposing soil and sediment
- Displacing, clearing, and relocating existing vegetation
- Spending funds to finance construction

Short-term construction activities would consume fossil fuel and energy, as construction vehicles and equipment typically use either gasoline or diesel fuel. This would also include electrical construction equipment that relies on fossil-fuel generated electricity. Irreversible and irretrievable commitments

to resources during construction activities would be unavoidable but would be minor and temporary in nature.

The Project’s land-clearing activities would remove existing trees and vegetation within the alignment of the Selected ~~Preferred~~ Alternative, which would constitute an irreversible and irretrievable loss of natural resources. As described in Section 3.10, Flora and Fauna, Endangered Species, the biological survey did not identify any plant species in the project area that are State or federally listed as threatened or endangered, candidate species for listing as endangered, or rare plant species native to Hawai‘i. In addition, the native plant species that were observed within the project area are considered widespread on Maui and elsewhere in Hawai‘i. The Project would incorporate native plant species to the extent practicable, particularly those already observed or that may have occurred historically within the project area.

Implementing the Project is anticipated to require acquiring privately owned land and buildings. Acquiring privately owned land would be carried out in compliance with the Uniform Relocation Assistance and Real Property Acquisition Act of 1970 and Hawai‘i’s eminent domain procedures.

The Project is anticipated to require removing or altering historic and cultural resources that are listed or eligible for listing on the National Register of Historic Places—either as individual structures or as part of a historic district. Adverse effects on historic resources would be minimized or otherwise mitigated through measures identified in a Programmatic Agreement, which would be prepared pursuant to Section 106 of the National Historic Preservation Act (Section 3.6, Archaeological and Architectural Historic Properties).

The Project would locate new highway infrastructure within and adjacent to mapped surface waters and wetlands. The Hawai‘i Department of Transportation (HDOT) would implement all practicable measures to avoid and/or minimize adverse effects to these features resulting from the Project. Potential measures to mitigate adverse effects to mapped surface waters and wetlands have been identified in consultation with the following:

- The County of Maui
- The State of Hawai‘i State, Department of Health, Clean Water Branch
- The State of Hawai‘i, Department of Land and Natural Resources
- The U.S. Army Corps of Engineers

Fossil fuels, labor, and construction materials such as concrete and steel would be expended irretrievably during project construction. In addition, labor and natural resources would be used in the fabrication and preparation of construction materials. These materials are generally not retrievable. However, these resources are not in short supply and their use would not have an adverse effect upon their continued availability. Construction would also require a one-time expenditure of federal and State funds, which are not retrievable.

The short-term use of public funds, construction labor, fossil fuels for construction equipment, and the materials needed to build the Project would ensure the long-term viability of the transportation

infrastructure in West Maui. The commitment of these resources is based on the principle that residents and businesses in the region would benefit from the improved reliability of the transportation system. The long-term benefits include improved safety and accessibility, as well as the enhanced livability, sustainability, and economic vitality of West Maui.

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7. Unresolved Issues and Unresolvable/Unavoidable Effects

This chapter summarizes the unresolvable or unavoidable adverse effects associated with the Honoapiʻilani Highway Improvements Project (the Project). As described in the previous chapters and throughout this ~~Draft~~ Final Environmental Impact Statement (EIS), mitigation and environmental commitments have been ~~would be~~ developed to avoid or minimize adverse effects to the extent practicable. However, even with mitigation, some adverse effects cannot be fully avoided. Unavoidable adverse effects occur if a resource would be lost or if the effects could only be partially mitigated.

7.1 UNRESOLVED ISSUES

~~The Preferred Alternative may incorporate design refinements during the development of the Final EIS. Any design refinements and potential effects from those refinements would be documented in the Final EIS and ROD.~~

The Project has coordinated with the County of Maui on its *Pali to Puamana Parkway Master Plan* (2005), which proposes to develop areas makai of the realigned Honoapiʻilani Highway as open resources land. Because the County is awaiting the completion of this ~~Draft~~ Final EIS before further developing this plan, it cannot be fully known what facilities would be on open resources land. As described in Appendix 2, Summary of Related Governmental Plans and Policies, the project area is located within Subarea 4 of the *West Maui Community Plan* (2022). This plan reiterates the objectives of the *Pali to Puamana Parkway Master Plan* and indicates that the land makai of the realigned highway would be used for open space and park to buffer against the effects of sea level rise and climate change while providing recreational opportunities.

As noted in Section 3.5, Parklands and Recreational Facilities/Beach Access, the State of Hawaiʻi Department of Land and Natural Resources has jurisdiction over three large parcels in the surrounding area (TMK 48003008 in Olowalu and TMK 48002008 and TMK 48002002 in Ukumehame) that are conditionally approved by the Board of Land and Natural Resources to be designated as forest reserves and which would be finalized by a governor of Hawaiʻi Executive Order. Board approval was made in coordination with planning for the Project, which would cover a small portion of these parcels along their makai edge. Based on the joint planning effort for the long-standing planning objectives of the highway relocation and conservation land management, the board affirmed that formal designation by Executive Order would proceed after HDOT defines and acquires the land needed for the proposed new highway alignment and that this road right-of-way would be excluded from the newly designated reserve area.

As described in Chapter 2, Alternatives, the existing Honoapiʻilani Highway in the project area is proposed to be relinquished from the State to the County of Maui. This process would involve coordination with the County of Maui, and the Department of Land and Natural Resources would finalize the relinquishment, which would not occur until completion of the Project.

With regard to the portion of the existing highway that would be transferred to the County of Maui, the HDOT will continue to coordinate with Maui County Police Department regarding the future management of the roadway to minimize potential public safety concerns, including those related to criminal activity and disaster management. In addition, the County of Maui Department of Public Works, Engineering Division, recommended further coordination related to inspection, improvements, and/or needed repairs prior to the jurisdictional changeover.

As described in Section 3.17, Infrastructure and Utilities, the Project would be anticipated to result in the displacement of the Olowalu Recycling and Refuse Convenience Center. However, Maui County has long considered relocation options for this facility to move it closer to the Lāhainā urban center, where most users originate. Because a new location for the Olowalu Recycling and Refuse Convenience Center has not been identified, this remains an unresolved project issue.

As described in Section 3.4, Land Acquisition, Displacement, and Relocation, Build Alternatives 2, 3, and 4 would require land that is currently in private property easements dedicated to the Olowalu Subdivision greenway, an approximately 60-acre set-aside providing for multiuse trails and natural area buffers. The greenway was included as a condition of the 2000 Special Management Area permit issued by Maui County. The extent of the adverse effect and the mitigation associated with the relocation, realignment, or elimination of portions of the greenway and its trail is an unresolved issue for this ~~Draft~~ Final EIS. Initial coordination with the affected private property owners and Maui County occurred during the EIS development and found that this issue would require developing appropriate mitigation, which would be included as an amendment to the existing subdivision Special Management Area or be part of a new Special Management Area specific to the Project. This permitting modification or new permit would occur during the design-build phase of the project.

As described in Section 3.9, Water Resources, the intent is to pursue a series of Nationwide Permits for anticipated effects to Waters of the U.S. as part of Section 404 of the Clean Water Act (CWA) permitting. However, coordination is ongoing with the U.S. Army Corps of Engineers regarding permitting pathways for the Project ~~including delineation review of the sedimentation basin~~ and would be implemented on final design prior to construction by the design-build contractor. ~~Results of coordination on Section 404 of the CWA and delineation review will be confirmed in the Final EIS, and a clear permitting pathway outlined in the ROD.~~

~~As described in in Section 3.10, Flora and Fauna, Endangered Species, coordination with the U.S. Fish and Wildlife Service on Section 7 of the Endangered Species Act is ongoing at the time of Draft EIS publication. Results of coordination will be confirmed in the Final EIS, and a clear consultation pathway outlined in the ROD. Avoidance and minimization measures proposed in the Draft EIS may also be modified and finalized in the Final EIS and ROD.~~

7.2 UNRESOLVABLE/UNAVOIDABLE EFFECTS

7.2.1 Land Acquisition

As presented in Section 3.4, Land Acquisition, Displacement, and Relocation, property that is affected by one or more Build Alternatives would require acquisition that could involve the purchase of a full

parcel, acquisition of a portion of a parcel, or the use of temporary and permanent easements on a portion of a parcel. These final determinations would be based on the final design of the Selected ~~Preferred~~ Alternative and would follow the Uniform Relocation Act process and the standards established by HDOT's Right-of-Way Manual. Potential property acquisition would continue to be assessed through the Final EIS and it would be determined during final design and the right-of-way negotiation process if parcels would be a full acquisition or a partial acquisition. Any property acquisition required that is beyond the extent of the areas studied in this Final EIS would require NEPA or HEPA re-evaluation in the design-build phase of the project prior to construction.

In Olowalu, it is anticipated that the Build Alternatives would affect and require some level of property acquisition for between 15 to 16 private parcels and between three and eight kuleana parcels.

In Ukumehame, Build Alternatives 2 and 3 require only one private parcel acquisition and six kuleana parcels. Build Alternative 1 would require three private parcels and five kuleana parcels. Build Alternative 4 would be the most extensive alignment in terms of property acquisition and would require some level of property acquisition for 20 private parcels and seven kuleana parcels.

The Selected ~~Preferred~~ Alternative would require full or partial acquisition of ~~15~~ 16 private parcels and five kuleana parcels in Olowalu and three private parcels (and, potentially, a small acquisition or easement of an area of less than one percent for two parcels) and five kuleana parcels in Ukumehame for a total of 18 private parcels and 10 kuleana parcels.

7.2.2 Archaeological and Historic Resources

As described in Section 3.6, Archaeological and Historic Properties, the FHWA and HDOT ~~would develop~~ have signed a Programmatic Agreement ~~in consultation~~ with the State of Hawai‘i Historic Preservation Division ~~the Advisory Council on Historic Preservation,~~ and other Consulting Parties to resolve the Project's potential adverse effects.

In addition, The Hawaii HRS § 6E requirements are an equivalent, but not identical, compliance process to Section 106. Significant historic properties are defined as any historic property that meets the criteria of the Hawaii Register of Historic Places or the criteria enumerated in subsections 13-275-6(b) or 13-284-6(b). The regulations require the State agency, in consultation with the State Historic Preservation Division (SHPD), to identify resources, determine eligibility, and mitigate adverse effects.

There are both archaeological and architectural resources in the Project's Area of Potential Effect, and one or more of the Build Alternatives could have an adverse effect on these resources. The Selected ~~Preferred~~ Alternative has been refined to provide additional avoidance options for affected resources. ~~Surveys and analysis would be updated as needed in the Final EIS for any design refinements made for the Preferred Alternative.~~ Overall, the process to complete the ~~final~~ determination of eligibility, the identification of adverse effects, and the opportunities to avoid and mitigate adverse effects ~~would be~~ are memorialized in the Programmatic Agreement and 6E compliance. ~~As detailed in Section 3.6, Archaeological and Architectural Historic Properties, the Section 106 Programmatic Agreement (presented in Appendix 3.6) will govern Section 106 compliance for the Project after environmental review is completed and into final design including the identification of potential archaeological historic properties within the limits of disturbance for the Preferred Alternative.~~

7.2.3 Water Resources

Following Draft EIS completion, the full scope of potential adverse effects to water resources ~~would~~ remains unresolved until final design.

As described in Section 3.9, Water Resources, Wetlands, and Floodplains, stream crossings would be designed to preserve water flow and the biological processes of the fauna living in them. Hardening the stream crossings would be avoided, and bridge design would consider keeping the stream cool, shaded, and oxygenated.

Construction BMPs that have been either preapproved or coordinated with regulatory agencies—which are included in *An Integrated Storm Water Management Approach and a Summary of Clear Water Diversion and Isolation Best Management Practices for Use in the State of Hawaii*—would be used to minimize the potential for water quality effects to the streams.

Section 404 permit requirements of the CWA that are associated with the stream crossings and other unavoidable effects to Waters of the U.S. would be coordinated with the U.S. Army Corps of Engineers. The intent is to pursue a series of Nationwide Permits for unavoidable effects to assumed Waters of the U.S. When work would require a Section 404 permit, a CWA Section 401 certification would also be required to regulate discharges into Waters of the U.S. Section 401 certification would be coordinated with the State of Hawai‘i Department of Health, Clean Water Branch. A CWA Section 402 National Pollutant Discharge Elimination System General Permit with an associated Stormwater Pollution Prevention Plan would be coordinated with the Clean Water Branch to prevent and reduce pollution associated with stormwater discharges resulting from construction and project activities. A Stream Channel Alteration Permit may be required, but only to document that no alterations are anticipated. This action would follow final design. These permits and plans would be required and implemented by the design-build contractors in addition to monitoring and addressing the effectiveness of BMPs and control devices.

The final design would include strategies to achieve a no-rise scenario in the regulatory floodway as required by the Federal Emergency Management Agency (FEMA). This would include obtaining a floodplain development permit from the Maui County Planning Department. If a no-rise is not attainable, the FEMA process to revise National Flood Insurance Program Maps and show changes to floodplains, regulatory floodways, or flood elevations would be followed. Reference CFR Title 44 Parts 60, 65, and 72.

In Olowalu, all Build Alternatives cross portions of water resources, though none are wetlands. Build Alternative 1 crosses over the greatest amount of water resources identified within the Olowalu area. Build Alternative 2 crosses over the least amount of water resources identified within the Olowalu area.

In Ukumehame, all Build Alternatives cross portions of water resources including streams, ditches, gulches, and wetlands. Build Alternatives 2 and 3 cross over the greatest amount of water resources identified within the Ukumehame area—and Build Alternative 4 crosses over the least amount.

7.2.4 Flora and Fauna

Adherence to BMPs, conservation measures, and avoidance and minimization measures identified as part of ongoing consultations with resource agencies—including most notably the Endangered Species Act Section 7 and Essential Fish Habitat provisions of the Magnuson-Stevens Fishery Conservation and Management Act—would prevent, to the extent practicable, adverse effects to biological resources.

~~Once~~ This ~~Draft~~ Final EIS ~~is published and on review of the Biological Assessment,~~ includes a Biological Opinion from the U.S. Fish and Wildlife Service ~~will~~ that evaluates the potential for adverse effects to threatened and endangered species and critical habitat resulting from the Project ~~Preferred Alternative~~. This Final EIS includes commitments from the ~~The results of the ongoing Section 7 process would be incorporated into the~~ Biological Opinion to carry through to final design, including ~~and would determine~~ specific measures that the design-build contractor must take to avoid and minimize adverse effects to listed species or species of concern and their habitat. These measures also include those to address the introduction of invasive species, provide for their control, and minimize the economic, ecological, and human health effects that invasive species cause.

In Olowalu, Build Alternative 1 would likely require the removal of monkeypod trees that the Maui County Arborist Committee designated as Exceptional Trees. Approval for tree removal would be reviewed by the County Arborist Committee and ultimately approved by the Director of Parks and Recreation. Appropriate replacement(s), relocation, or other recommendations would be followed to result in the least adverse effect to Olowalu monkeypod trees.

Other than Hawaiian goose (or nēnē) and Hawaiian stilt (or ae‘o), no federally or State-listed threatened or endangered species were observed in the project area. Nēnē and ae‘o may face unavoidable effects from vehicle strikes upon completion and operation of the new highway. Consultation with U.S. Fish and Wildlife Service provides measures to minimize vehicle strikes to the extent practicable. Construction activities, such as clearing and grubbing, would disturb potentially suitable habitat for listed species. However, no individuals, nests, or critical habitat were observed in the project area. With abundance of suitable habitat elsewhere in the region, and adherence to conservation measures, and avoidance and minimization measures, adverse effects to other listed species would be unlikely. The Hawaiian hoary bat is assumed to be present. Removing large trees may result in an avoidable affect to the roosting area available to the bat population in this area. However, with adherence to seasonal tree cutting guidance and the prevalence of suitable roosting habitat elsewhere in the Olowalu area, adverse effects to the bat population would be unlikely.

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TABLES

8. Public Involvement and Agency Coordination

This chapter describes efforts to provide opportunities for the public, agencies, and other stakeholders to provide input on the Honoapi'ilani Highway Improvements Project (the Project) through publication of the Draft EIS, the public hearing and the Draft EIS public comment period. Chapter 9, Response to Comments of this Final EIS presents a summary of substantive comments submitted during the public comment period and agency responses to these comments. The outreach approach for the Project is detailed in the *Coordination Plan for Public & Agency Participation*,[1] which was published in November 2022 and has guided Federal Highway Administration (FHWA) and Hawai'i Department of Transportation (HDOT) outreach.

The public and agency participation efforts for the Project have been developed in compliance with the following legislation and policies that guide public involvement in project development:

- National Environmental Policy Act of 1969 (NEPA)
- Hawaii Environmental Policy Act (HEPA, Chapter 343) and Hawai'i Revised Statutes and its implementing rules (Hawai'i Administrative Rules Chapters 11-200 and 11-201)
- 23 Code of Federal Regulations (CFR) Part 771 - Environmental Impact and Related Procedures
- 23 U.S.C. 139, Efficient environmental reviews for project decision-making and One Federal Decision
- Section 106 of the National Historic Preservation Act of 1966
- Section 7 of the Endangered Species Act of 1973
- ~~Environmental justice, including Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (1994), Executive Order 14008, Tackling Climate Crisis at Home and Abroad (2021), the Justice 40 Initiative (2022), and Executive Order 14096, Revitalizing Our Nation's Commitment to Environmental Justice for All (2023); U.S. Department of Transportation (USDOT) Order 5610.2(a) (1997 and 2012); and FHWA Order 6640.23A (2012)~~
- ~~Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency (2000)~~
- Uniform Relocation and Assistance and Real Property Acquisition Policies Act of 1970; the Surface Transportation and Uniform Relocation Assistance Act of 1987; and State of Hawai'i regulations for eminent domain (HRS §101-2), which outline the requirements for property acquisition, including targeted outreach to affected property owners
- Section 4(f) of the USDOT Act of 1966

[1] https://www.honoapiilanihwyimprovements.com/media/fcce011g/honoapiilanicoordinationplan.pdf.

- HDOT Public Involvement Policy (April 2012)

8.1 PUBLIC INVOLVEMENT TOOLS AND EFFORTS

The public involvement goals of the Project are as follows:

- Collaborate with the public, stakeholders, and agencies in reaching consensus on the best ways to improve the highway in the project area
- Provide a variety of equitable, inclusive, and accessible opportunities for the stakeholders and public to influence and shape the Project
- Understand specific local needs and concerns that would help to limit or avoid adverse impacts and help to shape the Project's alternatives
- Ensure that the Project is as consistent as possible with community plans and efforts undertaken by other agencies in the project area
- Position the Project to best meet the future conditions of the project area, both in terms of environmental changes and community changes

Outreach for the Project has included the following:

- Small group meetings, town-hall-style meetings, and other public meetings and hearings (in-person, virtual, or both)
- Print and electronic media
- The Project's website at www.honoapiilanihwyimprovements.com, which provides public access to a project overview, project reports and documents, surveys, notices, resource information, and HDOT contact information
- MetroQuest, which is an online public survey tool specifically designed to inform users and collect feedback on various aspects of the Project

8.1.1 Pre-NOI Scoping

Early outreach activities were conducted with a number of key stakeholders and the public. This identified specific outreach activities needed to facilitate community participation, including providing up-to-date information about the Project and informing the public about the project development process and formal scoping period.

HDOT and the FHWA held two early pre-Notice of Intent (NOI) scoping meetings on February 22 and 24, 2022. The meetings included the same presentation and provided opportunities to ask questions and provide input. Letters providing project information and requesting comments were mailed to federal, State, and County agencies, State and County elected officials, and other civic/social organizations. Input from these agencies and organizations was used to hone the Project's Purpose

and Need Statement and to understand potential concerns that should be considered in this Draft Environmental Impact Statement (EIS).

Additionally, several small group meetings were held with agencies and various stakeholders (TABLE 8-1). Appendix 8, Scoping Report, contains more detailed information about these meetings.

TABLE 8-1. **Early Project Coordination**

DATE	TYPE OF MEETING	NO. OF ATTENDEES	TOPICS DISCUSSED
February 8, 2022	Early Scoping	3	Meeting with Maui County Council Member Tamara Paltin to discuss the Project.
February 22, 2022	Early Scoping Meeting (Virtual)	46	Purpose and need for the Project, the project development process, initiate discussions of potential alternatives, receive input on resource concerns, and gain input on criteria for design and selecting a preferred alternative.
February 24, 2022	Early Scoping Meeting (Virtual)	43	Purpose and need for the Project, the project development process, initiate discussions of potential alternatives, receive input on resource concerns, and gain input on criteria for design and selecting a preferred alternative.
April 7, 2022	Pre-Site Visit Project Overview with Native Hawaiian	6	History of the area, cultural practices, historical sites, plantation era activities, bicycle facilities should not be collocated with the new highway, the Olowalu Cultural Reserve, and access to taro patches.
April 7, 2022	In-person meeting with Native Hawaiian Organizations and Native Hawaiians	14	Potential alternatives, access to parcels and cultural sites, inclusion of bike path(s), area land development, burial avoidance and treatment, and historic and cultural sites.
April 8, 2022	Site Visit	6	Site visit including Ukumehame Firing Range (and adjacent area), Kahoʻolawe viewing area, Kapāiki Place, and various segments of the old government road.
April 8, 2022	Site Visit	6	Olowalu Cultural Reserve site visit.
April 25, 2022	Agency - Maui County Department of Parks and Recreation	10	Clarification of use of Maui County properties, future plans for Pali to Puamana Parkway (and other projects in the area), and potential Impacts to Ukumehame Firing Range.
April 25, 2022	Olowalu Developers	8	History and status of area development plans and parcel access impacts.
June 1, 2022	Developer		Meeting with West Maui Land to discuss right-of-entry and the Olowalu Subdivision Greenway.
June 2, 2022	Agency – Maui County Department of Public Works	9	Area parks use, existing area infrastructure, and future department plans.
June 30, 2022	Agency – State Historic Preservation Division	4	Historic preservation, project compliance with Section 106 and Chapter 6E.

