ALAN M. ARAKAWA
Mayor

DAVID C. GOODE
Director

ROWENA M. DAGDAG-ANDAYA
Deputy Director

Telephone: (808) 270-7745
Fax: (808) 270-7975

COUNTY OF MAUI
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION
200 SOUTH HIGH STREET
WAILUKU, MAUI, HAWAII 96793

March 7, 2014

GLEN A. UENO, P.E., P.L.S.
Development Services Administration

CARY YAMASHITA, P.E.
Engineering Division

BRIAN HASHIRO, P.E.
Highways Division

Jessica Wooley, Acting Director
Office of Environmental Quality Control
Department of Health
State of Hawaii
235 South Beretania Street, Suite 702
Honolulu, Hawaii 96813

FILE COPY
MAR 23 2014

'14 MAR 11 P1:05

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT AND ANTICIPATED FINDING OF NO SIGNIFICANT IMPACT (DEA-AFNSI) FOR THE PROPOSED NORTH SHORE GREENWAY – PHASE IV PROJECT, PAIA, MAUI, HAWAII

Dear Ms. Wooley:

With this letter, the County of Maui, Department of Public Works hereby transmits the Draft Environmental Assessment and Anticipated Finding of No Significant Impact (DEA-AFNSI) for the proposed North Shore Greenway – Phase IV situated on the makai side of Hana Highway between Ulupua Place and Baldwin Park in Paia on the Island of Maui for publication in the next available edition of The Environmental Notice.

Enclosed is a completed OEQC Publication Form, two (2) copies of the DEA-AFNSI, an Adobe Acrobat PDF file of the same, and an electronic copy of the publication form in MS Word. Simultaneous with this letter, we have submitted the summary of the action in a text file by electronic mail to your office.

Should you have any questions, please do not hesitate to contact our consultant, Colleen Suyama, at Munekiyo & Hiraga, Inc. at (808) 244-2015.

Sincerely,

DAVID C. GOODE
Director of Public Works

cc: Colleen Suyama, Munekiyo & Hiraga, Inc.
Kirk Tanaka, R.T. Tanaka Engineers, Inc.
Kurt Watanabe, Engineering Division

Enclosures

DG/KW:gq (ED14-0363)
S:\ENG\ENGTRAF\12-35 North Shore Greenway\EA Documents\LTR_OEQC_Draft DEA-AFNSI Det_2014-03-07.doc

AGENCY ACTIONS
SECTION 343-5(B), HRS
PUBLICATION FORM (FEBRUARY 2013 REVISION)

Project Name **North Shore Greenway–Phase IV**
Island: Maui
District: Wailuku and Makawao
TMK: (2)2-5-005:046(por.); (2)3-8-001:(Hana Highway Parcel); and (2)3-8-001:071(por.)
Permits: Department of Army Nationwide Permits pursuant to Section 10 of the Rivers and Harbors Act and Section 404 Clean Water Act, as applicable; National Flood Insurance Program, as applicable; National Pollutant Discharge Elimination System Permit, as applicable; Department of Health Community Noise Permit, as applicable; Department of Health 401 Water Quality Certification, as applicable; Special Management Area Assessment; Special Flood Hazard Development Permit, as applicable; Work to Perform in State Right-of-Way Permit; and Construction Permits (Grading and Grubbing)

Proposing/Determination Agency: **County of Maui, Department of Public Works**
(*Address,* 200 South High Street
Wailuku, Hawaii 96793
Contact Person, Contact: David Goode, Director
Telephone) Phone No.: (808) 270-7845

Accepting Authority:
(for EIS submittals only)

Consultant: **Munekiyo & Hiraga, Inc.**
(*Address,* 305 South High Street, Suite 104
Wailuku, Hawaii 96793
Contact Person, Contact: Colleen Suyama, Senior Associate
Telephone) Phone No.: (808) 244-2015

'14 MAR 11 P1:10

Status (check one only):

X DEA-AFNSI — Submit the proposing agency notice of determination/transmittal on agency letterhead, a hard copy of DEA, a completed OEQC publication form, along with an electronic word processing summary and a PDF copy (you may send both summary and PDF to oeqchawaii@doh.hawaii.gov); a 30-day comment period ensues upon publication in the periodic bulletin.

__FEA-FONSI — Submit the proposing agency notice of determination/transmittal on agency letterhead, a hard copy of the FEA, an OEQC publication form, along with an electronic word processing summary and a PDF copy (send both summary and PDF to oeqchawaii@doh.hawaii.gov); no comment period ensues upon publication in the periodic bulletin.

__FEA-EISPN — Submit the proposing agency notice of determination/transmittal on agency letterhead, a hard copy of the FEA, an OEQC publication form, along with an electronic word processing summary and PDF copy (you may send both summary and PDF to oeqchawaii@doh.hawaii.gov); a 30-day consultation period ensues upon publication in the periodic bulletin.

__Act 172-12 EISPN — Submit the proposing agency notice of determination on agency letterhead, an OEQC publication form, and an electronic word processing summary (you may send the summary to oeqchawaii@doh.hawaii.gov). NO environmental assessment is required and a 30-day consultation period upon publication in the periodic bulletin.

__DEIS — The proposing agency simultaneously transmits to both the OEQC and the accepting authority, a hard copy of the DEIS, a completed OEQC publication form, a distribution list, along with an electronic word processing summary and PDF copy of the DEIS (you may

send both the summary and PDF to oeqchawaii@doh.hawaii.gov); a 45-day comment period ensues upon publication in the periodic bulletin.

__FEIS

The proposing agency simultaneously transmits to both the OEQC and the accepting authority, a hard copy of the FEIS, a completed OEQC publication form, a distribution list, along with an electronic word processing summary and PDF copy of the FEIS (you may send both the summary and PDF to oeqchawaii@doh.hawaii.gov); no comment period ensues upon publication in the periodic bulletin.

__ Section 11-200-23 Determination

The accepting authority simultaneously transmits its determination of acceptance or nonacceptance (pursuant to Section 11-200-23, HAR) of the FEIS to both OEQC and the proposing agency. No comment period ensues upon publication in the periodic bulletin.

__Section 11-200-27 Determination

The accepting authority simultaneously transmits its notice to both the proposing agency and the OEQC that it has reviewed (pursuant to Section 11-200-27, HAR) the previously accepted FEIS and determines that a supplemental EIS is not required. No EA is required and no comment period ensues upon publication in the periodic bulletin.

__Withdrawal (explain)

Summary (Provide proposed action and purpose/need in less than 200 words. Please keep the summary brief and on this one page):

The North Shore Greenway-Phase IV will be the final phase of bikepath which will run east from Ulupua Place and connect with the existing path directly east of H.A. Baldwin Park in Paia, Maui, Hawaii. The proposed project runs on the makai side of Hana Highway with two (2) proposed easements affecting Maui Country Club and H.A. Baldwin Park. The purpose of the proposed project is to complete the North Shore Greenway project in order to create an alternative route of transportation for pedestrians and bikers. The proposed project involves a new eight (8) foot wide asphaltic concrete pavement set approximately 7.5 feet away from the lane of vehicular travel. The proposed project also involves the construction of a drainageway crossing to extend eight (8) feet from the existing culvert to enable Greenway construction atop of it.

Draft Environmental Assessment

PROPOSED NORTH SHORE GREENWAY–PHASE IV

(TMK (2)2-5-005:046(por.), (2)3-8-001:(Hana Highway Parcel), and (2)3-8-001:071(por.))

Prepared for:

County of Maui

Department of Public Works

Approving Agency:

County of Maui
Department of Public Works

March 2014

MUNEKIYO & HIRAGA, INC.

CONTENTS

K:\DATA\RTTanaka\NS GreenwayPhIV\Draft EA\Draft EA.docx

LIST OF FIGURES

LIST OF APPENDICES

List of Acronyms

A&B	Alexander and Baldwin Company
AFNSI	Anticipated Finding of No Significant Impact
AIS	Archaeological Inventory Survey
ALISH	Agricultural Lands of Importance to the State of Hawaii
AMP	Archaeological Monitoring Plan
ASL	Above Sea Level
BMP	Best Management Practice
CFS	Cubic Feet per Second
CWA	Clean Water Act
CWRM	Commission on Water Resource Management
CZM	Coastal Zone Management
DA	U.S. Department of the Army
DHHC	Department of Housing and Human Concerns
DLNR	Department of Land and Natural Resources
DOE	Department of Education
DOH	Department of Health
DPR	Department of Parks and Recreation
DPW	Department of Public Works
DWS	Department of Water Supply
EA	Environmental Assessment
FEMA	Federal Emergency Management Agency

FIRM	Flood Insurance Rate Map
FONSI	Finding of No Significant Impact
GPM	Gallons per Minute
HAR	Hawaii Administrative Rules
HC&S	Hawaiian Commercial & Sugar Company
HCZMP	Hawaii Coastal Zone Management Program
HRS	Hawaii Revised Statutes
IaA	Iao Silty Clayp
LSB	Land Study Bureau
LUC	Land Use Commission
MGD	Million Gallons per Day
Mg/L	Milligram per Liter
MIP	Maui Island Plan
MSL	Mean Sea Level
MuA	Molokai Silty Clay Loam (0 to 3 percent slope)
MuB	Molokai Silty Clay Loam (3 to 7 percent slope)
NPDES	National Pollutant Discharge Elimination System
NSG	North Shore Greenway
OHWM	Ordinary High Water Mark
PpA	Pulehu Silt Loam (0 to 3 percent slope)
PpB	Pulehu Silt Loam (3 to 7 percent slope)
RGB	Rural Growth Boundary
SCS	Scientific Consultant Service

SDOT	State Department of Transportation
SHPD	State Historic Preservation Division
SMA	Special Management Area
SRB	Small Town Boundaries
TMK	Tax Map Key
UGB	Urban Growth Boundary
USDA	U.S. Department of Agriculture
WKWWRF	Wailuku Kahului Wastewater Reclamation Facility

Executive Summary

Project Name:	Proposed North Shore Greenway–Phase IV
Type of Document:	Draft Environmental Assessment
Legal Authority:	Chapter 343, Hawaii Revised Statutes
Anticipated Determination:	Anticipated Finding of No Significant Impact (AFNSI)
Applicable Environmental Assessment review "Trigger":	Use of State and County Lands and County Funds
Location:	Maui Island Wailuku and Makawao Districts, Maui TMK Nos. (2)2-5-005:046(por.), (2)3-8-001:(Hana Highway Parcel), and (2)3-8-001:071(por.)
Landowner:	1. TMK (2)2-5-005:046(por.): A&B Hawaii, Inc. (Leased to County of Maui) 2. TMK (2)3-8-001:(Hana Highway Parcel): State of Hawaii 3. TMK (2)3-8-001:071(por.): Maui Country Club
Applicant:	County of Maui, Department of Public Works 200 South High Street Wailuku, Hawaii 96793 Contact: David Goode, Director Phone: (808) 270-7845
Approving Agency:	County of Maui, Department of Public Works 200 South High Street Wailuku, Hawaii 96793 Contact: David Goode, Director Phone: (808) 270-7845

Consultant:	Munekiyo & Hiraga, Inc. 305 High Street, Suite 104 Wailuku, Hawai`i 96793 Contact: Colleen Suyama, Senior Associate Phone: (808) 244-2015
Project Summary:	The County of Maui, Department of Public Works is proposing Phase IV of the North Shore Greenway that stretches from Ulupua Place to H.A. Baldwin Park where it will connect with the existing bike path. The project will be constructed on the west bound shoulder of Hana Highway (TMK (2)3-8-001) with a portion traversing the Maui Country Club (TMK (2)3-8-001:071) and the H.A. Baldwin Park (TMK (2)2-5-005:046). Phase IV is the final phase of the North Shore Greenway project and will replace the existing westbound bike lane on Hana Highway. The bike path will be eight (8) feet wide with asphaltic concrete pavement. The new bike path will be aligned approximately 7 ½ feet from the pavement edge of Hana Highway. A portion of the bike path will cross Kailua Stream as it nears H.A. Baldwin Park. An existing 4.2 feet by 9.7 feet box culvert crosses under Hana Highway to allow stormwater runoff to cross the highway. The proposed project will include the installation of a con/span or approved equal system that will enable the Greenway to bridge Kailua Stream. The use of State and County lands and County funds are triggers for Chapter 343, Hawaii Revised Statutes (HRS) environmental review requirements. As such, an Environmental Assessment (EA) is being prepared to disclose the project's technical characteristics, alternatives, potential impacts, and proposed mitigation measures. A portion of the project site is located in the Special Management Area (SMA) of the island of Maui and the EA will serve as the supporting technical document for the SMA Assessment Application.

I. PROJECT OVERVIEW

I. PROJECT OVERVIEW

A. PROJECT LOCATION, EXISTING USE, AND LAND OWNERSHIP

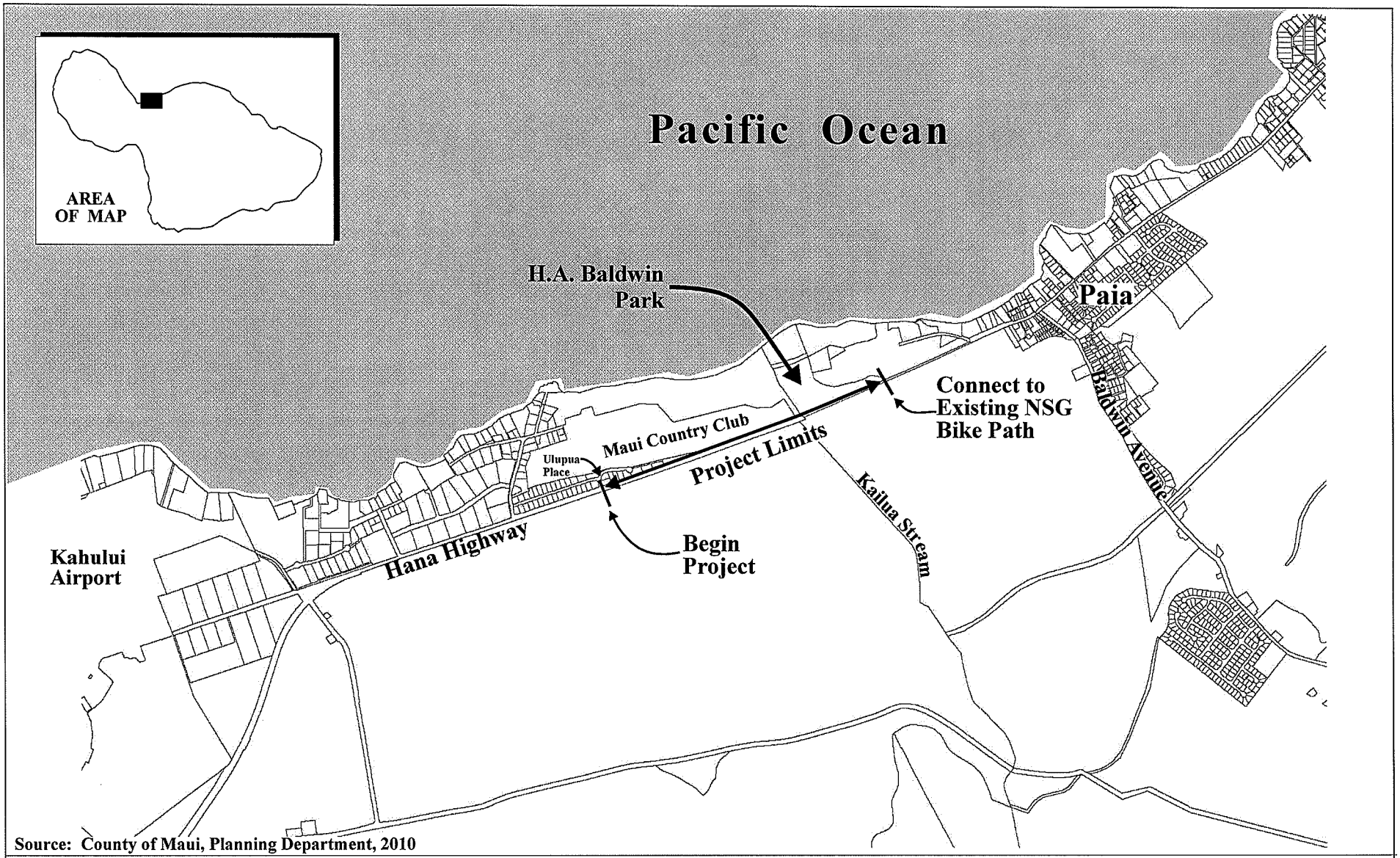
The applicant, the County of Maui, Department of Public Works (DPW), is proposing Phase IV of the North Shore Greenway (NSG) that stretches from Ulupua Place, Paia, Maui, Hawaii to H.A. Baldwin Park where it will connect with the existing bike path. See **Figure 1**. The project will be constructed on the westbound shoulder of Hana Highway (TMK (2)3-8-001:(Hana Highway parcel)) with a portion traversing the Maui Country Club (TMK (2)3-8-001:071) and H.A. Baldwin Park (TMK (2)2-5-005:046). Hana Highway is a State of Hawaii roadway facility while the Maui Country Club owns the golf course and A&B Hawaii, Inc. holds title to lands underlying H.A. Baldwin Park.

The Hana Highway right-of-way, within which a large segment of the Phase IV alignment is located, falls within the State Land Use "Agricultural" district. Those segments of the project falling within the Maui Country Club property and H.A. Baldwin Park are located within the State Land Use "Urban" district. The Wailuku-Kahului Community Plan designates the golf course portion of the Phase IV alignment as "Park", with the Paia-Haiku Community Plan also designating the H.A. Baldwin Park portion as "Park". Hana Highway falls within the Community Plans' "Agricultural" land use designation. The golf course portion of the subject property is designated as "Pk-4, Golf Course Park District", and the H.A. Baldwin Park portion is designated as "Pk-2, Community Park District" by Maui County zoning. Hana Highway is zoned by the County of Maui as "Agricultural".

It is noted that the northern or makai right-of-way limits of Hana Highway delineates the County of Maui's Special Management Area (SMA). Areas lying north of the Hana Highway right-of-way, therefore, fall within the SMA and are subject to the Maui Planning Commission's SMA Rules. Segments of the Phase IV project which are subject to SMA permitting include that which traverses the Maui Country Club and H.A. Baldwin Park.

B. PROJECT BACKGROUND

The NSG is a seven (7) mile pedestrian and bike path that runs from Kahului to Paia. See **Figure 2**. Phase IV is the final link to complete the path. This final phase will link Spreckelsville to H.A. Baldwin Park where it will connect to the existing bike path.



Source: County of Maui, Planning Department, 2010

Figure 1 Proposed North Shore Greenway-Phase IV

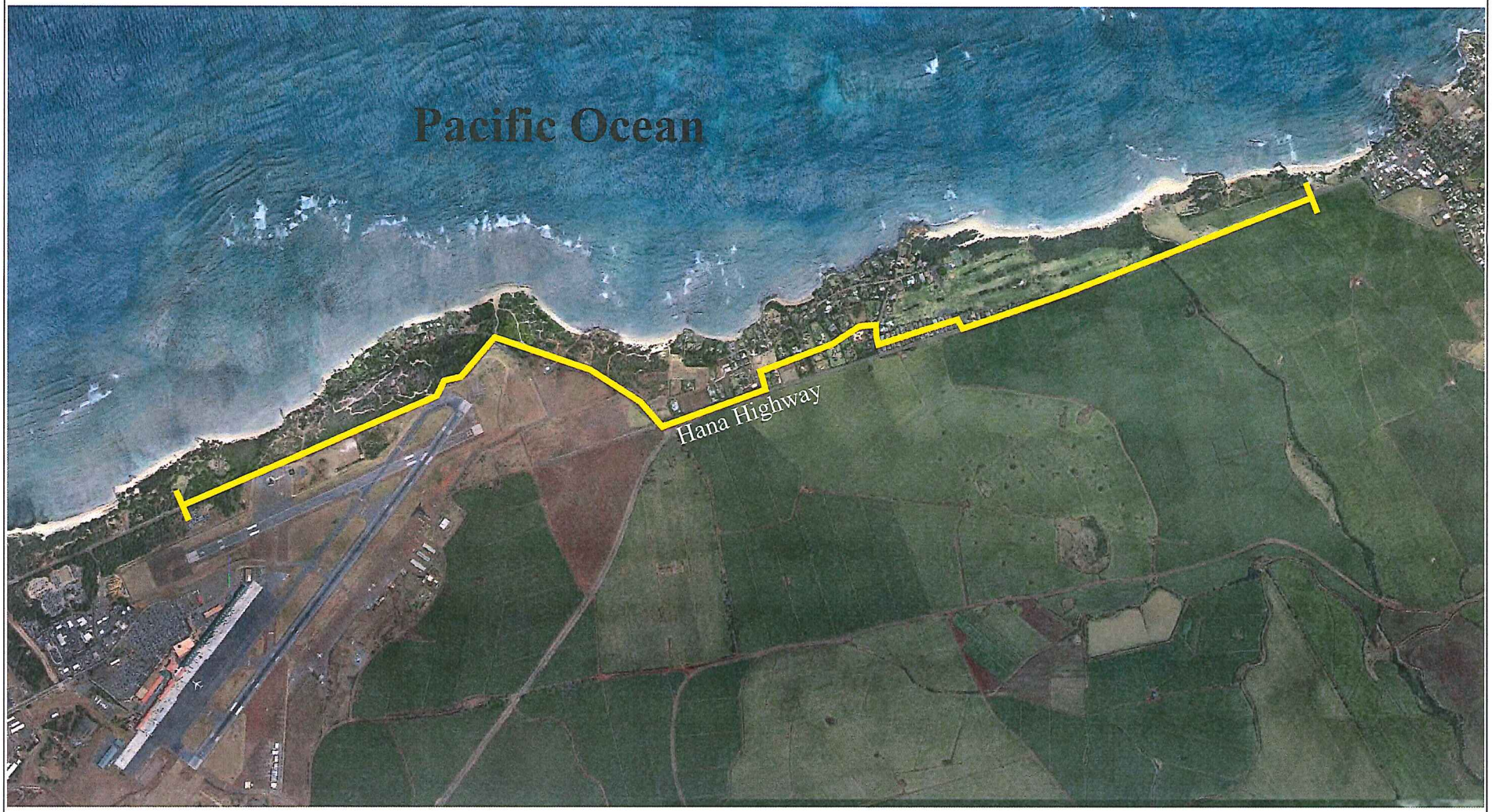
Regional Location Map

NOT TO SCALE

Prepared for: County of Maui, Department of Public Works

MUNEKIYO & HIRAGA, INC.

RTTanaka\NS GreenwayPhIV\Regional Location



Source: Google Earth

Figure 2

Proposed North Shore Greenway-Phase IV

Aerial View of Entire North Shore Greenway

NOT TO SCALE

Prepared for: County of Maui, Department of Public Works

MUNEKIYO & HIRAGA, INC.

RTTanaka\NS GreenwayPhIV\Aerial

The County of Maui, along with community advocates, have been planning and developing this bike path over the past twenty years. The purpose for the bike path is to accommodate bicyclists and pedestrians through the provision of their own safe lane of transportation.

C. PROPOSED ACTION

The proposed NSG–Phase IV is the final phase of the NSG project. The Phase IV component of the Greenway will stretch from Ulupua Place to H.A. Baldwin Park where it will connect with the existing bike path. See **Figure 3**. This project will replace the current westbound bike lane on Hana Highway. The typical section depicts an 8 foot-wide bicycle asphaltic concrete pathway set approximately 7½ feet away from the current lane of vehicle travel. See **Figure 4**.

Approximately 360 feet west of H.A. Baldwin Park lies Kailua Stream. Currently, a 4.2 feet x 9.7 feet box culvert runs under Hana Highway to allow stormwater runoff to cross the highway. Refer to **Figure 3**. The proposed project proposes the installation of a con/span or approved equal system that will enable the Greenway to bridge Kailua Stream.

D. PROJECT NEED

Over the past twenty years, the County of Maui has been constructing the NSG to provide alternate modes of transportation, via walking and biking, from Kahului to Paia. This project will complete the project by connecting Spreckelsville and H.A. Baldwin Park. The completed NSG will provide a safer lane of travel for bikers and pedestrians.

E. REGULATORY REQUIREMENTS

The proposed Phase IV of the NSG will involve the use of State and County lands and will be funded by the County of Maui, DPW. The use of State and County lands and County funds triggers the preparation of an Environmental Assessment (EA), pursuant to Chapter 343, Hawaii Revised Statutes (HRS) and Chapter 200 of Title 11, Department of Health (DOH), Hawaii Administrative Rules (HAR). The Draft EA has been prepared to evaluate the technical characteristics, environmental impacts and alternatives, as well as advance findings relative to the significance of the project. The Approving Agency for the EA is the DPW.

As previously noted, a bridge crossing over Kailua Stream is proposed to accommodate the construction of the Greenway. Work over the Kailua Stream may trigger requirements of the U.S. Department of the Army (DA) pursuant to Section 404 of the

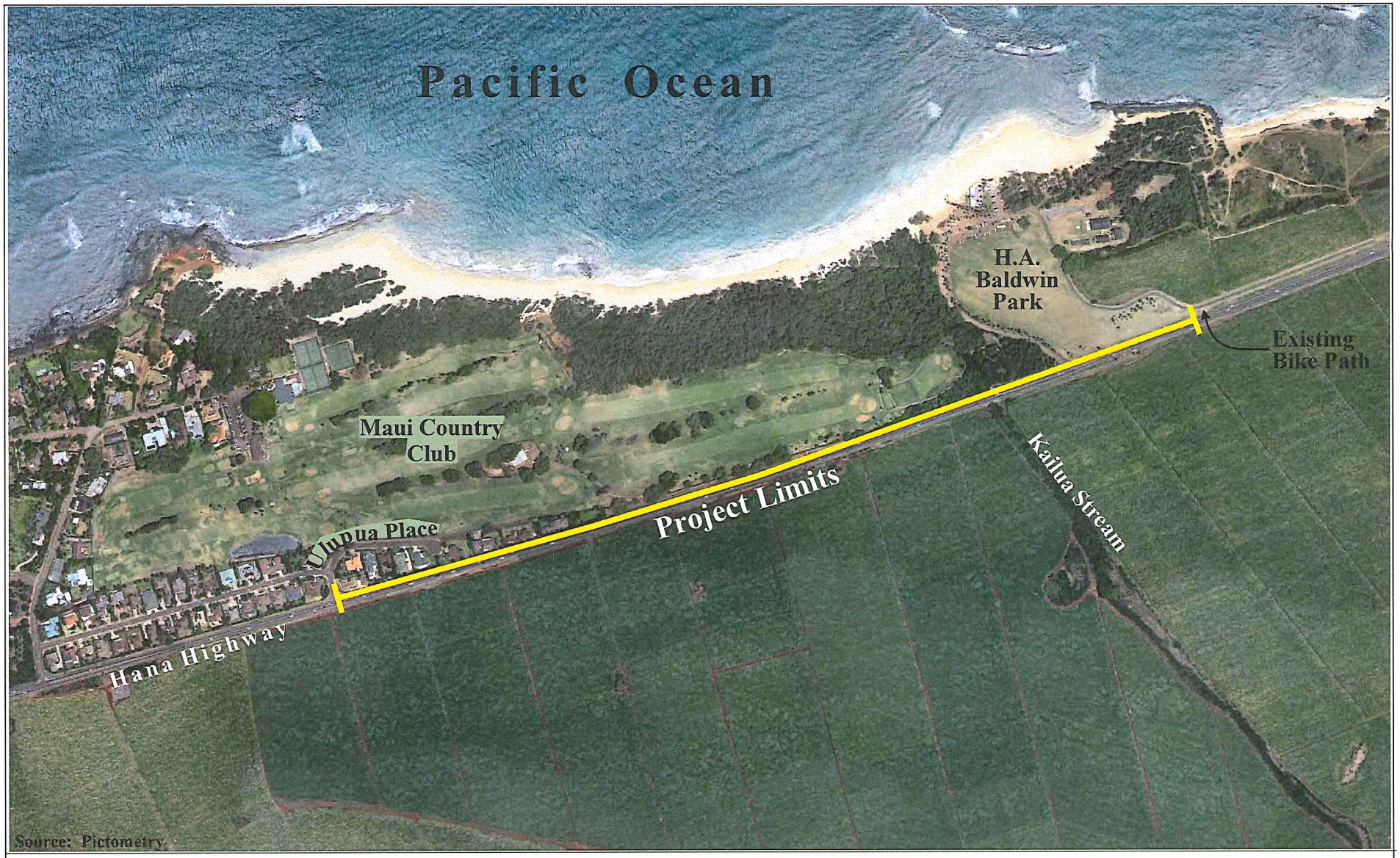


Figure 3 Proposed North Shore Greenway-Phase IV

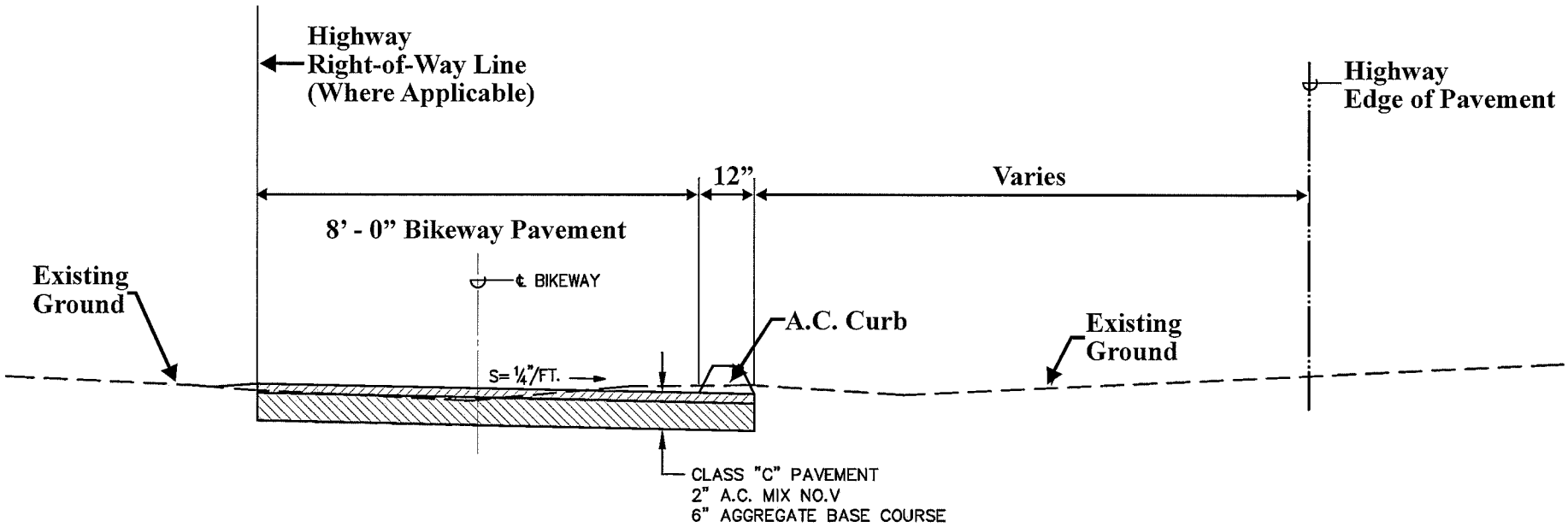
Project Location Map

NOT TO SCALE

MUNEKIYO & HIRAGA, INC.

Prepared for: County of Maui, Department of Public Works

RTTanaka\NS GreenwayPhIV\ProjectLocation



Source: R.T. Tanaka Engineers, Inc.

Figure 4 Proposed North Shore Greenway-Phase IV

Typical Section of Greenway

NOT TO SCALE

Prepared for: County of Maui, Department of Public Works

MUNEKIYO & HIRAGA, INC.

RTTanaka\NS GreenwayPhIV\Typical Section

Clean Water Act (CWA). Coordination will be undertaken with the DA to confirm whether the proposed bridge crossing will be deemed an action falling under the jurisdiction of the DA. Installation of a con/span or approved equal system to accommodate the bridge crossing at Kailua Stream may also require a Stream Channel Alteration Permit from the Department of Land and Natural Resources (DLNR), Commission on Water Resources Management (CWRM).

Inasmuch as portions of the project alignment falls within the County's SMA, a SMA permit will be required.

F. PROJECT FUNDING AND SCHEDULING

The total estimated construction cost of the proposed project is $1.75 million. Assuming all necessary approvals and entitlements are obtained, construction of the proposed improvements is expected to begin in early 2016, with an estimated construction duration of six (6) to nine (9) months.

II. DESCRIPTION OF THE EXISTING ENVIRONMENT, POTENTIAL IMPACTS AND MITIGATION MEASURES

II. DESCRIPTION OF THE EXISTING ENVIRONMENT, POTENTIAL IMPACTS AND MITIGATION MEASURES

A. PHYSICAL SETTING

1. Surrounding Land Uses

a. Existing Conditions

The North Shore Greenway (NSG)–Phase IV project is located along the northern coast of Maui, between Spreckelsville and the H.A. Baldwin Park in Paia. Spreckelsville is a small community that sits in between Kahului and Paia, and is known historically as a community where plantation owners, managers, sugarcane field workers, and their families lived. Phase IV of the NSG begins at Ulupua Street which serves the Maui Country Club Subdivision.

Paia is a small town oriented around a commercial core originally surrounded by various plantation camps. Many of these camps disappeared when the Kahului Town Development "Dream City" provided home ownership to these plantation workers. New residential developments have replaced the camps and surround the small shops, restaurants, and galleries located within the town of Paia. The primary agricultural activity in and around Paia is sugarcane cultivation. H.A. Baldwin Park represents the gateway entrance into this small town. H.A. Baldwin Park is a County of Maui beach park with a pavilion, restroom, and open field areas.

The proposed project runs along the north side of Hana Highway, adjacent to single-family residences and the Maui Country Club Golf Course. The County of Maui Department of Water Supply (DWS) maintains a pump station on the north side of the highway as well. Lands bordering Hana Highway to the south encompasses agricultural lands. The agricultural lands are utilized for sugarcane cultivation by Hawaiian Commercial & Sugar Company (HC&S). Kailua Stream traverses Hana Highway through the Phase IV corridor near H.A. Baldwin Park.

b. Potential Impacts and Mitigation Measures

Phase IV of the NSG encompasses an approximately 4,300 lineal foot bike and pedestrian path. The majority of the proposed greenway facility falls within the existing Hana Highway right-of-way. At the DWS's pump station location, the Greenway facility veers to the north, circumnavigating the pump station facility which lies within the Hana Highway right-of-way. This routing scenario requires that the bikeway be placed along the southern edge of the Maui Country Club Golf Course. An approximately 65 lineal foot section of the Greenway will fall within the Country Club boundary. Design coordination will be undertaken with the Maui Country Club to ensure that golf operations are not adversely affected by this segment of the Greenway.

At H.A. Baldwin Park, the path falls within the Park boundaries, traveling parallel with Hana Highway.

The path will be eight (8) feet wide with a one (1) foot wide curbing on the roadside edge. For the majority of the path, the Hana Highway travelway will be approximately 7 ½ feet away from the paved vehicular travelway. The proposed Greenway will improve bicycle and pedestrian safety along this segment of Hana Highway by providing a separate paved travelway for non-motorized vehicles and pedestrians. There are no adverse land use impacts associated with the proposed project.

The project corridor lies on the north side of the Hana Highway right-of-way and is not expected to adversely impact the surrounding agricultural uses in the vicinity.

2. Climate

a. Existing Conditions

Hawaii's tropical location results in uniform weather conditions throughout the year. Climatic conditions on Maui are characterized by mild year-round temperatures, moderate humidity, and steady northeasterly tradewinds. Variations in Maui's weather are attributable to regional topographic climatic conditions.

Paia is situated on the north coast of the island. Between 1981 and 2010, the average annual rainfall for the area, measured at Kahului Airport

located to the west of the project area, was approximately 18.49 inches per year. The wettest month is January while the driest month is June. Temperature recorded at the Kahului Airport range from an average daily low of 67.3 degrees Fahrenheit to an average daily high of 83.8 degrees Fahrenheit. The warmest month in the region is August while the coolest month is February (County of Maui, Office of Economic Development, 2012).

b. Potential Impacts and Mitigation Measures

The proposed project is limited to the construction of the fourth phase of the NSG. Significant adverse impacts to climatic conditions are not anticipated with implementation of this proposed project.

3. Topography and Soils

a. Existing Conditions

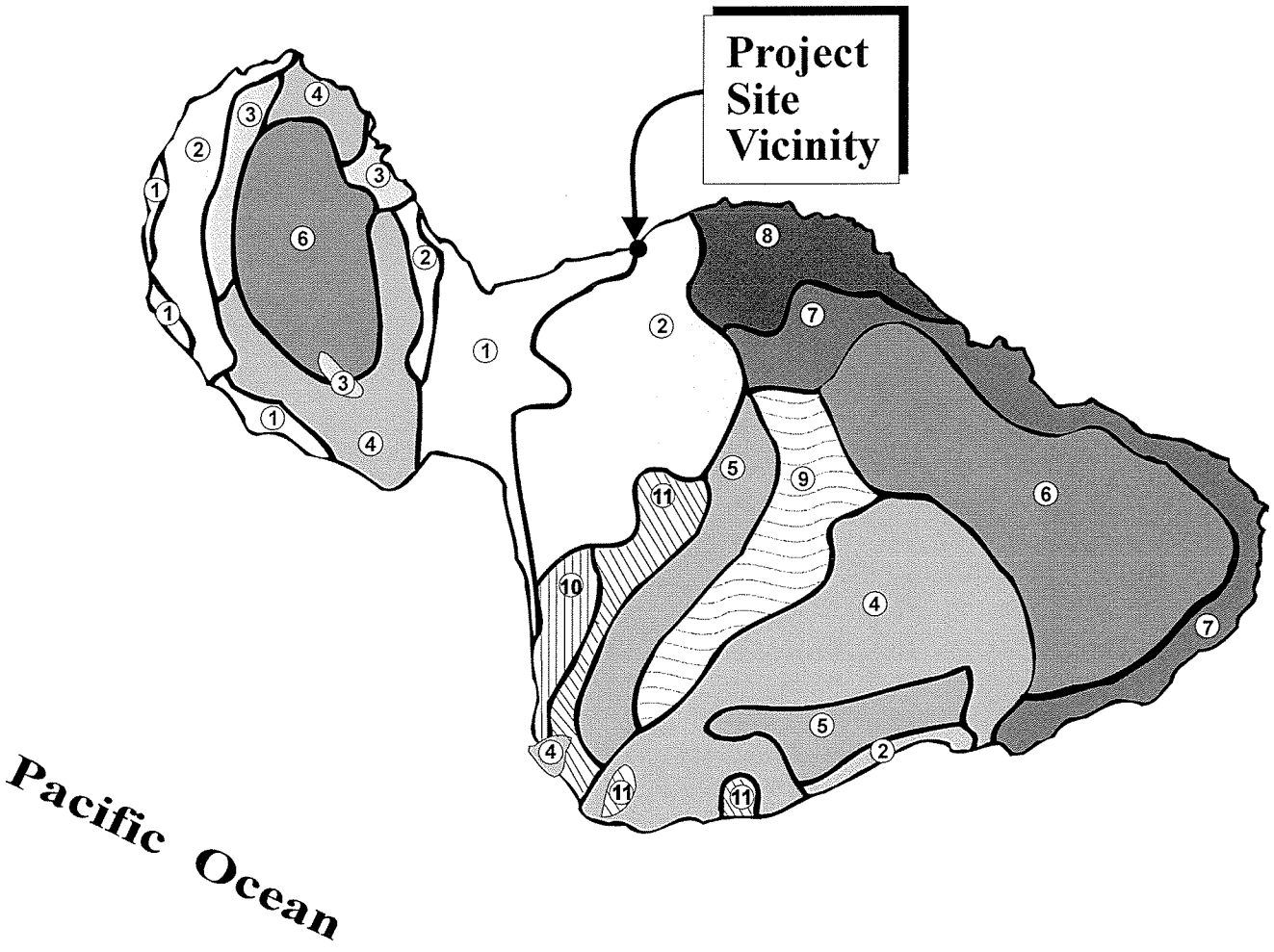
The project site is located at the transition between urban land uses and agricultural land uses. South of Hana Highway are sugarcane fields while land uses to the north include the Maui Country Club Subdivision, Maui Country Club Golf Course, and H.A. Baldwin Park. The elevation of the Hana Highway section which encompasses the Phase IV Greenway is approximately 11 to 31 feet above mean sea level (msl). The surrounding lands slope gently towards the Pacific Ocean.

Underlying the project area are soils belonging to the Pulehu-Ewa-Jaucas Association and the Waiakoa-Keahua-Molokai Association. See **Figure 5**. The Pulehu-Ewa-Jaucas Association is characterized by well drained, excessively drained, medium-textured, moderately fine textured, and coarse-textured soils on alluvial fans and in basins. These soils are nearly level to moderately sloping. The Waiakoa-Keahua-Molokai Association is characterized by well-drained and moderately fine textured soils on low uplands. These soils are nearly level to moderately steep (U.S. Soil Conservation Service, 1972).

There are multiple soil types underlying the project area. See **Figure 6**. They are Molokai silty clay loam (MuA, 0 to 3 percent slopes), Molokai silty clay loam (MuB, 3 to 7 percent slopes), Iao silty clay (IaA, 0 to 3 percent slopes), Pulehu silt loam (PpA, 0 to 3 percent slopes), and Pulehu silt loam (PpB, 3 to 7 percent slopes).

LEGEND

- (1) Pulehu-Ewa-Jaucas association
- (2) Waiakoa-Keahua-Molokai association
- (3) Honolua-Olelo association
- (4) Rock land-Rough mountainous land association
- (5) Puu Pa-Kula-Pane association
- (6) Hydrandepts-Tropaquods association
- (7) Hana-Makaalae-Kailua association
- (8) Pauwela-Haiku association
- (9) Laumaia-Kaipoipoi-Olinda association
- (10) Keawakapu-Makena association
- (11) Kamaole-Oanapuka association



Base Map Source: U.S.D.A., Soil Conservation Service

Figure 5

Proposed North Shore Greenway-Phase IV
Soil Association Map

NOT TO SCALE

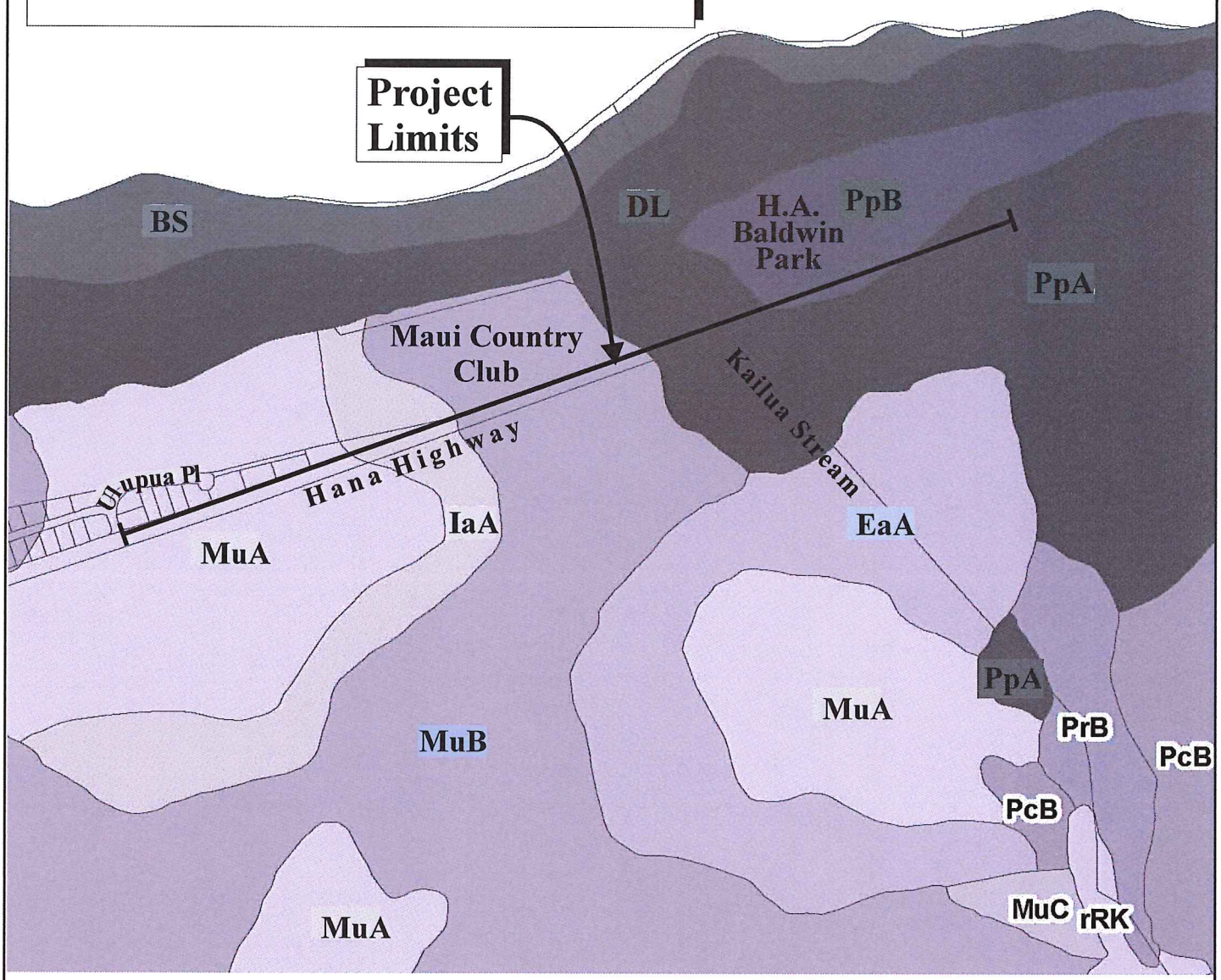
Prepared for: County of Maui, Department of Public Works

MUNEKIYO & HIRAGA, INC.

RTTanaka\NS GreenwayPhIV\SoilAssociation

Legend

BS	Beach Sand
DL	Dune Land
EaA	Ewa silty clay loam, 0 to 3 percent slopes
IaA	Iao silty clay, 0 to 3 percent slopes
MuA	Molokai silty clay loam, 0 to 3 percent slopes
MuB	Molokai silty clay loam, 3 to 7 percent slopes
MuC	Molokai silty clay loam, 7 to 15 percent slopes
PcB	Paia silty clay, 3 to 7 percent slopes
PpA	Pulehu silt loam, 0 to 3 percent slopes
PpB	Pulehu silt loam, 3 to 7 percent slopes
PrB	Pulehu cobbly silt loam, 3 to 7 percent slopes
rRK	Rock Land



Source: USDA Natural Resources Conservation Service, Soil Survey Geographic Database, 2006

Figure 6

Proposed North Shore Greenway-Phase IV
Soil Classification Map

0 416.5 Feet
208.25 833

MUNEKIYO & HIRAGA, INC.

Prepared for: County of Maui, Department of Public Works

RTTanaka\NS GreenwayPhIV\SoilClass

b. Potential Impacts and Mitigation Measures

There are no geologic or soil hazard limitations associated with the project area. As such, the proposed greenway is compatible with its underlying soil characteristics.

4. Agriculture

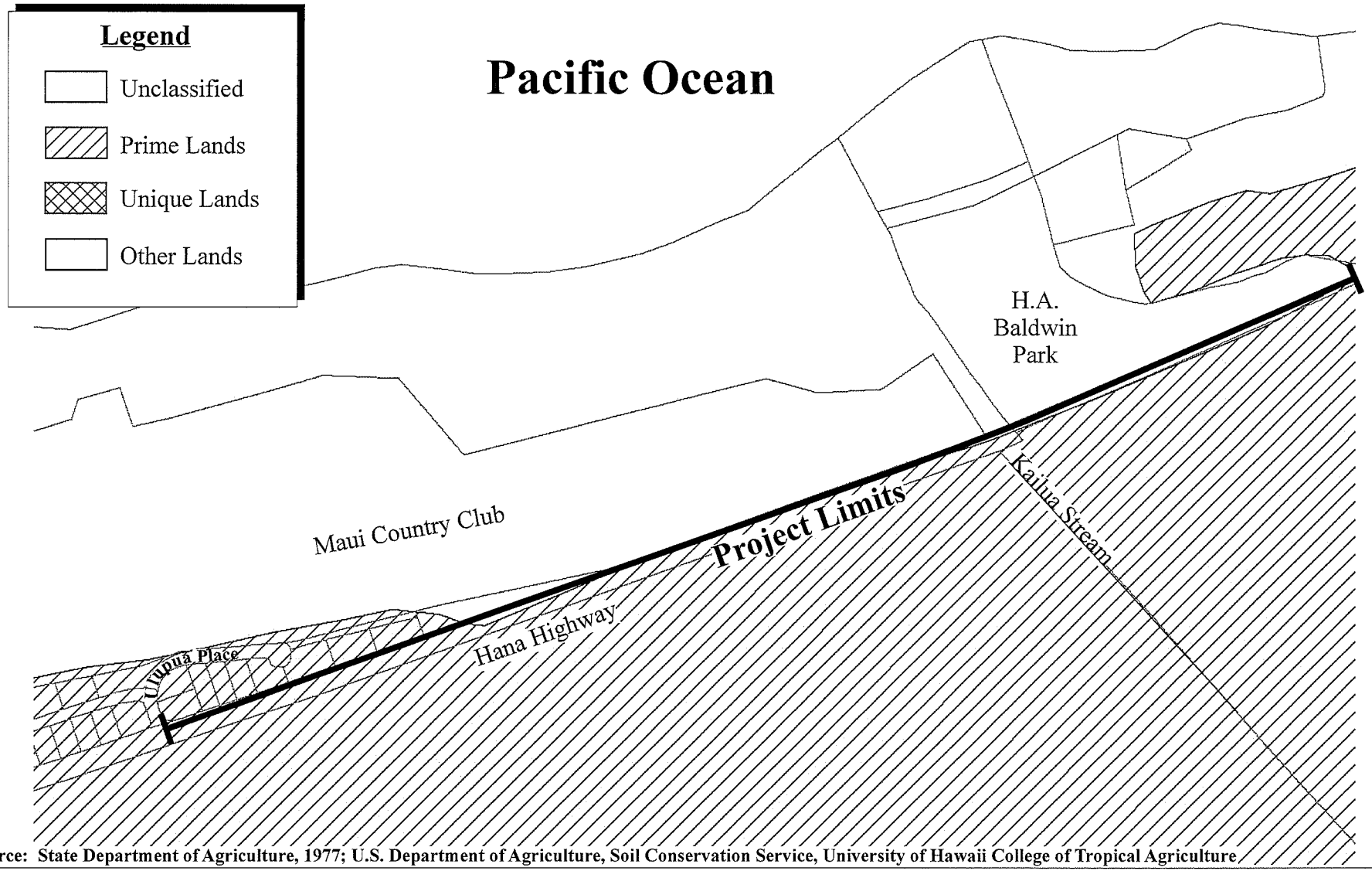
a. Existing Conditions

The State Department of Agriculture has established three (3) categories of Agricultural Lands of Importance to the State of Hawaii (ALISH). The ALISH system classifies lands into "Prime", "Unique", and "Other Important Agricultural Land". The remaining lands are "Unclassified". Utilizing modern farming methods, "Prime" agricultural lands have the soil quality, growing season, and moisture supply needed to produce sustained crop yields economically, while "Unique" agricultural lands possess a combination of soil quality, location, growing season, and moisture supply currently used to produce sustained high yields of a specific crop. "Other Important Agricultural Land" includes those which have not been rated as "Prime" or "Unique". The project sites are located on lands defined as both "Prime" and "Unclassified" agricultural lands by the ALISH rating system. See **Figure 7**.

In addition, the University of Hawaii, Land Study Bureau (LSB) classifies productivity characteristics on a scale of "A" through "E". Lands designated as "A" reflects the highest productivity and "E" represent lands with the lowest productivity. Lands underlying the project site within the Hana Highway right-of-way have been designated as "A" by the LSB. See **Figure 8**.

b. Potential Impacts and Mitigation Measures

The proposed NSG–Phase IV will be constructed on the north shoulder of Hana Highway. There are no agricultural activities along this side of the highway. Additionally, the installation of the NSG–Phase IV is not expected to adversely affect or limit agricultural operations along the southern extent of Hana Highway.



Source: State Department of Agriculture, 1977; U.S. Department of Agriculture, Soil Conservation Service, University of Hawaii College of Tropical Agriculture

Figure 7 Proposed North Shore Greenway-Phase IV

NOT TO SCALE

Agricultural Lands of Importance in the State of Hawaii Map

Prepared for: County of Maui, Department of Public Works

MUNEKIYO & HIRAGA, INC.