DATE	TYPE OF MEETING	NO. OF ATTENDEES	TOPICS DISCUSSED
July 8, 2022	Agency – Maui County Planning	8	Project overview.
July 29, 2022	Agency – U.S. Army Corps of Engineers	7	Potential project alternatives, wetlands, integration of NEPA process and Section 404 consultation. Potential USACE jurisdiction and jurisdictional determination process.
September 9, 2022	Community Members and Conservation Partners		Meeting at Kipuka Olowalu. Attendees included Olowalu residents, Native Hawaiians, government agency representatives, scientists, and nonprofit organizations. The event was co-hosted by the Coral Reef Alliance, Kipuka Olowalu, and The Nature Conservancy. The information gathered was used to produce an Ahupua'a Snapshot featuring the voices of the community and information about the status of natural resources in Olowalu and Ukumehame.
September 22, 2022	Agency Site Visit – U.S. Army Corps of Engineers	11	Site visit looking at various inland water sites including streams, potential wetlands, and the HDOT detention basin in Ukumehame.
September 29, 2022	Agency – Office of Conservation and Coastal Lands, Department of Lands and Natural Resources – Division of Aquatic Resources	7	Potential project alternatives, Conservation District Use requirements, wetlands and streams, and the Ukumehame detention basin.
October 17, 2022	Agency – Maui County Parks	4	Ukumehame Firing Range and potential Section 4(f) impacts and issues.

8.1.2 Project Website

HDOT and the FHWA established and maintains a project website at http://www.honoapiilanihwyimprovements.com/. This site contains a project overview and timeline, up-to-date information/documents, an option to join the Project's mailing list, and a form to submit comments at any time.

8.1.3 Coordination Plan and Stakeholder Database

The Project's Coordination Plan for Public & Agency Participation was developed to identify the goals and objectives for public involvement and to outline specific strategies and tactics to effectively involve the public and relevant agencies in the decision-making process. The plan guides public involvement activities throughout the project development process and will be evaluated at milestones and updated as needed. Based on the goals and objectives of the coordination plan, HDOT developed a database of stakeholders, partners, and interested parties.

8.1.4 Environmental Impact Statement Scoping

A public scoping period was initiated with the publication of the NEPA NOI on November 22, 2022, and with the publication of the State of Hawai'i Chapter 343 Environmental Impact Statement Preparation Notice on November 16, 2022. The period included three public scoping meetings: two virtual meetings held on December 14, 2022 (one afternoon and one evening session) and one in-person meeting held on December 15, 2022, at the Lāhainā Civic Center. The scoping comment period was open through December 31, 2022. Pursuant to 1502.17(a), the FHWA and HDOT reviewed and considered all comments, data, and information received by commenters. The agencies then responded to substantive comments and considered the information in finalizing the alternatives for assessment in ~~this~~ the Draft EIS. HDOT completed and posted a summary Scoping Report on the Project's website in May 2023. Appendix 8 also includes the Scoping Report.

8.1.5 Public Comment Period on the Draft Environmental Impact Statement

On the publication of the Notice of Availability in the *Federal Register* and the State of Hawai'i, Office of Planning and Sustainable Development, Environmental Review Program's *The Environmental Notice* in January 2025, ~~this~~ the Draft EIS was made available and initiated a 45-day public review period extending to February 24, 2025. Two public hearings ~~are scheduled~~ were conducted to allow for one in-person and one virtual public hearing in January 2025. All substantive comments received on ~~this~~ the Draft EIS ~~would be~~ are summarized and responded to in this ~~the~~ Final EIS (Chapter 9, Response to Comments).

8.1.6 Ongoing Outreach and Public Coordination

HDOT and the FHWA remained engaged with the public during the development of ~~this~~ the Draft EIS ~~and would continue to be responsive and inclusive of public participation~~ (see TABLE 8-2). Most notably, ~~development of this Draft EIS~~ this has included the following outreach and public coordination:

- Section 106 consulting parties that are seeking to ensure active engagement with local residents—particularly those with a Native Hawaiian affiliation and an interest in the cultural resources of the project area
- Environmental-justice related outreach, which overlaps extensively with the Section 106 participants, as well as local businesses and residents that the Project may adversely affect (for example, such as property displacement or loss of business)
- Property owners and businesses that may have a full or partial displacement of property

TABLE 8-2. **Public Outreach Meetings**

DATE	TYPE OF MEETING	NO. OF ATTENDEES	TOPICS DISCUSSED
December 14, 2022, 12 p.m.	Virtual Scoping Meeting	32	The Purpose and Need Statement, the project development process, potential alternatives, input on resource concerns, and criteria for design and selecting the Preferred Alternative.
December 14, 2022, 6 p.m.	Virtual Scoping Meeting	16	The Purpose and Need Statement, the project development process, potential alternatives, input on resource concerns, and criteria for design and selecting the Preferred Alternative.
December 15, 2022, 6 p.m.	In-Person Scoping Meeting	18	The Purpose and Need Statement, the project development process, potential alternatives, input on resource concerns, and criteria for design and selecting the Preferred Alternative.
March 22, 2023	Roundtable Discussion	6	Project overview.
March 29, 2023	Section 106 Consulting Party Meeting	21	Section 106 and Chapter 6E process, project overview, Preliminary APE/6E project area, review of project schedule, proposed Consulting Party list, the status of studies underway, Programmatic Agreement approach, and a request for input on historic and cultural sites and features in and around the project area.
March 30, 2023	Section 106 Consulting Party Meeting	20	Section 106 and Chapter 6E process, project overview, Preliminary APE/6E project area, review of project schedule, proposed Consulting Party list, the status of studies underway, Programmatic Agreement approach, and a request for input on historic and cultural sites and features in and around the project area.
May 1-6, 2023	Follow-Up Emails	15	Emails were sent to known Section 106 consulting parties sharing that Section 106 meeting materials were posted on the website, and input on the materials was requested from parties and individuals that were not able to attend the March 29 and 30 Section 106 meetings.
May 31, 2023	NHO Field Visit	19	Field visit of area archaeological sites, historic preservation approach including some proposed mitigation measures, and use and access impacts that the Project could have on traditional cultural practices.
June 1, 2023	COM-CRC (Virtual)		Project overview presented to County of Maui Cultural Resource Commission (CRC) including project purpose and need, project timeline, and the current archaeological past studies and field work findings. The public in attendance was given a chance to ask questions or make comments. No questions or comments were given.
June 1, 2023	Developer Coordination Meeting		Meeting with West Maui Land to discuss right-of-entry, the Olowalu Subdivision, and the greenway.
July 5, 2023	Developer Coordination Meeting (Virtual)	6	Meeting with West Maui Land Company to discuss status of development plans in Olowalu and Ukumehame and plans for area infrastructure, including roads and water system.

DATE	TYPE OF MEETING	NO. OF ATTENDEES	TOPICS DISCUSSED
July 17, 2023	Business Outreach		Meeting with local business to discuss the Project and potential impacts to area businesses.
July 24, 2023	Business Outreach		Two meetings with local business to discuss the Project and potential impacts to area businesses.
July 27, 2023	Section 106 Consulting Party Meeting	15	Project timeline, progress of project archaeological field work and studies, review of the Build Alternatives, the use of a Section 106 programmatic agreement and draft contents.
August 2, 2023	Section 106 Consulting Party Meeting	17	Project timeline, progress of project architectural field work and studies, review of the Build Alternatives, potential mitigation options, use of a Section 106 programmatic agreement and draft contents.
November 18, 2023	Section 106 Consulting Party Meeting		Site visit with Native Hawaiian organizations to look at sites in the pinch points.
November 20, 2023	Section 106 Consulting Party Meeting		Virtual post site visit meeting recap for those members of Native Hawaiian organizations that could not attend the Nov. 18 site visit and begin a discussion on the PA.

8.2 AGENCY PARTICIPATION

The roles of agencies involved in project consultation are described in 23 U.S.C. 139. This includes the roles of lead, cooperating, and participating agencies.

8.2.1 Cooperating Agencies

~~According to the Council on Environmental Quality (40 CFR Part 1508.1(e)), "cooperating agency"~~ Cooperating agencies include ~~means any~~ federal agencies ~~agency~~, other than a lead agency, which have ~~has~~ jurisdiction by law or special expertise with respect to any environmental impact involved in a proposed project or project alternative. By agreement with the lead agencies, a state or local agency of similar qualifications may also be a cooperating agency.

The FHWA and HDOT have contacted the agencies listed in the following sections. And TABLE 8-3 through TABLE 8-5 summarize responses from agencies that were invited to be cooperating agencies.

~~Further, the FHWA and HDOT will still continue to consult with some agencies, regardless of their status as a cooperating agency.~~

TABLE 8-3. **Cooperating Federal Agencies**

COOPERATING FEDERAL AGENCY	ACCEPTED DECLINED NO RESPONSE	PRIMARY ROLE
U.S. Army Corps of Engineers, Regulatory Branch	Accepted	Wetlands and water quality
U.S. Federal Emergency Management Agency	No Response	Flood elevations
U.S. Department of Agriculture, Natural Resources Conservation Service	No Response	NRCS has agreed to provide input on Farmland Preservation assessment
U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service	Accepted	Section 7, Essential Fish Habitat
U.S. Department of Interior, U.S. Fish and Wildlife Service	Accepted	Section 7
U.S. Environmental Protection Agency	Accepted	Clean Air Act, overall NEPA coordination~~, environmental justice~~
Department of Homeland Security, U.S. Coast Guard	Declined	Confirmed no bridge permits would be required

TABLE 8-4. **Cooperating State Agencies**

COOPERATING STATE AGENCY	ACCEPTED DECLINED NO RESPONSE	PRIMARY ROLE
Governor, State of Hawaii	Accepted	HEPA
Department of Business, Economic Development and Tourism, Office of Planning and Sustainable Development, Coastal Zone Management Program	Accepted	Coastal Zone Management
Department of Land and Natural Resources, State Historic Preservation Division and the State Historic Preservation Officer	Accepted	Section 106/Chapter 6E
Department of Land and Natural Resources, Commission on Water Resource Management	No Response	
HDOH, Disability and Communication Access Board	Declined	
HDOH, Indoor and Radiological Health Branch	No Response	
HDOH, Clean Water Branch	Accepted	

TABLE 8-5. **Cooperating County Agencies**

COOPERATING COUNTY AGENCY	ACCEPTED DECLINED NO RESPONSE	PRIMARY ROLE
Department of Planning	Accepted	Special Management Area Determination/Permit

8.2.2 Participating Agencies

A participating agency is a federal, state, Native Hawaiian, regional, or local government agency that has an interest in the Project and has agreed to participate in the NEPA/HEPA and scoping processes ~~(40 CFR 1508.1(w))~~. The standard for participating agency status is broader than the standard for cooperating agency status described in the previous section. Therefore, cooperating agencies are participating agencies by definition—but not all participating agencies are cooperating agencies. TABLE 8-6 through TABLE 8-8 summarize responses from organizations that were invited to be participating agencies.

8.2.3 Agency Meetings and Coordination

TABLE 8-9 summarizes the coordination meetings held with participating agencies. FHWA and HDOT will continue to consult with some agencies, regardless of their status as a participating agency.

TABLE 8-6. **Participating Federal Agencies**

FEDERAL PARTICIPATING AGENCY	ACCEPTED DECLINED NO RESPONSE
The Advisory Council on Historic Preservation*	No Response
Department of Housing and Urban Development	No Response
Department of the Interior, U.S. Geological Survey	No Response
Department of Transportation, Federal Aviation Administration	No Response

Note: The Advisory Council on Historic Preservation did not formally respond but have participated in the Section 106 process for the Project.

TABLE 8-7. **Participating State Agencies**

AGENCY	ACCEPTED DECLINED NO RESPONSE
Department of Accounting and General Services	Declined
Department of Agriculture	No Response
Department of Budget and Finance	No Response
Department of Business, Economic Development and Tourism	No Response
Department of Defense	Accepted
Department of Education	Declined
Department of Hawaiian Home Lands	Declined
State of Department of Health – Clean Air Branch	No Response
Department of Health – Clean Water Branch	Accepted
Department of Health – Environmental Management Branch	Accepted
Department of Health – Health Administration	Accepted
Department of Health – Maui District Health Office	Declined
Department of Health – Solid and Hazardous Waste Branch	Accepted

AGENCY	ACCEPTED DECLINED NO RESPONSE
Department of Natural and Land Resources – Commission on Water Resource Management	No Response
Department of Natural and Land Resources – Division of State Parks	No Response
Department of Natural and Land Resources – Maui Land Division	Accepted
Department of Natural and Land Resources – Division of Aquatic Resources	Accepted
Department of Natural and Land Resources – Division of Forestry and Wildlife	Accepted
Department of Natural and Land Resources – Na Ala Hele and Trails	No Response
Department of Natural and Land Resources – Engineering Division	Accepted
Department of Natural and Land Resources – Office of Conservation and Coastal Lands	Accepted
Department of Natural and Land Resources – Maui/Lanai Burial Council	Accepted
Office of Hawaiian Affairs	Accepted

TABLE 8-8. **Participating County Agencies**

PARTICIPATING AGENCY	ACCEPTED DECLINED NO RESPONSE
Department of Economic Development	No Response
Maui Emergency Management Agency	Accepted
Department of Environmental Management	Accepted
Department of Environmental Management, Solid Waste Division	Accepted
Department of Environmental Management, Wastewater Reclamation Division	Declined
Department of Environmental Management, Environmental Protection and Sustainability Division	Accepted
Maui Fire and Public Safety	Declined
Department of Housing and Human Concerns	Declined
Maui Metropolitan Planning Organization	Accepted
County of Maui Department of Parks and Recreation	Accepted
Maui Police Department	Accepted
Department of Public Works	Accepted
Department of Public Works – Development Services Administration	No Response
Department of Public Works – Engineering Division	Accepted
Department of Public Works – Highways Division	Accepted
Department of Transportation (Bus System)	Accepted
Department of Planning	Accepted
Maui Planning Commission	Accepted
County of Maui Cultural Resources Commission	Accepted
Department of Water Supply	Declined

TABLE 8-9. **Agency Meetings and Key Coordination**

DATE	AGENCY	PURPOSE OF COORDINATION/TOPICS DISCUSSED
January 20, 2023	USCG	The FHWA sent an email to the U.S. Coast Guard with the U.S.C. 144(c)(2) checklist. On February 2, 2023, the USCG concurred that no bridge permit would be required based on the factors specified in the checklist.
January 26, 2023	SHPD	Initiation of the Section 106 and Chapter 6E process, project overview, Preliminary APE/6E Project Area, review of project schedule, proposed Consulting Party list, the status of studies underway, Programmatic Agreement approach.
February 02, 2023	USACE	Project overview and schedule, review of progress of project studies related to wetlands and inland water resources, and potential Section 404 permit requirements.
February 02, 2023	USFWS	Project overview and schedule, review of progress of project studies related to flora and fauna resources, and potential flora and fauna mitigation measures.
February 16, 2023	NOAA-NMFS	Project overview and alternatives, field observations gathered to date, and aquatic species of concern and potential related mitigation measures.
February 27, 2023	NOAA—NMFS	NMFS Habitat Conservation Division provided a letter of technical assistance to the FHWA with suggestions and guidance on how to prepare an Essential Fish Habitat (EFH) Assessment and consult on potential effects to EFH.
March 09, 2023	COM Planning	Project overview and timeline, project alternatives, Ukumehame Firing Range (uses and management), review of status of project technical studies, and the disposition of the existing highway if the highway is relocated.
March 22, 2023	USFWS	Site visit with USFWS to look at the project area, with focus on project area biological resources.
Mar 24, 2023	BLNR	Meeting to discuss right of entry and involvement of State of Hawaiʻi land.
April 11, 2023	COM Planning Commission	Project presentation, which included project overview, purpose and need, alternatives, and timeline. Public testimony was given about the Project. Testimony included questions and comments about project public involvement, coastal beach processes and preservation, connector roads and continued area access, sedimentation and stormwater controls, multimodal uses, and integration with County open space plans.
May 2, 2023	NRCS	The FHWA sent email to NRCS with form CPA-106 to determine impact on farmlands. NRCS replied on May 2, 2023, by filling in their portion of the form.
May 30, 2023	COM-Parks	Project overview, timeline, and alternatives, Maui County land use plans, uses at Ukumehame Firing Range, the disposition of the existing highway if the highway is relocated, beach access, and the West Maui Greenway plan.
June 30, 2023	NMFS EFH	Letter sent to NMFS/PIRO providing an Essential Fish Habitat Analysis and requesting concurrence that the Project would have no more than minimal adverse effects to EFH and managed species.
June 30, 2023	NMFS Section 7	Letter sent to NMFS/PIRO providing information on Section 7 protected species and requesting concurrence that the Project may affect, but is not likely to adversely affect federally -protected species or their designated critical habitat.

DATE	AGENCY	PURPOSE OF COORDINATION/TOPICS DISCUSSED
July 13, 2023	Maui Lāna'i Islands Burial Council	Presentation to the council covering the Project's purpose and need, the proposed alternatives, findings of project archaeological studies, and the use of a Section 106 programmatic agreement.
October 10, 2023	NMFS EFH	NOAA NMFS concurred that with that implementation of the proposed BMPs and minimization measures discussed in the June 30, 2023, letter along with these Conservation Recommendations, there would be no more than minimal adverse effects to EFH.
November 13, 2023	USFWS	Letter sent to USFWS providing information on Section 7 protected species and requesting concurrence that the Project may affect, but is not likely to adversely affect federally -protected species or their designated critical habitat.
November 27, 2023	NMFS Section 7	NOAA NMFS concurred that with the implementation of agreed-upon avoidance and minimization measures the Project may affect but is not likely to adversely affect the listed species.
December 12, 2023	EPA	Virtual meeting to discuss status of Hazardous transfer station at the Ukumehame Firing Range
January 17, 2024	USFWS	Virtual meeting to discuss Endangered Species Act Section 7 submittal and impacts of Lāhainā wildfire on the Project.
Feb 22, 2024	USFWS	Need for a Biological Assessment and formal consultation on nēnē and waterbirds.
March 1, 2024	USACE	Meeting to discuss USACE jurisdiction of possible area wetlands and what is needed to complete a jurisdictional determination.
August 5, 2024	COM Parks	Virtual meeting to discuss Section 4(f) findings with the Official with Jurisdiction.
October 22, 2024	USACE	Meeting to discuss Connectivity Memo, design updates to viaduct structure, and help clarify a permitting pathway.
November 8, 2024	USFWS	Meeting to discuss Biological Report Supplement, design updated to viaduct structure and help clarify Endangered Species Act consultation pathway.
December 20, 2024	USFWS	Virtual meeting to discuss status of the Biological Assessment and clarify potential risks to listed species.
January 14, 2025	USFWS	Virtual meeting to discuss status of the Biological Assessment and determine appropriate conservation measures.
March 6, 2025	Maui County - Cultural Resources Commission	Virtual meeting to present Project updates following publication of the Draft EIS.
May 2, 2025	COM Planning	Virtual meeting to present Project updates following publication of the Draft EIS and to discuss Special Management Area permitting.
May 22, 2025	SHPD	Virtual meeting to discuss the Programmatic Agreement.
May 28, 2025	SHPD	Virtual meeting to discuss the Programmatic Agreement.

DATE	AGENCY	PURPOSE OF COORDINATION/TOPICS DISCUSSED
April 25, 2025	USFWS	Virtual meeting to discuss monitoring protocol and additional conservation measures for listed bird species.
June 4, 2025	SHPD	Virtual meeting to discuss the Programmatic Agreement.
July 18, 2025	Cooperating Agencies	Virtual meeting to present Project updates following publication of the Draft EIS and discuss development of the Final EIS.

Contents

9. Response to Comments[1]

The presentation and summary of comments and responses is a key element of the Final EIS. The Final EIS presents wholly new text specific to the process steps since release of the Draft EIS and a summary of comments received during the public comment period (along with agency responses to substantive comments).

9.1 DRAFT EIS COMMENT PERIOD

The Draft EIS was completed on December 20, 2024, and made available to the public through the website on that date along with publication of the Notice of Availability in the Federal Register and The Environmental Notice in January 2025. This initiated a 45-day public review period extending to February 24, 2025. Two public hearings were held: an in-person hearing on January 23, 2025, and a virtual public hearing on January 28, 2025. There were a variety of methods available for individuals to submit comments on the Draft EIS: email, online form, printed form, and verbally at public hearings. All substantive comments received on the Draft EIS have been summarized and responded to in this Final EIS.

9.2 COMMENTS AND RESPONSES

This section provides responses to substantive comments received during the 45-day comment period following publication of the Draft EIS, which ended on February 24, 2025. Appendix 9 provides the individual detailed transcription of all comments and communications received, while substantive comments are summarized below along with FHWA and HDOT responses. In total, over 200 comments were received from 85 submissions.

Where applicable, individual comments have been consolidated and aggregated together for ease of reading and to reduce redundancy. Comments are organized by key Final EIS chapters and technical impact assessment areas.

9.2.1 List of Speakers

The FHWA and HDOT thank all the participants who provided comments and input at the public hearings and during the public comment period. The list of commenters is presented below. For any comments that were consolidated, the people or organizations that contributed individually are shown at the end of the comment (in parentheses). To cross reference a commenter's specific transcript from Appendix 9 against the comments presented below, the transcript log number is provided along with the name. For example, in Comment 1, the relevant direct transcript text from Kathy Kihune can be found by referencing Submission Number 34 in the main comment table in Appendix 9.

[1] This section is new text for the Final EIS and was not included in the Draft EIS. For ease of reading, the new text is not double underlined.

Agencies and Elected Officials

1. Tamara Paltin, County Council, County of Maui
2. Viktorily A Sirova, U.S. Department of the Interior
3. Hawaii State Department of Health, Clean Air Branch
4. Jeremy Morgan, U.S. Army Corps of Engineers
5. Brian J Neilson, Hawaii DLNR-Aquatic Resources
6. Dina U. Lau, Hawaii DLNR-Engineering Division
7. Ciara W.K. Kahahane, Hawaii DLNR-Water Resource Management
8. Michael Cain, Hawaii DLNR-Coastal Lands
9. Russell Y. Tsuji, DLNR-Land Division
10. Roy Ikeda, Hawaii Department of Education
11. Robert Schmidt, Maui County Department of Environmental Management
12. Karen Comcowich, Maui County Long Range Planning Division
13. Francisco Dóñez, U.S. Environmental Protection Agency
14. Chelsie Javar-Salas, U.S. Fish and Wildlife Service

Organizations

1. Maui Bicycle League (Saman Dias, Chair)
2. Ulupono Initiative (Kathleen Rooney)
3. Valley Isle Sports Shooters Club (Raymond Ishii, President)
4. The Nature Conservancy (Kim Falinksi)
5. EarthJustice (Mahesh Cleveland)

In-Person Public Hearing, January 18, 2025

1. Anonymous 1
2. Anonymous 2
3. Anonymous 3
4. Anonymous 4
5. Kathy Kihune
6. Brandon Hazlet
7. Michele Lincoln
8. Linda Nahina Magallanes
9. Kellee Emmerich
10. Brad Emmerich
11. Raymond Ishii
12. David McPherson
13. Jason Wolford
14. Van Fischer
15. Nick Nielson
16. Malihini Keahi
17. Ms. Keele
18. Victoria Kaluna- Palafox
19. Linda Nahina Magallanes
20. Mr. Kaluna- Palafox
21. Ms. Felice

Virtual Public Hearing, January 23, 2025

1. Nancy Haley
2. Cesar Martin del Campo
3. Saman Dias
4. Karen Comcowich
5. Teje Roy
6. Jason Potts

Submitted Comments by Email, Mail, Phone, Online Form

1. Lee Chamberlain
2. Thorne Abbot
3. Carter Barto
4. Janice and James Revells
5. Victoria Kaluna- Palafox
6. Kevin Bridges
7. Darrell Tanaka
8. Benny Martin
9. Robert Santos
10. Tara King
11. C-T Folding
12. Kai Kalani
13. Raymond Ishii
14. Robert Cole
15. Dan Dennison
16. Donna Clayton
17. Constatine Mittendorf
18. Jerome Kellner
19. Richard Gailey
20. Van Fischer
21. Anna Nalaniewalu Vinuya-Palakiko
22. Jason
23. Trevor White
24. Dave Veldman
25. Allen Surbida
26. John Rafael
27. David Kingdon
28. Michele McLean
29. Cesar Martin del Campo
30. Jonathan Verona
31. Daniel Ornelas
32. Elaine Baker
33. Julie Durham
34. Dr. Marion Ceruti
35. Dennis Eyler
36. Julie Durham

37. Andrew Viloria

9.2.2 Comments and Responses by Draft EIS Chapter

Unless noted for a specific comment response, the comments and responses presented below did not result in changes to Draft EIS technical chapters. The responses indicate when a comment has contributed to the refinement of the Selected Alternative as presented in this Final EIS.