RTTanaka\NS GreenwayPhIV\ALISH

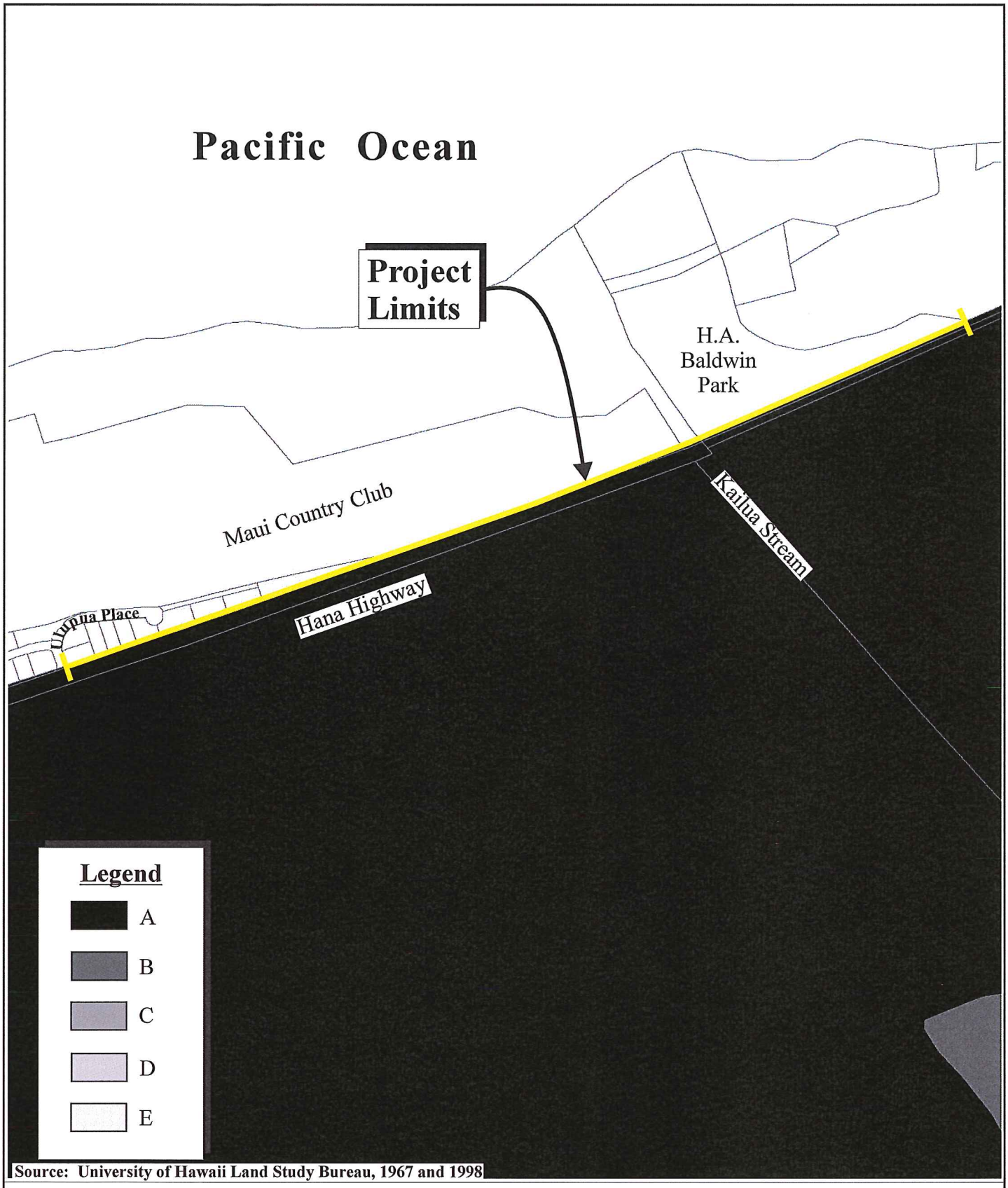


Figure 8

Proposed North Shore Greenway-Phase IV
Land Study Bureau Map

NOT TO SCALE

Prepared for: County of Maui, Department of Public Works

MUNEKIYO & HIRAGA, INC.

RTTanaka\NS GreenwayPhIV\LSB

5. Flood and Tsunami Conditions

a. Existing Conditions

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM), the project area is located in Flood Zone X and AE. Flood Zone AE is located at Kailua Stream and H.A. Baldwin Park. See **Figure 9**. Flood Zone X represents areas of minimal flooding and Flood Zone AE represents areas subject to inundation by theone (1) percent annual chance flood. The one (1) percent annual flood (100-year flood) is also known as the base flood. The base flood has a one (1) percent chance of being equaled or exceeded in any given year.

This project area is also located within a tsunami evacuation zone.

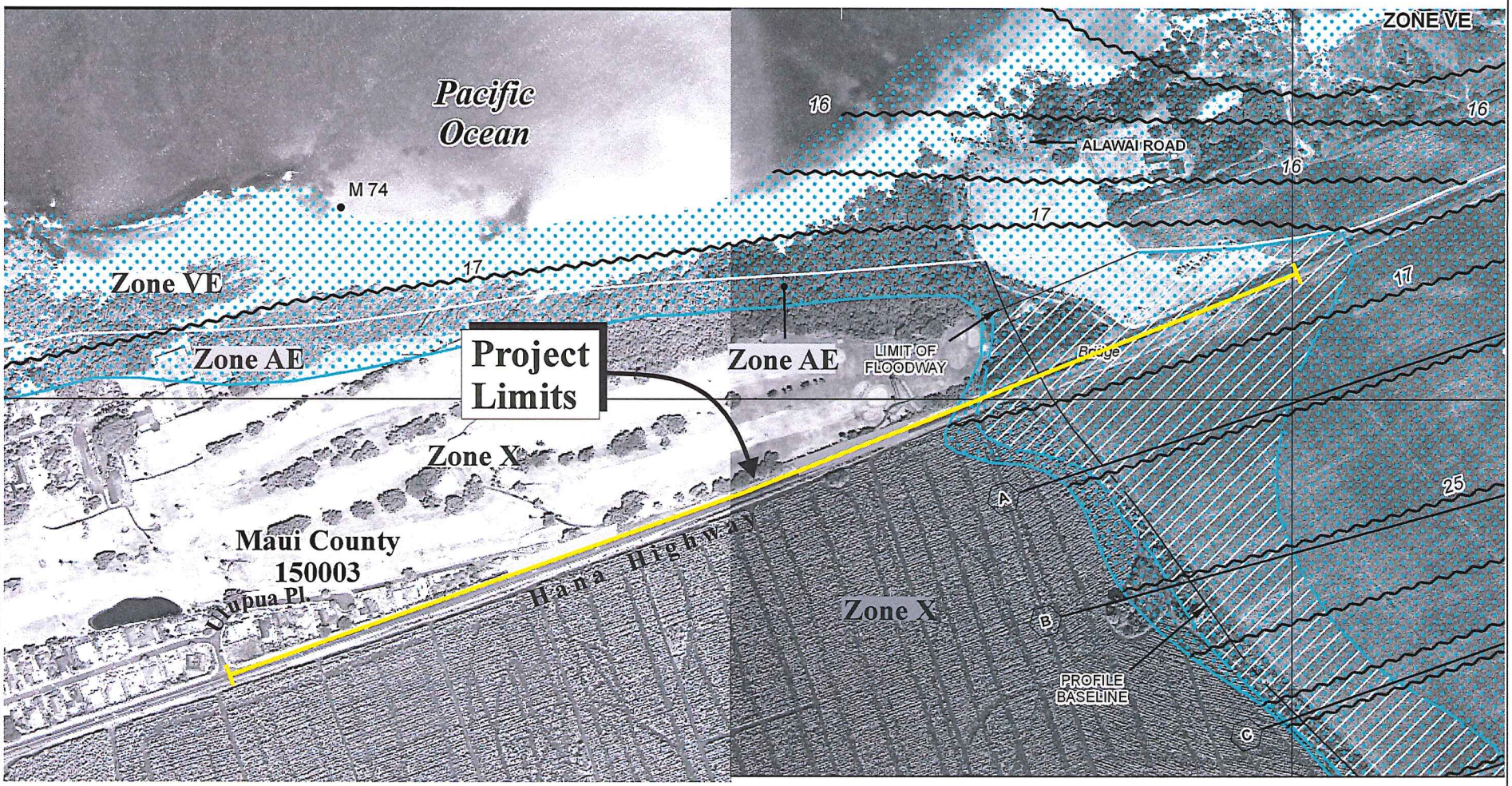
b. Potential Impacts and Mitigation Measure

The majority of the proposed project is located within an area of minimal flooding. However, part of the project site near Kailua Stream and H.A. Baldwin Park is located within Flood Zone AE. A base flood elevation of 17 feet has been established along the stream, in the vicinity of the project's alignment. The proposed NSG–Phase IV project involves the installation of a paved bicycle and pedestrian pathway. This improvement is not expected to adversely impact flooding conditions, nor will it increase the threat of flood or tsunami hazard to surrounding properties.

6. Streams and Wetlands

a. Existing Conditions

Kailua Stream is a non-perennial stream located approximately 3,240 feet east of Ulupua Place. The stream is approximately 16.9 miles long beginning in the upper reaches of Haleakala at an elevation of 6,867 feet and outlets at the ocean at H.A. Baldwin Park. In the upper watershed the stream is steep and with little embayment. Near the project area the stream narrows as it crosses the highway (Atlas of Hawaiian Watersheds, 2008). Hana Highway crosses Kailua Stream at approximately 20 feet above sea level (asl). A 4.2 feet x 9.7 feet box culvert provides passage of flow under the highway. Flow in the stream at the culvert is infrequent.



Source: Federal Emergency Management Agency, FIRM Panel Nos. 1500030408E and 1500030404E

Figure 9 Proposed North Shore Greenway-Phase IV

Flood Insurance Rate Map

NOT TO SCALE

Prepared for: County of Maui, Department of Public Works

MUNEKIYO & HIRAGA, INC.

RTTanaka\NS GreenwayPhIV\FIRM

The Ordinary High Water Mark (OHWM) at the culvert is elevation 8.5 ft. (AECOS, 2014).

There are no wetlands along or in the vicinity of the project corridor. However, a small stagnant pool was found in Kailua Stream Makai of Hana Highway near the outlet into the ocean (AECOS, 2014).

b. Potential Impacts and Mitigation Measures

The proposed NSG–Phase IV project will require a bridge crossing at the Hana Highway culvert crossing of Kailua Stream to accommodate the paved bicycle and pedestrian path. Additionally, any construction or work below the OHWM will require a Department of the Army permit. The proposed bridge crossing is expected to be constructed above the OHWM. During construction Best Management Practices (BMPs) will be implemented to prevent the degradation of water quality in Kailua Stream and the nearshore waters. As such, adverse impacts on Kailua Stream and water quality are not anticipated.

7. Flora and Fauna

a. Existing Conditions

The NSG–Phase IV project is located within the Hana Highway right-of-way, with portions to be aligned within the Maui Country Club and H.A. Baldwin Park. The shoulder area of the highway is mowed and is subject to regular maintenance by the State Department of Transportation (SDOT). Vegetation along the NSG-Phase IV alignment is primarily introduced and ruderal species, such as grasses and roadside weeds. Guinea grass (*Urochloa maxima*) and koa haole (*Leucaena leucocephala*) dominate the vegetation in the gulch and surrounding roadway. Of the 27 species observed in the lower reaches, native species is limited to the ʻuhaloa (*Waltheria indica*). Also, the tree tobacco (*Nicotiana glauca*) plant was observed in the project area, which is a non-native habitat for the Blackburn's sphinx moth (*Manduca blackburni*). (AECOS, 2014)

Streamlife in the project area was not present and, as a result, no fishes, crustaceans, or mollusks were observed. However, in a previous 2011 study, aquatic animals were observed only in ditches connecting to Kailua Stream and aquatic insects (adult damselflies and dragonflies) were observed flying in the gulch. In 2011, one (1) individual adult damselfly

(*Ischnura ramburii*) was observed flying in the project area. Only the larvae of damselflies are aquatic. (AECOS, 2014)

Urban species such as dogs and cats can be expected to be found along this section of the project. On occasion, mongoose can be seen along this stretch of highway.

b. Potential Impacts and Mitigation Measure

There are no rare, endangered, or threatened species of flora and fauna along the project corridor. However, the non-native tree tobacco plant was observed in the project area which provides habitat for the endangered Blackburn's sphinx moth. Removal of any tree tobacco plants during construction will be coordinated with the U.S. Fish and Wildlife Service. With appropriate mitigation, implementation of the NSG–Phase IV project is not anticipated to have adverse impacts upon these environmental parameters.

8. Archaeological Resources

a. Existing Conditions

On November 6, 2013, an archaeological field survey was conducted by Scientific Consultants Services, Inc. (SCS). See **Appendix "B"**. The survey encompassed a pedestrian walk through which noted that the ground surface in the NSG-Phase IV alignment has been graded and covered with grass. Portions of the area near the Maui Country Club golf course contain imported fill material. During the filed inspection, no surface cultural features or deposits were observed.

b. Potential Impacts and Mitigation Measures

Based on the archaeological field survey, SCS determined that the proposed project will not have an adverse effect on historic properties. However, as a precautionary measure, SCS recommended archaeological monitoring during ground-altering work. An Archaeological Monitoring Plan was prepared and approved by the Department of Land and Natural Resources (DLNR), State Historic Preservation Division (SHPD). See **Appendix "B-1"** and **Appendix "B-2"**.

In accordance with Section 6E-43.6, Hawaii Revised Statutes (HRS) and Chapter 13-300, Hawaii Administrative Rules (HAR), if any significant cultural deposits or human skeletal remains are encountered during ground-altering activities, work will stop in the immediate vicinity of the find and the SHPD will be contacted to identify the appropriate level of mitigation.

9. Cultural Assessment

a. Existing Conditions

Paia is located on the north side of Haleakala in a region of sloping *kula* lands that are intersected by small stream gulches. There is little direct information about the ahupua`a of Paia. Traditionally, there were trails that extended along the coast and from the coast to the mountains, linking the two (2) for economic as well as social reasons. The *Alaloa*, or the around-the-island road built by Kiha-a-pi'ilani, extended along the coastal region from Waiehu, passing Paia and extending on, crossing streams where the gulches emerged from the shore (Munekiyo & Hiraga, 2010).

The combined arid conditions and lack of reliable water sources, except for Maliko Stream, resulted in the importance of the expansive upland dry land field system. This area of Maui was described by E.S. Craighill Handy (Handy, 1940) as suitable for dry land taro and he surmised that it was well populated and cultivated because of the abundance of *kula* lands (Scientific Consultant Service (SCS), 2008).

In the 1800s sugarcane became a major industry with the Hawaiian Commercial Company, owned by Claus Spreckles, developing most of the flat lands of central and eastern Maui along with Alexander and Baldwin Company (A&B). During the mid 1870s, A&B incorporated as the Paia Plantation. The importance of sugar was augmented by the importation of foreign workers. Plantation camp communities were situated throughout the sugar lands and plantation towns appeared at the end of the 20th century at Paia, Spreckelsville, and Puunene. Around 1880, a railroad was built at the same time a mill was being constructed at the Paia Village Camp (SCS, 2008).

Paia Town was established around 1896, with small shops which provided goods to the many immigrant workers and their families in the town and

surrounding camps. At one time, it was one of Maui's largest plantation towns with 10,000 residents (Steele 2004). The combination of backgrounds and cultures created a unique and rich environment that is reflected in the town's architecture. Despite a fire in 1930 and tsunami of 1946, many of the historic structures remain and continue to be used as commercial property today (SCS, 2008).

b. Potential Impacts and Mitigation Measures

To assess cultural impacts associated with the proposed project, interviews were conducted with two (2) people with ties to the project area. See **Appendix "C"**. Summaries of the interview with Raymond Hew, a member of the nearby Maui Country Club, and Reverend Ryozo Yamaguchi, minister of the nearby Paia Rinzai Zen Mission, are presented below.

RAYMOND HEW

Raymond Hew is the President and general manager of Ah Fooks Supermarket. Mr. Hew's ties to Paia are through his grandparents. His grandfather owned the two-story house on Hana Highway located just pass the basketball courts and Paia Youth Center. Mr. Hew remembered the Paia-Kuau area as a plantation town with only a few homes. The area has since changed, with a number of new homes and businesses in the area.

As a youth Mr. Hew remembers swimming and fishing along the shoreline from the Lime Kiln area east of Baldwin Beach Park to the bunkers and the Iwamoto Factory area in Paia Town. Although Mr. Hew no longer swims or fishes in the area, these activities still continue today. At the Maui Country Club near the tennis courts there is a protected area in the ocean that families with small children use. The area from the Country Club to Paia Town is used by beach goers.

Mr. Hew's connection to the area is also as a member of the Maui Country Club. Mr. Hew voiced concern for the project since the high volume of vehicular traffic and speeding along Hana Highway toward Kahului is a problem in the area. Mr. Hew voiced his concern whether there was enough room along the highway for the bike path to keep it safely away from the highway, especially in the area where the wiliwili trees are located.

Mr. Hew voiced concern that the path could affect the golf course. The path will cross the entrance of the golf course's maintenance road and affect the property's fencing. Mr. Hew also, voiced concern that holes number 6 and 15 running along the highway will pose a safety problem to users of the path. There is the potential for golf balls being hit toward the path and highway. Users of the path should be made aware of this potential problem. Mr. Hew noted that County of Maui will need to coordinate with the Maui Country Club, to ensure that proper design mitigation measures are included in the plans.

Regarding possible burials or cultural sites, Mr. Hew was not aware of any burials, cultural sites, or cultural practices in the area of the proposed project.

REVEREND RYOZO YAMAGUCHI

Reverend Yamaguchi arrived on Maui in 1987 to become the minister of the nearby Paia Rinzai Zen Mission. The Paia Rinzai Zen Mission was established in 1932 by the Okinawan plantation community. The current church is the third church built on the site. The original church was destroyed by a tsunami in 1946 and the second church by fire in 1987. The current church was built in 1989.

As a historian Reverend Yamaguchi obtained his knowledge of the area by listening to the older members of his church and the community. During the plantation days workers lived near their work place. At one time there was a camp at the nearby Lime Kiln area made up of Japanese and Korean workers and their families. A cemetery for these plantation families is located adjacent to the Paia Rinzai Zen church property.

Alawai Road which connects to Hana Highway and runs through Baldwin Beach Park currently ends at the church property. While the Lime Kiln was in operation, an unimproved portion of the roadway provided access to the Lime Kiln area and was used by the plantation trucks. This portion of the roadway is no longer in existence.

Reverend Yamaguchi noted that the beach sand areas along this stretch of the shoreline from Spreckelsville to Paia contain Hawaiian burials that are periodically exposed by shoreline erosion. During discussion of a shoreline alignment of the bikeway he and other community members

walked along the proposed alignment. Community members noted their concerns that the undisturbed sand may contain Hawaiian burials.

Other than the Hawaiian burials in the beach sand, Reverend Yamaguchi was not aware of any traditional Hawaiian traditions or culture in the area. However, the shoreline area is heavily used for recreation. Reverend Yamaguchi felt construction of the greenway was a wonderful improvement that would not affect users of H.A. Baldwin Park.

In summary, the exercise of native Hawaiian rights related to gathering, access, or other customary activities will not be affected within the project area, and no significant adverse effects are anticipated.

10. Air and Noise Quality

a. Existing Conditions

Air quality in the vicinity of the project site is generally good. However, temporary degradation in air quality is expected due to the surrounding sugarcane cultivation activities. In particular, dust generation and cane burning on adjacent fields may result in degradation of air quality. Between harvests and before new crops are planted, sugarcane fields remain open for a few weeks. During this time, the fields are prone to dust generation as winds can carry dust. In addition, field preparations such as tilling prior to planting can also contribute to dust generation.

Harvesting of sugarcane also creates temporary disruptions to normal air quality in the vicinity. HC&S burns the sugarcane fields as part of the harvest methodology to get rid of dried leaves, which have accumulated over the 2-year growing period. By reducing the extraneous leafy material delivered to the mill, HC&S is able to increase the quantity and quality of sugar it recovers. It also reduces the number of hauling trucks crossing Maui's highways (HC&S, 2011). The maturation process for sugarcane is approximately 24 months. As such, sugarcane burning in the vicinity of the project site would occur approximately every two (2) years.

The principal source of noise generated in this area may be attributed to agricultural activities and traffic on area roadways.

b. Potential Impacts and Mitigation Measures

Airborne particulates, including dust, may be generated during site preparation and construction activities. However, dust control measures, such as regular watering and sprinkling, will be implemented as needed to minimize wind-blown emissions. In the long term, the project will not adversely impact local and regional ambient air quality conditions.

As with air quality, ambient noise conditions will be temporarily impacted by construction activities. Construction equipment will be the dominant source of noise during site construction. Construction generated noise will be mitigated through BMPs, and construction activities will be limited to daylight work hours only. The contractor will coordinate with the State Department of Health (DOH) to ensure that noise permits are obtained, as appropriate.

11. Scenic and Open Space Resources

a. Existing Conditions

The project site stretches from Spreckelsville to Paia. The NSG–Phase IV will be constructed adjacent to the westbound lane of traffic on Hana Highway. The existing area is surrounded by sugarcane fields cultivated by HC&S, single-family residences, Maui Country Club and golf course, and H.A. Baldwin Park. Views from Hana Highway traveling east include the vast expanse of sugarcane fields, as well as Haleakala. Views from Hana Highway traveling west include the agricultural lands and portions of the West Maui Mountains. The project site is not part of a scenic view corridor.

b. Potential Impacts and Mitigation Measures

The proposed project primarily involves the construction of the bike and pedestrian path. An eight (8) foot wide multi-use path will stretch from Ulupua Place to H.A. Baldwin Park. The proposed project involves no vertical construction and is an at-grade improvement which will not adversely affect existing view conditions, and which will not adversely detract from the existing visual conditions along the affected segment of Hana Highway.

B. SOCIO-ECONOMIC ENVIRONMENT

1. Population and Economy

a. Existing Conditions

The population of the County of Maui has exhibited a slight growth over the past couple years. In 2010, there were 155,036 residents in the county, a 20.4 percent increase of the resident population in 2000 of 128,754 (U.S. Census Bureau, 2000 and 2010). The Paia-Haiku region has experienced more modest growth over the past decade. The approximately 12,800 residents living in Paia-Haiku in 2010 represent an eight (8) percent increase since 2000 (U.S. Census Bureau, 2000 and 2010). The population of the County is anticipated to grow to 199,850 residents by 2030, including approximately 13,860 residents in the Paia-Haiku region (County of Maui, Planning Department, 2006).

The unemployment rate (not seasonally adjusted) for Maui County was 4.6 percent in December 2013. This represents a decrease of 0.6 percent from 5.2 percent for the County in December 2012. Maui Island's unemployment rate for December 2013 was 4.5 percent, a decrease of 0.5 percent from December 2012 rate of 5.0 percent (Department of Labor and Industrial Relations, 2014).

b. Potential Impacts and Mitigation Measures

Short-term economic benefits associated with construction labor and expenditures for the NSG–Phase IV are anticipated. There are no significant project-related economic impacts from a long-term perspective.

The proposed project is not a direct population generator. Thus, there are no anticipated long-term impacts on population parameters.

C. PUBLIC SERVICES

1. Police and Fire Protection

a. Existing Conditions

The County of Maui's Police Department headquarters are located in Wailuku. There are three (3) patrol divisions on the island of Maui.

These are the Wailuku, Lahaina, and Hana divisions. The Wailuku division covers Central Maui, Paia-Haiku, Kihei-Makena, and Upcountry Maui.

Fire prevention, suppression, and protection services for the project area are provided by the County Department of Fire and Public Safety. The Paia Fire Station is located approximately one (1) mile away from the project site along Hana Highway in Paia Town.

b. Potential Impacts and Mitigation Measures

The construction of the NSG–Phase IV will not extend the service limits for emergency services. Police and fire protection services are not anticipated to be adversely impacted by the proposed project. The proposed project will improve public safety conditions through the provision of a separate travelway for bicyclists, joggers, and walkers.

2. Medical Facilities

a. Existing Conditions

Maui Memorial Medical Center is currently the only major medical facility on the island. Acute, general, and emergency care services are provided by the 231-bed facility. In addition, both Central Maui and Paia have medical and dental clinics to service local community residents.

b. Potential Impacts and Mitigation Measures

The proposed project is not anticipated to have adverse impacts on existing medical facilities or services in the region.

3. Solid Waste

a. Existing Conditions

Single-family solid waste collection service is provided by the County of Maui on a weekly or twice-a-week basis. Solid waste collected by County refuse crews and private collection companies is disposed at the Central Maui Landfill.

b. Potential Impacts and Mitigation Measures

A solid waste management plan will be developed and implemented to minimize the volume of construction waste material being disposed of at the Central Maui Landfill. Upon completion of construction, the NSG will not be a solid waste generator. Therefore, from a long-term perspective, the proposed project will not have an impact on solid waste collection services nor will it affect the capacity of the Central Maui Landfill.

4. Recreational Resources

a. Existing Conditions

A primary facility catering to the recreational needs of area residents is the Paia Community Center. This center provides community rooms, as well as park space and athletic fields. Coastal recreational resources in the region include H.A. Baldwin Park. H.A. Baldwin Park includes baseball and softball fields, a pavilion, parking, picnic areas, restrooms, a soccer field, and ocean recreation opportunities. Hookipa Beach Park, an internationally recognized park known for its excellent surf and windsurfing is also located in the Paia region. Other recreational facilities include Maui Country Club, Lower Paia Park, Paia Gym, and Rainbow Park.

It is noted that the County of Maui's Kaunoa Senior Services is located approximately 0.7 mile west of the project's Ulupua Street terminus. The Senior Center is a division of the County of Maui's Department of Housing and Human Concerns (DHHC). It provides opportunities for seniors to learn and grow through a variety of programs.

b. Potential Impacts and Mitigation Measures

The proposed construction of the project will utilize lands within the Maui Country Club and H.A. Baldwin Park. Coordination will be undertaken with the Maui Country Club to ensure that the proposed NSG–Phase IV alignment affecting the golf course will not adversely affect its operations. Similarly, coordination will be undertaken with the County's Department of Parks and Recreation (DPR) to ensure that park operations and facilities are not adversely affected by the proposed project.

The project itself is viewed as a recreational facility, serving as a safe pathway for bicyclists and pedestrians.

5. Educational Facilities

a. Existing Facilities

The State of Hawaii, Department of Education (DOE) operates eight (8) public schools in East Maui and Upcountry Maui. They are Makawao Elementary School, Kalama Intermediate School, Pukalani Elementary School, Kula Elementary School, Haiku Elementary School, Paia Elementary School, King Kekaulike High School, and Hana High and Elementary School.

The region is also served by privately operated Montessori School of Maui, Doris Todd, Haleakala Waldorf School, Seabury Hall, Kamehameha Schools Maui Campus, and the Carden Academy of Maui.

b. Potential Impacts and Mitigation Measures

As previously noted, the project in and of itself is not considered a population generator and will not place added demands on education facilities or services.

D. INFRASTRUCTURE

1. Roadways

a. Existing Conditions

The project region is served by a number of arterial roadways, including Hana Highway and Baldwin Avenue. Hana Highway is a State of Hawaii roadway that serves as the principal linkage between Central Maui and East Maui, to Hana and beyond. It is a predominantly two-lane, two-way roadway generally oriented in the east-west direction. Baldwin Avenue is a County of Maui roadway that serves as the main commercial corridor of Paia Town. Baldwin Avenue originates at Hana Highway, east of the project site, and continues south, terminating in Makawao Town.

Local roadways in the project vicinity include Ulupua Place and Alawai Road. Ulupua Place is a two (2) lane road that runs perpendicular and parallel to Hana Highway. Ulupua Place provides access into the Maui

Country Club Subdivision in Spreckelsville. Alawai Road is also a two (2) lane road that generally runs perpendicular to Hana Highway and provides access to H.A. Baldwin Park and the Paia Rinzai Zen Mission.

b. Potential Impacts and Mitigation Measures

The proposed action will improve traffic safety condition by providing a separate travelway for bicyclists and pedestrians. The proposed NSG–Phase IV project is not a traffic generator and will not affect existing vehicular traffic conditions along Hana Highway.

2. Water System

a. Existing Conditions

Water to the Wailuku-Kahului region is provided by the Maui County, DWS Central Maui System which also serves the South Maui and Paia areas. The main sources of water for this sytem include the Iao and Waihee aquifers, the Iao Tunnel, and the Iao-Waikapu Ditch.

The project site is located within the Iao Aquifer System, which has a sustainable yield of 20 million gallons per day (MGD). In 2003, the CWRM designated the Iao Aquifer System as a groundwater management area and limited groundwater withdrawal from the aquifer to 90 percent of its sustainable yield. The current total water use permit allocation for the Iao Aquifer is 19.095 MGD. The current withdrawal from the Iao Aquifer System is approximately 16.1 MGD on a 12-month moving average basis.

b. Potential Impacts and Mitigation Measures

The proposed project will not require the use of water for its operation and maintenance. However, the DWS has indicated that construction plans will need to be reviewed and, as necessary, water valve covers must be lifted to match the finished grade of the Greenway. There are no irrigation systems along the Hana Highway right-of-way along this segment of the highway. There are no anticipated impacts to the County's water system attributed to the proposed action. See **Appendix "D"**.

3. Wastewater System

a. Existing Conditions

Wastewater generated in the Spreckelsville to Paia region is conveyed to the Wailuku-Kahului Wastewater Reclamation Facility (WKWWRF). The WKWWRF has a design capacity of 7.9 million gallons per day. An existing 10-inch County sewer force main runs along Hana Highway.

b. Potential Impacts and Mitigation Measures

The proposed construction of the NSG–Phase IV will not generate any wastewater flow and will not affect existing wastewater collection and treatment systems in the area. Refer to **Appendix "D"**. However, the Department of Environmental Management has indicated that project plans shall show the County's existing 10-inch force main along Hana Highway.

4. Drainage

a. Existing Conditions

There are no drainage improvements in the project area. Stormwater runoff sheet flows into the grassed areas along the highway, the Maui Country Club golf course, and the H.A. Baldwin Park. Near H.A. Baldwin Park, Kailua Stream crosses under Hana Highway.

b. Potential Impacts and Mitigation Measures

According to the drainage assessment, the proposed greenway will be graded to maintain the existing drainage flow patterns in the area. Refer to **Appendix "D"**. During construction appropriate BMPs for erosion and sediment control will be implemented, such as, but not limited to, protection of natural vegetation and using wind and water erosion control measures. The NSG-Phase IV project is not anticipated to create any adverse impacts on adjacent and downstream properties.

5. Electrical, Telephone, and Cable Services

a. Existing Conditions

Electrical, telephone, and cable television services in the project area are provided by Maui Electric Company, Hawaiian Telecon, and Oceanic Time Warner Cable, respectively.

The proposed NSG–Phase IV project will not require the use of electrical, telephone, or cable services. There are no plans for lighting of the project, nor are there any communication system requirements associated with the project.

b. Potential Impacts and Mitigation Measures

There are no adverse impacts to power and communications systems attributed to the proposed NSG–Phase IV project.

E. CUMULATIVE AND SECONDARY IMPACTS

1. Context for Cumulative and Secondary Impact Analysis

The term "cumulative impact" is defined as the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

The term "secondary impact" means effects which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems.

The proposed NSG–Phase IV project is the final phase of the overall NSG project which stretches from Kahului Airport to Paia. There are no other components of the project nor are there similar actions in the vicinity which would yield an adverse cumulative impact to the surrounding environs. Similarly, there are no discernible secondary or indirect impacts arising from the project, such as those relating to growth inducement or land use trends and patterns.

III. RELATIONSHIP TO LAND PLANS, POLICIES, AND CONTROLS

III. RELATIONSHIP TO LAND PLANS, POLICIES, AND CONTROLS

A. STATE LAND USE DISTRICTS

Chapter 205, Hawaii Revised Statutes (HRS), relating to the Land Use Commission (LUC), establishes the four (4) major land use districts in which lands in the State are placed. These districts are "Urban", "Rural", "Agricultural", and "Conservation".

The project site is located within both the State "Agricultural" and "Urban" districts. See **Figure 10**. It is noted that each county may define accessory agricultural uses and services permitted in State Land Use "Agricultural" districts through their zoning ordinances (Chapter 205-5-(b), HRS). The same may be noted for State Land Use "Urban" districts. The proposed NSG–Phase IV project will, for the most part, be located within the Hana Highway right-of-way and is a permitted use. In the Urban lands underlying the Maui Country Club and H.A. Baldwin Park, the proposed Greenway is also a permitted use.

B. CHAPTER 226, HRS, HAWAII STATE PLAN

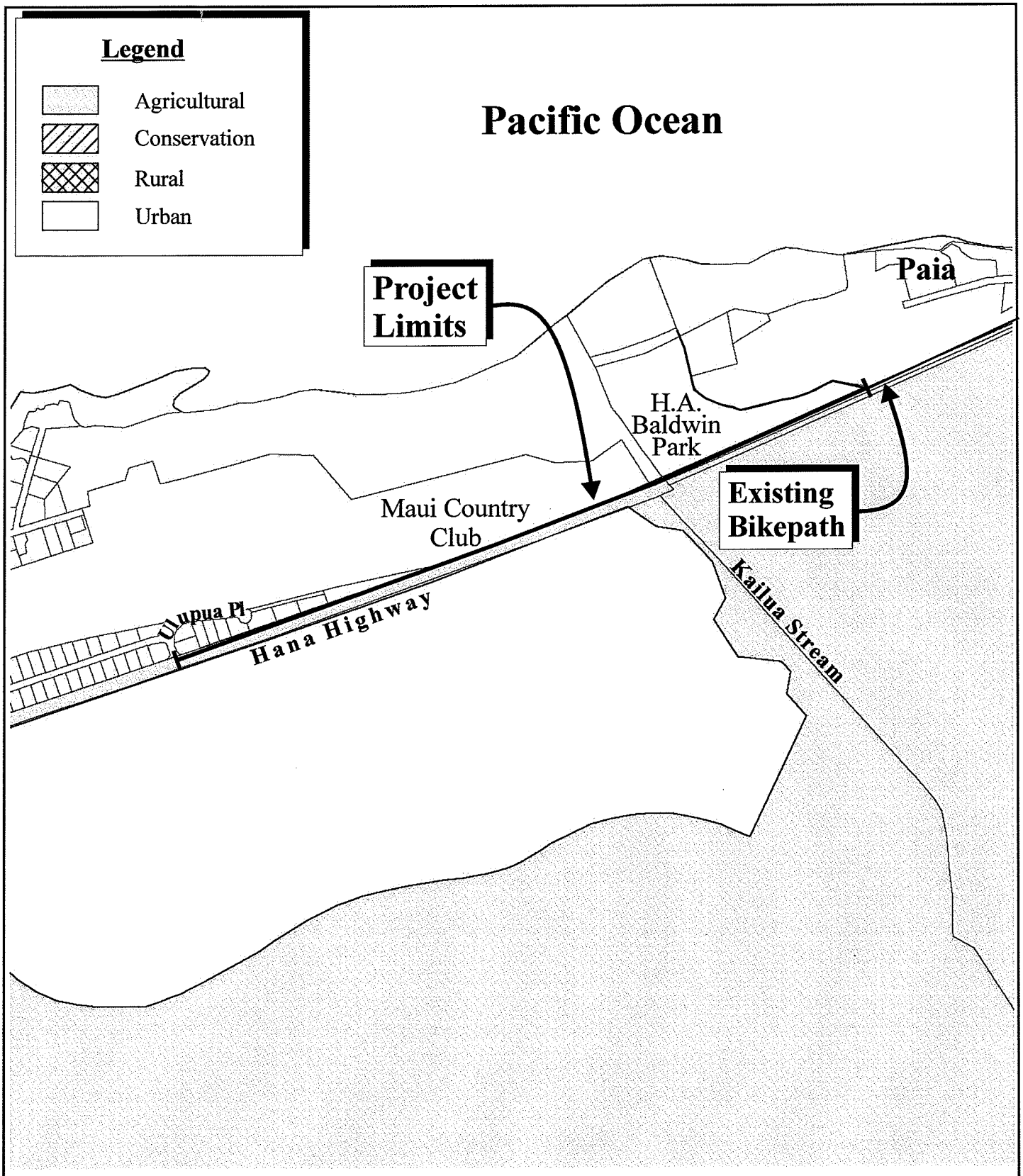
Chapter 226, HRS, also known as the Hawaii State Plan, is a long-range comprehensive plan which serves as a guide for the future long-range development of the State by identifying goals objectives, policies, and priorities, as well as implementation mechanisms. The proposed project is consistent with the following goals of the Hawaii State Plan:

- *A desired physical environment, characterized by beauty, cleanliness, quiet, stable natural systems, and uniqueness, that enhances the mental and physical well-being of the people.*

- *Physical, social, and economic well-being, for individuals and families in Hawaii, that nourishes a sense of community responsibility, of caring, and of participation in community life.*

1. Objectives and Policies of the Hawaii State Plan

The proposed project is consistent with the following objectives and policies of the Hawaii State Plan:



Source: State Land Use Commission, 2010

Figure 10

Proposed North Shore Greenway-Phase IV

State Land Use District Classification Map

NOT TO SCALE

Prepared for: County of Maui, Department of Public Works

MUNEKIYO & HIRAGA, INC.

RTTanaka\NS GreenwayPhIV\SLUD

Chapter 226-11, HRS, Objectives and policies for the physical environment-land based, shoreline, and marine resources

> ***226-11 (b)(3), HRS:*** *Take into account the physical attributes of areas when planning and designing activities and facilites.*
>
> ***226-11 (b)(9), HRS:*** *Promote increased accessibility and prudent use of inland and shoreline areas for public recreational, educational, and scientific purposes.*

Chapter 226-13, HRS, Objectives policies for the physical environment-land, air, and water quality

> ***226-13 (b)(6), HRS:*** *Encourage design and construction practices that enhance the physical qualities of Hawaii's communities.*

Chapter 226-14, HRS, Objective and policies for facility systems-in general

> ***226-14 (b)(1), HRS:*** *Accommodate the needs of Hawaii's people through coordination of facility systems and capital improvement priorities in consonance with state and county plans.*

Chapter 226-17, HRS, Objectives and policies for facility systems-transportation

> ***226-17 (a)(1), HRS:*** *An integrated multi-modal transportation system that services statewide needs and promotes the efficient, economical, safe, and convenient movement of people and goods.*
>
> ***226-17 (b)(1), HRS:*** *Design, program, and develop a multi-modal system in conformance with desired growth and physical development as stated in this chapter.*
>
> ***226-17 (b)(2), HRS:*** *Coordinate state, county, federal, and private transportation activities and programs toward the achievement of statewide objectives.*
>
> ***226-17 (b)(11), HRS:*** *Encourage safe and convenient use of low-cost, energy-efficient, non-polluting means of transportation.*

Chapter 226-23, HRS: Objective and policies for socio-cultural advancement-leisure.

226-23 (b)(3), HRS: *Enhance the enjoyment of recreational experiences through safety and security measures, educational opportunities, and improved facility design and maintenance.*

226-23 (b)(5), HRS: *Ensure opportunities for everyone to use and enjoy Hawaii's recreational resources.*

C. GENERAL PLAN OF THE COUNTY OF MAUI

As indicated by the Maui County Charter, the purpose of the general plan shall be to:

> *... indicate desired population and physical development patterns for each island and region within the county; shall address the unique problems and needs of each island and region; shall explain opportunities and the social, economic, and environmental consequences related to potential developments; and shall set forth the desired sequence, patterns and characteristics of future developments. The general plan shall identify objectives to be achieved, and priorities, policies, and implementing actions to be pursued with respect to population density; land use maps, land use regulations, transportation systems, public and community facility locations, water and sewage systems, visitor destinations, urban design, and other matters related to development.*

Chapter 2.80B of the Maui County Code, relating to the General Plan and Community Plans, implements the foregoing Charter provision through enabling legislation which calls for a Countywide Policy Plan and a Maui Island Plan. The Countywide Policy Plan was adopted as Ordinance No. 3732 on March 24, 2010, while the Maui Island Plan, which delineates areas for future urban and rural growth as part of a Directed Growth Strategy, was adopted as Ordinance No. 4004 on December 28, 2012.

The following sections identify pertinent objectives, policies, implementing actions and related provisions set forth in the Countywide Policy Plan and the Maui Island Plan. It is recognized that both documents are comprehensive in nature and address a number of functional planning areas which apply to all programs, plans, and projects. However, for purposes of addressing General Plan compliance requirements, policy considerations which are deemed most relevant in terms of compatibility and consistency are addressed in this report section.

1. Countywide Policy Plan

With regard to the Countywide Policy Plan, Section 2.80B.030 of the Maui County Code states the following.

The countywide policy plan shall provide broad policies and objectives which portray the desired direction of the County's future. The countywide policy plan shall include:

1. *A vision for the County;*

2. *A statement of core themes or principles for the County; and*

3. *A list of countywide objectives and policies for population, land use, the environment, the economy, and housing.*

Core principles set forth in the Countywide Policy Plan are listed as follows:

1. *Excellence in the stewardship of the natural environment and cultural resources;*

2. *Compassion for and understanding of others;*

3. *Respect for diversity;*

4. *Engagement and empowerment of Maui County residents;*

5. *Honor for all cultural traditions and histories;*

6. *Consideration of the contributions of past generations as well as the needs of future generations;*

7. *Commitment to self-sufficiency;*

8. *Wisdom and balance in decision making;*

9. *Thoughtful, island appropriate innovation; and*

10. *Nurturance of the health and well-being of our families and our communities.*

Congruent with these core principles, the Countywide Policy Plan identifies goals objectives, policies and implementing actions for pertinent functional planning categories, which are identified as follows:

1. *Natural environment*

2. *Local cultures and traditions*

3. *Education*

4. *Social and healthcare services*

5. *Housing opportunities for residents*

6. *Local economy*

7. *Parks and public facilities*

8. *Transportation options*

9. *Physical infrastructure*

10. *Sustainable land use and growth management*

11. *Good governance*

With respect to the proposed NSG–Phase IV, the following goals, objectives, policies and implementing actions are illustrative of the project's compliance with the Countywide Policy Plan.

Goal:

A full range of island-appropriate public facilities and recreational opportunities will be provided to improve the quality of life for residents and visitors.

Objective:

Expand access to recreational opportunities and community facilities to meet the present and future needs of residents of all ages and physical abilities.

Policies:

Expand and enhance the network of parks, multi-use paths, and bikeways.

Assist communities in developing recreational facilities that promote physical fitness.

Objective:

Reduce the reliance on the automobile and fossil fuels by encouraging walking, bicycling, and other energy-efficient and safe alternative modes of transportation.

Policies:

Make walking and bicycling transportation safe and easy between and within communities.

Design new and retrofit existing rights-of-way with adequate sidewalks, bicycle lanes, or separated multi-use transit corridors.

Support the development of a countywide network of bikeways, equestrian trails, and pedestrian paths.

2. Maui Island Plan

The Maui Island Plan (MIP), is applicable to the island of Maui only, providing more specific policy-based strategies for population, land use, transportation, public and community facilities, water and sewage systems, visitor destinations, urban design, and other matters related to future growth.

As provided by Chapter 2.80B, the MIP shall include the following components:

1. *An island-wide land use strategy, including a managed and directed growth plan*
2. *A water element assessing supply, demand and quality parameters*
3. *A nearshore ecosystem element assessing nearshore waters and requirements for preservation and restoration*
4. *An implementation program which addresses the County's 20-year capital improvement requirements, financial program for implementation, and action implementation schedule*
5. *Milestone indicators designed to measure implementation progress of the MIP*

It is noted that the Ordinance No. 4004 does not address the component relating to the implementation program. Chapter 2.80B of the Maui County Code, relating to the General Plan, was amended via Ordinance No. 3979, October 5, 2012, to provide that the implementation program component be adopted no later than one (1) year following the effective date of Ordinance No. 4004. The implementation program component of the MIP was extended to March 31, 2014 by Council Resolution No. 13-50 adopted on December 20, 2013.

The MIP addresses a number of planning categories with detailed policy analysis and recommendations which are framed in terms of goals, objectives, policies, and implementing actions. These planning categories address the following areas:

1. *Population*

2. *Heritage Resources*

3. *Natural Hazards*

4. *Economic Development*

5. *Housing*

6. *Infrastructure and Public Facilities*

7. *Land Use*

Additionally, an essential element of the MIP is its directed growth plan which provides a management framework for future growth in a manner that is fiscally, environmentally, and culturally prudent. Among the directed growth management tools developed through the MIP process are maps delineating urban growth boundaries (UGB), small town boundaries (SRB), and rural growth boundaries (RGB). The respective boundaries identify areas appropriate for future growth and their corresponding intent with respect to development character.

The portion of the NSG–Phase IV from Ulupua Place to the eastern most lot of the Maui Country Club subdivision is located within the UGB. However, the proposed project is limited to the transportation infrastructure and does not represent development or growth guided by the directed growth strategy.

The proposed NSG–Phase IV advances the following MIP objective and policy:

Objective:

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

Policy:

6.4.2.f Support the implementation of the Central Maui Pedestrian & Bicycle Master Plan (March 2012), when consistent with the MIP.

In summary, the proposed project is consistent with the themes and principals of both the Countywide Policy Plan and the Maui Island Plan.

D. COMMUNITY PLANS

Within Maui County, there are nine (9) community plan regions. From a General Plan implementation standpoint, each region is governed by a Community Plan which sets

forth desired land use patterns as well as goals, objectives, policies, and implementing actions for a number of functional areas.

1. Paia-Haiku Community Plan

A portion of the project site is located within the Paia-Haiku region and occupies lands designated as "AG, Agriculture" and "Pk, Park" in the Community Plan. See **Figure 11**.

The proposed project is consistent with the following goals, policies, and objectives of the Paia-Haiku Community Plan:

PHYSICAL INFRASTRUCTURE

Transportation

Goal

Transportation systems that facilitate the safe and efficient movement of people, produce and goods within and outside the region.

Objectives

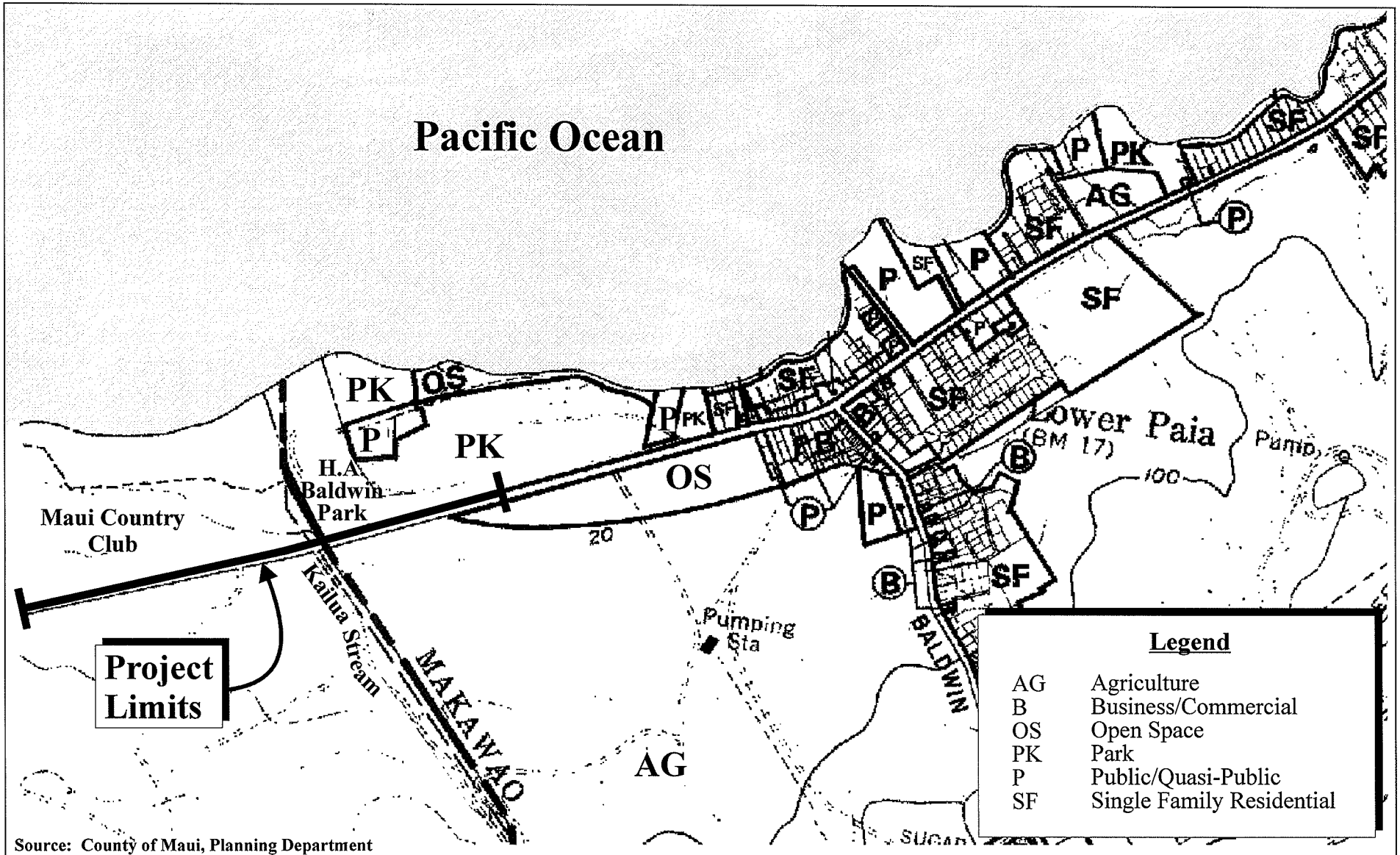
- *Establish a regional network of bikeways and pedestrian paths. This should include providing adequate space to accommodate bicycle traffic throughout the Paia Town area, including along Baldwin Avenue from Paia to Makawao.*

- *Encourage convenient pedestrian and bicycle access between residences and neighborhood commercial areas, parks and public facilities, in order to minimize use of the automobile within residential communities.*

2. Wailuku-Kahului Community Plan

A portion of the project site is also located within the Wailuku-Kahului region and occupies lands designated as "AG, Agriculture" and "Pk, Park" in the community plan. See **Figure 12**.

The proposed project is consistent with the following goals, policies, and objectives of the Wailuku-Kahului Community Plan:



Source: County of Maui, Planning Department

Figure 11 Proposed North Shore Greenway-Phase IV

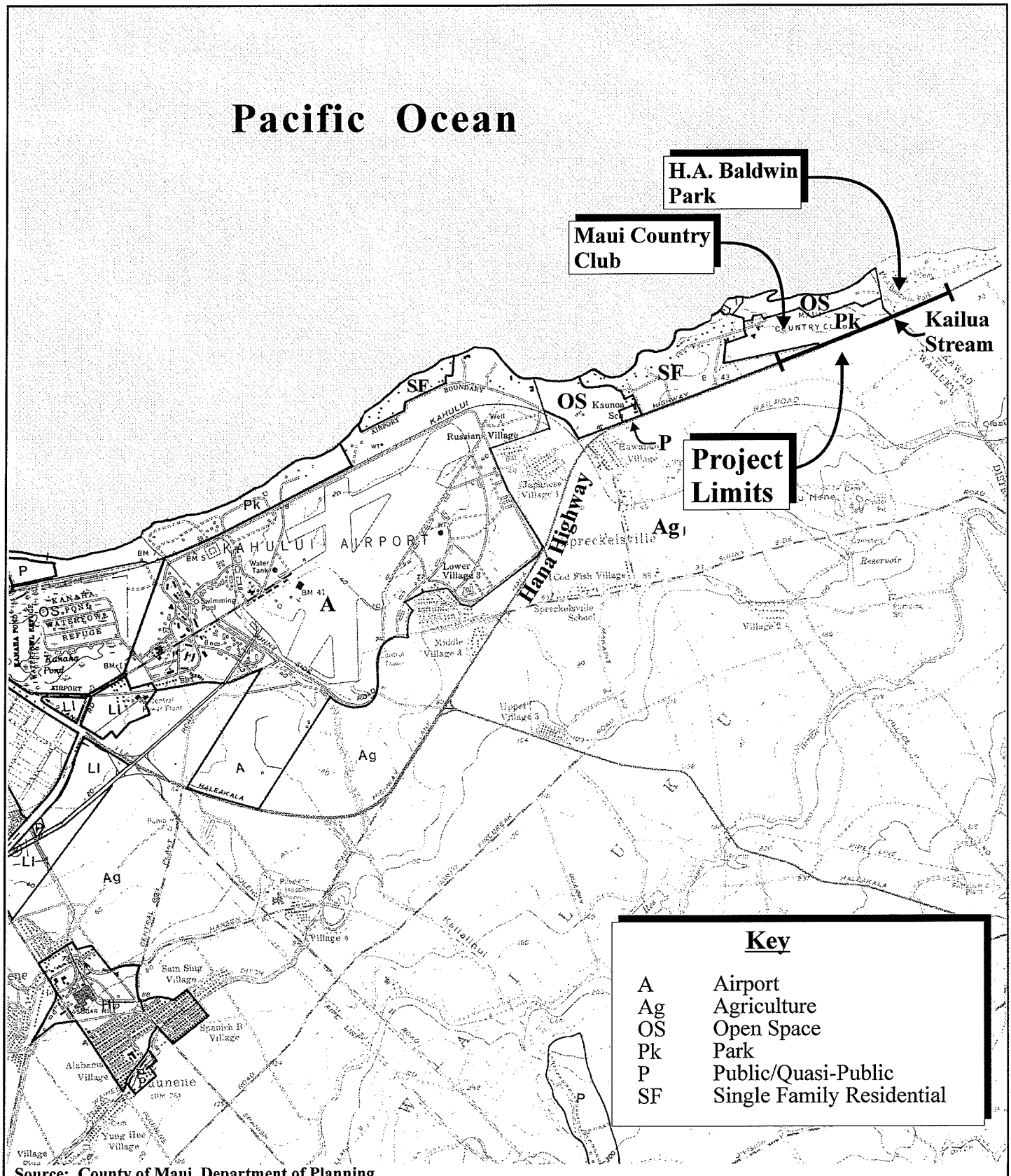
NOT TO SCALE

Paia-Haiku Community Plan Land Use Map

Prepared for: County of Maui, Department of Public Works

MUNEKIYO & HIRAGA, INC.

RTTanaka\NS GreenwayPhIV\PaiaHaikuCPLUD



Source: County of Maui, Department of Planning

Figure 12 Proposed North Shore Greenway-Phase IV

NOT TO SCALE

Wailuku-Kahului Community Plan Land Use Map

Prepared for: County of Maui, Department of Public Works

MUNEKIYO & HIRAGA, INC.

RTTanaka\NS GreenwayPhIV\CPLUD

SOCIAL INFRASTRUCTURE

Recreation

Goal

Develop and maintain an efficient and responsive system of public services which promotes a safe, healthy and enjoyable lifestyle, accommodates the needs of young, elderly, disabled and disadvantaged persons, and offers opportunities for self-improvement and community well-being.