Purpose and Need, EIS Process, and General Comments

Comment 1: Thank you for making the time to bring many stakeholders together from Olowalu and Ukumehame. It has been very informative and positive hearing the available/potential routes to mitigate sea level rise along with environmental concerns. (Kathy Kihune 34)

Response 1: Thank you for your comment and your interest in the Project.

Comment 2: We fully support HDOT's efforts of adaptive realignment of this critical highway inland. Previously the County approved a subdivision in the Ukumehame section for highway relocation and creation of a linear coastal park. County council also authorized purchase of the land to relocate the highway inland, uphill and out of the tsunami inundation zone. This may be a prudent route to use for the relocated highway. (Thorne Abbott 2)

Response 2: Consistent with this comment, the Selected Alignment through Ukumehame utilizes County land as created through the Ukumehame subdivision and other purchases to the extent practicable. The County’s purchase was intended to serve both as a future relocation of the highway and additional coastal park area.

Comment 3: The Honoapi‘ilani Highway Improvements Project presents a historic opportunity for HDOT to create a best-in-class model for adapting to sea level rise and coastal hazards, while at the same time incorporating sensible bicycle and pedestrian-friendly measures that would ultimately reduce car traffic, while promoting public health and mobility for Hawai‘i’s residents. (Mahesh Cleveland, EarthJustice 81)

Response 3: Thank you for your comment and your interest in the Project.

Comment 4: As part of HDOT's broader goal to repair the coastal highway network from Māʻalaea to north of Lāhainā, the Honoapiʻilani Highway Improvements Project will bring much-needed service dependability and resilience. This project also offers a rare chance to incorporate the West Maui Greenway as a crucial component of this reconstruction. The August 2023 wildfires has forced our community to rethink present and future disaster recovery and infrastructure planning. Conversion of the former highway into a cycling and pedestrian path, as well as an evacuation route, will shape a legacy of sustainable infrastructure that will benefit West Maui for many years to come. (Tamara Paltin, County Council, County of Maui 42)

Response 4: The West Maui Greenway project remains an independent initiative not led by HDOT. In the project area the West Maui Greenway is anticipated to eventually be integrated along the right-of-way of the existing Honoapiʻilani Highway which is anticipated to be relinquished to the Maui County one the Project is complete. In addition, based on comments received on the Draft EIS, the Selected Alternative as presented in this Final EIS will include a separated shared-use pathway along the makai edge of the new highway right-of-way, providing more multi-modal opportunities with the eventual and independent implementation of the West Maui Greenway.

Comment 5: I'm a West Maui resident and I drive the Honoapiʻilani Highway multiple times a week for commuting to and from work. I fully support this project because I see the wave impacts that are happening along the highway. (Karen Comcowich 46)

Response 5: Thank you for your comment and your interest in the Project.

Comment 6: I firmly believe and strongly support the proposed 6.5-mile mauka relocation of the Honoapiʻilani Highway. Honoapiʻilani Highway serves as critical infrastructure for residents, businesses, and visitors alike and the proposed project enhances safety and emergency preparedness, supports economic vitality, improves quality of life, and is responsive to environmental considerations and safety concerns. I urge HDOT and County of Maui to act swiftly to approve, fund, and complete this project. The benefits of an inland, four-lane Honoapiʻilani Highway far outweigh the costs, and its timely completion is essential for the safety, economic stability, and overall well-being of our community. Please do everything possible to make this happen. This is so very important for the island, the community, and the planet. Realignment will mitigate against risks posed by rising sea levels and wildfires. This project is a pivotal step in West Maui's recovery, resilience, and sustainability and this critical realignment will safeguard a vital transportation corridor that serves as a lifeline for West Maui residents, workers, and visitors. (Carter Barto 3 and 7; Robert Cole 16; Dan Dennison 17; Donna Clayton 18; Constantine Mittendorf 19; Jerome Kellnor 20; Saman Dias 24; David Veldman 27; Cesar Martin del Campo 32; Paltin, County Council, County of Maui 42)

Response 6: As stated in Chapter 2, Alternatives of the Draft EIS, based on current demand, the proposed highway would be constructed with two lanes but with sufficient right-of-way to accommodate a full four-lanes if and when demand indicates that need and if funding is available. Should HDOT pursue completion of a four-lane configuration in the future, a supplemental NEPA/HEPA environmental assessment would be undertaken.

Comment 7: Has there been any thought about putting passing lanes on the highway, not the whole but there should be a location where the roadway can be widened for a passing zone. Karen Comcowich 46, Teje Roy 47, Raymond Ishii 54, Ms. Keele 60)

Response 7: As stated in Chapter 2, Alternatives of the Draft EIS, based on current demand, the proposed highway would be constructed with two lanes but with sufficient right-of-way to accommodate a full four-lanes if and when demand indicates that need and if funding is available. The initial project construction would clear, grade and provide infrastructure (bridges and culverts) and be ready to accommodate four lanes. Should HDOT pursue completion of a four-lane configuration in the future, a supplemental NEPA/HEPA environmental assessment would be undertaken. Based on comments made during the Draft EIS public comment period and at the public hearings, the HDOT will evaluate in the design build process the potential for including a passing lane segment as part of the initial build-out.

Comment 8: Please expand the highway from two lanes to four to allow better flow of traffic for those that commute to the west side for work. Impatient motorists stuck behind those driving below the speed limit routinely drive aggressively through this section in order to pass clusters of slower drivers. Building two lanes in either direction will allow these motorists to safely pass slower drivers and reduce congestion through Lāhainā. (Carter Barto 3, Daniel Ornelas 49)

Response 8: As stated in in Chapter 2, Alternatives of the Draft EIS, based on current demand, the proposed highway would be constructed with two lanes but with sufficient right-of-way to accommodate a full four-lanes if and when demand indicates that need and if funding is available. Should HDOT pursue completion of a four-lane configuration in the future, a supplemental NEPA/HEPA environmental assessment would be undertaken. In addition, HDOT will evaluate in the design build process the potential for including a passing lane segment as part of the initial build-out.

Comment 9: My biggest comment is to speed up the construction timeline. The proposed construction timeline is way too long; this needs to be done now! The federal government just provided $2 billion for Lāhainā housing needs so that should free up state and local money to get this project started and finished sooner. The vulnerability threat to west side is only getting worse with time and needs to be fixed sooner rather than later. Get this extremely critical project finished sooner. (Kevin Bridges 6)

Response 9: The Project remains a high priority for HDOT and the approvals and construction implementation schedule are intended to expedite project delivery. The Final EIS/ROD must be completed in summer 2025 as a condition of project funding. HDOT will then move into the final design and construction phases of the Project and will use a design-build approach, where one contractor designs and builds the project, reducing schedule and getting this important project built faster. Construction is expected to start in 2027 and could potentially be complete and operational by 2030.

Comment 10: If you look up old satellite images from 1950 and compare them to now the land looks exactly the same, so what is the purpose of this? Is the land disappearing or is this a ploy to get Olowalu Town eventually passed? We don't want a new highway that will increase taxes and bring in more millionaires. And I think the more road you make the more people come. It's already hard enough to survive and the majority of kanaka have already been forced out due to the high cost of living. Only a few of the original families remain in Olowalu. So you take up more land. You open up the highway and then you infringe on people in Olowalu. (Jason 25, Malihini Keahi 59)

Response 10: As described in Chapter 1, Introduction, Purpose and Need, of this Final EIS, the Project’s primary purpose is to provide a reliable transportation facility in West Maui and improve Honoapi‘ilani Highway’s resilience by reducing its vulnerability to coastal hazards. Specifically, the Project is intended to address existing coastal erosion and flooding vulnerabilities as well as future coastal erosion and flooding. The Project does not include land use actions or modifications to the existing zoning that would facilitate additional development in the surrounding area. Regarding the Olowalu Town Master Plan Project, on December 7, 2015, the State Land Use Commission denied the acceptance of the Final EIS and the project was discontinued. There are currently no filed applications or permits to indicate that the Olowalu Town Master Plan Project would be pursued again. In addition, should the Olowalu Town Master Plan Project (or a project of similar scope or nature) be proposed, it would likely be subject to approvals, potentially involving environmental review and associated public engagement requirements.

Comment 11: I'm from Ukumehame, we are the first ones that you guys are going to plow through come into our kuleana. That's like taking a part of our livelihood. You cannot just come and plow through all our cultural sites or our wetlands or the river and life. Fix the old highway and you will save a lot more money by just fixing it. (Mr. Kaluna Palafox 63)

Response 11: The Project seeks to create a new highway alignment that is less vulnerable to coastal erosion and flooding that has undermined the reliability of the existing highway for decades. HDOT and the FHWA considered a “No Build” Alternative that would leave the highway in place or make other improvements (such as coastal armoring) that could protect the existing road alignment from the ocean. However, these solutions weren’t found to fix the problem of the ocean flooding the road. The road needs to be moved mauka to keep ocean waters off the road, and coastal armoring was found to worsen coastal erosion, which would in turn further degrade the Olowalu reef. The Preferred Alternative, as described in the Draft EIS and the Selected Alternative, as presented in this Final EIS—include revisions that are based on public comments about specific elements of the Project. Refinements to the alignment provide a balanced approach that achieves the Project’s stated purpose and need combined with the best opportunity to avoid, minimize, or mitigate impacts to the community and the environment. Generally, the No Build Alternative, or fixing the old highway as suggested in the comment, does not address the Project’s purpose and need of having a reliable transportation link connecting West Maui and Central Maui. This assessment is based on the existing and predicted levels of coastal erosion and flooding inundation. Any parcels that may be affected by right-of-way requirements for the new highway alignment—including kuleana parcels—are evaluated for the need of full or partial acquisition. Property acquisition would adhere to the appropriate procedures for fair compensation as set forth in the Uniform Relocation Act, as applicable (see Chapter 3.4 of the Final EIS). With regard to wetlands and water bodies, the alignment would be on viaduct over the low-lying

inundation areas adjacent to the Ukumehame Firing Range and wetlands in the Ukumehame area. Spanning these important ecological features preserves wetlands and wildlife habitat to the greatest extent practicable. Bridges and culverts would allow for continued water flow while crossing the new highway.

Comment 12: The 2007 Act 214 directed HDOT to incorporate cane haul roads into emergency evacuation planning. Yet over 100 lives were lost in the August 2023 Lāhainā fire—many of which could have been prevented had these evacuation routes been open and accessible. The Honoapi'ilani Highway realignment must correct this tragic failure by formally incorporating cane haul roads as emergency evacuation routes. HDOT must negotiate with the Owner of Record for right-of-way access and develop permanent emergency routes as part of this highway realignment. Failure to integrate emergency evacuation routes now would be a continuation of HDOT's past neglect and put West Maui residents at continued risk. (Saman Dias 51)

Response 12: The objective of Act 214 is to provide alternative routes if the highway is closed. The Project's new highway alignment, in combination with connections to the existing highway that will become a local roadway, generally supports the objectives of Act 214. There is no continuous north-south cane haul road network parallel to the existing highway and only a handful of mauka-makai cane haul roads in the project area. The existing roadway from Olowalu center towards the petroglyphs is being preserved. In the project area, subdivision streets are the primary mauka-to-makai travel ways including North Street and Luawai Street in Olowalu and Ehehene Steet and Pōhaku 'Aeko Street in Ukumehame. The proposed highway realignment will have two signalized intersections that will provide access to the existing highway from the realigned highway.

Comment 13: According to the plans as presented in the Draft EIS, the intent of HDOT is to leave the existing road and shoreline hardening structures in place, and to transfer ownership and maintenance responsibilities to Maui County to become a local access road. OCCL would like to see an assessment of the cost and long-term impact to the shoreline of removal of the existing road and all affiliated protective structures. (Michael Cain, Hawaii DLNR – Conservation and Coastal Lands 72)

Response 13: There are no known plans that would suggest the existing road, or its affiliated protective structures would be removed in their entirety in the future and such conditions are not proposed as part of the Project. Accordingly, an assessment of the cost and long-term impact to the shoreline of removal of the existing road and all affiliated protective structures would be outside the purview of this environmental review. The existing road would continue to provide important local access to homes, businesses, beach areas and parks so it is not anticipated to be removed in its entirety. The ability to plan for the future of the existing roadway to serve a new public use of local access and providing right-of-way to implement the West Maui Greenway but without the burden of ensuring the ability to carry more than 20,000 vehicles per day will enable the roadway to be managed with more flexibility in accommodating less shoreline hardening or other measures. The Draft EIS indicated that The Nature Conservancy is currently evaluating such opportunities along the old highway. The Draft EIS and this Final EIS indicate that once jurisdiction is transferred, there may be conditions in the future where the old highway is not a continuous link throughout the corridor.

Comment 14: Portions of the old road are in the Limited Subzone of the Conservation District. Per HAR §15-5-12, the objective of the Limited Subzone is to "limit uses where natural conditions suggest constraints on human activities." Footnote 5 on page 2-12 of the Draft EIS states the following: "As part of the relinquishment process, HDOT and the FHWA must concur that the land is not needed for federal-aid highway purposes in the foreseeable future, that the new roadway segment and its traffic operations would not be adversely affected by relinquishments, and that the lands are not suitable to restore, preserve, or improve the scenic beauty of the new roadway." The lands which are currently occupied by the existing highway are suitable for restoration. Naturalization of the shoreline would improve public access, return public trust land to the public, and benefit reef health at the Olowalu reef by enabling the land to naturally filter freshwater runoff. Restoration may provide a more substantial storm and wave buffer for the areas of the realigned highway which will remain in the SLR-XA. Finally, the scenic beauty of the realigned road will be improved if the existing road is removed and restored to a natural beach profile. (Michael Cain, Hawaii DLNR – Conservation and Coastal Lands 72)

Response 14: The relinquishment of the existing highway would not adversely affect the new roadway segment. The existing highway would continue to provide important local access to homes, businesses, beach areas and parks so it is not anticipated to be removed in its entirety. Once the Project is constructed and operational, the existing highway would not be the primary transportation link between West Maui and Central Maui, and the volume of traffic on the roadway would be substantially reduced. The reduction in traffic volume would allow the County to pursue multiple uses, such as the Maui Greenway, and consider non-hardening measures that are more conducive to naturalizing the shoreline. The Draft EIS and this Final EIS indicate that The Nature Conservancy is currently evaluating such opportunities along the old highway, and that once jurisdiction is transferred, there may be conditions in the future where the old highway is not a continuous link throughout the corridor.

Comment 15: HDOT should disclose and analyze any reasonably foreseeable growth-inducing effects from the Honoapiʻilani Project. For example, to the extent that any plans to develop Olowalu Town are still in the works and would be dependent on implementing the Honoapiʻilani Highway Improvements Project, HDOT must address these effects. (Mahesh Cleveland, EarthJustice 81)

Response 15: As established in the Draft EIS, the Honoapiʻilani Highway Improvements Project is not expected to have a growth inducing effect locally or in the larger region. The purpose of the Project is to ensure a reliable and resilient transportation link connecting West Maui with Central Maui. There is no change in up or downstream capacity of the highway and there are no actions included in the Project that would generate new travel demand (that is, no changes in land use, zoning, or development regulations). Specifically, as a limited-access road there would be no new driveways or access points connected directly to the realigned highway, and there is no change in overall development opportunities created by the roadway. Regarding the Olowalu Town Master Plan Project, on December 7, 2015, the State Land Use Commission denied the acceptance of the Final EIS and the project was discontinued. There are currently no filed applications or permits to indicate that the Olowalu Town Master Plan Project would be pursued again. In addition, should the Olowalu Town Master Plan Project (or a project of similar scope or nature) be proposed, it would likely be subject to approvals, potentially involving environmental review and associated public engagement requirements.

Comment 16: EPA did not identify significant concerns to be addressed in the final EIS. We acknowledge and recognize our colleagues in the state for continuing the NEPA process to analyze and deliver this project following the devastating wildfire impacts to Lāhainā just north of the proposed project area. We note that many of our scoping comments were adopted in the development of the Draft EIS, and that our November 1, 2024, comments on the Administrative Draft EIS regarding aquatic resources and community engagement were fully addressed in the Draft EIS. (Francisco Dóñez, USEPA 83)

Response 16: Thank you for your comment and your interest in the Project.

Alternatives

Comment 17: Build Alternative 1 would be the best alternative as it provides the shortest distance and will provide outstanding views. However, the Preferred Alternative would adequately address the ocean flooding issue and stand a better chance of not being delayed with nuisance lawsuits. I had asked about cutting down the trees through Olowalu -- the tunnel trees. I was told they cannot. You protect the trees but you're not protecting the cultural significance of Olowalu. If you cut the trees down, you got one road there, use the old cane haul road instead of going up. Alternative 1 is preferred and you can remove the trees. (Kevin Bridges 6, Linda Nahina Magallanes 40 and 62)

Response 17: As presented in the Draft EIS and this Final EIS, the various alternatives were evaluated based on the full range of technical environmental analyses conducted as well as roadway design considerations. In addition to the loss of monkeypod trees Build Alternative 1 in Olowalu would have resulted in further potentially adverse effects related to the proximity to existing residences and the intersection of Olowalu village center and the existing highway. All the alternatives are approximately the same length, so alignment length alone was not a primary factor in the comparative impact evaluation. As described in the Draft EIS, the Preferred Alternative is based on Build Alternative 1 in Ukumehame and Build Alternative 2 in Olowalu and is considered the best opportunity to achieve the Project's purpose and need while minimizing and avoiding environmental impacts.

Comment 18: I oppose all builds except maybe Build Alternative 1 as long as it doesn't demolish my wife's 2nd great grandmother's foundation located in the bushes right next to the old water tower/general store. I'm completely against Build Alternative 4, which is going right through the side of Pu'u Kilea and exactly where the oldest petroglyphs are located. Build Alternatives 3 and 4 worry me because they go by the petroglyphs and recently the petroglyphs have been getting vandalized. Specifically in Olowalu, what is going to be done with the existing highway? I say no to the new highway and please fix what is already there. (Jason 25, Teje Roy 47, Jason Potts 48)

Response 18: The various alternatives (including a No Build Alternative that would keep the highway in its present location) were evaluated based on the technical environmental analyses conducted as part of the Draft EIS and this Final EIS. Overall, the No Build Alternative did not meet the Project's purpose and need because it leaves the existing highway vulnerable to coastal erosion and flooding and remains a less reliable transportation link to West Maui. However, the existing highway would continue to serve the community as a local road; it would carry far less traffic but still provide access

to the Olowalu village center, homes, and business, as well as the beaches and parks in Ukumehame and Olowalu.

Build Alternative 1 does pass through this area adjacent to the general store and water tower and could disturb the foundation mentioned in the comment. As detailed in Chapter 5, Preferred Alternative, of the Draft EIS, Build Alternative 1 in Olowalu was not selected as the Preferred Alternative based on several factors, including the complexity of the overlapping or proximity of the new alignment with the existing highway and its close proximity to the village center itself. Further, Build Alternative 4 was not identified as the Preferred Alternative because it has several environmental constraints associated with the mauka alignment. This included its proximity to the petroglyphs, which were identified as a likely adverse effect on land use, visual quality, and archeological and historic resources—including a noise impact at the location of the petroglyph. As described in Chapter 5 of the Draft EIS, the Preferred Alternative is based on Build Alternative 2 in Olowalu, which is considered the best opportunity to achieve the Project’s purpose and need while minimizing and avoiding environmental impacts.

Comment 19: I am deeply concerned about the proposed highway realignment options, especially Build Alternative 4, which would run directly through many of our homes in the subdivision. If you put the road up higher, what about the heiau on the top? That heiau is still going strong. There's also Pu'u Kilea, which is where our Kupunas are buried. While we appreciate the environmental decision to move the highway away from the coastline, I strongly encourage consideration of Build Alternatives 2 and 3 for our section of the realignment, as they seem to pose less of a threat to the homes and families already established in the area. Please create the highway furthest away from infringing on local people. Please create a highway that encourages safety and more efficient transportation but discourages further development that does not enhance nor empower local people. (Benny Martin 9, Anonymous2 37, Linda Nahina Magallanes 62)

Response 19: In both Ukumehame and Olowalu, Build Alternative 4 was intended to represent the most mauka of alignments (that is, the most separation from the coast and inundation flood zones). The evaluation of this alignment showed that the distance from the coastline resulted in substantially more potential adverse effects on private property and other environmental considerations compared with Build Alternatives 1 and 2. As identified in Chapter 5 of the Draft EIS, the Preferred Alternative was selected based on Build Alternative 1 in Ukumehame and Build Alternative 2 in Olowalu. Build Alternative 4 was not identified as part of the Preferred Alternative, and the Preferred Alternative would not result in potential adverse effects to the referenced heiau. The Preferred Alternative avoids and minimizes effects on existing residences as well as cultural resources and other environmental considerations. The alignment does not create new development opportunities within the project area.

Comment 20: In Olowalu, use the mauka/northern section of Build Alternative 1 until it crosses Build Alternative 2 and then pick up that option. Basically, use the uphill section of Build Alternatives 1 and 2 - a mauka hybrid - don't use the makai section of either. (Brandon Hazlet 35)

Response 20: This comment generally reflects the proposed refinements to the Selected Alternative made in consideration of public comments and refined design analysis.