Objectives and Policies

- *Ensure the development of the North Shore greenway project is done in a manner that respects the dune system and cultural sensitivity of the area. Specifically, the project should:*

    - *Minimize the excavating, grading, and grubbing for the project, and instead use minimal fill (as necessary to meet engineering standards), especially in the area near Baldwin Beach Park;*

    - *Provide appropriate protection to prevent unnecessary traversing of the dune system mauka-makai;*

    - *Use the greenway as an opportunity to interpret the significant cultural and historic sites in the area; and*

    - *Have the archaeological inventory survey and the design plans for the project reviewed by the Cultural Resources Commission prior to the issuance of the necessary development permits.*

INFRASTRUCTURE

Transportation

Goal

Timely and environmentally sound planning, development and maintenance of infrastructure systems which serve to protect and preserve the safety and health of the region's residents, commuters and visitors through the provision of clean water, effective waste

disposal and drainage systems, and efficient transportation systems which meet the needs of the community.

Objectives and Policies

- *Provide bikeway and walkway systems in the Wailuku-Kahului area which offer safe and pleasant means of access, particularly along routes accessing residential district, major community facilities and activity centers, school sites, and the shoreline between Kahului Harbor and Paia.*

- *Accommodate bicycle and pedestrian ways within planned roadway improvements.*

E. ZONING

The Hana Highway right-of-way is Agricultural zoned, while the Maui Country Club and H.A. Baldwin Park are zoned by the County as "PK-4, Golf Course" and "PK-2, Community Park", respectively. The proposed NSG–Phase IV is permitted by Maui County Zoning.

F. COASTAL ZONE MANAGEMENT OBJECTIVES AND POLICIES

The Hawaii Coastal Zone Management Program (HCZMP), as formalized in Chapter 205A, HRS, establishes objectives and policies for the preservation, protection, and restoration of natural resources of Hawaii's coastal zone. The project site lies less than one (1) mile away from the coast. While the segment of the NSG–Phase IV project within the Hana Highway right-of-way lies outside of the County of Maui's Special Management Area (SMA), those segments which fall within the Maui Country Club and H.A. Baldwin Park are located within the SMA. See **Figure 13**.

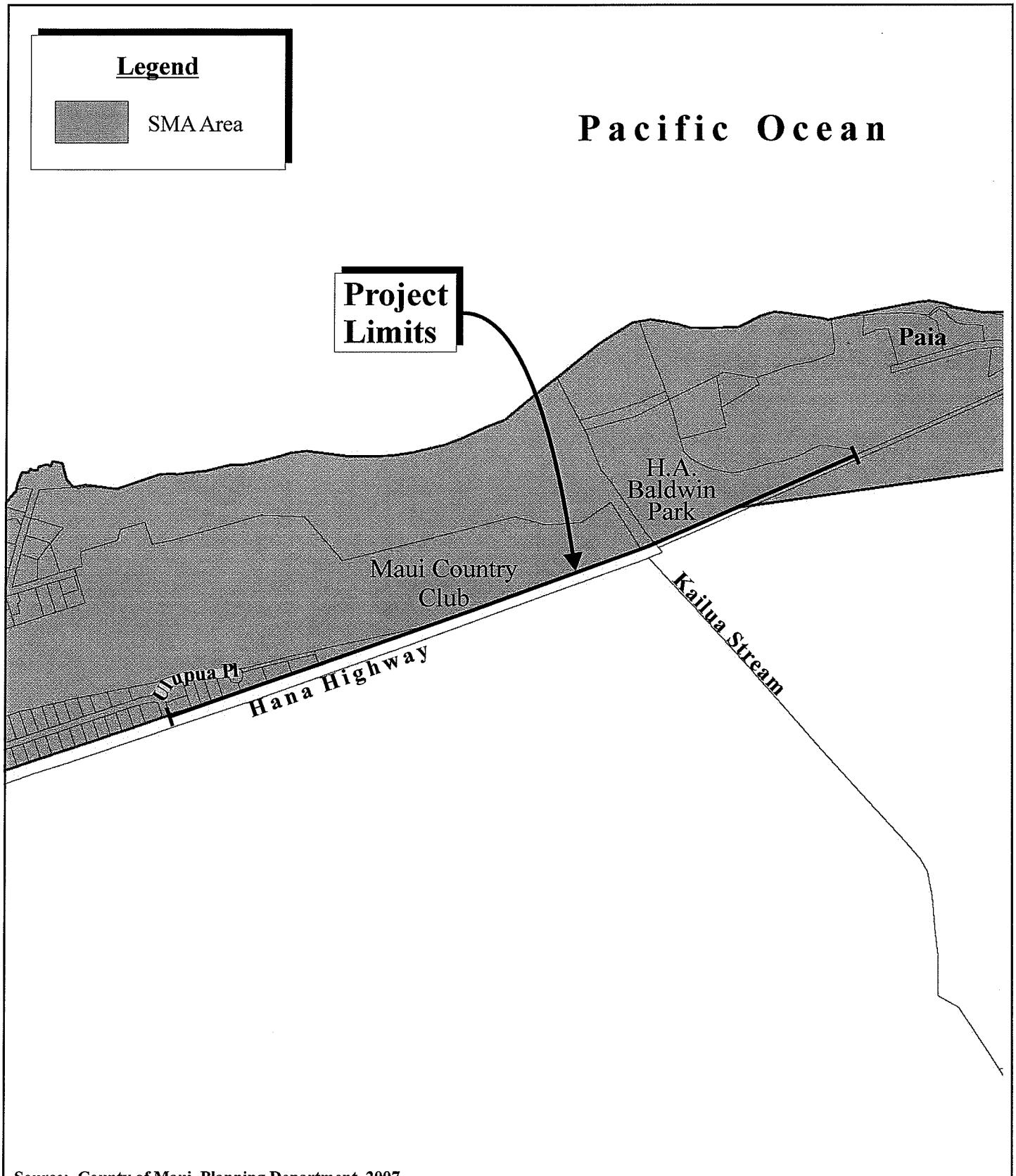
This section addresses the project's relationship to applicable coastal zone management considerations, set forth in Chapter 205A, HRS. Inasmuch as a SMA permit will be needed for the segments of the project located makai of Hana Highway, the section below also addresses the Maui Planning Commission's SMA Rules.

CHAPTER 205A, HRS

1. Recreational Resources

Objective:

Provide coastal recreational opportunities accessible to the public.



Source: County of Maui, Planning Department, 2007

Figure 13

Proposed North Shore Greenway-Phase IV

Special Management Area Map

0 220 440 880 Feet

Prepared for: County of Maui, Department of Public Works

MUNEKIYO & HIRAGA, INC.

RTTanaka\NS GreenwayPhIV\SMA

Policies:

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

b. *Provide adequate, accessible, and diverse recreational opportunities in the coastal zone management area by:*

   i. *Protecting coastal resources uniquely suited for recreational activities that cannot be provided in other areas;*

   ii. *Requiring replacement of coastal resources having significant recreational value, including but not limited to, surfing sites, fishponds, and sand beaches, when such resources will be unavoidably damaged by development; or requiring reasonable monetary compensation to the State for recreation when replacement is not feasible or desirable;*

   iii. *Providing and managing adequate public access, consistent with conservation of natural resources, to and along shorelines with recreational value;*

   iv. *Providing an adequate supply of shoreline parks and other recreational facilities suitable for public recreation;*

   v. *Ensuring public recreational use of county, state, and federally owned or controlled shoreline lands and waters having recreational value consistent with public safety standards and conservation of natural resources;*

   vi. *Adopting water quality standards and regulating point and non-point sources of pollution to protect, and where feasible, restore the recreational value of coastal waters;*

   vii. *Developing new shoreline recreational opportunities, where appropriate, such as artificial lagoons, artificial beaches, and artificial reefs for surfing and fishing; and*

   viii. *Encouraging reasonable dedication of shoreline areas with recreational value for public use as part of discretionary approvals or permits by the land use commission, board of land and natural resources, and county authorities; and crediting such dedication against the requirements of Section 46-6.*

Response: The proposed project complements coastal recreational resources by providing infrastructure which enhances non-vehicular traffic to coastal destinations, including H.A. Baldwin Park. In addition, the NSG–Phase IV project advances the overall plan of implementation for the NSG, a regional recreational infrastructure component.

2. **Historic Resources**

Objective:

Protect, preserve and, where desirable, restore those natural and manmade historic and prehistoric resources in the coastal zone management area that are significant in Hawaiian and American history and culture.

Policies:

a. Identify and analyze significant archeological resources;

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

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

Response: The proposed project is not anticipated to have an adverse effect on historic or cultural resources. An archaeological field inspection conducted for the proposed project did not find any surface features or deposits. Based on the field survey, it was determined that the project would not have an adverse impact on historic properties. However, as a precautionary measure, an Archaeological Monitoring Plan has been prepared and will be implemented during ground-altering work. Refer to **Appendix "B"** and **"Appendix "B-1"**.

Should any cultural or historical materials be uncovered during construction-related activities, work shall be halted in the area of the find and the SHPD shall be notified for determination of appropriate mitigation measures.

The Cultural Impact Assessment concludes that the proposed project does not impact traditional Hawaiian practices or culture in the area.

3. Scenic and Open Space Resources

Objective:

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

Policies:

a. *Identify valued scenic resources in the coastal zone management area;*

b. *Ensure that new developments are compatible with their visual environment by designing and locating such developments to minimize the alteration of natural landforms and existing public views to and along the shoreline;*

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

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

Response: The proposed project primarily involves the north side shoulder of Hana Highway along with some land that is being utilized within the Maui Country Club and H.A. Baldwin Park properties. The at-grade improvements will not create adverse view impacts to and along the shoreline, nor will they detract from the open space views along Hana Highway. As such, adverse impacts to scenic and open space resources are not anticipated as a result of the proposed project.

4. Coastal Ecosystems

Objective:

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

Policies:

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

b. *Improve the technical basis for natural resource management;*

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

d. *Minimize disruption or degradation of coastal water ecosystems by effective regulation of stream diversions, channelization, and similar land and water uses, recognizing competing water needs; and*

e. *Promote water quantity and quality planning and management practices that reflect the tolerance of fresh water and marine ecosystems and maintain and enhance water quality through the development and implementation of point and nonpoint source water pollution control measures.*

Response: The proposed project is not anticipated to result in significant, adverse impacts to coastal ecosystems. Best Management Practices (BMPs) will be implemented during the construction of the proposed improvements to mitigate potential impacts to the coastal environment.

5. **Economic Uses**

Objective:

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

Policies:

a. *Concentrate coastal dependent development in appropriate areas;*

b. *Ensure that coastal dependent development such as harbors and ports, and coastal related development such as visitor industry facilities and energy generating facilities, are located, designed, and constructed to minimize adverse social, visual, and environmental impacts in the coastal zone management area; and*

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

   i. *Use of presently designated locations is not feasible;*

   ii. *Adverse environmental effects are minimized; and*

   iii. *The development is important to the State's economy.*

Response: The proposed project is not a coastal dependent development. Instead, it is considered an infrastructure component which enhances the community's ability to access and enjoy Maui's coastal recreational resources. The project will provide short-term economic benefits during the construction phase. From a long-term perspective, there are no long-term adverse economic impacts envisioned.

6. **Coastal Hazards**

Objective:

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

Policies:

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

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

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

d. *Prevent coastal flooding from inland projects.*

Response: There are parts of the subject properties that lie within the tsunami evacuation zone. The majority of the project lies within Flood Zone X, an area of minimal flooding action and without development restrictions. A small portion of the project, near the Kailua Stream, lies in Flood Zone AE, an area with a base flood elevation for a 100-year flood. While the proposed project will include the installation of a bridge crossing at Kailua Stream's Hana Highway crossing, this action does not hold adverse impact implications to downstream streamflow or stormwater runoff patterns.

7. **Managing Development**

Objective:

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

Policies:

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

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

c. *Communicate the potential short and long-term impacts of proposed significant coastal developments early in their life cycle and in terms understandable to the public to facilitate public participation in the planning and review process.*

Response: Opportunities for public involvement will be provided as part of the Chapter 343 Environmental Assessment (EA) review process for the proposed project. In particular, interested agencies and organizations will be offered the opportunity to provide input via early consultation coordination and review of the Draft EA document.

8. Public Participation

Objective:

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

Policies:

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

b. *Disseminate information on coastal management issues by means of educational materials, published reports, staff contact, and public workshops for persons and organizations concerned with coastal issues, developments, and government activities; and*

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

Response: As mentioned above, public awareness and participation opportunities will be facilitated through the Chapter 343 HRS, EA process for the subject project.

9. Beach Protection

Objective:

Protect beaches for public use and recreation.

Policies

a. Locate new structures inland from the shoreline setback to conserve open space, minimize interference with natural shoreline processes, and minimize loss of improvements due to erosion;

b. Prohibit construction of private erosion-protection structures seaward of the shoreline, except when they result in improved aesthetic and engineering solutions to erosion at the sites and do not interfere with existing recreational and waterline activities; and

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

Response: The proposed project is located away from shoreline areas and will not impact natural beach processes.

10. Marine Resources

Objective:

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

Policies:

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

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

c. Assert and articulate the interests of the State as a partner with federal agencies in the sound management of ocean resources within the United States exclusive economic zone;

d. Promote research, study, and understanding of ocean processes, marine life, and other ocean resources in order to acquire and inventory information necessary to understand how ocean

development activities relate to and impact upon ocean and coastal resources; and

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

Response: The project is not located in the vicinity of the shoreline. The use of appropriate BMPs will be implemented during the construction of the proposed NSG–Phase IV project to mitigate any potential impacts to marine resources.

In addition to the foregoing objectives and policies, HRS Section 205A-30.5 Prohibitions, provides specifications for the limitation of lighting in coastal shoreline areas in relation to the granting of SMA permits:

No special management area use permit or special management area minor permit shall be granted for structures that allow artificial light from floodlights, uplights, or spotlights used for decorative or aesthetic purposes when the light:

(1) Directly illuminates the shoreline and ocean waters; or

(2) Is directed to travel across property boundaries toward the shoreline and ocean waters.

(c) Subsection (a) shall not apply to special management area use permits for structures with:

(1) An outdoor lighting fixture that is located on the grounds of a hotel, hotel-condominium or condominium-hotel as defined in section 486K-1; provided that:

(A) The outdoor lighting fixture is located underwater or is directed downward and illuminates a limited area of no more than thirty feet into the shoreline and ocean waters; or

(B) The outdoor lighting fixture is the only practicable means of ensuring the safety and security of guests, visitors, and employees;

(3) Artificial lighting provided by a government agency or its authorized users for government operations, security, public safety, or navigational needs; provided that a government agency

or its authorized users shall make reasonable efforts to properly position or shield lights to minimize adverse impacts.

Response: There are no lighting improvements proposed in connection with the proposed project. As such, there are no adverse lighting-related impacts associated with the project.

The project site is also subject to Chapter 202, SMA Rules of the Maui Planning Commission. Pursuant to Section 12-202-12(e), the project has been evaluated in accordance with the following 12 criteria.

1. **Involves an irrevocable commitment or destruction of any natural or cultural resources.**

   The project alignment encompasses parts of the Maui Country Club, H.A. Baldwin Park, and Hana Highway. There are no sensitive natural resources which will be affected by the proposed action.

   An archaeological field inspection and cultural impact assessment were prepared for the proposed project. No archaeological, historic, or cultural sites were uncovered. However, as a precaution, archaeological monitoring during ground-altering work is recommended. Additionally, no traditional cultural practices were found. As such, the proposed project will not involve an irrevocable commitment or destruction of any natural or cultural resources.

2. **Significantly curtails the range of beneficial uses of the environment.**

   The proposed NSG-Phase IV project is limited in scope and scale and will not significantly curtail the range of beneficial uses of the environment.

3. **Conflicts with the county's or the state's long-term environmental policies or goals.**

   The proposed project is consistent with and does not conflict with the State's and County's long-term environmental policies and goals.

4. **Substantially affects the economic or social welfare and activities of the community, county, or state.**

   The proposed action advances transportation alternatives for bicyclists and pedestrians and will not substantially affect the economic or social welfare and activities of the community, County, or State.

5. **Involves substantial secondary impacts, such as population changes and increased effects on public facilities, streets, drainage, sewage, and water systems and pedestrian walkways.**

The proposed action will provide an alternative infrastructure component for bicyclists and pedestrians. The project is not a population generator and does not have adverse implications with respect to secondary impacts.

6. **In itself has no significant adverse effects but cumulatively has considerable effect upon the environment or involves a commitment for larger actions.**

The project area is identified as a proposed action in the Wailuku-Kahului Community Plan and the Paia-Haiku Community Plan. The proposed project is not linked to any other action and is not anticipated to result in cumulative impacts.

7. **Substantially affects a rare, threatened, or endangered species of animal or plant, or its habitat.**

No rare, threatened, or endangered species of animal or plant are found within the project's limits. However, the tobacco tree plant was observed in the project area, which is a non-native host of the endangered Blackburn's sphinx moth. Removal of any tobacco trees will be coordinated with the U.S. Fish and Wildlife Service. As such, with appropriate mitigation the project will not adversely impact these environmental parameters.

8. **Is contrary to the state plan, county's general plan, appropriate community plans, zoning and subdivision ordinances.**

The proposed project is in compliance with the State Plan, County's General Plan, Wailuku-Kahului Community Plan, Paia-Haiku Community Plan, and zoning. Project design will be in compliance with all applicable governmental regulations.

9. **Detrimentally affects air or water quality or ambient noise levels.**

During construction of the proposed project, there may be short-term impacts to air, water, and noise quality. Appropriate BMPs will be implemented to minimize these short-term impacts, which will not extend into the long-term. The proposed project is not anticipated to have a detrimental effect on air or water quality or ambient noise levels.

10. **Affects an environmentally sensitive area, such as flood plain, shoreline, tsunami zone, erosion-prone area, geologically hazardous land, estuary, fresh waters, or coastal waters.**

A portion of the proposed project alignment is located in Flood Zone AE at Kailua Stream and H.A. Baldwin Park. As an at-grade paved pathway, the NSG-Phase IV is not considered to have an adverse impact on drainage or flooding conditions.

11. **Substantially alters natural land forms and existing public views to and along the shoreline.**

As an at-grade improvement with no vertical structures, the proposed project is not anticipated to substantially alter natural land forms or affect existing public views to and along the shoreline.

12. **Is contrary to the objectives and policies of chapter 205A, HRS.**

As noted previously, the proposed project is not contrary to the objectives and policies of Chapter 205A, HRS.

G. OTHER REGULATORY CONSIDERATIONS

As noted previously, the Kailua Stream crosses Hana Highway in the vicinity of the NSG-Phase IV project. As a result, a bridge crossing is proposed on the makai side of Hana Highway to accommodate the paved greenway. The installation of the bridge crossing may trigger other permit requirements, such as the U.S. Department of the Army Permit, Section 401 Water Quality Certification, Coastal Zone Management Consistency Review approval, and Stream Channel Alteration Permit. Coordination will be undertaken with the appropriate agencies to obtain permit jurisdictional confirmations. As applicable, permit applications will be filed to address the foregoing regulatory requirements.

IV. SUMMARY OF ADVERSE ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED

IV. SUMMARY OF ADVERSE ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED

Project construction may result in certain unavoidable construction-related impacts, including noise-generated impacts and air quality impacts associated with the operation of construction equipment. Air quality may also be temporarily impacted by dust generated from site work. The construction-related impacts will be temporary and mitigated through implementation of appropriate Best Management Practices (BMPs).

The development of the proposed project will involve the commitment of approximately 26,000 sq. ft. of land currently utilized as the Maui Country Club and H.A. Baldwin Park for construction of the North Shore Greenway (NSG)–Phase IV. In addition, the proposed action would involve a commitment of fuel, labor, funding, and material resources. However, the commitment of resources necessary to implement the proposed project is considered justified, given the benefits associated with the completion of the NSG.

In the long term, the completion of the NSG is not anticipated to result in significant, long-term environmental effects.

V. ALTERNATIVES TO THE PROPOSED ACTION

V. ALTERNATIVES TO THE PROPOSED ACTION

A. PREFERRED ALTERNATIVE

The proposed project involves the construction of the North Shore Greenway (NSG)–Phase IV to complete a pedestrian and bike path from Kahului to Paia for recreational and alternative transportation use. It creates a safe alternate route for pedestrians and bikers. The proposed project's alignment following along or near Hana Highway is considered a workable solution based on right-of-way availability and the ability to minimize impacts to existing land uses.

B. NO ACTION ALTERNATIVE

The "No Action" alternative would leave the NSG project in an incomplete condition. The recreational, public access, and public safety benefits of the project would, therefore, not be realized. In the context of the overall North Shore Greenway plan and its development process, the "No Action" option is not viewed as a reasonable alternative.

C. DEFERRED ACTION ALTERNATIVE

The "Deferred Action" alternative would yield a similar result as the "No Action" alternative. Opportunity for a time-certain implementation schedule for the project would be lost and leave the project's completion in a probable state of uncertainty. Given the need for the project at this time, the "Deferred Action" alternative was not considered by the Department of Public Works.

D. ALTERNATIVE GREENWAY ALIGNMENT

A coastal route for the Greeenway, following the shoreline, makai of the Maui Country Club was also considered as a potential alignment for the NSG–Phase IV project. Limitations associated with this route, however, included potential adverse environmental impacts associated with the existing coastal sand dune, as well as the potential effects to cultural resources. The sand dune area is considered to be of higher sensitivity as it represents a valued coastal resource. Importantly, the sand dune also holds potential for encountering inadvertent burials. For these reasons, the coastal alignment was not considered viable.

VI. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

VI. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

The proposed construction of the North Shore Greenway–Phase IV is anticipated to result in the irreversible and irretrievable commitment of land and fiscal resources. Other resource commitments include labor and material sources. Impacts relating to the use of these resources are anticipated to be minimal, especially when weighed against the expected positive recreational and public safety benefits to be derived from the project, versus the consequences of taking no action.

In addition, the proposed project is not anticipated to require a substantial commitment of government services, nor is it anticipated to place additional demands on other services, such as police, medical, and social care.

VII. SIGNIFICANCE CRITERIA ASSESSMENT

VII. SIGNIFICANCE CRITERIA ASSESSMENT

The proposed project includes the use of State and County lands and the use of County funds. Since State and County lands and County funds are being utilized for the project, an Environmental Assessment (EA) has been prepared pursuant to Chapter 343, Hawaii Revised Statutes (HRS) and Chapter 200 of Title 11, Hawaii Administrative Rules (HAR) of the State Department of Health, Environmental Impact State Rules.

The "Significance Criteria" Section 12, of the HAR, Title 11, Chapter 200, Environmental Impact Statement Rules, were reviewed and analyzed to determine whether the proposed project will have significant impacts to the environment. The following analysis is provided:

1. **No Irrevocable Commitment to Loss or Destruction of any Natural or Cultural Resources Would Occur as a Result of the Project**

   The project alignment encompasses parts of the Maui Country Club, H.A. Baldwin Park, and Hana Highway. There are no sensitive natural resources which will be affected by the proposed action.

   An archaeological field inspection and cultural impact assessment were prepared for the proposed project. No archaeological, historic, or cultural sites were identified. However, as a precaution, archaeological monitoring during ground-altering work is recommended. Additionally, no traditional cultural practices were found. As such, the proposed project will not involve an irrevocable commitment or destruction of any natural or cultural resources.

2. **The Proposed Action Would Not Curtail the Range of Beneficial Uses of the Environment**

   The subject project is limited in scope and scale. The proposed action, as a bicycle and pedestrian facility, will not significantly curtail the range of beneficial uses of the environment.

3. **The Proposed Action Does Not Conflict with the State's Long-Term Environmental Policies or Goals or Guidelines as Expressed in Chapter 344, Hawaii Revised Statutes**

   The State's Environmental Policy and Guidelines are set forth in Chapter 344, HRS. The proposed action is in consonance with the policies and guidelines of Chapter 344, HRS.

4. **The Economic or Social Welfare of the Community or State Would Not Be Substantially Affected**

The proposed action will provide direct, short-term economic benefits during the construction phase. There are no long-term economic or social welfare impacts associated with the proposed action.

5. **The Proposed Action Does Not Affect Public Health**

The North Shore Greenway project will provide a bicycle/pedestrian path to establish the final link in this project. When this phase of the Greenway is opened to public, it will link Spreckelsville to Paia and provide bikers and pedestrians an alternative route of travel. No adverse impacts to public health are anticipated.

6. **No Substantial Secondary Impacts, Such as Population Change or Effects on Public Facilities are Anticipated**

The proposed project will provide an alternative path for bicyclists and pedestrians. The proposed project is not a population generator and will not result in substantial secondary impacts.

7. **No Substantial Degradation of Environmental Quality is Anticipated**

During project construction, appropriate Best Management Practices (BMPs) will be utilized to mitigate potential adverse environmental impacts. The proposed action will have no substantial adverse impact to environmental quality over the long term.

8. **The Proposed Action Does Not Involve a Commitment to Larger Actions, Nor Would Cumulative Impacts Result in Considerable Effects on the Environment**

The proposed project is limited in scope and scale and is not anticipated to result in any cumulative impacts.

9. **No Rare, Threatened or Endangered Species or Their Habitats Would Be Adversely Affected By the Proposed Action**

There are no rare, threatened, or endangered species of animal or plant which will be affected by the proposed action. However, the tobacco tree plant was observed in the project area, which is a non-native host of the Blackburn's sphinx moth. Removal of any tobacco trees will be coordinated with the U.S. Fish and Wildlife Service. As such, with appropriate mitigation the project will not adversely impact rare, threatened, or endangered species or their habitats.

10. **Air Quality, Water Quality, or Ambient Noise Levels Would Not Be Detrimentally Affected by the Proposed Project**

During the construction of the proposed project, there may be short-term impacts to air, water, and noise quality. Appropriate BMPs will be implemented to minimize these short-term impacts, which will not extend into the long term. The proposed project is not anticipated to have any long-term effects on air or water quality or ambient noise levels.

11. **The Proposed Project Would Not Affect Environmentally Sensitive Areas, Such as Flood Plains, Tsunami Zones, Erosion-prone Areas, Geologically Hazardous Lands, Estuaries, Fresh Waters or Coastal Waters**

The project site is located in Flood Zones X and AE. The project area is located within a tsunami evacuation zone. There are no adverse impacts to flooding or tsunami patterns anticipated as a result of project implementation.

Potential impacts to downstream properties will be mitigated through appropriate BMPs during construction-related activities.

12. **The Proposed Action Would Not Substantially Affect Scenic Views and Viewplanes Identified in County Plans or Studies**

The proposed project involves the construction of a multi-use path from Spreckelsville to Paia on the makai side of Hana Highway. The project site abuts a residential subdivision, Maui Country Club, and H.A. Baldwin Park on the makai side of Hana Highway. Agricultural fields are planted on the mauka side of the highway. As an at-grade improvement with no vertical structures, the project is not anticipated to adversely impact visual resources in the area.

13. **The Proposed Action Would Not Require Substantial Energy Consumption**

The proposed action will involve the short-term commitment of fuel for equipment, vehicles, and machinery during construction activities. However, there will not be energy consumption associated with the use of the NSG-Phase IV in the long term.

Based on the foregoing findings, it is anticipated that the proposed action will result in a Finding of No Significant Impact (FONSI) by the Department of Public Works as the approving agency.

VIII. LIST OF PERMITS AND APPROVALS

VIII. LIST OF PERMITS AND APPROVALS

The following permits and approvals are anticipated to be needed for project implementation.

Federal

1. Department of the Army Jurisdictional Determination
2. Department of the Army Permit, as applicable
3. Compliance with Section 106 of the National Historic Preservation Act, as applicable
4. Compliance with Section 7, Endangered Species Act, as applicable

State of Hawaii

1. Department of Health, National Pollutant Discharge Elimination System Permit, as applicable
2. Department of Health, Section 401 Water Quality Certification, as applicable
3. Department of Health, Community Noise Permit, as applicable
4. Coastal Zone Management Consistency Approval, as applicable
5. Stream Channel Alteration Permit, as applicable

County of Maui

1. Compliance with Chapter 343, Hawaii Revised Statutes
2. Special Management Area Permit
3. Construction Permits (Grubbing, Grading and Work to Perform on State Highway), as applicable

IX. PARTIES CONSULTED DURING THE PREPARATION OF THE DRAFT ENVIRONMENTAL ASSESSMENT; LETTERS RECEIVED AND RESPONSES TO SUBSTANTIVE COMMENTS

IX. PARTIES CONSULTED DURING THE PREPARATION OF THE DRAFT ENVIRONMENTAL ASSESSMENT; LETTERS RECEIVED AND RESPONSES TO SUBSTANTIVE COMMENTS

The following agencies were consulted during preparation of the Draft Environmental Assessment (EA). Comment letters received, as well as responses to substantive comments, are included herein.

FEDERAL AGENCIES

1. Ranae Ganske-Cerizo, Soil Conservationist
Natural Resources Conservation Service
U.S. Department of Agriculture
77 Hookele Street, Suite 202
Kahului, Hawaii 96732

2. George Young, Chief, Regulatory Branch
U.S. Department of the Army
U.S. Army Engineer District, Honolulu
Regulatory Branch, Building 230
Fort Shafter, Hawaii 96858-5440

3. Loyal A. Mehrhoff, Field Supervisor
U. S. Fish and Wildlife Service
300 Ala Moana Blvd., Rm. 3-122
Box 50088
Honolulu, Hawaii 96813

STATE AGENCIES

4. Dean H. Seki, Comptroller
Department of Accounting and General Services
1151 Punchbowl Street, #426
Honolulu, Hawaii 96813

5. Russell Kokubun, Chair
Department of Agriculture
1428 South King Street
Honolulu, Hawaii 96814-2512

6. Richard C. Lim, Director
State of Hawaii
Department of Business, Economic Development and Tourism
P.O. Box 2359
Honolulu, Hawaii 96804

7. Kathryn Matayoshi, Superintendent
State of Hawaii
Department of Education
P.O. Box 2360
Honolulu, Hawaii 96804

8. Heidi Meeker, Planning Division
Office of Business Services
Department of Education
c/o Kalani High School
4680 Kalanianaole Highway, #T-B1A
Honolulu, Hawaii 96821

9. Jobie Masagatani, Chairperson
Hawaiian Home Lands Commission
P.O. Box 1879
Honolulu, Hawaii 96805

10. Alec Wong, P.E., Chief
Clean Water Branch
State of Hawaii
Department of Health
919 Ala Moana Blvd., Room 300
Honolulu, Hawaii 96814

11. Patti Kitkowski, District Environmental Health Program Chief
State of Hawaii
Department of Health
Maui Sanitation Branch
54 South High Street, Room 300
Wailuku, Hawaii 96793

12. Laura McIntyre, AICP, Office Manager
Environmental Planning Office
Department of Health
919 Ala Moana Blvd., Suite 312
Honolulu, Hawaii 96814

13. Lene Ichinotsubo
Environmental Management Division
State of Hawaii
Department of Health
919 Ala Moana Blvd., Room 212
Honolulu, Hawaii 96814

14. William J. Aila, Jr., Chairperson
State of Hawaii
Department of Land and Natural Resources
P. O. Box 621
Honolulu, Hawaii 96809

15. Nicki Thompson, Interim Administrator
State of Hawaii
Department of Land and Natural Resources
State Historic Preservation Division
601 Kamokila Blvd., Room 555
Kapolei, Hawaii 96707

16. Jenny Pickett, Maui Archaeologist
State of Hawaii
Department of Land and Natural Resources
State Historic Preservation Division
130 Mahalani Street
Wailuku, Hawaii 96793

17. Glenn Okimoto, Director
State of Hawaii
Department of Transportation
869 Punchbowl Street
Honolulu, Hawaii 96813

cc: Ferdinand Cajigal, Maui District Engineer

18. Genevieve Salmonson, Acting Director
Office of Environmental Quality Control
235 S. Beretania Street, Suite 702
Honolulu, Hawaii 96813

19. Dr. Kamana`opono Crabbe, Chief Executive Officer
Office of Hawaiian Affairs
711 Kapiolani Boulevard, Suite 500
Honolulu, Hawaii 96813

20. Jesse Souki, Director
State of Hawaii
Office of Planning
P. O. Box 2359
Honolulu, Hawaii 96804

COUNTY AGENCIES

21. Teena Rasmussen, Coordinator
County of Maui
Office of Economic Development
2200 Main Street, Suite 305
Wailuku, Hawaii 96793

22. Anna Foust, Management Officer
Maui Civil Defense Agency
200 South High Street
Wailuku, Hawaii 96793

23. Jeffrey A. Murray, Fire Chief
County of Maui
Department of Fire and Public Safety
200 Dairy Road
Kahului, Hawaii 96732

24. Jo-Ann Ridao, Director
County of Maui
Department of Housing and Human Concerns
One Main Plaza
2200 Main Street, Suite 546
Wailuku, Hawaii 96793

25. Glenn Correa, Director
County of Maui
Department of Parks and Recreation
700 Halia Nakoa Street, Unit 2
Wailuku, Hawaii 96793

26. William Spence, Director
County of Maui
Department of Planning
2200 Main Street, Suite 315
Wailuku, Hawaii 96793

27. Gary Yabuta, Chief
County of Maui
Police Department
55 Mahalani Street
Wailuku, Hawaii 96793

28. Kyle Ginoza, Director
County of Maui
Department of Environmental Management
One Main Plaza
2200 Main Street, Suite 100
Wailuku, Hawaii 96793

29. Jo Anne Johnson Winer, Director
County of Maui
Department of Transportation
200 South High Street
Wailuku, Hawaii 96793

30. David Taylor, Director
County of Maui
Department of Water Supply
200 South High Street
Wailuku, Hawaii 96793

31. **Kaunoa Senior Center**
County of Maui
401 Alakapa Place
Paia, Hawaii 96779

UTILITIES

32. Dan Takahata, Manager – Engineering
Maui Electric Company, Ltd.
P.O. Box 398
Kahului, Hawaii 96733

33. **Hawaiian Telcom**
60 South Church Street
Wailuku, Hawaii 96793

COMMUNITY ORGANIZATIONS

34. **Maui Country Club**
48 Nonohe Street
Spreckelsville, Maui, Hawaii 96779

35. Ryozo Yamaguchi
Paia Rinzai Zen Mission
120 Alawai Road
Paia, Hawaii 96779

36. **Paia Youth and Cultural Center**
P.O. Box 790999
Paia, Hawaii 96779

NEIL ABERCROMBIE
GOVERNOR

OCT 16 2013

Dean H. Seki
Comptroller

Maria E. Zielinski
Deputy Comptroller

STATE OF HAWAII
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
P.O. BOX 119, HONOLULU, HAWAII 96810-0119

(P)1232.3

OCT 14 2013

Ms. Colleen Suyama, Senior Associate
Munekiyo & Hiraga, Inc.
305 High Street, Suite 104
Wailuku, Hawaii 96793

Dear Ms. Suyama:

Subject: Consultation Request for Proposed North Shore Greenway Phase IV
Paia, Maui, Hawaii; DPW Job No. 12-35
TMK: (2) 3-8-001:071 (por), (2) 3-8-001
Hana Highway Right-of-Way, (2) 2-5-005:046 (por).

Thank you for the opportunity to provide comments for the subject project.

This project does not impact any of the Department of Accounting and General Services' projects or existing facilities in this area, and we have no comments to offer at this time.

If you have any questions, please call me at 586-0400 or your staff may call Mr. Alva Nakamura of the Public Works Division at 586-0488.

Sincerely,

DEAN H. SEKI
Comptroller

c: Mr. Kurt Watanabe, County of Maui, Dept. of Public Works

MUNEKIYO & HIRAGA, INC.

MICHAEL T. MUNEKIYO
PRESIDENT

KARLYNN FUKUDA
EXECUTIVE VICE PRESIDENT

GWEN OHASHI HIRAGA
SENIOR VICE PRESIDENT

MITSURU "MICH" HIRANO
SENIOR VICE PRESIDENT

MARK ALEXANDER ROY
VICE PRESIDENT

March 7, 2014

Dean Seki, Comptroller
Department of Accounting and General Services
State of Hawaii
P.O. Box 119
Honolulu, Hawaii 96810

SUBJECT: Early Consultation Request for Proposed North Shore Greenway–Phase IV, Paia, Maui, Hawaii; DPW Job No. 12-35; TMK (2)3-8-001:071(por.), (2)3-8-001(Hana Highway Right-of-Way), and (2)2-5-005:046(por.) ((P)1232.3)

Dear Mr. Seki:

Thank you for your letter dated October 14, 2013, providing early consultation comments on the Draft Environmental Assessment (EA) for the proposed North Shore Greenway–Phase IV project. On behalf of the County of Maui, Department of Public Works (DPW), we acknowledge that the Department of Accounting and General Services does not have any comments at this time.

Again, thank you for your participation in the Chapter 343, Hawaii Revised Statutes review process. A copy of your letter will be included in the Draft EA. In the meantime, if there are any questions or if additional information is needed, please feel free to contact me at (808) 244-2015.

Very truly yours,

Colleen Suyama, Senior Associate

CS:la
cc: Kurt Watanabe, Department of Public Works
Kirk Tanaka, R.T. Tanaka Engineers, Inc.
K:\DATA\RTTanaka\NS GreenwayPhIV\ec\\Response Letters\DAGS.ltr.docx

MAUI
305 High St., Suite 104 Wailuku, Hawaii 96793
PH: (808)244-2015 FAX: (808)244-8729
OAHU
735 Bishop St., Suite 238 Honolulu, Hawaii 96813 | PH: (808)983-1233
WWW.MHPLANNING.COM

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

OCT 22 2013

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

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

In reply, please refer to:
EMD/CWB

10066PJF.13

October 18, 2013

Ms. Colleen Suyama
Senior Associate
Munekiyo & Hiraga, Inc.
305 High Street, Suite 104
Wailuku, Hawaii 96793

Dear Ms. Suyama:

SUBJECT: Comments on Early Consultation Request for the Proposed North Shore Greenway Phase IV Project Paia, Island of Maui, Hawaii

The Department of Health (DOH), Clean Water Branch (CWB), acknowledges receipt of your letter, dated October 4, 2013, requesting comments on your project. The DOH-CWB has reviewed the subject document and offers these comments. Please note that our review is based solely on the information provided in the subject document and its compliance with the Hawaii Administrative Rules (HAR), Chapters 11-54, and 11-55. You may be responsible for fulfilling additional requirements related to our program. We recommend that you also read our standard comments on our website at: http://health.hawaii.gov/epo/files/2013/05/CWB-standardcomment.pdf.

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

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

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

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

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

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

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

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

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

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

Sincerely,

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

JF:rh

MUNEKIYO & HIRAGA, INC.

MICHAEL T. MUNEKIYO
PRESIDENT

KARLYNN FUKUOA
EXECUTIVE VICE PRESIDENT

GWEN OHASHI HIRAGA
SENIOR VICE PRESIDENT

MITSURU "MICH" HIRANO
SENIOR VICE PRESIDENT

MARK ALEXANDER ROY
VICE PRESIDENT

March 7, 2014

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

SUBJECT: Early Consultation Request for Proposed North Shore Greenway–Phase IV, Paia, Maui, Hawaii; DPW Job No. 12-35; TMK (2)3-8-001:071(por.), (2)3-8-001(Hana Highway Right-of-Way), and (2)2-5-005:046(por.) (10066PJF.13)

Dear Mr. Wong:

Thank you for your letter dated October 18, 2013, providing early consultation comments on the Draft Environmental Assessment (EA) for the proposed North Shore Greenway–Phase IV project. As recommended, the Department of Public Works (DPW) and design consultant have reviewed the standard comments on your website and applicable comments will be complied with. Further, on behalf of the DPW we offer the following information, which addresses your comments in the order listed in your letter:

1. We acknowledge that the project must meet the Department of Health (DOH) water quality requirements of Hawaii Administrative Rules (HAR), Chapter 11-54.

2. As may be required, a National Pollutant Discharge Elimination System (NPDES) permit application will be submitted to the DOH for approval prior to the initiation of construction.

3. We acknowledge that work in, over, or under waters of the United States may require additional permitting from the Army Corps of Engineers (ACE), Regulatory Branch. In this regard, the DPW has initiated coordination with the ACE.

MAUI
305 High St., Suite 104 Wailuku, Hawaii 96793
PH: (808)244-2015 FAX: (808)244-8729
OAHU
735 Bishop St., Suite 238 Honolulu, Hawaii 96813 | PH: (808)983-1233
WWW.MHPLANNING.COM

4. We acknowledge the project must comply with the State's Water Quality Standards and non-compliance may be subject to penalties of $25,000.00 per day per violation.

Again, thank you for your participation in the Chapter 343, Hawaii Revised Statutes review process. A copy of your letter will be included in the Draft EA. In the meantime, if there are any questions or if additional information is needed, please feel free to contact me at (808) 244-2015.

Very truly yours,

Colleen Suyama, Senior Associate

CS:la
cc: Kurt Watanabe, Department of Public Works
Kirk Tanaka, R.T. Tanaka Engineers, Inc.
K:\DATA\RTTanaka\NS GreenwayPhIV\ecl\Response Letters\DOH CWB.ltr.docx

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

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

LORRIN W. PANG, M.D., M.P.H.
DISTRICT HEALTH OFFICER

STATE OF HAWAII
DEPARTMENT OF HEALTH
MAUI DISTRICT HEALTH OFFICE
54 HIGH STREET
WAILUKU, HAWAII 96793

October 16, 2013

Ms. Colleen Suyama
Senior Associate
Munekiyo & Hiraga, Inc.
305 High Street, Suite 104
Wailuku, Hawaii 96793

Dear Ms. Suyama:

Subject: **Early Consultation Request for Proposed North Shore Greenway Phase IV, Paia, Maui, HI; DPW Job No. 12-35; TMK (2) 3-8-001:071 (por.), (2) 3-8-001:(Hana Highway Right of Way, (2) 2-5-005:046 (por.)**

Thank you for the opportunity to review this project. We have the following comments to offer:

1. National Pollutant Discharge Elimination System (NPDES) permit coverage maybe required for this project. The Clean Water Branch should be contacted at 808 586-4309.

2. The noise created during the construction phase of the project may exceed the maximum allowable levels as set forth in Hawaii Administrative Rules (HAR), Chapter 11-46, "Community Noise Control." A noise permit may be required and should be obtained before the commencement of work. The Indoor & Radiological Health Branch should be contacted at 808 586-4700.

It is strongly recommended that the Standard Comments found at the Department's website: www.state.hi.us/health/environmental/env-planning/landuse/landuse.html be reviewed and any comments specifically applicable to this project should be adhered to.

Should you have any questions, please call me at 808 984-8230 or E-mail me at patricia.kitkowski@doh.hawaii.gov.

Sincerely,

Patti Kitkowski

Patti Kitkowski
District Environmental Health Program Chief
c:EPO

MUNEKIYO & HIRAGA, INC.

MICHAEL T. MUNEKIYO
PRESIDENT

KARLYNN FUKUDA
EXECUTIVE VICE PRESIDENT

GWEN OHASHI HIRAGA
SENIOR VICE PRESIDENT

MITSURU "MICH" HIRANO
SENIOR VICE PRESIDENT

MARK ALEXANDER ROY
VICE PRESIDENT

March 7, 2014

Ms. Patti Kitkowski
Maui District Health Office
Department of Health
State of Hawaii
54 High Street
Wailuku, Hawaii 96793

SUBJECT: Early Consultation Request for Proposed North Shore Greenway–Phase IV, Paia, Maui, Hawaii; DPW Job No. 12-35; TMK (2)3-8-001:071(por.), (2)3-8-001(Hana Highway Right-of-Way), and (2)2-5-005:046(por.)

Dear Ms. Kitkowski:

Thank you for your letter dated October 16, 2013, providing early consultation comments on the Draft Environmental Assessment (EA) for the proposed North Shore Greenway–Phase IV project. On behalf of the County of Maui, Department of Public Works (DPW), we offer the following information in response to your comments:

1. As may be required, a National Pollutant Discharge Elimination System (NPDES) permit application will be submitted to the Department of Health.

2. As may be required, in compliance with Chapter 11-46 "Community Noise Control" a noise permit will be obtained prior to the commencement of work.

3. The DPW will comply with applicable comments and conditions found at the Department's website.

MAUI
305 High St., Suite 104 Wailuku, Hawaii 96793
PH: (808)244-2015 FAX: (808)244-8729
OAHU
735 Bishop St., Suite 238 Honolulu, Hawaii 96813 | PH: (808)983-1233
WWW.MHPLANNING.COM

Again, thank you for your participation in the Chapter 343, Hawaii Revised Statutes review process. A copy of your letter will be included in the Draft EA. In the meantime, if there are any questions or if additional information is needed, please feel free to contact me at 244-2015.

Very truly yours,

Colleen Suyama, Senior Associate

CS:la
cc: Kurt Watanabe, Department of Public Works
Kirk Tanaka, R.T. Tanaka Engineers, Inc.
K:\DATA\RTTanaka\NS GreenwayPhIV\ecl\Response Letters\DOH Maui.ltr.docx

OCT 21 2013

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

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

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

In reply, please refer to:
File:

13-191
Greenway Phase IV

October 14, 2013

Ms. Colleen Suyama
Munekiyo & Hiraga, Inc.
305 High Street, Suite 104
Wailuku, Hawaii 96793

Dear Ms. Suyama:

SUBJECT: EARLY CONSULTATION REQUEST FOR PROPOSED NORTH SHORE GREENWAY PHASE IV, PAIA, MAUI, HAWAII; DPW JOB NO. 12-35; TMK: (2) 3-8-001: 071 (POR.), (2) 3-8-001: (HANA HIGHWAY RIGHT-OF-WAY), (2) 2-5-005: 046 (POR.)

The Department of Health (DOH), Environmental Planning Office (EPO), acknowledges receipt of your letter dated October 4, 2013. Thank you for allowing us to review and comment on the subject document. The document was routed to DOH's Maui District Health Office. They will provide specific comments to you if necessary. EPO recommends that you review the Standard Comments found on our website: http://health.hawaii.gov/epo/home/landuse-planning-review-program/. You are required to adhere to all Standard Comments specifically applicable to this application.

EPO appreciates your work to create healthy, active, and sustainable communities.

We wish to receive notice of the environmental assessment's availability when it is completed. We request a written response confirming receipt of this letter and any other letters you receive from DOH in regards to this submission. You may mail your response to: 919 Ala Moana Blvd., Ste. 312, Honolulu, Hawaii 96814. However, we would prefer an email submission to epo@doh.hawaii.gov. We anticipate that our letter(s) and your response(s) will be included in the final document. If you have any questions, please contact me at (808) 586-4337.

Mahalo,

Laura Leialoha Phillips McIntyre, AICP
Manager, Environmental Planning Office

MUNEKIYO & HIRAGA, INC.

MICHAEL T. MUNEKIYO
PRESIDENT

KARLYNN FUKUDA
EXECUTIVE VICE PRESIDENT

GWEN OHASHI HIRAGA
SENIOR VICE PRESIDENT

MITSURU "MICH" HIRANO
SENIOR VICE PRESIDENT

MARK ALEXANDER ROY
VICE PRESIDENT

March 7, 2014

Ms. Laura Leialoha Phillips McIntyre, AICP
Environmental Planning Office
Department of Health
State of Hawaii
P.O. Box 3378
Honolulu, Hawaii 96801

SUBJECT: Early Consultation Request for Proposed North Shore Greenway–Phase IV, Paia, Maui, Hawaii; DPW Job No. 12-35; TMK (2)3-8-001:071(por.), (2)3-8-001(Hana Highway Right-of-Way), and (2)2-5-005:046(por.) (13-191 Greenway Phase IV)

Dear Ms. McIntyre:

Thank you for your letter dated October 14, 2013, providing early consultation comments on the Draft Environmental Assessment (EA) for the proposed North Shore Greenway–Phase IV project. On behalf of the County of Maui, Department of Public Works (DPW), as recommended, the DPW and design consultant will review the standard comments pertaining to land use and sustainable design to support healthy, active and sustainable communities. The DPW will comply with applicable comments and conditions.

MAUI
305 High St., Suite 104 Wailuku, Hawaii 96793
PH: (808)244-2015 FAX: (808)244-8729
OAHU
735 Bishop St., Suite 238 Honolulu, Hawaii 96813 | PH: (808)983-1233
WWW.MHPLANNING.COM

Again, thank you for your participation in the Chapter 343, Hawaii Revised Statutes review process. A copy of your letter will be included in the Draft EA. In the meantime, if there are any questions or if additional information is needed, please feel free to contact me at (808) 244-2015.

Very truly yours,

Colleen Suyama, Senior Associate

CS:la
cc: Kurt Watanabe, Department of Public Works
Kirk Tanaka, R.T. Tanaka Engineers, Inc.
K:\DATA\RTTanaka\NS GreenwayPhIV\ecl\Response Letters\DOH EPO.ltr.docx

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

WILLIAM J. AILA, JR.
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

October 25, 2013

Munekiyo & Hiraga, Inc.
Attention: Ms. Colleen Suyama, Senior Associate
305 High Street, Suite 104
Wailuku, Hawaii 96793

via email: colleen@mhplanning.com

Dear Ms. Suyama;

SUBJECT: Early Consultation Request for Proposed North Shore Greenway Phase IV, DPW Job No. 12-35

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

At this time, the DLNR has no comments to offer on the subject matter. If you have any questions, please feel free to call Lydia Morikawa at 587-0410. Thank you.

Sincerely,

Russell Y. Tsuji
Land Administrator

cc: Central Files

OCT 2 8 2013

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

WILLIAM J. AILA, JR.
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

October 28, 2013

Munekiyo & Hiraga, Inc.
Attention: Ms. Colleen Suyama, Senior Associate via email: colleen@mhplanning.com
305 High Street, Suite 104
Wailuku, Hawaii 96793

Dear Ms. Suyama;

SUBJECT: Early Consultation Request for Proposed North Shore Greenway Phase IV, DPW Job No. 12-35

Thank you for the opportunity to review and comment on the subject matter. In addition to the comments previously sent you on October 25, 2013, enclosed are comments from the Engineering Division on the subject matter. Should you have any questions, please feel free to call Lydia Morikawa at 587-0410. Thank you.

Sincerely,

Russell Y. Tsuji
Land Administrator

Enclosure(s)
cc: Central Files

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

'13 OCT 11 PM 12:22 ENGINEERING

WILLIAM J. AILA, JR.
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

October 9, 2013

RECEIVED
LAND DIVISION
2013 OCT 25 PM 2:55
DEPT. OF LAND & NATURAL RESOURCES
STATE OF HAWAII

MEMORANDUM

TO: FR:

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

FROM: TO:
SUBJECT: Russell Y. Tsuji, Land Administrator
Early Consultation Request for Proposed North Shore Greenway Phase IV, DPW Job No. 12-35
LOCATION: Paia, Island of Maui; TMK: (2) 3-8-001 & 071 (por.), (2) 2-5-005:046 (por.)
APPLICANT: County of Maui, Department of Public Works

Transmitted for your review and comment on the above referenced document. We would appreciate your comments on this document. Please submit any comments by October 23, 2013.

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

Attachments

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

Signed:
Print Name: Cary S. Chang, Chief Engineer
Date: 10/25/13

cc: Central Files

DEPARTMENT OF LAND AND NATURAL RESOURCES
ENGINEERING DIVISION

LD/LydiaMorikawa
Ref.:NorthShoreGreenwayEarlyConsultation
Maui: 611

COMMENTS

( ) We confirm that the project site, according to the Flood Insurance Rate Map (FIRM), is located in Flood Zone ___.

(X) Please take note that project site, according to the Flood Insurance Rate Map (FIRM), is located in Zones X and AE Floodway (AEF). The National Flood Insurance Program does not regulate activities under Zone X, however, it does regulate developments AEF as indicated in bold letters below.

( ) Please note that the correct Flood Zone Designation for the project site according to the Flood Insurance Rate Map (FIRM) is ___.

(X) Please note that the project must comply with the rules and regulations of the National Flood Insurance Program (NFIP) presented in Title 44 of the Code of Federal Regulations (44CFR), whenever development within a Special Flood Hazard Area is undertaken. If there are any questions, please contact the State NFIP Coordinator, Ms. Carol Tyau-Beam, of the Department of Land and Natural Resources, Engineering Division at (808) 587-0267.

Please be advised that 44CFR indicates the minimum standards set forth by the NFIP. Your Community's local flood ordinance may prove to be more restrictive and thus take precedence over the minimum NFIP standards. If there are questions regarding the local flood ordinances, please contact the applicable County NFIP Coordinators below:

( ) Mr. Mario Siu Li at (808) 768-8098 and Ms. Ardis Shaw-Kim at (808) 768-8296 of the City and County of Honolulu, Department of Planning and Permitting.

( ) Mr. Frank DeMarco at (808) 961-8042 of the County of Hawaii, Department of Public Works.

(X) Ms. Carolyn Cortez at (808) 270-7813 of the County of Maui, Department of Planning.

( ) Mr. Stanford Iwamoto at (808) 241-4884 of the County of Kauai, Department of Public Works.

( ) The applicant should include water demands and infrastructure required to meet project needs. Please note that projects within State lands requiring water service from the Honolulu Board of Water Supply system will be required to pay a resource development charge, in addition to Water Facilities Charges for transmission and daily storage.

( ) The applicant should provide the water demands and calculations to the Engineering Division so it can be included in the State Water Projects Plan Update.

(X) Additional Comments: Because portion of this project is being conducted in a flood zone designated as AEF, strict adherence to the NFIP regulations, specifically 44CFR §60.3(d)(3), must be followed.

( ) Other: _____

_____

Should you have any questions, please call Ms. Suzie S. Agraan of the Planning Branch at 587-0258.

Signed: _____
CARTY S. CHANG, CHIEF ENGINEER

Date: 10/25/19

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

WILLIAM J. AILA, JR.
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

November 14, 2013

Munekiyo & Hiraga, Inc.
Attention: Ms. Colleen Suyama, Senior Associate via email: colleen@mhplanning.com
305 High Street, Suite 104
Wailuku, Hawaii 96793

Dear Ms. Suyama;

SUBJECT: Early Consultation Request for Proposed North Shore Greenway Phase IV, DPW Job No. 12-35

Thank you for the opportunity to review and comment on the subject matter. In addition to the comments previously sent you on October 25 and October 28, 2013, enclosed are comments from the Commission on Water Resources Management on the subject matter. Should you have any questions, please feel free to call Lydia Morikawa at 587-0410. Thank you.