Comment 21: In Ukumehame, my request is that the highway go as low as possible through County land rather than through the resident or the residential areas or the agricultural areas and private property. It makes sense to me that the State would put the highway there on the County property at the bottom of Ukumehame development, although people have moved in there and put up homesteads despite “no trespassing” signs. I'm concerned about road noise the closer it comes to where people are living and since we can basically hear the highway now and hope that they would do something to try and mitigate the noise. (Kellee Emmerich 52, Brad Emmerich 53)

Response 21: In Ukumehame, the most mauka alignment (Build Alternative 4) was not identified as the Preferred Alternative for many of the environmental constraints noted in the comment, including a high number of private property takings. The Preferred Alternative is primarily on State and County lands, with a more makai alignment than Build Alternative 4 but mauka of Build Alternative 2/3 and the existing highway to avoid the inundation and flood zones to the extent possible. As detailed in Chapter 3.4 of the Draft EIS and this Final EIS, property acquisitions and displacement of existing residences must follow the rigorous procedures of the federal Uniform Relocation Act. As presented in Chapter 3.16 of the Draft EIS and this Final EIS, there are no impacts from increased noise levels generated by the Preferred Alternative and no abatement is warranted.

Comment 22: Has the design team thought about putting guardrails up? This would save our County and State dollars in not having to clean up cars and guardrails would eliminate anybody really driving into State-covered land or places that they should not be trespassing. (David McPherson 55, Ms. Keele 60)

Response 22: Guard rails will be included along both sides of the new highway.

Comment 23: Can there be a separate biking, walking, golf cart lane, with its own divider along the side? So many bikers are on Honoapi‘ilani Highway they deserve their own "green lane." How will cycling be addressed along the realignment and across the viaduct and bridge structures? It is really important that we incorporate safe bicycling and pedestrian crossing into the new highway. State law (Act 131 and the Complete Streets Policy) mandates that new highways must be bike-friendly and accommodate pedestrians. The Navahine Settlement requires HDOT to “implement policies and procedures to ensure that Complete Streets improvements remain part of the project throughout the planning and development process.” Hawai‘i’s Complete Streets statute requires HDOT to “adopt a complete streets policy that seeks to reasonably accommodate convenient access and mobility for all users of the public highways,” including “pedestrians, bicyclists, transit users, motorists, and persons of all ages and abilities.” The mandate applies specifically to “new construction, reconstruction, and maintenance” of highways such as the Honoapi‘ilani Improvements Project. The Project, as proposed in the Draft EIS, lacks any Complete Streets improvements for pedestrians, bicyclists, and transit users. (C-T Folding 12, Saman Dias 45 and 51, Karen Comcowich 46, Mahesh Cleveland, EarthJustice 81)

Response 23: The preliminary design consideration did not include a separate pathway for non-motorized users, and all alternatives would incorporate a standard width shared-use shoulder lane that would accommodate bicyclists. This was intended to provide a direct route to and from the Pali and Lāhainā (including the viaducts and bridges) as a complement and interconnect with the primary

bike route served by implementing the West Maui Greenway, which is proposed to be alongside the existing highway. Plans for the West Maui Greenway indicate the greenway is intended to provide a more substantial and integrated shared-use pathway that would be closer to the coastline and away from the main highway. However, based on these and other comments generated during the public review period for the Draft EIS, the Selected Alternative has been refined to incorporate a separated travel way for nonmotorized traffic (golf carts would not be allowed). As described in Chapter 2 of this Final EIS, the pathway would be constructed along the makai edge of the new highway alignment. At Luawai Street in Olowalu and Ehehene Street in Ukumehame, traffic signals would allow bicyclists and pedestrians to safely cross the new roadway.

Comment 24: HDOT should also include a shaded, protected bike and pedestrian pathway through the center of the realigned highway to comply with the Navahine Settlement and Complete Streets mandate and ensure this $160.8 million project contributes to decarbonizing the state transportation system. This pathway should provide for integration and linkages with the West Maui Greenway, in consultation with stakeholders. (Mahesh Cleveland, EarthJustice 81)

Response 24: Based on this and other comments submitted during the public review period for the Draft EIS, the Selected Alternative has been refined to incorporate a separated travel way for nonmotorized traffic within the new alignment. However, the provision of a shaded shared-use path through the center of the new alignment would introduce new safety concerns particularly the increase of potential conflicts between pedestrians/cyclists and motorists (especially at intersections). In addition, this would require the addition of fixed objects within the median to protect bicyclists and pedestrians (guardrails and crash cushions). The user experience would be compromised in this environment particularly if a future four lane configuration were implemented. Furthermore, the center median of the new alignment is anticipated to be vegetated to provide for the management of stormwater runoff. Based on preliminary conceptual design, the appropriate location for a new bicycle/pedestrian facility would be along the makai edge of the realigned roadway right-of-way. Given the limitations of the geometry of the roadway—that is, the need to restrict the area of disturbance mauka and makai of the new alignment to avoid cultural resources and other environmental constraints—and the arid nature of the surrounding open landscape, providing shading for this segment of a shared-use path would not be feasible.

Comment 25: Can I see the details of the work to be done including their staging area? (Robert Santos 10)

Response 25: As set forth in the Draft EIS, the proposed alignments are anticipated to largely use delineated right-of-way for staging areas during construction. Further, the key phases and construction activities are summarized in this Final EIS, including the environmental commitments to minimize and avoid potential construction-related impacts. The design-build contractor would make final decisions about specific staging areas, and their decisions would incorporate the environmental commitments identified in the combined Final EIS and ROD.

Comment 26: I really hope you are going to rebuild Weinberg Court between Prison Street and Dickenson Street. (Tara King 11)

Response 26: While redeveloping Lāhainā after the devastating wildfire is critically important, it is beyond the scope of this transportation project. Weinberg Court is substantially outside the study area for the Project’s Draft and Final EIS.

Comment 27: You are not going to build a highway up north because we don't have the funding. Right? But we need another way out of Lāhainā. If you were here during the fire you would understand. We only got the bypass through Lāhainā and Keawe. And that got all messed up and then we asked, "Why couldn't you do the road Mauka and take it to Honokowai?" No more money, but now we are talking about money. So why don't you work on that part? (Ms. Felice 64, Malihini Keahi 59)

Response 27: As noted in the comment, there is no current funding for work on the bypass north of Lāhainā. The Project was started well before the devastating 2023 wildfire that destroyed Lāhainā and resulted in significant human loss and suffering as well as difficult economic impacts. The Project would generally support the efforts to rebuild Lāhainā by providing a reliable transportation facility in West Maui and improving Honoapi‘ilani Highway’s resilience by reducing its vulnerability to coastal hazards. Planning for the Project began with pre-Notice of Intent Scoping, where HDOT and FHWA held two early scoping meetings in February 2022. The EIS scoping period was initiated in November 2022. These activities informed HDOT and FHWA’s approach to future public engagement and community input was used to hone the Project’s Purpose and Need Statement and to understand potential concerns that should be considered in the analyses. At the time of the wildfire, the Draft EIS technical evaluations were largely complete and being reviewed and refined. The goal was to publish the Draft EIS toward the end of 2023. After the wildfire, HDOT and the FHWA reviewed each technical evaluation to acknowledge and identify whether changes in the analyses would be appropriate based on the wildfire’s effects. While there was extensive public participation before the wildfire, HDOT and the FHWA understand that the community’s focus has been on rebuilding efforts. However, the purpose and need for the Project remain, and the funding associated with the Project was committed prior to the wildfire.

Comment 28: The next question is when do we get an escape route, not just a road down from Ulupalakua lookup down exactly 2.2 miles to the road at Makena golf course? Thompson Road, aka "Oprah's road" might be a handshake deal for MFD, but what about the rest of us trying to get down the hill for another fire event? (Kai Kalani 13)

Response 28: This comment pertains to roadways that are substantially beyond the study area of the Honoapi‘ilani Highway Improvements Project and are therefore beyond the scope of the Project’s Draft and Final EIS.

Land Acquisition, Displacement, and Relocation

Comment 29: There is a critical issue regarding the classification and evaluation of Parcel 48002115, which has been flagged for full acquisition under Build Alternative 1. It is essential that the property's current and planned uses are accurately reflected in the Project's documentation. The current project documentation categorizes Parcel 48002115 as "not in use," which does not accurately reflect its status. Specifically, the parcel is actively utilized for grass farming operations, supported by established water connections and other agricultural infrastructure. Farming activities are currently underway, generating revenue and contributing to the agricultural economy of the area. Additionally, the lot is being developed with architectural plans for a residential structure to complement its agricultural use. Will someone be contacting us to understand the level of impact to our farming operation? (Cesar Martin del Campo 32 and 44)

Response 29: During development of the Draft EIS in 2022 and 2023, property record searches along with field reconnaissance and review of Geographic Information Systems (GIS) mapping and data layers did not reveal the level of activity as described in the comment. HDOT recognizes that property ownership and use activities initiated by owners will change over time—especially in an area where subdivisions have occurred—and this information was updated accordingly in the Final EIS. Most importantly, any updated and current information will be integrated into the process of determining land value and fair compensation if the property must be acquired as part of the Project (see Chapter 3.4 of the Final EIS, which includes an explanation of how the Uniform Relocation Act establishes the protocol that must be followed in the acquisition process as well as HDOT's guidelines for right-of-way acquisition).

In Ukumehame, Build Alternative 1 has been determined to be the basis of the Preferred Alternative, so the alignment is directly through Parcel 48002115. This indicates that a full acquisition of the parcel would be required. Once final design has determined the requirements for property acquisition, a representative of HDOT Right-of-Way will contact the property owner to start the process. The Final EIS Chapter 3.4 has been revised to reflect this updated information.

Comment 30: Avoid impacts to kuleana parcels as much as possible. (Karen Comcowich 46)

Response 30: Chapter 3.4 of the Draft EIS and this Final EIS specifically identifies kuleana parcels and evaluates the effects of the Project on those parcels. The Preferred Alternative minimizes the potential impacts on the five affected kuleana parcels in both Olowalu and Ukumehame. HDOT must comply with the Hawaiʻi State Eminent Domain Law, which establishes the public purpose and acquisitions procedures for private property acquisition by the State of Hawaiʻi. In complying with the law, the individuals affected by land acquisition would have a transparent process to follow and a full understanding of their rights to just compensation.

Parklands and Recreational Resources/Beach Access

West Maui Greenway

Comment 31: We support the proposed 6.5-mile mauka relocation of the Honoapi‘ilani Highway, in conjunction with the Maui Greenway Project and respectfully urge HDOT and FHWA to incorporate the West Maui Greenway into the Honoapi‘ilani Highway realignment plan by repurposing the existing highway for Segments 6 and 7. I have seen the benefits that greenways bring to the communities where they were located. The West Maui Greenway, as part of the Hele Mai Maui Legacy Projects, presents a significant opportunity to foster sustainable, multimodal transportation that strengthens resilience and community connectivity in West Maui. It is essential to highlight a complementary opportunity to strengthen active transportation options and preserve the vision of the West Maui Greenway. This approach will maximize cost-efficiency, adhere to policy mandates, and support West Maui’s resilience, safety, and community connectivity goals. By repurposing this space for non-motorized transportation, we can build a legacy of active transportation choices and sustainable infrastructure that meets the needs of future generations and supports West Maui’s long-term recovery and growth. West Maui Greenway serves dual purposes—as a transportation corridor and evacuation route in case of future wildfires and other disasters. West Maui Greenway allows for compliance with the Navahine Settlement’s mandate to expand multimodal transportation, and integration of complete streets policy and Hawaii Bike Plan. Act 131 and the Complete Streets Policy: State law mandates that new highways must be bike-friendly and accommodate pedestrians. (Lee Chamberlain 1; Dan Dennison 17; Donna Clayton 18; Constantine Mittendorf 19; Jerome Kellnor 20; Saman Dias 24-45-51; Dave Veldman 27; David Kingdon 30; Tamara Paltin, County Council, County of Maui 42; Julie Durham 75)

Response 31: Implementing the West Maui Greenway (by the County) along the existing highway is considered a future condition that is fully compatible with the Honoapi‘ilani Highway Improvements Project. The West Maui Greenway is not included in the Project because its ultimate design, funding, approvals and implementation would be a separate process led by Maui County. After the highway is realigned, jurisdiction of the existing Honoapi‘ilani Highway would be transferred to the County of Maui, and the roadway would continue to carry vehicular traffic that serves local traffic (business, residences, beaches, parks) but with less volume.

As set forth in Chapter 5 of this Final EIS, and based on public comments on the Draft EIS, the new Honoapi‘ilani Highway alignment will incorporate a separate and protected shared-use path along the makai side of the new right-of-way (including two locations for protected crosswalks of the new highway). This will add flexibility and provide for integration with the West Maui Greenway, should it be constructed in the future.

Comment 32: Will a separate bike path along the shoreline be built? (Anonymous 33)

Response 32: The Honoapi‘ilani Highway Improvements Project does not include development of the separate bike path along the shoreline. Maui County may implement plans for the West Maui Greenway and other potential shoreline recreational facilities sometime in the future.

Comment 33: This should also include prohibition or limitation of the use of 'e-bikes,' as many of those are capable of traveling at higher or even highway speeds, which could pose a danger to those employing muscle-powered sport and recreation. (David Kingdon 30)

Response 33: The prohibition or limitation of the use of "e-bikes" is beyond the scope of the Honoapiʻilani Highway Improvements Project, and therefore this EIS.

Comment 34: The West Maui Greenway has secured significant financial support, including: RAISE Grant: $15 million awarded to the West Maui Greenway to support development and implementation efforts. Inclusion in STIP (MC28) ensures that the West Maui Greenway project is recognized as a priority for state and federal transportation funding allocations. This available funding underscores the importance of expediting the West Maui Greenway by integrating Segment 6 into the Honoapiʻilani Highway Improvements Project, ensuring that the funds are utilized effectively and within the required timelines. (Lee Chamberlain 1)

Response 34: As set forth in the Draft EIS and this Final EIS, the Honoapiʻilani Highway Improvements Project is fully compatible with the ultimate development of the West Maui Greenway (although, as indicated in the comment, it would be a separately funded project). With jurisdiction of the existing Honoapiʻilani Highway being transferred to Maui County as part of the Project, planning elements of the West Maui Greenway that use the existing highway's right-of-way (or adjacent areas) would be more easily integrated with County actions. Due to the funding identified above, separate approvals would be required related to the West Maui Greenway project, and the purpose and need for the West Maui Greenway project would be distinct from the purpose and need for the Honoapiʻilani Highway Improvements Project.

Comment 35: Given that federal and other funding for the West Maui Greenway Plan is uncertain, HDOT should provide funding for the West Maui Greenway Plan Segments 6 and 7, which would be located on or along the portions of the existing highway that will be deeded to the County and have not yet been funded. (Mahesh Cleveland, EarthJustice 81)

Response 35: The Project's primary purpose is to provide a reliable transportation facility in West Maui and improve the resilience of Honoapiʻilani Highway by reducing its vulnerability to coastal hazards. Specifically, the Project is intended to address existing coastal erosion and flooding vulnerabilities as well as future coastal erosion and flooding caused by anticipated sea level rise. The Project provides a reliable transportation facility for vehicles, bicycles, and pedestrians. Funding for the West Maui Greenway Plan is outside of the scope of the Project and this Final EIS.

Ukumehame Firing Range

Comment 36: The County/State must keep the Ukumehame Firing Range where it is and provide easy access to the only range we have. This project is great but developers should make sure that the range entries are kept open and easily accessible. The highway should not cut through our only outdoor flat open firing range. It would make the inaccessibility of sport shooting that much more difficult for Hawaii citizens. The Ukumehame Firing Range is the only legal firing range on the island and is used by thousands of sportsmen practicing marksmanship and exercising their 2nd Amendment rights. It is also used by law enforcement and the military on a regular basis for firearms and riot control training. While supportive of moving the existing highway inland, there are a number of concerns. The routes appear to run makai of the firing lines, which we are grateful although a couple are uncomfortably close to the range. Another concern is the height of the viaduct, one or more of the routes has the entrance road to the range being under the viaduct. Will the viaduct be high enough to allow fire trucks and heavy equipment to drive under it? Due to the constant threat of brush fires on the Pali, and medical calls to the range, the more access Emergency Services has the better. (Raymond Ishii 15, Allen Surbida 28, John Rafael 29, Andrew Viloria 85)

Response 36: The Draft EIS and this Final EIS established and evaluated alternatives specifically with the understanding of the importance of the Ukumehame Firing Range to the community. As a public recreational resource, the firing range was further evaluated under the FHWA’s obligation pursuant to Section 4(f) of the USDOT Transportation Act. Preservation of the use of the facility contributed to the identification of the Preferred Alternative such that the crossing of the new highway alignment was more makai than the original Build Alternatives 1 and 4 evaluated in the Draft EIS. By placing the alignment on a viaduct over the HDOT detention basin, the elevation of the viaduct will provide for a minimum of 20 feet of clearance for the existing firing range driveway, allowing for enough clearance for most emergency vehicles and trucks that may need to enter the facility.

Comment 37: The proposed route does not show access to the Ukumehame Firing Range nor beach accesses for the general public. The four ranges are used almost daily by the numerous clubs and MPD. There is also a building used for firearm safety classes. Driving to Launiupoko and then returning toward Kahului to get to access the ranges and the beaches is ludicrous. (Janice and James Revells - 4)

Response 37: As with all alternatives evaluated in the Draft EIS, the Preferred Alternative would retain access to the Ukumehame Firing Range and County beach parks via the existing Honoapi‘ilani Highway. Trips to and from Central Maui would not have to loop as far away as Launiupoko but would use the new highway alignment’s intersection with Pōhaku ‘Aeko Street, which is located within a mile of the existing driveway. Placing the viaduct over the existing driveway ensures continued access and use of the firing range and also minimizes disturbance to sensitive ecological resources.

Comment 38: With the Project, to access the firing range and the Pāpalaua Wayside Park we would have to drive past the range via the Viaduct exit to the Ukumehame subdivision, then backtrack on the existing highway. The question I had was if the State is going to maintain that existing highway to a correct standard where you can actually drive on it. I was told that's going to be turned over to the County so now this is a County question. Because that section of road – if anybody's driven it -- is probably going to fall in the ocean pretty soon. So the question I have is that road going to be maintained? (Raymond Ishii 54)

Response 38: The routing as described is correct. For the existing highway it is noted that the Project would result in the transfer of jurisdiction from HDOT to Maui County as a local roadway. The existing highway would have substantially less traffic demand after the realigned highway is open, and the intent would be for the County to maintain the road in a manner that improves environmental sensitivity (that is, less hardened shoreline structures) and includes the West Maui Greenway and other planning initiatives. The Nature Conservancy and University of Hawaii are currently studying the coastal zone in Olowalu and Ukumehame (including the existing highway alignment) to identify nature-based solutions that strengthen coastal ecosystems and resilience. While, as noted, this section of the existing highway is vulnerable to coastal erosion, it also serves important County uses including the firing range, Ukumehame Beach, and Pāpalaua Wayside Park.

Comment 39: Would it be possible to install a turn lane before the viaduct begins on the Pali side to allow direct access to the range and beach parks, plus a merge lane on to the highway for Maalaea bound traffic? That will give access to both the range and the beach park without any bypass. (Raymond Ishii 15 and 54)

Response 39: The option of having an intersection at the Pali terminus of the Project to maintain access to the old highway was reviewed and evaluated by the conceptual design team. However, the option was determined infeasible due to the angle of departure of the new highway both horizontally and vertically—the new highway must rapidly ascend an existing berm for the detention pond that is makai of the firing range—and the limited space that results from these geometric constraints. In short, the limited geometry leads to the inability to provide a safe intersection in this area.

Comment 40: During construction, will we be allowed access to the range? Understandably while the viaduct is being constructed, the section under it will be blocked off. Will a temporary road be constructed to allow access under a completed section of the viaduct to ensure access to the public firing range? (Raymond Ishii 15, Jason Wolford 56)

Response 40: Because the viaduct would be constructed with piers on either side of the firing range driveway, the construction-related disruption to the driveway itself would be short-term. While the viaduct structures are being placed across the driveway from pier to pier, the driveway could be temporarily closed. The design-build contractor would be required to coordinate construction phasing and sequencing in this area with Maui County Parks and Recreation (the owner and operator of the firing range).

Comment 41: More and better parking is needed at the Ukumehame Firing Range to keep users from having to park their cars in the mud puddles. This is a great opportunity to upgrade the parking at Papalaua to do something about the drainage problem that has plagued the area for years. (Dr. Marion Ceruti 76)

Response 41: Under the Preferred Alternative, the viaduct construction would be makai of the firing range and its parking lots and therefore the Project does not include construction or proposed improvements to the existing parking lots. Similarly, the Preferred Alternative would not involve construction or permanent physical disturbance to Pāpalaua Wayside Park, as evaluated in Chapter 3.5, “Parklands and Recreational Facilities/Beach Access,” of the Draft EIS and this Final EIS.

Unhoused Persons along Beaches and Parks

Comment 42: The homeless situation is getting worse in Olowalu, they are slowly taking over the beach area at Mile Marker 14 and there is concern that there will be an increase of homeless in the area between the existing Honoapi‘ilani Highway and the realigned highway. How will the State/County address safety and cleanliness along the shoreline? Concerned there will be an increase in homeless in the area between the existing Honoapi‘ilani Highway and the Realigned Highway. We should make it into a state park and manage it to prevent it from being trashed. It is a popular tourist and local spot to take kids to the beach and snorkel and fish. In fact, make the area from Ukumehame Beach park all the way to Olowalu General Store a state beach park. It would be great if the Project included returning the shoreline of the original highway to a more natural state; with minimal shoreline hardening but I'm concerned that giving this responsibility to the County will just result in miles of homeless encampments like those on the old highway when the bypass went in. (Darrell Tanaka 8, Anonymous1 33, Anonymous4 39, Jonathan Verona 41)

Response 42: As stated in the Draft EIS and this Final EIS, encampments in the project area are an issue independent of the Honoapi‘ilani Highway Improvements Project. HDOT is coordinating with other State and County officials in the ongoing management of encampments. Also discussed in the Draft EIS Chapter 5 presentation of the Preferred Alternative: when the new highway alignment connects with the existing Lāhainā bypass, the old/existing highway would be reconnected with the old highway segment that currently dead-ends before the bypass. The isolated nature of the current configuration that contributed to this area’s density of homeless encampments would be improved with the Project.

Parkland designations are beyond the scope of the Project. However, it is noted that the shoreline is largely accessible along the length of the existing highway (as well as from the Olowalu Beach and the Olowalu Sugar Mill historic site public access and parking) and includes two County parks. This would primarily be in the realm of Maui County because the Project includes transferring the jurisdiction of the existing highway to the County. Further, the final design and potential implementation of the West Maui Greenway, in combination with County-owned recreational lands in Ukumehame, would also be under County jurisdiction.

Beach Access and Open Spaces

Comment 43: When you build the new highway, please ensure there is ample beach access for routes along the shoreline. Care should be taken to provide sufficient exits and roads in the makai direction for beach access, to include better parking, particularly at the Ukumehame beach park, on the mauka side of the existing road. HDOT has recently cut off several of our traditional beach accesses from the McGregor's point to Olowalu and we don't appreciate losing our ability to fish and gather. We see all our beaches being destroyed, being used as recreation. Will the County also be working concurrently to provide shoreline access for the 6-mile stretch? What access to Ukumehame Beach Park and Thousand Peaks will be provided? Will there be Parking? (Darrell Tanaka 14, Anonymous1 33, Mr. Kaluna Palafox 63, Dr. Marion Ceruti 76)

Response 43: The new alignment of the Honoapiʻilani Highway would be mauka of the existing highway and would not provide direct access to beach areas. The roadway is proposed to be limited-access only at intersections, with existing mauka to makai cross-streets. There would be no parking or pull-off areas along the new alignment. Beach access would continue to be available from the existing Honoapiʻilani Highway, which would become a County roadway and is expected to be integrated with the future plans for the Maui County West Maui Greenway. Once under County jurisdiction, the management of parking, access to adjacent beaches, and access to/from the greenway can be integrated into corridor planning.

Comment 44: Maui has a dearth of mixed-use public spaces, other than perhaps beaches, where people can enjoy our beautiful corner of the planet. Beaches are not conducive for bicycles. Our island is a small place so maximizing green areas is essential to our quality of life. I urge you to design and approve plans that do so. (Tavor White 26)

Response 44: As analyzed in the Draft EIS and this Final EIS, the Honoapiʻilani Highway Improvements Project is compatible with the long-term planning by Maui County regarding open space planning and future implementation of the West Maui Greenway. Consistent with long-term planning initiatives such as the Pali to Puamana Parkway Master Plan, the Project has been part of a coordinated planning effort with Maui County regarding the use of County-owned land in Ukumehame with intended shared use for the relocated highway and open space uses makai of the new road. In addition, HDOT has coordinated with Maui County regarding continued use and access to the Ukumehame Firing Range. In Ukumehame and Olowalu, the Project has also been in a coordinated planning effort with the State of Hawaiʻi DLNR. This coordinated effort aims to establish the location of the new highway alignment, and subsequently adding to the protection of public lands, by extending the Natural Forest Reserve over much of the department-owned property in the project area exclusive of the new highway alignment.

Archaeological and Architectural Historic Resources

Comment 45: My family kuleana aina is in Olowalu Valley and Ukumehame Valley. It has been brought to my attention that our aina and iwi in Olowalu are in harm’s way. I have attempted multiple times to have my ohana burials marked and chained off to help prevent future vandalism because it has happened in past. My request is for them to be on the burial protection list and marked so visitors will know that it's protected Native Hawaiian burial site. (Anna Nalaniewalu Vinuya-Palakiko 23)

Response 45: We understand the community’s concerns with burials in the project area and have been in communication with descendants and the Maui Lanai Island Burial Council. As stated in the Executed Programmatic Agreement (Appendix 3.6 of this Final EIS), the Maui/Lāna‘i Island Burial Council (MLIBC) has the authority to determine treatment and jurisdiction over all requests to preserve or relocate previously identified Native Hawaiian burial sites. If a previously identified Native Hawaiian burial site will be affected by the project, HDOT, through its contractor, shall follow HAR § 13-300-33, *Request for council determination to preserve or relocate Native Hawaiian Burial sites*. With regard to burials in proximity to Pu'u Kilea, the Preferred Alternative would be makai of Pu'u Kilea and the Project would not result in physical disturbances to that area.

Comment 46: With this plan there is no acknowledgment of the ancient burials, heiau, reef, trees, water ways and uses, taro fields, and animals such as the Nene. There would have to be many steps taken to ensure all of which I addressed are acknowledged and cared for to the upmost respect as if it was your own families’ burials and kuleana. Why is there still no attempts to protect our ancient sites like Ka'iwaloa Heiau, Petroglyphs, and the many burials we have in Olowalu? Protections in place for areas that have already been acknowledged to have ancient burials and Ka'iwaloa heiau. Research and surveyance of the land and water in and around Olowalu before construction using archaeologist, historians, and burial council –for our children and our grandchildren and our great-grandchildren. Reviewing land patents, LCA land commission awards, survey records, and acknowledging water and land right given to our people from our Ali'i. My suggestion is to consult with lineal descendants from each area the road goes thru to ensure pre-contact, iwi, and other cultural historical things are protected and preserved. This is a very significant conversation for us to have, we know that there's going to be Iwi where we're talking about. And so having a plan for that and follow state law, like if you find Iwi you stop. Be mindful of those kind of things because we know that's going to happen. (Anna Nalaniewalu Vinuya-Palakiko 23, Michele Lincoln 36, Ms. Keele 60)

Response 46: Chapter 3.6 of the Draft EIS and this Final EIS summarizes the extensive survey and research conducted by the Project’s archeologists and historians. The results of the analysis to date have allowed for a refinement of the alignment of the Preferred Alternative to avoid and minimize disturbance of identified archeological and architectural historic resources, such as heiaus. Chapter 3.7 of the Draft EIS and this Final EIS provides a contextual history of the cultural resources of the project area. In coordination and continued dialogue with the community, there will be comprehensive testing for historic resources (Archaeological Inventory Survey or AIS) for the Selected Alternative, with testing protocol and mitigation requirements set forth in the Executed Programmatic Agreement as required by the National Historic Preservation Act and the Hawai‘i Revised Statutes, Chapter 6E process. Consultation with descendants and other individuals and organizations with a demonstrated interest in the Project (referred to as “consulting parties”) is ongoing as part of the Federal Section

106 and Hawaii 6E processes and will continue as the Project moves into final design and construction.

Comment 47: I say NO to APE [Area of Potential Effect] and Build Alternative 1 because they both would disrupt the land of which my family lived and is buried upon and lacks respect to our people Kanaka Maoli because it offers no protection for our iwi and some of the only untouched aina left here in West Maui. And my family (Naho'oikaikas Olowalu) live right above the store. (Anna Nalaniewalu Vinuya-Palakiko 23, Malihini Keahi 59)

Response 47: For clarification, the APE line referenced in the comment is intended to show the extent of the Project's study area of possible project effects on historic architectural and archaeological properties (the APE is not a proposed roadway alignment). In the evaluation of all Draft EIS alternatives for Olowalu, Build Alternative 4 (which is closest to the APE boundary) and Build Alternative 1 were excluded from the Preferred Alternative because these alternatives would have the greatest potential for adverse effects on historic properties (though neither directly affect the Naho'oikaika property).

Comment 48: Prefer Build Alternative 1 and you can remove the trees. There are burials in the area where the preferred is located on the map. Very concerned about burials. (Linda Nahina Magallanes 40)

Response 48: As detailed in Chapter 5 of the Final EIS, the Selected Alternative has been refined and modified to minimize and avoid sensitive archeological resources. There will be comprehensive testing for historic resources (Archaeological Inventory Survey or AIS) with mitigation protocols established through federal and State commitments (Section 106 and Section 6E). As stated in the Executed Programmatic Agreement (Appendix 3.6 of this Final EIS), mitigation of effects on significant historic properties may include preservation per HAR § 13-275-8. Such mitigation may include avoidance and protection (conservation), stabilization, rehabilitation, restoration, reconstruction, interpretation, or appropriate cultural use of the significant historic property. With regard to burials, the Maui/Lānaʻi Island Burial Council (MLIBC) has the authority to determine treatment and jurisdiction over all requests to preserve or relocate previously identified Native Hawaiian burial sites. If a previously identified Native Hawaiian burial site will be affected by the project, HDOT, through its contractor, shall follow HAR § 13-300-33*, Request for council determination to preserve or relocate Native Hawaiian Burial sites*.

Comment 49: The only option that I would be in agreement with is Build Alternative 2. It is far enough away from both my family burials, kuleana land and foundation to provide more distance in hopes to give more protection from unwanted vandalism or desecration. It is far enough away to offer protection of archeological sites i.e., the Petroglyphs, Ka'iwaloa, Lanakila Church, and Japanese burials. (Anna Nalaniewalu Vinuya-Palakiko 23)

Response 49: This is the Selected Alternative through Olowalu as described by the comment.

Comment 50: Will any monies/resources be steered back to the communities of Ukumehame and Olowalu for preservation and education? (Anonymous2 38)

Response 50: Preservation and education may be incorporated into mitigation strategies established in coordination with HDOT, the FHWA, the SHPD, and the community as required by the Federal Section 106 process and the Hawaiʻi Revised Statutes, Chapter 6E process. Potential mitigation measures are described in the Project's Programmatic Agreement, which was presented in draft form in the Draft EIS. The Executed Programmatic Agreement is included in this Final EIS (see Appendix 3.6). As described in the Executed Programmatic Agreement, the FHWA and HDOT, in consultation with the SHPD and Native Hawaiian Organizations, will continue consultation to determine if alternate mitigation under HAR § 13-275-8(2) is appropriate.

Comment 51: The Preferred Alternative is going through two of those large rock mounds from the old sugarcane company. I've been told there's possibly bones in that. So, what will be happen if you guys find bones during construction? (Jason Potts 48)

Response 51: For the entire Project, there are rigorous requirements in the testing for potential burials in the final design alignment and standing mitigation procedures if iwi (or unanticipated remains) are discovered during construction. As stated in the Executed Programmatic Agreement (Appendix 3.6 of this Final EIS), mitigation of effects on significant historic properties may include preservation per HAR § 13-275-8. Such mitigation may include avoidance and protection (conservation), stabilization, rehabilitation, restoration, reconstruction, interpretation, or appropriate cultural use of the significant historic property. With regard to burials, the Maui/Lānaʻi Island Burial Council (MLIBC) has the authority to determine treatment and jurisdiction over all requests to preserve or relocate previously identified Native Hawaiian burial sites. If a previously identified Native Hawaiian burial site will be affected by the project, HDOT, through its contractor, shall follow HAR § 13-300-33, *Request for council determination to preserve or relocate Native Hawaiian Burial sites*. A note specific to the push pile mounds identified in the comment: based on other public comments and the evaluation of design refinements, the Selected Alternative has been adjusted so the roadway avoids these push piles.

Cultural Resources

Comment 52: My concern is to not disturb the true function of Aina. That can never be repaired, unless we can better protect, what is. The Island is a cultural Entity, moving the Honoapiʻilani Highway is within everyone's responsibility to protect this sacred place. This area has been sacred for me all of my life. We need to speak, we need to share the history of Olowalu, not condemn it because we're going to have more people coming in. We get to know of our past, our history. For our children and our grandchildren and our great-grandchildren -- they'll never see that. It's going to be covered. Also, places need to be named correctly, for example Kapa'iki is not Olowalu. (Victoria Kaluna-Palafox 5, Richard Gailey 21, Malihini Keahi 59, Linda Nahina Magallanes 62).

Response 52: HDOT and the FHWA have worked to maintain an open dialogue with the community and to use this information to minimize disturbance to Aina and to cultural resources found within Ukumehame and Olowalu ahupuaʻa. The analyses contained within the Draft and Final EIS generally

use ahupuaʻa as a geographic unit for delineation rather than ʻili (a smaller area of land within a ahupuaʻa); however, in instances where further geographic refinement was warranted (*e.g.,* Chapter 3.7, Cultural Resources) ʻili are discussed.

Water Resources, Wetlands, and Floodplains

Comment 53: Developers have covered up wetlands pools or restricted water flow in Ukumehame and Olowalu. Before the time of the first development this area was all wet and now, within the last year or so water has been seeping under the road. Kane has found his way, therefore bringing the fishes back to where they were in time past. Are you going to run your highway with a big berm or are you using dry pipe? If it is dry pipe I am against dry pipe because the wetlands are important for us, especially at this time as we need to start concentrating on growing food for our people. And this is where it should be since Ukumehame and Olowalu is the largest open land in Lāhainā and good 'Aina to grow food. The degraded wetlands of Pāpalaua and Ukumehame are important for both flood water and sediment retention, and have historically been a crucial part of the Ukumehame watershed hydrologic system (Victoria Kaluna-Palafox 61, Kim Falinski, The Nature Conservancy 79)

Response 53: As evaluated in the Draft EIS and this Final EIS, the Project's alternatives were established to avoid and minimize wetland areas and to manage stormwater flow from the new highway with low-impact design standards and not hard infrastructure, such as piping storm flows for direct discharge to adjacent waters. As described in Chapter 5 of this Final EIS, the Selected Alternative incorporates many design features that would preserve and not substantially alter water flow from mauka sources towards the ocean. The alignment would be on viaduct over the low-lying inundation areas adjacent to the Ukumehame Firing Range and wetlands in the Ukumehame area. Spanning these important ecological features preserves wetlands and wildlife habitat to the greatest extent practicable. Bridges and culverts would allow for continued water flow while crossing the new highway. Based on low-impact design standards required by State and federal guidance, stormwater flowing off the new highway pavement would be collected and treated with infiltration basins located in multiple locations along the corridor.

Comment 54: We agree with the assessment of Ansari and Erickson documented in Section 3.9.3.1 of the prime wetland areas, and we ask you to also consider that iwi identified a broader buffer of wetlands in the regions (Maui Environmental Consultants, 2024) (Kim Falinski, The Nature Conservancy 79)

Response 54: Historical distributions and hydrology of water and wetlands, particularly prior to the plantations when in community use, are part of this dynamic landscape. As described in Chapter 5 of this Final EIS, the Selected Alternative has been designed to avoid and minimize adverse effects to waterbodies and wetlands and to not exacerbate historic alterations that have adversely affected wetlands. This is the underlying principle of State and federal protections and policies and the Project has incorporated a comprehensive array of best management practices pursuant to these regulations, most notably the Clean Water Act. As described in Chapter 3.9, Water Resources of the Final EIS, the parameters for wetlands to be considered Waters of the U.S. are defined in 40 CFR 120 and 33 CFR 328.3. The wetland delineations identified a total of 12 wetlands, all found in the Ukumehame area

around the Ukumehame Firing Range and totaling approximately 21.403 acres. Figure 3.9 1 identifies these 12 wetlands and their jurisdictional status.

Comment 55: We strongly advocate that the highway realignment include a viaduct to bypass the existing wetland areas. Wetland areas will likely expand in the future, and existing restoration planning would be adversely affected by the realignment without a viaduct. (Kim Falinski, The Nature Conservancy 79)

Response 55: As established in the Draft and Final EIS, the use of a viaduct over wetlands in the vicinity of the Ukumehame Firing Range is a key design commitment that will be required as part of final design and design-build contractor obligations.

Comment 56: To reduce sediments and increase groundwater infiltration, we commend efforts to reduce erosion during the Project, and advocate for watershed-scale efforts to reduce erosion in the project area more broadly as a strategy to protect the reef. (Kim Falinski, The Nature Conservancy 79)

Response 56: The collaborative efforts of the Honoapiʻilani Highway Improvements Project with The Nature Conservancy and the State of Hawaiʻi DLNR provide the basis for larger watershed-scale benefits. Chapter 5, Selected Alternative of this Final EIS contains environmental commitments related to water resources. As part of the Project, HDOT will ensure the Contractor adheres to HDOT Storm Water Post-Construction Best Management Practices Manual (February 2022). Site-specific stormwater BMPs would be implemented and/or installed at the staging and work areas by the Contractor to prevent water quality degradation associated with stormwater runoff.

Comment 57: The maintenance and preservation of sediment retention basins is one of the key methods to hold back sediment in the near-term, as outlined by the West Maui Community Plan, and is the primary intervention needed for Pāpalaua detention basin which serves as the primary retention basin for the Makiwa gulch intermittent stream. The basin has been shown to be a large contributor of fine sediments due to degraded upland conditions. The basin was installed in 1999, and has since filled with sediment above the original height of the standpipes, and has not received regular maintenance. It is at risk of overflow in every storm event, delivering sediment directly into coastal waters. For larger flows the basin is undersized. Additional retention capacity through maintenance and possible redesign is needed to prevent further ecosystem damage to the coral reef. The proposed Preferred Alternative in Ukumehame reduces the footprint of the basin. We recommend considering drainage plans upland of the proposed bypass to serve as additional areas for retention. In addition, we would hope that the Project would instigate a reconsideration of operations and maintenance of the existing basin, the redevelopment of culverts, and a re-design of the volume of the basin to make sure that it is the most efficient possible for protecting the downstream reef from sedimentation. (Kim Falinski, The Nature Conservancy 79)

Response 57: As detailed in Chapter 5 of the Draft EIS, the Preferred Alternative would not reduce the functional capacity of the HDOT detention basin makai of the Ukumehame Firing Range. As a point of clarification, this basin was built in 1970 and primarily drains the Papalaua Gulch. The Makiwa Gulch is located further west of the basin and likely drains through multiple small channels as part of

the coastal floodplain, including the Hanaula Gulch, though its direct flow has been altered by historic land use practices. Routine maintenance is performed by HDOT, including sediment removal and vegetation management. Inspection and maintenance protocols adhere to the 2022 HDOT Storm Water Permanent Best Management Practices Manual. In 2023, HDOT brought the basin into a state of good repair, re-establishing the capacity of the basin through restoration of the original bottom of basin elevations and exposing the outfall standpipes. HDOT will continue to monitor the sediment basin annually and remove built-up sediment material periodically to ensure that the basin remains effective. The areas that would be occupied by viaduct piers are small and may contribute to a marginal change to volume of water that could be detained at the basin. Use of the viaduct preserves wetlands in the area to the greatest extent practicable while providing for the structural integrity and safety of the viaduct.

Large-scale redesign of the existing detention basin would be based on a watershed-wide assessment and rethinking of water flows mauka of the firing range and the new highway. This is beyond the jurisdiction of HDOT and out of the scope of potential effects evaluated in this Final EIS. As noted in comments from The Nature Conservancy, such an effort would reasonably be part of the larger watershed initiative of the State of Hawaiʻi DLNR. As owner of the detention basin, HDOT could be a stakeholder participant in such an effort.

Comment 58: Incorporate nature-based solutions and best management practices for stormwater, groundwater and surface flows that exceed County design standards are needed to protect ecosystem health, along with operations and maintenance plans that are practicable and have clear ownership models. In particular, we recommend that where possible, drainage swales that incorporate grasses and plants that can hold back sediment be used, or a similar nature-based alternative. If possible, the grading plans can include earthen berms to disperse water more broadly for infiltration. (Kim Falinski, The Nature Conservancy 79)

Response 58: Consistent with this comment, HDOT's comprehensive approach to stormwater management for the Project is based on low-impact permanent best management practices (BMPs) to lessen effects to water quality caused by stormwater. For the Selected Alternative, there will be about an acre set aside (on average) at eight natural low points for stormwater management infrastructure to capture and detain roadway stormwater. BMPs will be required and, based on final design completed through the design build process after the ROD, they could include detention ponds to promote infiltration and treatment of discharge generated on-site using industry standard low-impact development practices, such as vegetated swales, vegetated buffers, and bioswales as appropriate (including use of the median, where applicable).

Comment 59: The Draft EIS refers to using 100-year storms for bridges and 50-year storms for culverts. It would be important to consider the effects of increased storm intensity, especially for culverts, and how this may impact overall sediment movement on the landscape. (Kim Falinski, The Nature Conservancy 79)

Response 59: The Project would be designed consistent with HDOT's Design Criteria for Highway Drainage. In addition to requiring all bridges to be designed for 100-year storm events and all culverts

to be designed for 50-year storm events (unless they involve FEMA flood zones, where they will be designed for 100-year storm events), the design criteria also outlines how design discharges are determined, including the use of regression equations that are periodically updated based on observations made by the U.S. Geological Survey. These design standards are intended to ensure that bridges and culvert crossings that carry off-site flow across a highway corridor are not significantly altered by the highway, thereby minimizing impacts to these waterways by the highway development itself. Onsite drainage systems will be designed per HDOT’s drainage and permanent best management practices policies to ensure treatment of highway-generated runoff prior to discharge. Wherever possible, low-impact development based designs, such as infiltration ponds/systems, will be utilized to minimize impacts of stormwater runoff from the highway itself. These culverts will meet HDOT standards as well as effectively manage sediment transport, protect the environment, and ensure the safety and longevity of infrastructure.

Comment 60: The Project will cross two major streams—Ukumehame and Olowalu—but the Draft EIS does not adequately assess the potential impacts of the highway relocation on these streams. Ukumehame and Olowalu streams have been identified by the State of Hawai‘i Division of Aquatic Resources (DAR) as important for their aquatic species diversity, with over five species of native fish and invertebrates found in both streams. Both streams are home to endemic Hawaiian gobies, including the IUCN-listed Sicyopterus stimpsoni, and snails, which have been observed during the CWRM/DAR stream monitoring. As these species are amphidromous, they rely on healthy and continuous stream habitats for their life cycles. Therefore, we recommend that a more detailed analysis of impacts to the stream habitats be included in this EIS. (Brian Neilson, Hawaii DLNR-Aquatic Resources 69, Kim Falinski, The Nature Conservancy 79)

Response 60: As presented in Chapter 3.9 of the Draft EIS and this Final EIS, the Project would be required to provide a bridge spanning the Olowalu and Ukumehame streams, and design standards will be required that prohibit any bridge structures from being within the water course and outside the mean high-water level. Coordinating with State and federal agencies, environmental commitments will include construction best management practices and permanent low-impact stormwater treatment. Further, the Project’s pre-construction, construction, and completion will include water quality and sedimentation monitoring (including in-stream and near-shore locations). Overall, no adverse effects on aquatic resources are expected.

Comment 61: The EIS does not clearly specify the type of stream crossing to be used. The impact on water flow and habitat connectivity will differ significantly depending on whether a culvert, bridge, or viaduct is employed. It is important to note that culverts, over time, can develop undercuts and erosion, which can obstruct the migration of stream species and disrupt habitat continuity. These potential issues should be avoided. Minimizing long stretches of concretized stream and incorporating small pools and riffles with artificial materials would help to make sure larvae can make it upstream to their final habitat. There are also no clearly defined Best Management Practices (BMPs) for stream protection during construction. BMPs to assist o’opu migration may be different than those used to mitigate water quality impairment. (Brian Neilson, DLNR-Aquatic Resources 69, Kim Falinski, The Nature Conservancy 79)

Response 61: The DLNR – Division of Aquatic Resources is a Participating Agency and their input helped guide implementation of best practices to be required for the Project. Full span bridges would be used for the two major perennial streams (Olowalu and Ukumehame Streams) and there is no in-water work planned for the Project at these locations since the bridge embankments would be outside the Ordinary High-Water Mark. Therefore, the Project would not affect species within the Ukumehame and Olowalu streams. Table 3.10-12 of the Draft EIS Chapter 3.10, Flora and Fauna, identifies Avoidance and Minimization Measures that would be implemented as part of the Project. The USFWS has also prepared a Biological Opinion (see Appendix 3.10) with additional commitments identified. As described in Chapter 2, Alternatives and Chapter 5, Selected Alternative, the ultimate determination of culvert and bridge specifications for all crossings in addition to the two perennial streams, or the use of viaducts to span larger areas, is based on identification of the Selected Alternative, the length of the span required, environmental effects, constructability, and cost. These would be finalized during the development of final construction documents as part of the design-build process.