Sincerely,

Russell Y. Tsuji
Land Administrator

Enclosure(s)
cc: Central Files

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

WILLIAM J. AILA, JR
CHAIRPERSON

WILLIAM D. BALFOUR, JR.
KAMANA BEAMER
LORETTA J. FUDDY, A.C.S.W., M.P.H.
MILTON D. PAVAO
JONATHAN STARR
TED YAMAMURA

WILLIAM M. TAM
DEPUTY DIRECTOR

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
P.O. BOX 621
HONOLULU, HAWAII 96809

November 5, 2013

RECEIVED
LAND DIVISION
2013 NOV 13 PM 1:44
DEPT. OF LAND & NATURAL RESOURCES
STATE OF HAWAII

TO: Russell Tsuji, Administrator
Land Division

FROM: William M. Tam, Deputy Director
Commission on Water Resource Management

SUBJECT: Paia North Shore Greenway Early Consult for EA, Paia, Maui

FILE NO.: N/A
TMK NO.: (2) 3-8-001 & 071 (por), (2) 2-5-005:046 (por)

Thank you for the opportunity to review the subject document. The Commission on Water Resource Management (CWRM) is the agency responsible for administering the State Water Code (Code). Under the Code, all waters of the State are held in trust for the benefit of the citizens of the State, therefore, all water use is subject to legally protected water rights. CWRM strongly promotes the efficient use of Hawaii's water resources through conservation measures and appropriate resource management. For more information, please refer to the State Water Code, Chapter 174C, Hawaii Revised Statutes, and Hawaii Administrative Rules, Chapters 13-167 to 13-171. These documents are available via the Internet at http://www.hawaii.gov/dlnr/cwrm.

Our comments related to water resources are checked off below.

☒ 1. We recommend coordination with the county to incorporate this project into the county's Water Use and Development Plan. Please contact the respective Planning Department and/or Department of Water Supply for further information.

☐ 2. We recommend coordination with the Engineering Division of the State Department of Land and Natural Resources to incorporate this project into the State Water Projects Plan.

☐ 3. We recommend coordination with the Hawaii Department of Agriculture (HDOA) to incorporate the reclassification of agricultural zoned land and the redistribution of agricultural resources into the State's Agricultural Water Use and Development Plan (AWUDP). Please contact the HDOA for more information.

☐ 4. We recommend that water efficient fixtures be installed and water efficient practices implemented throughout the development to reduce the increased demand on the area's freshwater resources. Reducing the water usage of a home or building may earn credit towards Leadership in Energy and Environmental Design (LEED) certification. More information on LEED certification is available at http://www.usgbc.org/leed. A listing of fixtures certified by the EPA as having high water efficiency can be found at http://www.epa.gov/watersense/.

☒ 5. 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. Stormwater management BMPs may earn credit toward LEED certification. More information on stormwater BMPs can be found at http://hawaii.gov/dbedt/czm/initiative/lid.php.

☒ 6. We recommend the use of alternative water sources, wherever practicable.

☐ 7. We recommend participating in the Hawaii Green Business Program, that assists and recognizes businesses that strive to operate in an environmentally and socially responsible manner. The program description can be found online at http://energy.hawaii.gov/programs/achieving-efficiency/green-business-program

☒ 8. We recommend adopting landscape irrigation conservation best management practices endorsed by the Landscape Industry Council of Hawaii. These practices can be found online at http://landscapehawaii.org/_library/documents/lich_irrigation_conservation_bmps.pdf

☐ 9. 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.

Permits required by CWRM:
Additional information and forms are available at http://hawaii.gov/dlnr/cwrm/info_permits.htm.

☐ 10. The proposed water supply source for the project is located in a designated water management area, and a Water Use Permit is required prior to use of water. The Water Use Permit may be conditioned on the requirement to use dual line water supply systems for new industrial and commercial developments.

☐ 11. A Well Construction Permit(s) is (are) required before any well construction work begins.

☐ 12. A Pump Installation Permit(s) is (are) required before ground water is developed as a source of supply for the project.

☐ 13. There is (are) well(s) located on or adjacent to this project. If wells are not planned to be used and will be affected by any new construction, they must be properly abandoned and sealed. A permit for well abandonment must be obtained.

☐ 14. Ground water withdrawals from this project may affect streamflows, which may require an instream flow standard amendment.

☐ 15. A Stream Channel Alteration Permit(s) is (are) required before any alteration(s) can be made to the bed and/or banks of a stream channel.

☐ 16. A Stream Diversion Works Permit(s) is (are) required before any stream diversion works is (are) constructed or altered.

☐ 17. A Petition to Amend the Interim Instream Flow Standard is required for any new or expanded diversion(s) of surface water.

☒ 18. The planned source of water for this project has not been identified in this report. Therefore, we cannot determine what permits or petitions are required from our office, or whether there are potential impacts to water resources.

☒ OTHER:
Unable to comment; what is "greenway"? Any water use or impact?

If there are any questions, please contact Charley Ice at 587-0218.

10/17/13

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

WILLIAM J. AILA, JR.
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

October 9, 2013

2013 OCT 11 P 2:58

MEMORANDUM

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

FROM: Russell Y. Tsuji, Land Administrator
SUBJECT: Early Consultation Request for Proposed North Shore Greenway Phase IV, DPW Job No. 12-35
LOCATION: Paia, Island of Maui; TMK: (2) 3-8-001 & 071 (por.), (2) 2-5-005:046 (por.)
APPLICANT: County of Maui, Department of Public Works

Transmitted for your review and comment on the above referenced document. We would appreciate your comments on this document. Please submit any comments by October 23, 2013.

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

Attachments

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

Signed: _____
Print Name: _____
Date: _____

cc: Central Files

MUNEKIYO & HIRAGA, INC.

MICHAEL T. MUNEKIYO
PRESIDENT

KARLYNN FUKUDA
EXECUTIVE VICE PRESIDENT

GWEN OHASHI HIRAGA
SENIOR VICE PRESIDENT

MITSURU "MICH" HIRANO
SENIOR VICE PRESIDENT

MARK ALEXANDER ROY
VICE PRESIDENT

March 7, 2014

Russell Y. Tsuji, Land Administrator
Department of Land and Natural Resources
State of Hawaii
P.O. Box 621
Honolulu, Hawaii 96809

SUBJECT: Early Consultation Request for Proposed North Shore Greenway–Phase IV, Paia, Maui, Hawaii; DPW Job No. 12-35; TMK (2)3-8-001:071(por.), (2)3-8-001(Hana Highway Right-of-Way), and (2)2-5-005:046(por.)

Dear Mr. Tsuji:

Thank you for your letters dated October 25 and 28, 2013 and November 14, 2013, providing early consultation comments on the Draft Environmental Assessment (EA) for the proposed North Shore Greenway–Phase IV project. On behalf of the County of Maui, Department of Public Works (DPW), we acknowledge the following:

Engineering Division

1. The project site is located in Zones X and AE of the Flood Insurance Rate Map.

2. The project will comply with applicable provisions of the National Flood Insurance Program.

Commission on Water Resources Management

1. The project does not need to be incorporated into the County's Water Use and Development Plan since the pedestrian and bicycle path does not involve long-term use of water for irrigation purposes. Landscaping is limited to grass in exposed areas of the construction limits and once established, the grass will not require ongoing irrigation for its upkeep.

MAUI
305 High St., Suite 104 Wailuku, Hawaii 96793
PH: (808)244-2015 FAX: (808)244-8729
OAHU
735 Bishop St., Suite 238 Honolulu, Hawaii 96813 | PH: (808)983-1233
WWW.MHPLANNING.COM

2. As recommended best management practices for stormwater management will be implemented to minimize impacts of the project.

3. Consideration will be given to using a water tank with reclaimed water from the County's Wailuku-Kahului Wastewater Reclamation Facility to temporarily irrigate the grass.

4. As previously noted, landscaping is limited to grass in exposed areas of the construction limits.

5. As previously noted, there will be no long-term use of water for irrigation purposes.

6. The term "greenway" is used to describe the pedestrian/bike path separated from the roadway pavement by a grassed area involving no long-term use of water for irrigation purposes.

Again, thank you for your participation in the Chapter 343, Hawaii Revised Statutes review process. A copy of your comment letter will be included in the Draft EA. In the meantime, if there are any questions or if additional information is needed, please feel free to contact me at (808) 244-2015.

Very truly yours,

Colleen Suyama, Senior Associate

CS:la
cc: Kurt Watanabe, Department of Public Works
Kirk Tanaka, R.T. Tanaka Engineers, Inc.
K:\DATA\RTTanaka\NS GreenwayPhIV\ecl\Response Letters\DLNR.ltr.docx

NEIL ABERCROMBIE
GOVERNOR

GENEVIEVE SALMONSON
INTERIM DIRECTOR

STATE OF HAWAI'I
OFFICE OF ENVIRONMENTAL QUALITY CONTROL
Department of Health
235 South Beretania Street, Suite 702
Honolulu, Hawai'i 96813
Telephone (808) 586-4185
Facsimile (808) 586-4186
Email: oeqchawaii@doh.hawaii.gov

October 21, 2013

Colleen Suyama, Senior Associate
Munekiyo & Hiraga, Inc.
305 High Street, Suite 104
Wailuku, Hawaii 96793

SUBJECT: Early consultation Request for Proposed North Shore Greenway Phase IV, Paia, Maui, Hawaii; DPW Job No. 12-35; TMK (2)3-8-001:071 (por.), (2)3-8-001:(Hana Highway Right-of-Way), (2)2-5-005:045 (por.)

Dear Ms. Suyama:

The Office of Environmental Quality Control is in receipt of your October 4, 2013 letter about the subject project, requesting comments in accordance with Chapter 11-200, Hawai'i Administrative Rules (HAR).

We understand that the County of Maui, Department of Public Works (DPW) proposes to construct Phase IV of the North Shore Greenway, a seven-mile long path for both pedestrian and bike use that stretches from Paia to Kahului. The use of county funds and lands will require the preparation of an environmental assessment, pursuant to Chapter 343, Hawai'i Revised Statutes.

According to your letter, the North Shore Greenway is seven miles long. However, a review of Figure 1 and Figure 2, attached to your letter, shows that the project area is less than a mile in length.

OEQC recommends that whatever option DPW uses to meet Chapter 343, Hawai'i Revised Statutes (HRS), all seven miles of the North Shore Greenway must be considered as one project.

Section 11-200-7, HAR, Multiple or Phased Applicant or Agency Action states that, "A group of actions proposed by an agency or an applicant shall be treated as a single action when:

A. The component actions are phases or increments of a larger total undertaking;
B. An individual project is a necessary precedent for a larger project;
C. An individual project represents a commitment to a larger project; or
D. The actions in question are essentially identical and a single statement will adequately address the impacts of each individual action and those of the group of actions as a whole."

Clearly, the project limits identified and shown on Figures 1 and 2 is only a part of the seven-mile pedestrian and bike path. Therefore, please discuss all seven miles of the path instead of just a section of the path in the environmental assessment. If sections of the path have already been completed, include those in the EA and discuss how those path sections (if any) cleared Chapter 343 requirements.

There are three options DPW can take to fulfill Chapter 343 requirements:

1. Exemption Declaration;
2. Finding of No Significant Impact (FONSI) supported by a Final Environmental Assessment (FEA); or
3. Mayoral acceptance of a Final Environmental Impact Statement.

Please discuss all approvals and permits the project requires, as well as a discussion of impacts and mitigation, besides the other content requirements in the EA.

Thank you very much for the opportunity to provide comments to subject project. Feel free to contact Herman Tuiolosega at (808) 586-4185, if you have further questions.

Sincerely,

GENEVIEVE SALMONSON
Interim Director

ALAN M. ARAKAWA
Mayor

DAVID C. GOODE
Director

ROWENA M. DAGDAG-ANDAYA
Deputy Director

Telephone: (808) 270-7745
Fax: (808) 270-7975

COUNTY OF MAUI
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION
200 SOUTH HIGH STREET
WAILUKU, MAUI, HAWAII 96793

GLEN A. UENO, P.E., P.L.S.
Development Services Administration

CARY YAMASHITA, P.E.
Engineering Division

BRIAN HASHIRO, P.E.
Highways Division

March 7, 2014

Jessica Wooley, Acting Director
Office of Environmental Quality Control
Department of Health
State of Hawaii
235 South Beretania Street, Suite 702
Honolulu, Hawaii 96813

SUBJECT: Early Consultation Request for Proposed North Shore Greenway–Phase IV, Paia, Maui, Hawaii; DPW Job No. 12-35; TMK (2)3-8-001:071(por.), (2)3-8-001(Hana Highway Right-of-Way), and (2)2-5-005:046(por.)

Dear Ms. Wooley:

Thank you for your letter dated October 21, 2013, providing early consultation comments on the Draft Environmental Assessment (EA) for the proposed North Shore Greenway–Phase IV project.

We note your comment relative to the relationship of the North Shore Greenway-Phase IV project to the overall North Shore Greenway project. The Phase IV component of the North Shore Greenway is the final phase of construction of the overall North Shore Greenway. The initial phases of the project were constructed and completed over a number of years, between 1996 and 2010. Those previous phases were implemented incrementally, based on the availability of County funding. In this regard, while there was no guarantee that the project would be completed as originally conceived, as funds became available over the 14 year timeframe, our department undertook design and construction to extend the length of the Greenway.

Each phase was evaluated with respect to its scope and its applicability to Chapter 343, Hawaii Revised Statutes (HRS). For example, the last segment (Phase III) of the North Shore Greenway, which traverses through H.A. Baldwin Park, was constructed in 2010when funding became available. A Finding of No Significant Impact (FONSI) was determined for the project on August 2, 2007.

We hope that the implementation circumstances of the project clarify the focus of the subject EA to the Phase IV component only.

Thank you for your participation in the Chapter 343, HRS review process. A copy of your comment letter will be included in the Draft EA. In the meantime, if there are any questions or if additional information is needed, please feel free to contact our consultant, Colleen Suyama of Munekiyo & Hiraga, Inc., at (808) 244-2015.

Sincerely,

DAVID C. GOODE
Director of Public Works

cc: Colleen Suyama, Munekiyo & Hiraga, Inc.
Kirk Tanaka, R.T. Tanaka Engineers, Inc.
Kurt Watanabe, Engineering Division

DG/KW:gq(ED14-0401)

S:\ENG\ENGTRAF\12-35 North Shore Greenway\EA Documents\OEQC.ltr.docx

OCT 28 2013

OFFICE OF PLANNING
STATE OF HAWAII

NEIL ABERCROMBIE
GOVERNOR

JESSE K. SOUKI
DIRECTOR
OFFICE OF PLANNING

235 South Beretania Street, 6th Floor, Honolulu, Hawaii 96813
Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804

Telephone: (808) 587-2846
Fax: (808) 587-2824
Web: http:/planning.hawaii.gov/

Ref. No. P-14147

October 23, 2013

Ms. Colleen Suyama
Munekiyo & Hiraga, Inc.
305 High Street, Suite 104
Wailuku, Hawaii 96793

Dear Ms. Suyama:

Subject: Early Consultation Request for Proposed North Shore Greenway Phase IV, Paia, Maui, TMK: (2) 3-8-001:071 (por), (2) 3-8-001 (Hana Highway Right-of-Way), and (2) 2-5-005:046 (por)

Thank you for the opportunity to provide comments on the North Shore Greenway pedestrian and bike path project being proposed by the County of Maui Department of Public Works.

We have reviewed the documents submitted to our office by letter dated October 4, 2013, and have the following comments to offer.

1. The entire state is defined to be within the Coastal Zone Management Area, see Hawaii Revised Statutes (HRS) §205A-1 (definition of "coastal zone management area"). The Draft Environmental Assessment (Draft EA) should include a discussion of the proposed project's ability to meet the objectives and policies set forth in HRS §205A-2.

2. A portion of the proposed project may lie within the Special Management Area (SMA) delineated by the County of Maui. Typically the planning departments of the various county administrations are charged with assessing the requirements for SMA use and Shoreline Setback Variances. Please consult with the County of Maui Planning Department on where your project lies within the designated SMA, and whether an SMA permit is required for this project.

3. CZM federal consistency review by the Hawaii CZM Program may be required if a Department of the Army Permit from the U.S. Army Corps of Engineers is required for any portion of the project.

4. The construction project may have nonpoint pollution impacts on coastal waters. Please review the Hawaii Watershed Guidance, which provides a summary and links to management measures that may be implemented to minimize coastal nonpoint pollution impact. Specifically, please examine the section on "Urban Areas" (page 109). The *Watershed Guidance* can be viewed or downloaded from the Office of Planning website at http://files.hawaii.gov/dbedt/op/czm/initiative/nonpoint/HIWatershedGuidanceFinal.pdf.

5. The Draft EA should include the Coastal Zone Management Act, HRS Chapter 205A, in the list of "Relationship to Land Use Plans, Policies, and Controls."

6. The Draft EA would benefit from the depiction of an area map that displays the entire length of the planned pedestrian/bike path, including implementation schedule and any associated facilities.

If you have any questions regarding this comment letter, please contact Josh Hekekia of our Hawaii CZM Program at (808) 587-2845.

Sincerely,

Jesse K. Souki
Director

MUNEKIYO & HIRAGA, INC.

MICHAEL T. MUNEKIYO
PRESIDENT

KARLYNN FUKUDA
EXECUTIVE VICE PRESIDENT

GWEN OHASHI HIRAGA
SENIOR VICE PRESIDENT

MITSURU "MICH" HIRANO
SENIOR VICE PRESIDENT

MARK ALEXANDER ROY
VICE PRESIDENT

March 7, 2014

Jesse K. Souki, Director
Office of Planning
State of Hawaii
P.O. Box 2359
Honolulu, Hawaii 96804

SUBJECT: Early Consultation Request for Proposed North Shore Greenway–Phase IV, Paia, Maui, Hawaii; DPW Job No. 12-35; TMK (2)3-8-001:071(por.), (2)3-8-001(Hana Highway Right-of-Way), and (2)2-5-005:046(por.) (P-14147)

Dear Mr. Souki:

Thank you for your letter dated October 23, 2013, providing early consultation comments on the Draft Environmental Assessment (EA) for the proposed North Shore Greenway–Phase IV project. On behalf of the County of Maui, Department of Public Works (DPW), we offer the following information in response to your comments:

1. We acknowledge that the entire state is defined to be within the Coastal Zone Management (CZM) Area. Included in the Draft EA will be a discussion of the proposed project's relationship to the objectives and policies set forth in Hawaii Revised Statutes (HRS), Chapter 205A-2.

2. We understand that a portion of the proposed project lies within the Special Management Area (SMA) delineated by the County of Maui. A SMA permit application will be prepared for filing with the Planning Department.

3. We acknowledge that a CZM federal consistency review by the Hawaii CZM Program may be required if a Department of the Army Permit from the U.S. Army Corp of Engineers is required. Coordination with the Department of the Army has been initiated.

4. We acknowledge that the construction project may have nonpoint pollution impacts on coastal waters. We have forwarded your comments to the project's

MAUI
305 High St., Suite 104 Wailuku, Hawaii 96793
PH: (808)244-2015 FAX: (808)244-8729
OAHU
735 Bishop St., Suite 238 Honolulu, Hawaii 96813 | PH: (808)983-1233
WWW.MHPLANNING.COM

civil engineer for consideration of the Hawaii Watershed Guidance management measures.

5. The Draft EA will include the CZM Act, HRS Chapter 205A, in the list of "Relationship to Land Use Plans, Policies, and Controls."

6. The Draft EA will include an area map that displays the entire length of the planned pedestrian/bike path and any associated facilities. This is the last phase of the North Shore Greenway.

Again, thank you for your participation in the Chapter 343, HRS review process. A copy of your comment letter will be included in the Draft EA. In the meantime, if there are any questions or if additional information is needed, please feel free to contact me at (808) 244-2015.

Very truly yours,

Colleen Suyama, Senior Associate

CS:la
cc: Kurt Watanabe, Department of Public Works
Kirk Tanaka, R.T. Tanaka Engineers, Inc.
K:\DATA\RTTanaka\NS GreenwayPhIV\ecl\Response Letters\OP.ltr.docx

OCT 15 2013

ALAN M. ARAKAWA
MAYOR

JEFFREY A. MURRAY
CHIEF

ROBERT M. SHIMADA
DEPUTY CHIEF

COUNTY OF MAUI
DEPARTMENT OF FIRE AND PUBLIC SAFETY
FIRE PREVENTION BUREAU

313 MANEA PLACE + WAILUKU, HAWAII 96793
(808) 244-9161 + FAX (808) 244-1363

October 10, 2013

To : Munekiyo & Hiraga, Inc.
Attention: Colleen Suyama
305 High Street, Suite 104
Wailuku, HI 96793

Re : **Proposed North Shore Greenway Phase IV**
DPW Job No. 12-35
Paia, HI
(2) 3-8-001: 071 (por), (2) 3-8-001: (Hana Hwy. Right-of-Way), (2) 2-5-005: 046 (por)

Dear Colleen:

Thank for the allowing the Department of Fire and Public Safety the opportunity to comment on the referenced subject. At this time, our office does not have any comments.

If there are any questions or comments, please feel free to contact me at 244-9161 ext. 23.

Sincerely,

Paul Haake
Captain, Fire Prevention Bureau

MUNEKIYO & HIRAGA, INC.

MICHAEL T. MUNEKIYO
PRESIDENT

KARLYNN FUKUDA
EXECUTIVE VICE PRESIDENT

GWEN OHASHI HIRAGA
SENIOR VICE PRESIDENT

MITSURU "MICH" HIRANO
SENIOR VICE PRESIDENT

MARK ALEXANDER ROY
VICE PRESIDENT

March 7, 2014

Captain Paul Haake
Fire Prevention Bureau
Department of Fire and Public Safety
County of Maui
313 Manea Place
Wailuku, Hawaii 96793

SUBJECT: Early Consultation Request for Proposed North Shore Greenway–Phase IV, Paia, Maui, Hawaii; DPW Job No. 12-35; TMK (2)3-8-001:071(por.), (2)3-8-001(Hana Highway Right-of-Way), and (2)2-5-005:046(por.)

Dear Captain Haake:

Thank you for your letter dated October 10, 2013, providing early consultation comments on the Draft Environmental Assessment (EA) for the proposed North Shore Greenway–Phase IV project. On behalf of the County of Maui, Department of Public Works (DPW), we acknowledge that the Department of Fire and Public Safety Fire Prevention Bureau does not have any comments at this time.

Again, thank you for your participation in the Chapter 343, Hawaii Revised Statutes review process. A copy of your letter will be included in the Draft EA. In the meantime, if there are any questions or if additional information is needed, please feel free to contact me at 244-2015.

Very truly yours,

Colleen Suyama, Senior Associate

CS:la
cc: Kurt Watanabe, Department of Public Works
Kirk Tanaka, R.T. Tanaka Engineers, Inc.
K:\DATA\RTTanaka\NS GreenwayPhIV\ecl\Response Letters\DFPS.ltr.docx

MAUI
305 High St., Suite 104 Wailuku, Hawaii 96793
PH: (808)244-2015 FAX: (808)244-8729
OAHU
735 Bishop St., Suite 238 Honolulu, Hawaii 96813 | PH: (808)983-1233
WWW.MHPLANNING.COM

OCT 22 2013

DEPARTMENT OF
HOUSING AND HUMAN CONCERNS
HOUSING DIVISION
COUNTY OF MAUI

ALAN M. ARAKAWA
Mayor
JO-ANN T. RIDAO
Director
JAN SHISHIDO
Deputy Director

35 LUNALILO STREET, SUITE 102 • WAILUKU, HAWAII 96793 • PHONE (808) 270-7351 • FAX (808) 270-6284

October 18, 2013

Mr. Michael Munekiyo, AICP, Principal
Munekiyo & Hiraga, Inc.
305 High Street
Wailuku, HI 96793

Dear Mr. Munekiyo:

Subject: Early Consultation Request for Proposed North Shore Greenway Phase IV, Paia, Maui, Hawaii; DPW Job 12-35; TMK (2) 3-8-001: 071 (por.), (2) 3-8-001: (Hana Highway Right-of-Way), (2) 2-5-005: 046 (por.)

The Housing Department has reviewed the request for Early Consultation for the above subject project. Based on our review, we have determined that the subject project is not subject to Chapter 2.96, Maui County Code. At the present time, the Department has no additional comments to offer.

Please call me at 270-7355 if you have any questions.

Sincerely,

Wayde T. Oshiro

WAYDE T. OSHIRO
Housing Administrator

cc: Director of Housing and Human Concerns

MUNEKIYO & HIRAGA, INC.

MICHAEL T. MUNEKIYO
PRESIDENT

KARLYNN FUKUDA
EXECUTIVE VICE PRESIDENT

GWEN OHASHI HIRAGA
SENIOR VICE PRESIDENT

MITSURU "MICH" HIRANO
SENIOR VICE PRESIDENT

MARK ALEXANDER ROY
VICE PRESIDENT

March 7, 2014

Wayde T. Oshiro, Housing Administrator
Department of Housing and
Human Concerns
County of Maui
35 Lunalilo Street, Suite 102
Wailuku, Hawaii 96793

SUBJECT: Early Consultation Request for Proposed North Shore Greenway–Phase IV, Paia, Maui, Hawaii; DPW Job No. 12-35; TMK (2)3-8-001:071(por.), (2)3-8-001(Hana Highway Right-of-Way), and (2)2-5-005:046(por.)

Dear Mr. Oshiro:

Thank you for your letter dated October 18, 2013, providing early consultation comments on the Draft Environmental Assessment (EA) for the proposed North Shore Greenway–Phase IV project. On behalf of the County of Maui, Department of Public Works (DPW), we acknowledge that the Department of Housing and Human Concerns has determined that the project is not subject to Chapter 2.96, Maui County Code and has no additional comments at this time.

Again, thank you for your participation in the Chapter 343, Hawaii Revised Statutes review process. A copy of your letter will be included in the Draft EA. In the meantime, if there are any questions or if additional information is needed, please feel free to contact me at 244-2015.

Very truly yours,

Colleen Suyama, Senior Associate

CS:la
cc: Kurt Watanabe, Department of Public Works
Kirk Tanaka, R.T. Tanaka Engineers, Inc.

MAUI
305 High St., Suite 104 Wailuku, Hawaii 96793
PH: (808)244-2015 FAX: (808)244-8729
OAHU
735 Bishop St., Suite 238 Honolulu, Hawaii 96813 | PH: (808)983-1233
WWW.MHPLANNING.COM

ALAN M. ARAKAWA
Mayor

OCT 23 2013

GLENN T. CORREA
Director

BRIANNE SAVAGE
Deputy Director

(808) 270-7230
FAX (808) 270-7934

DEPARTMENT OF PARKS & RECREATION

700 Hali'a Nakoa Street, Unit 2, Wailuku, Hawaii 96793

October 17, 2013

Colleen Suyama, Senior Associate
Munekiyo & Hiraga, Inc.
305 High Street, Suite 104
Wailuku, HI 96793

Dear Ms. Suyama:

SUBJECT: Early Consultation Request for Proposed North Shore Greenway Phase IV, Paia, Maui, Hawaii; DPW Job No. 12-35; TMK (2)3-8-001:071 (por), (2)3-8-001 (Hana Highway Right-of -Way), (2)2-5-005:046 (por)

Thank you for the opportunity to comment on Early Consultation for the subject development. We have no objections or comment to offer at this time.