Comment 62: The Nature Conservancy has been working on a ridge to reef approach to protecting and restoring the sensitive environments adjacent to the 939-acre Olowalu reef tract that involve working with community and government partners to establish a vision for a restored coastal area and watershed. We have been excited about the opportunity presented by the highway realignment to collaborate to protect key ecosystem functions.

With regards to the Honoapi‘ilani Highway Improvements Project, The Nature Conservancy is focused on three areas: 1) Reducing sedimentation to the coral reef; 2) Implementing a suite of mauka-makai protective and restorative interventions that protect the reef, wetlands and streams, and 3) Visioning, with Hawai`i Department of Transportation, Highways Division (HDOT), County of Maui, partners, and community the future of this existing Honoapi‘ilani (makai) highway as a place where people and nature thrive.

The Nature Conservancy is also helping through the Olowalu: The Road to Resilience - Community Design for the Existing Highway and Surrounding Areas. The planned project provides opportunities to re-imagine the Olowalu-Ukumehame coastal corridor by incorporating park spaces, traditional biocultural practices, and nature-based solutions for coastal resiliency. This project aims to strengthen coastal ecosystems, reduce pressures on the Olowalu-Ukumehame reef system. Through research, analysis, and engagement with stakeholders and community, The Nature Conservancy and University of Hawai`i Community Design Center are leading a process culminating in a conceptual design for local and state stakeholders.

A primary threat to reef health comes not from the sea but from the mountains above: sediment is carried in surface water from mauka lands impacted by non-native feral ungulates, poor land use practices, and fire. These stressors contribute to habitat degradation and erosion. The DLNR Division of Forestry & Wildlife (DOFAW) is embarking on a three-year NOAA Transformational Habitat project, “Olowalu Mauka to Makai,” which will implement a full suite of ecosystem-based, mauka-to-makai conservation measures. With DOFAW, The Nature Conservancy will partner with Kipuka Olowalu and Coral Reef Alliance on projects including wetland restoration planning, sediment management, and community engagement, working to address threats and hazards throughout the Olowalu and Ukumehame ahupua`a. This project is inter-related with and impacted by the realignment project, so we look forward to continued communication and collaboration with you as our projects progress. (Kim Falinski, The Nature Conservancy 79)

Response 62: HDOT and the FHWA acknowledge The Nature Conservancy’s dedication to the collaborative efforts described in this comment. HDOT is aware of the Olowalu Mauka to Makai project and the Final EIS recognizes these efforts relative to the Project in the Final EIS Chapter 3.20, Cumulative Effects. The Project will involve the implementation of low impact BMPs that are anticipated to manage stormwater and limit additional sediment loading as a result of the Project. These BMPs could include detention ponds to promote infiltration and treatment of discharge generated on-site using industry standard low-impact development practices, such as vegetated swales, vegetated buffers, and bioswales as appropriate (including use of the median, where applicable). Permanent BMPs would be designed to treat stormwater generated by the impervious area of the new roadway as it collects at natural low points along the roadway as defined by the final roadway profile in accordance with the HDOT Storm Water Post-Construction BMPs Manual (February 2022). The design process outlined within the manual includes principles that mimic pre-development

hydrologic regimes. The design of permanent BMP measures will consider appropriate hydraulic capacity per HDOT design guidelines.

Comment 63: According to Table S-3, the Preferred Alternative is intended to reduce impacts to the wetland, and we would like to see a clearer depiction of how this route has been modified from Alternative 1 on the map. Furthermore, it would be appreciated if wetland and other waterbodies are delineated in the map to assess the impact to the area more accurately (Brian Neilson, DLNR-Aquatic Resources 69)

Response 63: As described in Chapter 5 of the Draft EIS, Alternative 1 was modified in the area where the alignment would connect with the existing highway, shifting to a more makai alignment. The modifications result in the alignment crossing the sediment basin rather than going mauka of the basin. Shifting Alternative 1 further makai in the vicinity of the basin and firing range allows for the avoidance of critical archaeological and cultural sites and reduces impacts to the firing range. The Selected Alternative does reduce impacts to wetland areas by elevating the alignment on a viaduct. The viaduct would cross over the wetland and other water features, reducing impacts to the greatest extent practicable when compared with a roadway on fill. There is no reduction in wetland area crossed by the viaduct (the discrepancy was a GIS layer error and has been corrected as part of this Final EIS).

Comment 64: Although 0-3/4 and U-4 did not achieve the highest overall score, from an environmental perspective, these alternatives perform well by minimizing impacts to the wetland and preserving the vulnerable lower stream reach habitat. This habitat is crucial for two of our endemic goby species, Eleotris sandwicensis and Stenogobius hawaiiensis, which are unable to migrate to the upper reaches. (Brian Neilson, DLNR-Aquatic Resources 69)

Response 64: As noted in the comment, there were instances where the mauka alternatives provided better environmental outcomes. However, on the balance of fulfilling purpose and need and minimizing adverse effects overall, the mauka alternatives were not identified for the Preferred Alternative. Generally, the mauka alternatives resulted in more adverse effects on a range of environmental factors including cultural resources, archaeology, and impacts on the community (such as noise, visual quality, and property acquisition). The potential adverse effects on water and aquatic biota resources would be avoided or minimized based on bridge designs crossing the perennial streams to fully stay out of surface waters and mean high water levels. Project construction would adhere to the HDOT Standard Specifications for Road and Bridge Construction (Section 209) Temporary Water Pollution, Dust, and Erosion Control. Construction BMPs that have been either preapproved or coordinated with regulatory agencies, which are included in an integrated storm water management approach. A “Summary of Clear Water Diversion and Isolation BMPs for Use in the State of Hawai‘i,” would be utilized to minimize the potential for water quality impacts to the streams. Additionally, the HDOT Construction Best Management Practices Field Manual (October 2021) would be used for land-based BMPs. Structures crossing streams would be designed to preserve water flow and the biological processes of the fauna living in them. Hardening the stream crossings would be avoided to the extent practicable.

Comment 65: We recommend the use of best management practices (BMP) for stormwater management to minimize the impact of the Project to the existing area's hydrology while maintaining on-site infiltration and preventing polluted runoff from storm events. (Ciara Kahahane, Hawaii DLNR – Water Resource Management 71)

Response 65: Based on coordination with state and federal resource agencies, a comprehensive array of stormwater BMPs have been incorporated into the environmental commitments associated with the Project. These BMPs could include detention ponds to promote infiltration and treatment of discharge generated on-site using industry standard low-impact development practices, such as vegetated swales, vegetated buffers, and bioswales as appropriate (including use of the median, where applicable). Permanent BMPs would be designed to treat stormwater generated by the impervious area of the new roadway as it collects at natural low points along the roadway as defined by the final roadway profile. These set asides are conservatively sized for a maximum potential area of disturbance and the final locations and size of the infrastructure may vary depending on the treatment strategies as identified through final design as part of the design-build process, which is assumed to be fully within the right-of-way analyzed as part of this environmental review. HDOT has a comprehensive approach to the management of stormwater runoff associated with its highways as documented in HDOT’s Storm Water Post-Construction BMPs Manual, as amended in February 2022. This manual outlines HDOT’s policy to prioritize the utilization of low-impact development practices to address polluted runoff from highway surfaces. Additional BMPs included in An Integrated Storm Water Management Approach and a Summary of Clear Water Diversion and Isolation Best Management Practices for Use in the State of Hawai‘i, would be utilized to minimize the potential for water quality impacts to the streams. Additionally, the HDOT Construction Best Management Practices Field Manual (October 2021) would be used for land-based BMPs.

Comment 66: There may be the potential for ground or surface water degradation/contamination and recommend that approvals for this project be conditioned upon a review by the State Department of Health and the developer's acceptance of any resulting requirements related to water quality. (Ciara Kahahane, Hawaii DLNR – Water Resource Management 71)

Response 66: Water quality monitoring would be performed in accordance with a Clean Water Act Section 401 Water Quality Certification that would be sought from the Hawai‘i Department of Health (HDOH) Clean Water Branch in a future phase of the Project. The HDOH Clean Water Branch issues this certificate and is most frequently required in tandem with a Section 404 permit request. To address permanent and temporary discharges associated with individual projects, the HDOH Clean Water Branch may issue a set of requirements that outline water quality protection measures that must be taken. Additional requirements, as set forth in a National Pollutant Discharge Elimination System General Permit to be sought in a future phase of the Project, would be adhered to including monitoring and inspection of erosion and sediment controls and pollution prevention practices throughout the entire construction process.

Comment 67: When fill quantities and impact areas within aquatic resources are finalized, please submit a Corps permit application so we can begin the review process for discharges of fill under Section 404 of the Clean Water Act. (Jeremy Morgan, US Army Corps of Engineers 68)

Response 67: Permitting will occur in the next phase of the Project, after the Final EIS/ROD is finalized.

Comment 68: We recommend culverts and bridges over streams be designed with the height and width to handle periodic massive surges of water from torrential rain events that are known to occur in the area and 100-year storms may become more frequent. Flooding has the potential to destroy aeʻo (Hawaiian stilt, Himantopus mexicanus knudseni) and nēnē (Hawaiian goose, Branta sandvicensis) nests that may be found in the project area. Additionally, ensuring culverts and bridges have the height and width to handle 100-year storm torrential rains may also minimize impacts to other trust resources protected under the Fish and Wildlife Coordination Act. (Chelsie Javar-Salas, USFWS 84)

Response 68: As set forth in the Draft EIS and this Final EIS (see Chapters 2 and 3.9), the Project would be designed consistent with HDOT's Design Criteria for Highway Drainage. Design flows are determined utilizing the National Oceanic and Atmospheric Administration (NOAA) Precipitation Frequency Data Server website. Stream crossings would be designed to preserve water flow and the biological processes of the fauna living in them. In addition to requiring all bridges to be designed for 100-year storm events and all culverts to be designed for 50-year storm events (unless they involve FEMA flood zones, where they will be designed for 100-year storm events), the design criteria also outlines how design discharges are determined, including the use of regression equations that are periodically updated based on observations made by the U.S. Geological Survey. These design standards are intended to ensure that bridges and culvert crossings that carry off-site flow across a highway corridor are not significantly altered by the highway, thereby minimizing impacts to these waterways and habitats by the highway development itself. Wherever possible, low impact development and nature-based designs, such as infiltration ponds/systems, will be utilized to minimize impacts of stormwater runoff from the highway itself. These designs will meet HDOT standards as well as effectively manage sediment transport, protect the environment, and ensure the safety and longevity of infrastructure.

Comment 69: For erosion control during construction, we recommend using materials (*e.g.,* biosock) that are at least 3 feet (ft) in diameter to reduce chances of runoff into the ocean during torrential rain. Sedimentation runoff onto the beach and into the ocean degrades sea turtle habitat and has the potential to bury sea turtle nests. This emphasizes the importance of incorporating our BMPs for Work In and Around Aquatic Environments to minimize project impacts. These BMPs may also help minimize impacts to other trust resources protected under the Fish and Wildlife Coordination Act. (Chelsie Javar-Salas, USFWS 84)

Response 69: HDOT employs the use of its Construction Best Management Practices Field Manual to govern the development of Site Specific BMP Plans during construction. The manual describes appropriate use and diameter width for Compost Filter Berm/Socks which include limitations on placement in areas where high volumes or velocities of flow are anticipated and recommends other methods/materials for sediment control in such situations. The USFWS BMPs for Work In and Around

Aquatic Environments have been agreed to and incorporated into the Project design (see Draft EIS Table 3.10-16).

Flora and Fauna, Endangered Species

Comment 70: The boards say "a grassy median" and that made me very uncomfortable. I want to make sure that we are talking about that as a native plant median and not a grassy of some sort. (Ms. Keele 60)

Response 70: An environmental commitment of the Project as specified in Chapter 5 of this Final EIS requires the use of native species for all revegetation and landscaping purposes. Species identified in the project area will be prioritized. Additional consideration will be given to native, fire-resistant vegetation. Turf grass is prohibited for revegetation and landscaping in accordance with the 2011 HDOT Highway Manual for Sustainable Landscape Maintenance.

Comment 71: Today in that culvert under Pōhaku ʻAeko Street there's water in there and there's fishes. There is life right where you're thinking of putting that highway. I ask you to bring your scientists, and check our 'Aina Ukumehame because it's coming alive again. There is fishes where you wouldn't think there is fishes. There are water pools in Ukumehame where there weren't water pools. (Victoria Kaluna-Palafox 61)

Response 71: Biologists performed surveys in the area throughout 2023 (Draft EIS Appendix 3.10 as well as additional field surveys conducted in March 2025 (Final EIS Appendix 3.10).While the culvert under Pōhaku ʻAeko Street was not included as part of these surveys (because it would not be affected by the Project), the surveys do acknowledge the local habitats in Ukumehame and names of fish species known to be in the Ukumehame and Olowalu streams were listed. They include ʻOʻopu and Āholehole. The biggest threats affecting fish include habitat degradation resulting from water diversion, stream channelization, dams, pollution, and the introduction of exotic species and parasites. For the Project, no streams will be diverted or channelized, and no in-water work is planned for bridges and stream crossings to avoid and minimize potential impacts on fish and other aquatic species. In coordination with state and federal natural resource agencies, environmental commitments to BMPs will be utilized to protect water resources and the area's native species from construction and operational impacts (see Final EIS Chapter 5). These include using native plants for revegetation which will help with soil retention. Water quality monitoring by trained local scientists will flag if any degradation is occurring so that mitigation can be implemented.

Comment 72: It might be necessary to relocate the nēnēs in the area temporarily, for their safety. (Dr. Marion Ceruti 76)

Response 72: The Final EIS incorporates a range of environmental commitments (see Chapter 5) that would be required to protect the nēnē during construction. These include but are not limited to high visibility signs to alert drivers to their presence, training for all on-site staff to recognize and protect nēnē, and protocol on what to do if nēnē or their nests are observed.

Comment 73: All surveys to detect for the presence of aeʻo nests and aeʻo exhibiting defensive nest protection behavior should be carried out by a qualified biologist with knowledge of the species' life history. If heavy rains result in ephemeral wetlands, ʻalae keʻokeʻo (Hawaiian coot, Fulica alai) should be surveyed for as well. (Chelsie Javar-Salas, USFWS 84)

Response 73: The Biological opinion from USFWS is found in Appendix 3.10 and the environmental commitments are summarized in Chapter 5 of this Final EIS. This refined protocol includes but is not limited to; qualified biologist would be on-call throughout the duration of construction to assist in monitoring, surveys, and in an advisory capacity; prior to the initial clearing and grubbing phase of the Project, a qualified biologist would be on-site to perform visual surveys for listed species and nests. Should individuals or nests be observed, then species specific buffers and protocol would apply; prior to the start of any construction activities, a qualified biologist would produce a handout on listed species that occur within the Action Area and present a mandatory Environmental Awareness Program to on-site personnel, including but not limited to contractors, contractor's employees, supervisors, inspectors, and all subcontractors. USFWS would be contacted to review the awareness program prior to administering to on-site personnel; the qualified on-call biologist would be present on-site once every three weeks, or as needed, to provide training to new on-site personnel; should work be halted for more than 72 hours, the on-call biologist shall be contacted to survey the area prior to resumption of work.

Comment 74: All surveys to detect for presence of nēnē nests and nēnē exhibiting defensive nest protection behavior should be carried out by a qualified biologist with knowledge of the species' life history. (Chelsie Javar-Salas, USFWS 84)

Response 74: See Response 69 (above); a qualified biologist would be on-call throughout the duration of construction to assist in monitoring, surveys, and in an advisory capacity; prior to the initial clearing and grubbing phase of the Project, a qualified biologist would be on-site to perform visual surveys for listed species and nests.

Comment 75: We recommend including all final biological survey and monitoring protocols in the final EIS under Appendix 3.10. We encourage your team to submit draft survey and monitoring protocols/standard operating procedures to our office for review and comments prior to finalization. We also encourage incorporating adaptive management into these procedures and triggers for modifying them. (Chelsie Javar-Salas, USFWS 84)

Response 75: Biological survey and monitoring protocols are finalized in the Section 7 Biological Opinion (BO) prepared by USFWS (Appendix 3.10).

Comment 76: The draft EIS states additional biological surveys will be performed by trained biologists in areas of "permanent BMPs." The Service recommends providing more details about this objective, including protocols and habitat features that support listed species in the draft EIS. (Chelsie Javar-Salas, USFWS 84)

Response 76: As set forth in Appendix 3.10, biological surveys were performed by qualified biologists in areas of "permanent BMPs" that were not included in previous surveys. This additional assessment evaluated and affirmed that the full range of environmental effects and environmental commitments first identified in the Draft EIS remain the basis of the BO from USFWS (Appendix 3.10 of this Final EIS)

Comment 77: We recommend that temporary signs be placed around the project area during construction to remind workers of the potential presence of ae'o and nēnē and to drive slowly (10 miles per hour as stated in the Draft EIS). Additionally, permanent signs should be placed along the highway through the Ukumehame wetland area alerting drivers of the potential presence of ae'o and nēnē and for reducing the speed limit through the area to minimize injury and mortality to listed birds from vehicle strikes. (Chelsie Javar-Salas, USFWS 84)

Response 77: This comment is consistent with the environmental commitments incorporated into this Final EIS (see Chapter 5) and as presented in the USFWS BO (Appendix 3.10 of this Final EIS).

Comment 78: Avoid placing staging areas in or directly adjacent to wetland habitat (jurisdictional and non jurisdictional) and streambanks identified by the consultants to avoid and minimize impacts to habitat that supports listed waterbirds and nēnē. (Chelsie Javar-Salas, USFWS 84)

Response 78: This comment is consistent with the environmental commitments incorporated into this Final EIS (see Chapter 5) and as presented in the USFWS BO (Appendix 3.10 of this Final EIS).

Comment 79: Any hazing that occurs to nēnē must follow the 4(d) rule. We recommend keeping a copy of the regulations at the on-site office for easy reference. A key section of the 4(d) rule follows: Before implementing any such intentional harassment activities during the nēnē breeding season (September through April), a qualified biologist knowledgeable about the nesting behavior of nēnē must survey in and around the area to determine whether a nest or goslings are present. If a nest is discovered, the Service must be notified within 72 hours and the following measures implemented to avoid disturbance of nests and broods: No disruptive activities may occur within a 100-ft (30-meter) buffer around all active nests and broods until the goslings have fledged; Brooding adults (i.e., adults with an active nest or goslings) or adults in molt may not be subject to intentional harassment at any time; and the landowner must arrange follow-up surveys of the property by qualified biologists to assess the status of birds present. (Chelsie Javar-Salas, USFWS 84)

Response 79: This comment is consistent with the environmental commitments incorporated into this Final EIS (see Chapter 5) and as presented in the USFWS BO (Appendix 3.10 of this Final EIS).

Comment 80: Hawaiian yellow-faced bees are known to occur in scattered populations along the western coastline of Mauna Kahālāwai (Maui Komohana or West Maui Mountains). Coastal populations of yellow-faced bees occur in habitat along rocky shorelines with naupaka (Scaevola taccada) and tree heliotrope (Heliotropium arboreum) with either landscaped vegetation, nonnative kiawe (Neltuma pallida), or bare rock inland. Bees are restricted to an extremely narrow corridor, typically 33 to 66 feet (10 to 20 meters) wide, and do not occur on barren sandy beaches or inland, or on landscaped native plants on hotel grounds. Documented nectar plants include naupaka, ʻilima (Sida fallax), ʻakoko (Euphorbia spp.), pua kala (Argemone glauca), naio (Myoporum sandwicense), and tree heliotrope. Threats to yellow-faced bees include habitat destruction and modification from land use change, nonnative plants, ungulates, and fire, along with predation by nonnative ants and wasps. Mahalo for including the Service's avoidance and minimization measures for coastal Hawaiian yellow-faced bees. (Chelsie Javar-Salas, USFWS 84)

Response 80: We appreciate the USFWS providing these measures and have included them as commitments as presented in Chapter 5 of this Final EIS.

Comment 81: Table 3.9.10 states that project effects on listed waterbirds and nēnē would be minimal due to the implementation of avoidance and minimization measures outlined in Appendix 3.10. The project may potentially impact aeʻo and nēnē. Therefore, we recommend that the cumulative impacts analysis in the draft EIS include an assessment for the construction phase and the normal operations phase. This should specifically address how the highway designs in the Ukumehame area will avoid car strikes and minimize impacts to aeʻo and nēnē. Additionally, we encourage your team to consider the anticipated increase in waterbird populations (aeʻo and ʻalae keʻokeʻo) and nēnē in the Ukumehame area following wetland restoration when conducting the cumulative impact analysis. Currently, neither Chapter 3.10 nor the Biological Resource Discussion in Appendix 3.10 includes an evaluation of the impacts to listed waterbirds and nēnē from the routine operations of the new highway after construction. (Chelsie Javar-Salas, USFWS 84)

Response 81: This comment is consistent with the assessments outlined in the Section 7 BA and the BO (Appendix 3.10 of this Final EIS). As described in Chapter 3, Affected Environment and Reasonably Foreseeable Effects of this Final EIS, on February 19, 2025, CEQ issued a memorandum, Implementation of the National Environmental Policy Act, which acknowledged that the Fiscal Responsibility Act of 2023 amended NEPA to clarify that EISs must analyze and disclose the "reasonably foreseeable environmental effects of the proposed agency action." CEQ encouraged Federal agencies to "analyze the reasonably foreseeable effects of the proposed action consistent with section 102 of NEPA, which does not employ the term 'cumulative effects;'[…and the agencies should consider] 'reasonably foreseeable' effects, regardless of whether or not those effects might be characterized as 'cumulative.'" Further, since the publication of the Draft EIS, the U.S. Supreme Court issued its decision in Seven County Infrastructure Coalition v. Eagle County, Colorado, which held the focus of NEPA is the project at hand, not other separate projects. 605 U.S. ____ (May 29, 2025). Accordingly, this Final EIS analyzes reasonably foreseeable effects that result from the proposed action. The Honoapiʻilani Highway Improvements Project considers reasonably foreseeable effects to have a rational link to the Project in terms of geographic and temporal proximity and must be sufficiently likely to occur.

Comment 82: The draft EIS states nighttime work is not anticipated; however, if it does become necessary, the DOT and FHWA will consult with the Service (see Appendix 3.9, page 4). Chapter 3.10, Table 3.10.9 states the project does not anticipate to impact seabirds, as standard Service seabird avoidance and minimization measures will be implemented. However, Table 3.10.5 mentions that nighttime work may occur, but not during the seabird fallout season. Please confirm whether nighttime work will occur during the seabird fallout season. If it is determined that nighttime work will occur during the seabird fallout season, we recommend contacting our office several months in advance for guidance to avoid adverse impacts to listed seabirds. Additionally, we recommend following the 2022 Maui Dark Skies Ordinance for all permanent lighting. For permanent lighting, limit these lights as human safely considerations allow, and include light frequencies and intensities that have the least impact on seabirds and sea turtles. There is also a growing body of peer-reviewed literature and seabird groups to help guide you with the most current animal friendly lighting. (Chelsie Javar-Salas, USFWS 84)

Response 82: Following completion of the Draft EIS, nighttime work commitments were made such that nighttime work is limited in scope and duration and would be specifically at the tie-in points to the existing roadways (at the Lāhainā Bypass to the north, at the Pali to the south) in order to prevent traffic delays. Nighttime work would not be allowed during the seabird fallout season. The 2022 Maui Dark Skies Ordinance for all permanent lighting has already been incorporated into the commitments described in this Final EIS (Chapter 5).

Comment 83: For revegetation efforts, we recommend using only native plants, in particular those documented in the biological survey: ‘ilima (Sida fallax), ‘iliahialo‘e (Santalum ellipticum), ‘a‘ali‘i (Dodonaea viscosa), hoary abutilon (Abutilon incanum), akulikuli (Sesuvium portulacastrum), milo (Thespesia populnea), and naupaka (Scaevola taccada). If possible, we recommend avoiding disturbance to endemic plant species such as ‘iliahialo‘e that currently occupy the project area. ‘Iliahialo‘e is an endemic plant species to the Hawaiian Islands. Limiting disturbance of non-listed endemic plants help to prevent their decline. (Chelsie Javar-Salas, USFWS 84)

Response 83: This comment is consistent with the environmental commitments incorporated into this Final EIS (see Chapter 5) and as presented in the USFWS BO (Appendix 3.10 of this Final EIS).

Comment 84: To minimize collisions for seabirds, we recommend flagging the tops of monopoles, cranes, and crane wires/cables and flagging fencing that extends above vegetation. (Chelsie Javar-Salas, USFWS 84)

Response 84: This comment is consistent with the environmental commitments incorporated into this Final EIS (see Chapter 5) and as presented in the USFWS BO (Appendix 3.10 of this Final EIS).

Comment 85: To avoid and minimize invasive species potential impacts to ESA listed species, we recommend incorporating our invasive species biosecurity protocols into your project planning. The proposed project will be transporting a substantial amount of materials (i.e., construction materials or aggregate, etc.), vehicles, machinery, equipment, and personnel between sites, which has the potential to unintentionally introduce invasive species to the project site. (Chelsie Javar-Salas, USFWS 84)

Response 85: This comment is consistent with the environmental commitments incorporated into this Final EIS (see Chapter 5) and as presented in the USFWS BO (Appendix 3.10 of this Final EIS).

Comment 86: Under Mammals, the Draft EIS states that ʻōpeʻapeʻa (Hawaiian hoary bat, Lasiurus cinereus semotus) have not been detected on Maui and cites Tomich 1986. Current data show that ʻōpeʻapeʻa do occur on Maui. The Draft EIS states that if scheduling becomes a serious issue and cutting down or pruning trees taller than 15 feet cannot be avoided during the bat breeding season (June 1 through September 15), FHWA will consult with the Service. We recommend FHWA consult with us several months in advance if scheduling is anticipated to prevent implementing the Service's avoidance and minimization measures for ʻōpeʻapeʻa or any other listed species that occurs or may occur in the project area. (Chelsie Javar-Salas, USFWS 84)

Response 86: Under Section 3.10.3.2 Mammals, the Draft EIS states that "There are records for this species on Maui, and their potential presence is assumed within the project area" and then cites Tomich 1986. This Final EIS states in Chapter 5, that if bat breeding season cannot be avoided for cutting down or pruning trees taller than 15 feet, the contractor would contact the USFWS five months in advance for guidance.

Comment 87: Please include Service avoidance and minimization measures for sea turtles (honu (green sea turtles, Chelonia mydas) and honu'ea (Hawksbill sea turtles, Eretmochelys imbricata)). Construction on, or in the vicinity of, beaches can result in sand and sediment compaction, sea turtle nest destruction, beach erosion, contaminant and nutrient runoff, and an increase in direct and ambient light pollution, which may disorient hatchlings or deter nesting females. Off-road vehicle traffic may result in direct impacts to sea turtles or nests, and contributes to habitat degradation through erosion and compaction. Avoidance and minimization measures include: No vehicle use on or modification of the beach/dune environment during the sea turtle nesting or hatching season (See nesting date ranges above); Do not remove native dune vegetation; Have a biologist familiar with sea turtles conduct a visual survey of the project site to ensure no basking sea turtles are present; If a basking sea turtle is found within the project area, cease all mechanical or construction activities within 100 feet until the animal voluntarily leaves the area; Cease all activities between the basking turtle and the ocean; Remove any project-related debris, trash, or equipment from the beach or dune if not actively being used; Do not stockpile project-related materials in the intertidal zone, reef flats, sandy beach and adjacent vegetated areas, or stream channels. To avoid and minimize project impacts to sea turtles from lighting we recommend: Avoiding nighttime work during the nesting and hatching season; Minimizing the use of temporary and permanent lighting on or near beaches and shield all project-related temporary and permanent lights so the light is not visible from any beach; If lights can't be fully shielded or if headlights must be used, fully enclose the light source with light filtering tape or filters; Incorporating design measures into the construction or operation of buildings adjacent to the beach to reduce ambient outdoor lighting such as tinting, reducing the height of exterior lighting to below 3 feet and pointed downward or away from the beach, and minimizing light intensity to the lowest level feasible and, when possible, include timers and motion sensors. We recommend keeping workers, staging areas, and temporary resting equipment on the mauka side of the old highway, away from the beach, especially during sea turtle nesting season and within the proposed green sea turtle critical habitat. (Chelsie Javar-Salas, USFWS 84)

Response 87: This comment is consistent with the environmental commitments incorporated into this Final EIS (see Chapter 5) and as presented in the USFWS BO (Appendix 3.10 of this Final EIS). As noted in Chapter 5, since completion of the Draft EIS, nighttime work commitments have been made such that nighttime work is limited in scope and duration and would be specifically at the tie-in points to the existing roadways (at the Lāhainā Bypass to the north, at the Pali to the south) in order to prevent traffic delays. Nighttime work would not be allowed during the sea turtle nesting/hatching season. According to shapefiles downloaded from USFWS Ecos, https://ecos.fws.gov/ecp/species/C00S#crithab, there is no USFWS PIFWO 07/19/2023 proposed critical habitat for Hawaiian green sea turtle (Chelonia mydas) overlapping the northern end of the project area. The closest proposed critical habitat for Chelonia mydas is located in Lāhainā, approximately 2.8 miles from the northern terminus of the Project.

Geology, Soils, and Natural Hazards

Comment 88: The rules and regulations of the National Flood Insurance Program (NFIP), Title 44 of the Code of Federal Regulations (44 CFR), are in effect when development falls within a Special Flood Hazard Area (high-risk areas). Be advised that 44 CFR, Chapter 1, Subchapter B, Part 60 reflects the minimum standards as set forth by the NFIP. Local community flood ordinances may stipulate higher standards that can be more restrictive and would take precedence over the minimum NFIP standards. The owner of the project property and/or their representative is responsible for researching the Flood Hazard Zone designation for the project. Flood zones subject to NFIP requirements are identified on FEMA's Flood Insurance Rate Maps (FIRM). (Dina Lau, Hawaii DLNR – Engineering Division 70)

Response 88: These requirements are reflected in the initial analyses for the draft floodplain assessment presented in the Draft EIS and there has been no change of condition identified in this Final EIS for the Selected Alternative.

Climate Change and Sea Level Rise[2]

Comment 89: The sea level rise simulation indicates that certain sections of the preferred U1 route will be adjacent to or within the sea level rise exposure area, potentially increasing the risk of coastal hardening and erosion in the future. (Brian Neilson, DLNR-Aquatic Resources 69)

Response 89: To avoid the potential requirement for coastal hardening, the Selected Alternative would be placed on a viaduct above the inundation zone. Other than the piers and columns with a small footprint in these areas (and included in the modeling of potential effects), there would be open flow of water below the viaduct and no additional hardening would be required.

Comment 90: HDOT should disclose and consider alternatives that account for updated sea-level rise projections. HDOT's stated purpose and need for realigning the Honoapiʻilani Highway is "to address existing coastal erosion and flooding vulnerabilities as well as future coastal erosion and flooding caused by anticipated sea level rise." Indeed, around two-thirds of the highway span proposed for realignment "are considered exposed and potentially vulnerable to sea level rise." HDOT acknowledges that, among a variety of potential hazards to transportation infrastructure in West Maui, sea level rise is "the most urgent," while the associated risks of passive flooding, storm surges, and coastal erosion are already occurring and predicted to worsen. The alternatives considered in the Draft EIS are all based on the conservative assumption that ocean levels will rise by 3.2 feet by 2100. More recent estimates, however, predict that sea level may rise by closer to 4 feet and by as much as 6 feet by 2100. (Mahesh Cleveland, Earth Justice 81)

Response 90: Effective July 2019, the State of Hawaiʻi required all new projects undergoing environmental review under the Hawaiʻi Environmental Policy Act (also known as HRS, Chapter 343) to consider whether the Project is likely to have an adverse effect or be vulnerable to a sea level rise exposure area (SLR-XA), as defined by the 2017 Hawaiʻi Sea Level Rise Vulnerability and Adaptation

[2] Climate Change and Sea Level Rise is a chapter in the already published Draft EIS (December 2024) and is most specifically tied to Hawaii Revised Statutes (HRS) 255P. The Hawaiʻi Climate Change Mitigation and Adaptation Commission and the Hawaiʻi Department of Land and Natural Resources determination of Sea Level Rise Exposure Area (SLR-XA) inundation zones was used to evaluate alternatives.

Report. This accepted guidance is to use a 3.2-foot sea level rise as a planning target for 2100, with an additional consideration of a 6-foot target in that time frame. The impact evaluation was based on the best available information as the Draft EIS was initiated, and in coordination with the Hawai‘i Climate Change Mitigation and Adaptation Commission and the State of Hawai‘i DLNR. All alternatives were evaluated based on a 3.2-foot and 6-foot sea level rise scenario. Additional modeling was performed to provide a higher resolution site-specific inundation model to better define the hazards associated with passive and annual high-wave flooding for 3.2 feet of sea level rise. This methodology, as described in Appendix 3.13, Climate Change and Sea Level Rise Supplemental Information, of the Draft EIS is supported by the Intergovernmental Panel on Climate Change Fifth and Sixth Assessment Reports, the HDOT Climate Resilience Action Plan, and the Hawaii Sea Level Rise Vulnerability and Adaption Report.

The most mauka alternatives which mostly avoid inundation zones were found to have cultural resource impacts and other environmental adverse effects that resulted in these alternatives not being considered as the preferred alignment. Overall, the Project’s commitment to elevating the highway on a viaduct as a design requirement would effectively keep the roadway out of the vast majority of inundation.

Comment 91: The Draft EIS acknowledges the harm that climate change and sea level rise are “already causing to the existing highway,” but does not discuss how relinquishing the existing highway to the County will affect the environment. So long as the County keeps the existing highway in place and sea levels continue rising, the existing highway will increasingly serve as shoreline armoring that would harm beach and reef ecosystems, including monk seal habitat. HDOT should, at minimum, consider these harmful effects and measures to mitigate them. (Mahesh Cleveland, Earth Justice 81)

Response 91: As noted in the response to Comment 12, part of the rationale for transferring the old highway to Maui County is that once this portion of the roadway is not utilized as the primary transportation link between West Maui and Central Maui, the volume of traffic would be substantially reduced. This allows the County to pursue multiple uses of the old highway such as the West Maui Greenway as well as to consider long-term maintenance measures that are less reliant on shoreline hardening and more conducive to naturalizing the shoreline. The Draft and Final EIS indicated that The Nature Conservancy is evaluating such opportunities along the old highway as part of its “Road to Resilience” initiative. The Draft and Final EIS also acknowledge that once jurisdiction is transferred, there may be conditions in the future that would prevent the old highway from being a continuous link.

Traffic, Right-of-Way, Pedestrians/Bicycles

Comment 92: Please use roundabouts at intersections whenever possible (Michele McLean 31)

Response 92: Roundabouts serve important transportation management functions and were evaluated for potential application as part of the preliminary design for the Honoapi‘ilani Highway Improvements Project, although they have not been furthered as a design option. The project area has five intersections and for the Selected Alternative, two would be signalized to safely allow for pedestrian and bicycle crossings (which would generally not be appropriate for a free flowing roundabout). The other locations have limitations for the right-of-way necessary to implement a

roundabout with the anticipated design capacity and free flow speeds of the new highway alignment. If the use of a roundabout is proposed at a future date, it would require further operational and environmental assessment.

Comment 93: Will intersections have lighting, signals, emergency roadside phones etc.? (Anonymous3 38)

Response 93: As established in the Draft EIS, Luawai Street in Olowalu would be a signalized intersection and, as detailed in this Final EIS and based on public comments and input, a second signalized intersection at Ehehene Street would part of the Project. Limited street lighting would be included at project intersections but not along the entire corridor. Consistent with HDOT policy, there would be no provision for emergency phones along the roadway given the prevalence and availability of cellular phones.

Comment 94: The use of left side acceleration lanes without sufficient length to allow entering traffic to get up to speed and the requiring those vehicles to merge right. In my experience left side merges and lane drops have proven to have higher crash rates. Having those entering left turns sit in the center of the roadway without any physical, lateral buffering space from traffic passing on both sides at higher speeds, would seem to be uncomfortable for the drivers and may result in sideswipe crashes The Reduced Conflict Intersection (RCI) design concept eliminates those problems and provides the following benefits: conflict points involve traffic headed in on direction conflicting with another single traffic movement; the "threat" or priority traffic movement is always approaching from the left or from ahead, never from the right; no left turns are required into higher speed, higher volume traffic flows. In addition, RCIs provide two stage crossings of the heavy, high-speed traffic movements and two stage left turns onto the major roadways for any length vehicle. Vehicles of any length are not required to cross both directions of the major roadway while requiring a gap in both directions. Minnesota recently announced it is no longer building full movement intersections on rural divided highways without traffic signals or roundabouts. However, since there are many existing locations with left side merges on Maui, my concerns would be greatly lessened if the crash data shows that they perform safely on Maui. (Dennis Eyler 78)

Response 94: The preliminary alignment design has been based on state and federal design standards and reflects the limitations of right-of-way availability, as well as constraints related to sensitive cultural resources and other environmental considerations. For example, innovative reduced conflict intersection concepts noted in the comment would require additional right-of-way acquisition, including areas potentially containing sensitive cultural resources or other environmental concerns and as a result, would be difficult to implement as part of the Project or result in potentially adverse impacts.

Comment 95: Will the road be asphalt or concrete? (Anonymous 38)

Response 95: The roadway and shoulders will be constructed with concrete pavement. Side street tie-ins will be asphalt concrete pavement.

Comment 96: We recommend — similar to our past comments — that consideration be made to strengthening the multimodal and active transportation components within the project framework. This could include any number of more robust commitments, including: consider modifying the current cross-section design to be more amenable to active transportation elements such including a shared-use path; and, strengthen financial commitments to the active transportation infrastructure. While the West Maui Greenway represents a promising initiative, securing dedicated funding would ensure its implementation. Similar funding considerations could benefit the Olowalu project, creating a comprehensive active transportation network. (Kathleen Rooney, Ulupono Initiative 67)

Response 96: Based on this and several other comments, the Selected Alternative as presented in this Final EIS will include a separated shared-use pathway along the makai edge of the new highway right-of-way and will include signal-controlled bicycle and pedestrian crossings at Luawai Street in Olowalu and Ehehene Street in Ukumehame. This addition to the Selected Alternative is included in the revised cost estimates for the Project as summarized in Chapter 5, Selected Alternative. The West Maui Greenway is an independent project outside the jurisdiction of HDOT. Funding for the West Maui Greenway Plan is outside of the scope of the Project and this Final EIS.

Comment 97: The Hawaii State Department of Education is concerned about commute times and traffic patterns for its students, parents, and staff as there are many that have been displaced to different parts of the island due to the West Maui Wildfires. With the uncertainty that still lies ahead, the Department requests that your staff and consultants meet with the administrators of Lahainaluna High, Lāhainā Intermediate, and Nahienaena Elementary Schools to present traffic impacts leading to and from each of these campuses and specific timelines associated with the project. (Roy Ikeda, Hawaii Department of Education 77)

Response 97: HDOT understands the concerns related to commute times and traffic patterns around one of West Maui's most vital centers for community and educational purposes. HDOT will coordinate a meeting with the referenced parties to address uncertainties that the Hawaii Department of Education has about the Project's effect on traffic. There are no changes at these school sites as a result of the Project. As established in the Final EIS, the Project would not increase traffic and would decrease travel delays since current disrupters such as flooding and emergency roadway storm repairs would be reduced. During project construction, the existing highway would remain open and operational because the Selected Alternative is not on the existing alignment.

Comment 98: The Navahine Settlement mandates that “Level of Service is discontinued as a criterion for project prioritization,” which goes hand-in-hand with the requirement to instead assess each project’s greenhouse gas and vehicle miles traveled impacts. As the youth highlighted in Navahine, level of service, a metric assessing how quickly cars move along a roadway, “promotes projects that induce additional traffic and ultimately increase congestion over time and imposes blind spots and barriers against multimodal projects.” Any subsequent environmental review documents should avoid use of or reliance on level of service to evaluate the Honoapi‘ilani Highway Improvements Project. (Mahesh Cleveland, EarthJustice 81)

Response 98: As described in Chapter 1 of the Draft EIS, the Project’s primary purpose is to provide a reliable transportation facility in West Maui and improve Honoapi‘ilani Highway’s resilience by

reducing its vulnerability to coastal hazards. Overall, Level of Service is not a criteria for the prioritization of this project; rather it is based on the Statewide Coastal Highway Program Report and the Coastal Road Erosion Susceptibility Index ranking system. In Chapter 3.14 of the Draft EIS, Level of Service is provided to confirm that creating the new highway alignment achieves project goals but does not worsen operating conditions. Roadway segment level of service was determined using ranges of volume/capacity ratios based on guidance contained in the *Highway Capacity Manual, Seventh Edition: A Guide for Multimodal Mobility Analysis*. For the purposes of the transportation analysis, level of service is utilized to quantify the performance of the roadway or element being analyzed.

Air Quality

Comment 99: All project activities shall comply with Hawaii Administrative Rules (HAR), Chapter 11-59 and 11-60.1. If your proposed project: Requires an Air Pollution Control Permit you must obtain an air pollution control permit from the Clean Air Branch. If there is a potential to generate fugitive dust, you must reasonably control the generation of all airborne fugitive dust. (State Department of Health, Clean Air Branch 66)

Response 99: As noted in this Final EIS (Chapter 5) project construction would be required to employ BMPs to control fugitive dust and any other air pollution control permit requirements would be obtained, as necessary.

Comment 100: If a project includes construction, demolition, or renovation activities that involve potential asbestos and lead containing materials, please contact the Indoor and Radiological Health Branch. (State Department of Health, Clean Air Branch 66)

Response 100: The project would not be demolishing or renovating structures that might have asbestos and lead containing materials.

Comment 101: If the project involves increases in the population and number of vehicles in an area, this may lead to more air pollution via vehicle exhaust. Ensure drivers keep idling time to three minutes or less and consider support for alternative transportation options. (State Department of Health, Clean Air Branch 66)

Response 101: The project does not have a development or land use component and is not expected to induce development so there is no anticipated incremental increase in population or vehicular traffic. The Selected Alternative will incorporate bicycle and pedestrian facilities and is fully compatible with the potential future implementation of the West Maui Greenway.

Comment 102: HDOT’s environmental review of the proposed Honoapi‘ilani Highway Improvements Project should contain analyses and mitigation measures to reduce greenhouse gas emissions, consistent with the Navahine Settlement and state law. (Mahesh Cleveland, EarthJustice 81)

Response 102: As described in Draft EIS, the Project does not generate additional traffic demand since the realignment creates a new and more reliable linkage between West Maui and Central Maui

and there would be no up or downstream changes in the transportation network or new anticipated growth or development as a result of the Project. A qualitative analysis was conducted according to agency guidance in place at the time of the Draft EIS. Compared to the No Build Alternative, the Project would not result in a material change in regional criteria air pollutant and emissions. No mitigation measures are proposed for any of the Build Alternatives because no violations of the National Ambient Air Quality Standards or State Ambient Air Quality Standards are anticipated.

Comment 103: The Navahine Settlement further requires HDOT to "develop and implement an objective, scientifically-based methodology to assess and report the total, long-term [greenhouse gas] emission and [vehicle miles traveled] impacts of each infrastructure project," specifically for use in "preparing environmental review documents for its transportation projects." Such analyses are not included in the Draft EIS. Given that HDOT must develop and implement this methodology by April 2025, any subsequent environmental review documents should disclose these Project impacts. (Mahesh Cleveland, EarthJustice 81)

Response 103: The Draft EIS was published in December 2024, before the development and implementation of the HDOT methodology applicable to new planning projects initiated after April 2025. Further, as noted in the Draft EIS, the Project is not expected to add travel demand or increase regional VMT so the emissions analysis would show little or no change.

Comment 104: HDOT should specifically consider and compare the greenhouse gas emissions and vehicle miles traveled impacts of (1) constructing the new highway while closing or keeping the existing highway open to motorist traffic, and (2) including or omitting bike and pedestrian facilities on the existing and new highways. (Mahesh Cleveland, EarthJustice 81)

Response 104: Given that the Project would not generate new trips, the Selected Alternative would not be anticipated to result a material change in regional criteria air pollutants or greenhouse gas emissions as compared to the No Build Alternative. Given the limited bicycle and pedestrian activity in the area presently, the incremental difference with or without the bicycle and pedestrian facilities would be minimal. However, for the purposes of presenting a conservative evaluation, such trips are not accounted for in the analysis.

Noise

Comment 105: We are concerned about the hours of construction and if there's going to be limits or if it's going to be a 24-hour operation. How will noise be addressed and recorded before and after construction. Will there be a decibel meter at our location now and that's compared to construction? (Nick Nielson 58)

Response 105: As presented in Chapter 3.16 of the Draft EIS and this Final EIS, the Hawaii Department of Health maintains community noise control standards (HAR §11 46) that also apply to construction noise. These specifications would be adhered to, and a noise permit would be obtained for construction activities performed during standard work hours (Monday through Friday 7:00 a.m. to 6:00 p.m. and Saturday 9:00 a.m. to 6:00 p.m.). Should night work be required (outside of sea turtle nesting/hatching periods and seabird fledgling periods), it would be limited and of short duration at

the connection points at the north and south ends of the corridor in order to limit daytime congestion. The distances of this anticipated night work would be far enough away from residences to have no adverse effect.

Infrastructure and Utilities

Comment 106: The proposed route also appears to pass through the existing Olowalu Convenience Center (OCC) at the Closed Olowalu Landfill. OCC is the only recycling and waste transfer station for the West Maui community. Please advise if the OCC will be affected, and if so, the plan to relocate the OCC to another location to allow the County of Maui to continue providing this service to the local community. Routing across any portion of the Olowalu Recycling and Refuse Center will result in a reduction of solid waste services for West Maui. (Robert Schmidt, Maui County Department of Environmental Management 80, Elaine Baker 50)

Response 106: As presented in Chapter 3.17 of the Draft, the Preferred Alternative (and all alternatives evaluated) would be anticipated to result in the displacement and relocation of the existing County of Maui recycling and transfer station. Based on information provided by the County, the location at the landfill was not considered a permanent solution and the County has long considered relocation options for this facility to move it closer to the Lāhainā urban center, where most users originate.

Hazardous Materials

Comment 107: When all the debris was moved to the Olowalu dump site after the Lāhainā fires, Mayor Bissen said that it would later be transported over to the Central Maui landfill. I'm wondering how this is going to impact plans for the highway? Was the movement of transport trucks back and forth to get to the Central Maui landfill been looked at in the EIS. And do you think your highway proposal would affect that in some way, environmentally? There's been concern about the current dump site possibly leeching into the coastal waters off of Olowalu and do you think your highway proposal would affect that in some way, environmentally? Routing across any portion of the closed Olowalu Landfill should be avoided so that buried waste is not exposed to the environment. (Nancy Haley 43, Elaine Baker 50)

Response 107: It is anticipated that the new roadway would begin construction after completion of removal operations and closure of the landfill. On October 27, 2023, the Board of Land and Natural Resource granted Maui County a land disposition to use the Olowalu Landfill to dispose of the Lāhainā wildfire ash and smaller particles. The debris would be wrapped in liners to prevent the migration of any waste materials and the landfill would again be capped and closed. Both the Temporary Debris Staging and Reduction site and the repurposed scale and weigh station are likely to be used for less than five years. The temporary uses related to disposal of debris from the Lāhainā wildfire is expected to stop prior to the development of the Project. Therefore, any affects to this facility or conflicts with the Lāhainā wildfire debris removal are unlikely.

The new roadway would have an intersection with turning lanes and to serve the landfill site thus if any future transfer activities were to be undertaken, there would be roadway access to all for the movement of trucks and vehicles. The Selected Alternative does not disturb any disposal areas of prior landfill so construction of the roadway would not increase potential for off-site contamination.

Evaluation of effects from the landfill would be part of the ongoing management of the closed landfill by the State of Hawaii.

Comment 108: A portion of the proposed "common" route appears to encroach onto landfilled waste along the toe of closed Olowalu Landfill. Constructing structures and roadways on landfilled waste should be avoided. Please advise if this project does plan to place the improved highway on top of landfilled waste at the Closed Olowalu Landfill. (Robert Schmidt, Maui County Department of Environmental Management 80)

Response 108: The Selected Alternative would be constructed in the area of the closed Olowalu Landfill but would remain makai of the toe of the slope over covered materials. The roadway realignment will not be located over landfilled waste and the alignment was developed in coordination with the Maui County Environmental Management Division.

Section 4(f) Evaluation

Comment 109: The Department [Department of Interior], through the National Park Service (NPS), concurs with a *de minimis* finding, that the project will have no adverse effects on any Section 4(f) properties within the project area. (Viktorily Sirova 65)

Response 109: Thank you for your comment and your interest in the Project.

Preferred Alternative

Comment 110: As owner of Lot 19 CPR Unit C in the Olowalu Mauka subdivision, the proposed highway location [Preferred Alignment] just cuts a small corner of our property and we are relieved that it will not destroy our vision for our farm. (Van Fischer 22 and 57)

Response 110: Thank you for your comment and your interest in the Project.

Comment 111: We believe there are a number of reasons why a minor adjustment to a small section of the highway moving the route approximately 150-200 feet mauka will improve the safety and flow of traffic and help to avoid valuable natural resources. The current design does not cross Luawai Street at a right angle creating an unsafe intersection for vehicles entering the highway from both the subdivision above the new highway and out of the lower Olowalu village. If the highway is relocated 150-200 feet mauka the highway will cross Luawai Street at a right angle providing maximum sight distance for vehicles using the intersection and more stopping distance for vehicles approaching the intersection from the lower road. It also makes more sense to locate the detention basin next to this intersection as it can be used to collect the water that flows down Luawai Street in heavy rain events. (Van Fischer 22 and 57)

Response 111: These comments have been reviewed and incorporated into the refinements of the Selected Alternative to the extent practicable, most notably with a mauka shift of the roadway. Modifications to the Selected Alternative are summarized in Chapter 5, Selected Alternative, of this Final EIS.

Comment 112: I live in Kapāiki Village, most people know it as Olowalu Village. As we look at the alternate routes, I would like to see it go a little bit higher [mauka] away from the homes. We have a small little village and I would really like to see it would be pushed further away from our homes for the noise. (David McPherson 55)

Response 112: There have been several comments looking to move the Preferred Alternative further mauka from its alignment as presented in the Draft EIS. These comments have been reviewed and incorporated into the refinements of the Selected Alternative, and the result would be a more mauka alignment (up to approximately 200 feet of the original alignment). Modifications to the Selected Alternative are summarized in Chapter 5, Selected Alternative, of this Final EIS. In terms of noise, there was no impact on the homes in the Kapāiki Village area from the Preferred Alternative as analyzed in the Draft EIS. Based on the removal of the high volume of through traffic on the existing highway, the homes in this area would experience a decrease in noise levels over the No Build condition (see Chapter 3.16 of the Draft EIS and Final EIS).

Comment 113: The intersection with Luawai Street absolutely must be signalized with right turn lanes. (Van Fischer 22 and 57)

Response 113: As indicated in the Draft and Final EIS, this intersection is proposed to be fully signalized.

Comment 114: The topography along a section of the mauka lot line of lot 19 CPR Unit C has a very steep 10-12 foot tall cut bank that runs along that property line in the exact area where the proposed highway crosses that property corner. Due to the continued rise up the hill, building the highway in this spot will result in the sloped bank of the highway will be approximately 20 feet high or more. Simply moving the highway mauka 100 feet or so will eliminate this situation. (Van Fischer 22 and 57)

Response 114: These comments have been reviewed and incorporated into the refinements of the Selected Alternative to the extent practicable, most notably based on the mauka shift of the roadway as noted by the comments. Modifications to the Selected Alternative are summarized in Chapter 5, Selected Alternative, of this Final EIS.

Comment 115: The Mopua Stream is an open stream from the mauka property line of Lot 19 to the existing highway where a culvert crosses the highway into the ocean (it is an underground stream above Lot 19). The open section of this stream is teaming with life and well worth protecting. There also appears to be an underground stream channel that runs along the mauka property line of lots 19 and 20 and there is an existing abandoned pump house and moving water is visible in the bottom of the trench. Moving the highway mauka as we propose will protect this valuable water source as we do not know if it is coming from springs or other underground streams. Provisions should also be made for a culvert to be placed under the highway should State wish to re-establish all of Mopua Stream as an open channel in the future. (Van Fischer 22 and 57)

Response 115: These comments have been reviewed and incorporated into the refinements of the Selected Alternative to the extent practicable. Modifications to the Selected Alternative are

summarized in Chapter 5, Selected Alternative, of this Final EIS. During final design further geotechnical studies would be conducted related to the limits of disturbance. These studies would identify subsurface conditions (including potential underground streams) and potential design modifications would be evaluated based on those findings.

Comment 116: Another consideration in moving the Preferred Alternative, should be the protection of quality farming soil. The property above our mauka property line (Lot 19) is very rocky and not suitable for farming. All of lots 19 and 20 are comprised of good quality soil and it would be a shame to use any more of that land for the highway than absolutely necessary. (Van Fischer 22 and 57)

Response 116: The consideration of soils of concern to the property owner are accommodated in the overall request of a mauka shift that has been included in the refinements to the Selected Alternative. Modifications to the Selected Alternative are summarized in Chapter 5, Selected Alternative, of this Final EIS.

Comment 117: The route as proposed cuts directly through Lot 19 CPR Unit A and Lot 20 CPR Units A and B and includes a proposed detention basin in that area. As such, the State will need to acquire most if not all these parcels rendering the remainder unbuildable as home sites. The land just mauka of these parcels consists of an agricultural parcel that is designated as part of the subdivision Greenway Open Space. On these lots, there are two local families who are in contract to buy those to build their homes but can't build without a mauka alignment shift. If the State agrees to move the highway as suggested, the owners of Lot 20 Units A and B would be willing to donate an open space easement on one acre of the Lot 20 CPR Units A and B to offset a portion of the loss of the required greenway at no cost to the State. (Van Fischer 22 and 57)

Response 117: These comments have been reviewed and incorporated into the refinements of the Selected Alternative.

Comment 118: With the single viaduct with one moving lane in each direction, what happens when there's an accident on that elevated roadway? If the vehicles are stopped there and people need to get through, how are you going to get people off of the viaduct? (Jason Wolford 56)

Response 118: The viaduct will have 6-foot-wide shoulders, 11-foot-wide travel lanes (one in each direction) and a 4-foot wide median, providing a total roadway width of 38-feet plus a shared use path. This width is anticipated to be adequate to provide the passage of vehicles should an accident occur either by having vehicles pulling to the side (and passing vehicles utilizing the median space to pass) or in more severe cases the use of a single contraflow lane with the assistance of Maui Police Department.

Comment 119: The realignment of Honoapi‘ilani Highway out of the Sea-Level Rise Exposure Area (SLR-XA) is supported in the Maui County General Plan and more specifically by the West Maui Community Plan. (Karen Comcowich, Maui County Long Range Division 82)

Response 119: Thank you for your comment and your interest in the Project.

Comment 120: Multimodal transportation options and Complete Streets elements should be incorporated into the Honoapiʻilani Highway Improvements. In addition, thoughtful consideration should be given to the road design to ensure the realigned highway retains and enhances the existing character and scenic resources found in Ukumehame and Olowalu. The inclusion of trees and landscaping appropriate to the microclimate is also important. The design of the Honoapiʻilani Highway Improvements will need to incorporate multimodal and Complete Street design elements, while thoughtfully considering the existing character and scenic resources of the communities through which it passes. (Karen Comcowich, Maui County Long Range Division 82)

Response 120: The Selected Alternative, as documented in the Final EIS/ROD, includes an adjacent shared-use path as part of the highway realignment for bicycles and pedestrians, and two mauka-makai signalized crossings of the corridor that non-motorized vehicles can use. Revegetation for disturbed areas or for landscaping purposes would use native plants found within the project area or native, wildfire resistant plant species. Turf grass would be prohibited, and all landscaping and vegetation maintenance would adhere to the 2011 HDOT Highway Manual for Sustainable Landscape Maintenance. As the area is arid and wildfire risk is a major concern, during dry seasons, vegetation along the roadway would be kept low to avoid risk of fires. Trees along the new alignment are not proposed since there would be limited right-of-way and with limited access to irrigation in an arid area. In addition, trees within a median for this design speed would be a safety concern.

Comment 121: Designing the realigned portions of the highway to support transit, bike and pedestrian access would provide multiple benefits from resilience actions by increasing transportation options and making walking and bicycling safe and easy between and within communities. (Karen Comcowich, Maui County Long Range Division 82)

Response 121: The new highway alignment would likely be compatible with through travelling buses since the alignment would be controlled with no driveways or curbside uses which can disrupt through movements. Local bus service would be expected to leave the new alignment to serve the Olowalu Village via connector roads and the existing highway that would become a local road serving community uses. The Selected Alternative, as documented in the Final EIS/ROD, includes an adjacent shared-use path as part of the highway realignment for bicycles and pedestrians, and two mauka-makai signalized crossings of the corridor that non-motorized vehicles can use.

Comment 122: The West Maui Community Plan and Countywide Policy Plan support the inclusion of trees along public right of ways. The West Maui Community Plan specifies the use of native trees and landscaping that is appropriate to the microclimate. Trees and other appropriate landscaping should be included in the realigned Honoapiʻilani Highway Improvements. (Karen Comcowich, Maui County Long Range Division 82)

Response 122: Appropriate landscaping will be included in the realigned Honoapiʻilani Highway in accordance with the 2011 HDOT Highway Manual for Sustainable Landscape Maintenance. Native vegetation found in the project area will be used for revegetation efforts along with native, wildfire resistant species to reduce the risks associated with wildfires. During the dry season, the area immediately adjacent to the roadway will be mowed to keep vegetation low to prevent the risk of fuel buildup/wildfires. While certain native trees grow in the area, there is a constrained right-of-way to

incorporate tree planting and limited access for irrigation in an arid area. However, as part of avoidance and minimization measures for the endangered Hawaiian hoary bat, large trees would be preserved in place to the greatest extent practicable.

Comment 123: The Maui County General Plan, the Maui Island Plan and the West Maui Community Plan all support protecting and enhancing natural and cultural resources. This includes using Low Impact Development strategies and vegetated buffers around gulches and wetlands, giving consideration to how agriculture areas will be impacted, particularly where there is active subsistence farming or lo‘i cultivation, and ensuring access to kuleana lands. It is noted that the project proponents have consulted with community members in development of the Environmental Impact Statement Preparation Notice, including the Aha Moku Council and Lineal Descendants. As final alignment and design for Honoapi‘ilani Highway Improvements are refined, protecting, and enhancing natural and cultural resources should be a priority. Continued involvement and collaboration with community members as plans are refined is encouraged. (Karen Comcowich, Maui County Long Range Division 82)

Response 123: The alternatives considered potential impacts to natural and cultural resources, and the Selected Alternative provides the best balance to achieve the Project’s purpose and need and minimize and avoid adverse effects. Consultation with descendants and other individuals and organizations with a demonstrated interest in the Project (referred to as “consulting parties”) is ongoing as part of the National Historic Preservation Act Section 106 and the Hawai‘i Revised Statutes, Chapter 6E processes. The Executed Programmatic Agreement (Appendix 3.6 of the Final EIS) provides the framework for commitments on resource evaluation and mitigation as well as continued consultation with interested participants.

Comment 124: The protection and enhancement of trails is encouraged throughout the Maui County General Plan. While it is not expected that the Honoapi‘ilani Highway Improvements will develop additional trails, preservation of existing trails and options for new connections should be incorporated. (Karen Comcowich, Maui County Long Range Division 82)

Response 124: There are no existing public hiking trails that are along the proposed highway alignment. The trailhead for the West Lāhainā Pali trail is located along the existing highway about a half mile further south (towards Maalaea). The existing Olowalu subdivision shared-use path, which is largely built out by the private owners, will be disrupted by the Selected Alternative. As presented in this Final EIS, the continuity of the path would be tied into the pathway alongside the makai alignment of the Selected Alternative.

Comment 125: Undergrounding utilities is supported throughout the Maui County General Plan. This may be an opportunity to work with Maui Electric Company to underground utilities in the area where improvements are being implemented. (Karen Comcowich, Maui County Long Range Division 82)

Response 125: The Honoapi‘ilani Highway project is compatible with this plan element in that the corridor is suitable to accommodate new utility systems, although no utility realignments are proposed. As described in Chapter 3.17 of the Draft and Final EIS, the new alignment would have no existing or

future driveways or access points to properties requiring local utility connections. Therefore, the existing system for local distribution would remain along the existing Honoapiʻilani Highway for local uses or from the Olowalu and Ukumehame subdivision utility lines which are already primarily below ground. Regional transmission lines parallel the highway but are considerably mauka of the developed areas up into the higher elevations and would require a major regional change to its routing if it were to be accommodated within the new highway alignment.

Comment 126: While it is evident that the Honoapiʻilani Highway Improvements have considered the impacts of the alignment on the character and scenic resources of the surrounding area, it will also be important to consider the character and scenic resources of the surrounding area in the design of the road and how it interacts with the surrounding communities. (Karen Comcowich, Maui County Long Range Division 82)

Response 126: The proposed new alignment will largely weave through the community outside the village center in Olowalu and the parks and beaches in Ukumehame. As the comment notes, the potential visual character of the Project is evaluated in Chapter 3.8 of the Draft and Final EIS. The visual impact assessment identifies recommended guidelines to best integrate the road design with the character and scenic resources of the community.

Comment 127: Although this is not part of the scope of this project the realignment will offer the possibility to achieve goals supported by the Maui County General Plan regarding protection and enhancement of shoreline resources, the development of Parks and Open Space, and alternative modes of transportation makai of the realigned highway. (Karen Comcowich, Maui County Long Range Division 82)

Response 127: Thank you for your comment and your interest in the Project.

Comment 128: We recommend including conceptual designs of the preferred alternative viaduct through the Ukumehame area, including identified wetland habitat (jurisdictional and non jurisdictional) in the area, architectural/design features aimed at reducing car strikes for nēnē and listed waterbirds (e.g., diversion poles and/or guardrails), and any land alterations to assist with stormwater management and highway runoff as described in Section 3.9.8 of [Draft EIS] Chapter 3. (Chelsie Javar-Salas, USFWS 84)

Response 128: Conceptual designs of the Preferred Alternative and viaduct were provided in the Section 7 BA for USFWS PIFWO review and use in development of the Biological Opinion (Appendix 3.10 of this Final EIS), as are the identified wetland habitat in the area, and preliminary typical section drawings of the proposed highway and stream crossings (with guardrails). Conceptual designs of the diversion poles to be affixed to the viaduct have not been developed, but dimensions and placement are described in the BA as extending approximately 6 feet (1.8 meters) above the 54-inch (137 centimeters) rail and spaced approximately 12 feet (3.7 meters) apart across the length of and on both sides of the viaduct. As described in Chapter 2, Alternatives of the Draft EIS, the ultimate determination of culvert and bridge specifications, or the use of viaducts to span larger areas, would be based on identification of the Preferred Alternative, the length of the span required, environmental

effects, constructability, and cost. This would be finalized during the development of final construction documents as part of the design-build process.

Comment 129: In section 5.1.1.3, the Draft EIS mentions guardrails would be placed on either side of the viaduct. We recommend clarifying whether the architectural design features aimed at reducing listed bird car strikes will be placed on one side or both sides of the highway. (Chelsie Javar-Salas, USFWS 84)

Response 129: The Final EIS specifies that diversion poles would be included on both sides of the viaduct. Guardrails would be placed on either side of the roadway and viaduct. Preliminary designs for the viaduct and roadway are included in typical section drawings in the BA.

Comment 130: We recommend providing more details about the swales (Appendix 3.10) to control stormwater, and other highway design features aimed at minimizing highway contaminant runoff into wetland habitat to reduce impacts to nēnē, ae'o, and other listed waterbirds that may use the wetland habitat in the project area. Specifically, clarify where the stormwater will be diverted to or be collected, and will these areas have the potential to attract nēnē and listed waterbirds. (Chelsie Javar-Salas, USFWS 84)

Response 130: The Selected Alternative would traverse the wetland area on the viaduct. Stormwater flow from the elevated viaduct would run along the parapet walls until the width of the water running along the wall reaches a threshold to enter a closed drainage system where it would flow through downspouts attached to the piers to a permanent BMP at ground level. Proposed locations of permanent BMPs are shown in the BA. The final design established as part of the design-build process would determine the design, size, and location of the permanent BMPs, including conceptual detention ponds to promote infiltration and treatment of discharge generated on-site, and incorporation of Low Impact Development strategies, such as vegetated swales in the median and on the outside edges of the pavement structure to the maximum extent practicable. Revegetation strategies outlined in the BA and in the Biological Opinion (Appendix 3.10 of this Final EIS) would prohibit the use of turf grass, and include native species found within the project area. Regular maintenance of the permanent BMPs would deter nēnē and listed waterbirds.

Comment 131: Additionally, the proposed grassy swales adjacent to the road may increase the risk for nēnē car strikes. We recommend you inquire with the Nēnē Recovery Action Group about the proposed grassy swales and for potential alternative options for the swales, as applicable. (Chelsie Javar-Salas, USFWS 84)

Response 131: The project team reached out to the Nēnē Recovery Action Group about best practices for proposed grassy swales and potential alternatives. No additional recommendations were provided.

Contents

10. List of Preparers

The following agencies and contracted firms prepared this report:

- Agencies
  - State of Hawaiʻi, Department of Transportation
  - Federal Highway Administration
- Firms
  - WSP USA, Inc.
  - ʻĀina Archaeology Inc.
  - HT Harvey & Associates
  - Sea Engineering, Inc.

10.1 AGENCIES

10.1.1 State of Hawaiʻi, Department of Transportation, Highways Division

NAME	RESPONSIBILITIES	EDUCATION	YEARS OF EXPERIENCE
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Pua Aiu	Cultural Resource Manager	PhD Communication	20
Ken Tatsuguchi	Project Manager	B.S. Civil Engineering	36
Brian Tyau	Technical Review	B.S. Civil Engineering	31

10.1.2 Federal Highway Administration

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Paul La Farga	Project Manager for FHWA	M.S. Planning	3
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10.2 FIRMS

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10.2.2 ʻĀina Archaeology, Inc.

NAME	RESPONSIBILITIES	EDUCATION	YEARS OF EXPERIENCE
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Leah Santos	Archaeology, Cultural Impact Assessment and Ethnographic Survey	B.A. Visual Anthropology	19

10.2.3 HT HARVEY & Associates

NAME	RESPONSIBILITIES	EDUCATION	YEARS OF EXPERIENCE
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Scott Terrill, PhD	Ecology	B.S. Zoology; M.S. Zoology; PhD Biology/Ecology	35

10.2.4 Sea Engineering, Inc.

NAME	RESPONSIBILITIES	EDUCATION	YEARS OF EXPERIENCE
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Ian Hardy	Project Support	B.S. Civil Engineering; M.S. Ocean Engineering	8