Should you have any questions or need of additional information, please feel free to contact me, or Steve Grogan, Capital Improvements Project Coordinator, at 270-6158, or Stephen.Grogan@co.maui.hi.us.

Sincerely,

Brianne Savage
FOR GLENN T. CORREA
Director of Parks & Recreation

c: Robert Halvorson, Chief of Planning & Development

GTC:RH:sg

MUNEKIYO & HIRAGA, INC.

MICHAEL T. MUNEKIYO
PRESIDENT

KARLYNN FUKUDA
EXECUTIVE VICE PRESIDENT

GWEN OHASHI HIRAGA
SENIOR VICE PRESIDENT

MITSURU "MICH" HIRANO
SENIOR VICE PRESIDENT

MARK ALEXANDER ROY
VICE PRESIDENT

March 7, 2014

Glenn T. Correa, Director
Department of Parks & Recreation
County of Maui
700 Hali`a Nakoa Street, Unit 2
Wailuku, Hawaii 96793

SUBJECT: Early Consultation Request for Proposed North Shore Greenway–Phase IV, Paia, Maui, Hawaii; DPW Job No. 12-35; TMK (2)3-8-001:071(por.), (2)3-8-001(Hana Highway Right-of-Way), and (2)2-5-005:046(por.)

Dear Mr. Correa:

Thank you for your letter dated October 17, 2013, providing early consultation comments on the Draft Environmental Assessment (EA) for the proposed North Shore Greenway–Phase IV project. On behalf of the County of Maui, Department of Public Works (DPW), we acknowledge that you have no objections or comments to offer at this time.

Again, thank you for your participation in the Chapter 343, Hawaii Revised Statutes review process. A copy of your comment letter will be included in the Draft EA. In the meantime, if there are any questions or if additional information is needed, please feel free to contact me at 244-2015.

Very truly yours,

Colleen Suyama, Senior Associate

CS:la
cc: Kurt Watanabe, Department of Public Works
Kirk Tanaka, R.T. Tanaka Engineers, Inc.
K:\DATA\RTTanaka\NS GreenwayPhIV\ecl\Response Letters\DPR.ltr.docx

MAUI
305 High St., Suite 104 Wailuku, Hawaii 96793
PH: (808)244-2015 FAX: (808)244-8729
OAHU
735 Bishop St., Suite 238 Honolulu, Hawaii 96813 | PH: (808)983-1233
WWW.MHPLANNING.COM

OCT 25 2013

ALAN M. ARAKAWA
Mayor

KYLE K. GINOZA, P.E.
Director

MICHAEL M. MIYAMOTO
Deputy Director

TRACY TAKAMINE, P.E.
Solid Waste Division

ERIC NAKAGAWA, P.E.
Wastewater Reclamation Division

COUNTY OF MAUI
DEPARTMENT OF
ENVIRONMENTAL MANAGEMENT
2200 MAIN STREET, SUITE 100
WAILUKU, MAUI, HAWAII 96793

October 24, 2013

Ms. Colleen Suyama
Munekiyo & Hiraga, Inc.
305 High Street, Suite 104
Wailuku, Hawaii 96793

Dear Ms. Suyama:

SUBJECT: NORTH SHORE GREENWAY PHASE IV (DPW JOB NO. 12-35) EARLY CONSULTATION
TMK (2) 3-8-001:071 (POR.), 3-8-001 (HANA HIGHWAY RIGHT-OF-WAY), 2-5-005:046 (POR.), PAIA

We reviewed the subject application and have the following comments:

1. Solid Waste Division comments:

   a. None.

2. Wastewater Reclamation Division (WWRD) comments:

   a. Plans shall show the County's existing 10" force main along Hana Highway.

If you have any questions regarding this memorandum, please contact Michael Miyamoto at 270-8230.

Sincerely,

KYLE K. GINOZA, P.E.
Director of Environmental Management

MUNEKIYO & HIRAGA, INC.

MICHAEL T. MUNEKIYO
PRESIDENT

KARLYNN FUKUDA
EXECUTIVE VICE PRESIDENT

GWEN OHASHI HIRAGA
SENIOR VICE PRESIDENT

MITSURU "MICH" HIRANO
SENIOR VICE PRESIDENT

MARK ALEXANDER ROY
VICE PRESIDENT

March 7, 2014

Kyle Ginoza, Director
Department of Environmental Management
County of Maui
2200 Main Street, Suite 100
Wailuku, Hawaii 96793

SUBJECT: Early Consultation Request for Proposed North Shore Greenway–Phase IV, Paia, Maui, Hawaii; DPW Job No. 12-35; TMK (2)3-8-001:071(por.), (2)3-8-001(Hana Highway Right-of-Way), and (2)2-5-005:046(por.)

Dear Mr. Ginoza:

Thank you for your letter dated October 24, 2013, providing early consultation comments on the Draft Environmental Assessment (EA) for the proposed North Shore Greenway–Phase IV project. On behalf of the County of Maui, Department of Public Works (DPW), we offer the following information in response to your comment:

1. Your letter has been forwarded to the DPW and engineering consultant to ensure the project plans identify the County's existing ten (10) inch force main along Hana Highway. Review of the final construction documents will be coordinated with the Department of Environmental Management.

MAUI
305 High St., Suite 104 Wailuku, Hawaii 96793
PH: (808)244-2015 FAX: (808)244-8729
OAHU
735 Bishop St., Suite 238 Honolulu, Hawaii 96813 | PH: (808)983-1233
WWW.MHPLANNING.COM

Again, thank you for your participation in the Chapter 343, Hawaii Revised Statutes review process. A copy of your comment letter will be included in the Draft EA. In the meantime, if there are any questions or if additional information is needed, please feel free to contact me at 244-2015.

Very truly yours,

Colleen Suyama, Senior Associate

CS:la
cc: Kurt Watanabe, Department of Public Works
Kirk Tanaka, R.T. Tanaka Engineers, Inc.
K:\DATA\RTTanaka\NS GreenwayPhIV\ecl\Response Letters\DEM.ltr.docx

NOV 12 2013

ALAN M. ARAKAWA
Mayor

JO ANNE JOHNSON-WINER
Director
MARC I. TAKAMORI
Deputy Director
Telephone (808) 270-7511

DEPARTMENT OF TRANSPORTATION

COUNTY OF MAUI
200 South High Street
Wailuku, Hawaii, USA 96793-2155

October 30, 2013

Ms. Colleen Suyama
Munekiyo & Hiraga Inc.
305 High Street, Suite 104
Wailuku, Maui, Hawaii 96793

Subject: Proposed North Shore Greenway Phase IV, Paia, Maui

Dear Ms. Suyama,

Thank you for the opportunity to comment on this project. We have no comments to make at this time.

Please feel free to contact me if you have any questions.

Sincerely,

Jo Anne J. Winer

Jo Anne Johnson Winer
Director

MUNEKIYO & HIRAGA, INC.

MICHAEL T. MUNEKIYO
PRESIDENT

KARLYNN FUKUDA
EXECUTIVE VICE PRESIDENT

GWEN OHASHI HIRAGA
SENIOR VICE PRESIDENT

MITSURU "MICH" HIRANO
SENIOR VICE PRESIDENT

MARK ALEXANDER ROY
VICE PRESIDENT

March 7, 2014

Jo Anne Johnson Winer, Director
Department of Transportation
County of Maui
200 S. High Street
Wailuku, Hawaii 96793

SUBJECT: Early Consultation Request for Proposed North Shore Greenway–Phase IV, Paia, Maui, Hawaii; DPW Job No. 12-35; TMK (2)3-8-001:071(por.), (2)3-8-001(Hana Highway Right-of-Way), and (2)2-5-005:046(por.)

Dear Ms. Winer:

Thank you for your letter, dated October 30, 2013, providing early consultation comments on the Draft Environmental Assessment (EA) for the proposed North Shore Greenway–Phase IV. On behalf of the County of Maui, Department of Public Works (DPW), we acknowledge that the Department of Transportation has no comments at this time.

Again, thank you for your participation in the Chapter 343, Hawaii Revised Statutes review process. A copy of your letter will be included in the Draft EA. In the meantime, if there are any questions or if additional information is needed, please feel free to contact me at 244-2015.

Very truly yours,

Colleen Suyama, Senior Associate

CS:la
cc: Kurt Watanabe, Department of Public Works
Kirk Tanaka, R.T. Tanaka Engineers, Inc.
K:\DATA\RTTanaka\NS GreenwayPhIV\ecl\Response Letters\MDOT.ltr.docx

MAUI
305 High St., Suite 104 Wailuku, Hawaii 96793
PH: (808)244-2015 FAX: (808)244-8729
OAHU
735 Bishop St., Suite 238 Honolulu, Hawaii 96813 | PH: (808)983-1233
WWW.MHPLANNING.COM

OCT 30 2013

ALAN M. ARAKAWA
Mayor

DAVID TAYLOR, P.E.
Director

PAUL J. MEYER
Deputy Director

DEPARTMENT OF WATER SUPPLY
COUNTY OF MAUI
200 SOUTH HIGH STREET
WAILUKU, MAUI, HAWAII 96793-2155
www.mauiwater.org

October 25, 2013

Ms. Colleen Suyama, Senior Associate
Munekiyo & Hiraga, Inc.
305 High Street, Suite 104
Wailuku, HI 96793

Re: Early Consultation Request for Proposed North Shore Greenway Phase IV, Paia, Maui. DPW Job No. 12-35; TMK 3-8-001:071 (por.), 3-8-001: (Hana Highway Right-of-Way), 2-5-005:046 (por.)

Dear Ms. Suyama:

Thank you for the consulting with the Department of Water Supply in preparation of this Environmental Assessment.

A DWS 8-inch cast iron waterline and a 12-inch ductile iron waterline runs along the North side of Hana Highway from Ulupua Place to the Country Club booster pumps. The 8-inch waterline runs along the rest of the project area to Paia town. Construction plans need to be reviewed by the DWS engineering division. Water valve covers must be lifted to match the finished grade of the roadway.

For questions on construction plans, please contact our Engineering Division at (808) 270-7835.

Sincerely,

David Taylor, Director
emb

cc: engineering

"By Water All Things Find Life"

MUNEKIYO & HIRAGA, INC.

MICHAEL T. MUNEKIYO
PRESIDENT

KARLYNN FUKUDA
EXECUTIVE VICE PRESIDENT

GWEN OHASHI HIRAGA
SENIOR VICE PRESIDENT

MITSURU "MICH" HIRANO
SENIOR VICE PRESIDENT

MARK ALEXANDER ROY
VICE PRESIDENT

March 7, 2014

David Taylor, Director
Department of Water Supply
County of Maui
2200 Main Street
Wailuku, Hawaii 96793

SUBJECT: Early Consultation Request for Proposed North Shore Greenway–Phase IV, Paia, Maui, Hawaii; DPW Job No. 12-35; TMK (2)3-8-001:071(por.), (2)3-8-001(Hana Highway Right-of-Way), and (2)2-5-005:046(por.)

Dear Mr. Taylor:

Thank you for your letter dated October 25, 2013, providing early consultation comments on the Draft Environmental Assessment (EA) for the proposed North Shore Greenway–Phase IV project. On behalf of the County of Maui, Department of Public Works (DPW), we offer the following information in response to your comments:

1. Your comment has been forwarded to the DPW and engineering consultant to ensure the project plans identify the three (3) Department of Water Supply (DWS) waterlines that run along the project alignment. As required, water valve covers will be lifted to match the finished grade of the roadway. We acknowledge that the project plans will need to be reviewed by the DWS Engineering Division.

MAUI
305 High St., Suite 104 Wailuku, Hawaii 96793
PH: (808)244-2015 FAX: (808)244-8729
OAHU
735 Bishop St., Suite 238 Honolulu, Hawaii 96813 | PH: (808)983-1233
WWW.MHPLANNING.COM

Again, thank you for your participation in the Chapter 343, Hawaii Revised Statutes review process. A copy of your comment letter will be included in the Draft EA. In the meantime, if there are any questions or if additional information is needed, please feel free to contact me at 244-2015.

Very truly yours,

Colleen Suyama, Senior Associate

CS:la
cc: Kurt Watanabe, Department of Public Works
Kirk Tanaka, R.T. Tanaka Engineers, Inc.
K:\DATA\RTTanaka\NS GreenwayPhIV\ecl\Response Letters\DWS.ltr.docx

OCT 16 2013

Hawaiian Telcom

October 9, 2013

Munekiyo & Hirqga, Inc.
305 High St., Suite 104
Wailuku, HI 96793

Attention: Colleen Suyama

Subject: Proposed North Shore Greenway, Phase IV, Paia
DPW Job No. 12-35

Dear Colleen,

Thank you for allowing us to review and comment on the subject project. Your plans have been received and put on file.

Hawaiian Telcom, Inc. has no comment, nor do we require any additional information at this time.

Should you require further assistance, please call me at 242-5258.

Sincerely,

Sheri Ann Tihada
OSP Engineer

cc: Gerry Sagucio, Section Manager

BICS File No. 1310-037 (3030)

MUNEKIYO & HIRAGA, INC.

MICHAEL T. MUNEKIYO
PRESIDENT

KARLYNN FUKUDA
EXECUTIVE VICE PRESIDENT

GWEN OHASHI HIRAGA
SENIOR VICE PRESIDENT

MITSURU "MICH" HIRANO
SENIOR VICE PRESIDENT

MARK ALEXANDER ROY
VICE PRESIDENT

March 7, 2014

Sheri Ann Tihada, OSP Engineer
Hawaiian Telcom, Inc.
60 S. Church Street
Wailuku, Hawaii 96793

SUBJECT: Early Consultation Request for Proposed North Shore Greenway–Phase IV, Paia, Maui, Hawaii; DPW Job No. 12-35; TMK (2)3-8-001:071(por.), (2)3-8-001(Hana Highway Right-of-Way), and (2)2-5-005:046(por.)

Dear Ms. Tihada:

Thank you for your letter dated October 9, 2013, providing early consultation comments on the Draft Environmental Assessment (EA) for the proposed North Shore Greenway–Phase IV project. On behalf of the County of Maui, Department of Public Works (DPW), we acknowledge that Hawaiian Telcom, Inc. does not have any comments at this time.

Again, thank you for your participation in the Chapter 343, Hawaii Revised Statutes review process. A copy of your letter will be included in the Draft EA. In the meantime, if there are any questions or if additional information is needed, please feel free to contact me at 244-2015.

Very truly yours,

Colleen Suyama, Senior Associate

CS:la
cc: Kurt Watanabe, Department of Public Works
Kirk Tanaka, R.T. Tanaka Engineers, Inc.
K:\DATA\RTTanaka\NS GreenwayPhIV\ecl\Response Letters\HawaiianTelcom.ltr.docx

MAUI
305 High St., Suite 104 Wailuku, Hawaii 96793
PH: (808)244-2015 FAX: (808)244-8729
OAHU
735 Bishop St., Suite 238 Honolulu, Hawaii 96813 | PH: (808)983-1233
WWW.MHPLANNING.COM

X. REFERENCES

X. REFERENCES

Council of Environmental Quality, Executive Office of the President, Considering Cumulative Impacts Under the National Environmental Policy Act, January 1997.

County of Maui, Maui Island Plan, December 2012.

County of Maui, Office of Economic Development, Maui County Data Book 2012, March 2013.

County of Maui, Paia-Haiku Community Plan, 1995.

County of Maui, Planning Department, Socio-Economic Forecast-The Economic Projection for the Maui County General Plan 2030, June 2006.

County of Maui, The 2030 Countywide Policy Plan, 2010.

County of Maui, Wailuku-Kahului Community Plan, 1987.

Federal Emergency Management Agency, Flood Insurance Rate Map Panel No. 1500030404E and 1500030408E, September 25, 2009.

Handy, E.S. Craighill, The Hawaiian Planter, Bishop Museum Press, Honolulu, 1940.

Handy, E.S. Craighill and E.G. Handy: Native Planters in Old Hawai'i Bishop Museum Bulletin 233, Honolulu, 1972.

Hawaiian Commercial and Sugar Company, 2011.

Munekiyo & Hiraga, Inc., Final Environmental Assessment for the Proposed Heritage Hall, Paia, Maui, Hawaii, August 2010.

Munekiyo & Hiraga, Inc., Final Environmental Assessment for the Proposed Improvements at Hamakuapoko Well Nos. 1 and 2, April 2013.

Scientific Consultant Services, Inc., A Cultural Impact Assessment of a Land Parcel in Pa'ia, Hāmākuapoko, Makawao District, Island of Maui, Hawaii: (TMK (2)2-5-006:019), February 2008.

State Land Use Commission, http://www.state.hi.us/, 2010.

State of Hawaii, Department of Agriculture, Agricultural Lands of Importance to the State of Hawaii, January 1977.

State of Hawaii, Department of Labor and Industrial Relations, http://hiwi.org, 2014.

State of Hawaii, Department of Land and Natural Resources, Division of Aquatic Resources, Atlas of Hawaiian Watersheds and Their Aquatic Resources, Island of Maui, 2008; http://hawaiiwatershedatlas.com/.

Steele, Julia, Global Village, Hana Hou, Volume 7, Number 2, The Magazine of Hawaiian Airlines, 2004.

University of Hawaii, Land Study Bureau, Detailed Land Classification – Island of Maui, L.S.B. Bulletin No. 7, May 1967.

U.S. Census Bureau, 2000 Census Summary File 1, accessed October 2013.

U.S. Census Bureau, 2010 Redistricting Data, accessed October 2013.

U.S. Department of Agriculture, Natural Resources Conservation Service, Soil Survey Geographic (SSURGO) Database for Maui, Hawaii. Available online at http://soildatamart.nrcs.usda.gov. Accessed October 2013.

U.S. Soil Conservation Service, Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii, U.S. Government Printing Office, 1972.

APPENDICES

APPENDIX A.

Biological and Water Quality Survey

Water quality, biological, and jurisdictional surveys of Kailua Stream for the Northshore Greenway Project, Makawao, Maui

January 24, 2014 *AECOS* No. 1371

Susan Burr
AECOS, Inc.
45-939 Kamehameha Hwy, Suite 104
Kāneʻohe , Hawaiʻi 96744
Phone: (808) 234-7770 Fax: (808) 234-7775 Email: aecos@aecos.com

Introduction

The County of Maui Department of Public Works Engineering Division (DPW-ENG) contracted R. T. Tanaka Engineers, Inc. to design a pedestrian walkway/bikeway on the *makai* shoulder of Hāna Highway between Ulupua Place and H. A. Baldwin Park ("Project")—Phase IV of the Northshore Greenway Project. Current project plans (July 2013) include the installation of an 8-ft wide precast concrete bikeway crossing over Kailua Gulch (Tanaka Engineers, 2013). *AECOS* was contracted by Munekiyo & Hiraga to assess water quality, ascertain biological resources, and establish an Ordinary High Water Mark (OHWM) of Kailua Stream to provide information necessary for the Environmental Assessment and planning- and environmental-related permits for the Project[1].

The project site was visited by *AECOS* biologists on November 20, 2013. The surveys were of Kailua Gulch within the Project area, and also included 6 additional accessible points within the gulch from the headwaters of the stream to the mouth (Fig. 1). The irrigation ditches connecting to the gulch were not extensively surveyed because these systems are not considered State waters (HDOH, 2012) or waters of the U.S (USEPA, 1977).

[1] This report will become part of the public record.

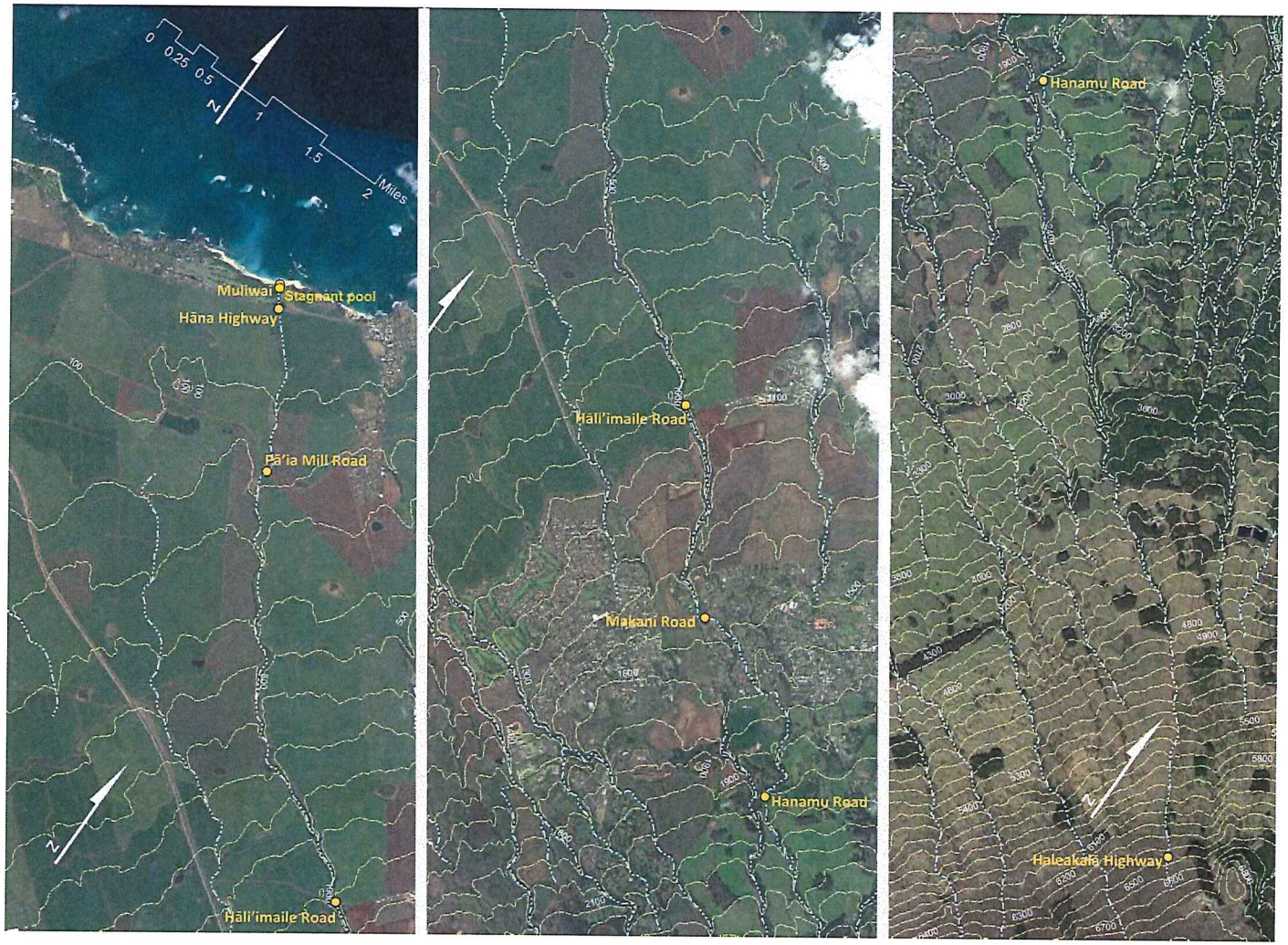


Figure 1. Location of survey areas in Kailua Gulch.

Stream Description

In 2011, *AECOS* biologists conducted a survey of Kailua Stream and 4 other streams on windward East Maui (*AECOS*, 2011). Table 1and some of the general description of Kailua Stream included in this report is taken from that survey report.

Table 1. Stream relationships, characteristics, and other aquatic features for Kailua Gulch, windward East Maui .

Gulch		State Code	Stream Class[1]	"Headwaters" Elevation[2]	Feature (F)[3]	F elev.	Notes[4]
Kailua		63019	I	(1620)			
					Haiku Ditch	200	
					Lowrie Ditch	480	siphon
					Unnamed Ditch	660	
					Kauhikoa Ditch	820	siphon
					Hamakua Ditch	1060	siphon
Kailua	l		I	6867			
unnamed	r		I	~3120	Waihou Spring	3400[5]	

FOOTNOTES:

1 - I = intermittent. Class is inferred from observation and as indicated in the Hawaii Stream Assessment (HCPSU, 1990).

2 - In feet, estimated (from topographic maps) upper elevation of stream channel; generally somewhat higher than headwaters shown on topographic map, but may be lower than drainage basin boundary. Elevation in () indicates top of stream segment and point of significant branch or name change to tributary in next row.

3 - Natural or man-made aquatic features, such as wetlands, reservoirs, and irrigation ditch systems, which capture flow from the natural stream or feed water into the natural stream. The actual or estimated elevation (in feet) of the feature is provided in Column 7. Multiple features are listed from lowest to highest on branch.

4 - Relevant notes.

5 – No visible channel between Waihou Spring and headwaters of the unnamed tributary.

Kailua Stream (Watershed Code No. 63019) is described as a non-perennial[2] stream in the Hawai'i Department of Land and Natural Resources-Division of Aquatic Resources (DLNR-DAR) Watershed Atlas (DLNR-DAR, 2008b) and is not included in the Hawai'i Stream Assessment (HCPSU, 1990), which lists only

[2] A perennial stream has year-round, continuous flow in at least part of its bed; flow need not be continuous from upper reaches to the sea. A non-perennial stream then would presumably be entirely dry at least some part of the year.

perennial streams. The stream channel arises at approximately 2093 m (6867 ft) elevation above sea level (ASL) on the windward slope of East Maui Mountain. Total stream length is 27.1 km (16.9 mi) and area of the watershed is estimated at 30.7 km^2 (11.8 mi^2). Five water supply ditches cross Kailua Stream; from north to south these are Haiku Ditch, Lowrie Ditch, an unnamed ditch, Kauhikoa Ditch, and Hamakua Ditch.

Table 1 provides additional information on Kailua Stream. The first column of the table lists the stream and tributary names. In convention with USGS topographic maps, stream names are italicized and gulches are not. Although gulches and ravines are generally considered dry much of the time, whereas streams might be flowing much or all of the time, the distinction here is simply one established by USGS in mapping and is not meant to imply a particular class (see Column 4—Stream Class).

The letters "*l*" or "*r*" appear in the second column to indicate a branch entering on the left or right bank, respectively. Segments representing the confluence of two branches account for stream or gulch names being repeated (different segments represented). Column 3 (State Code) lists the Department of Land and Natural Resources, Division of Aquatic Resources (DLNR-DAR) watershed code. Column 4 (Stream Class) presents the type of stream feature.

Column 5 ("Headwaters Elevation") gives the elevation of headwaters in feet above sea level. The value is estimated by examination of the topographic map, and represents an attempt to determine the highest elevation at which a distinct channel for the stream is probably present. Where this value is particularly difficult to determine from the map, the value is preceded by "~", meaning "about." A number in parentheses indicates the upper elevation of the particular segment, the stream continuing as two or more branches to headwaters at a higher elevation.

Natural or man-made aquatic features (Column 6—Feature), such as wetlands, reservoirs, and irrigation ditch systems that capture flow from or feed water into the natural stream, are each given a line under the associated stream branch. Multiple features are listed from lowest to highest on a branch. Column 7 (F elev.) gives the approximate elevation (usually on the stream branch) of the feature. Column 8 (Notes) provides relevant notes.

Hāna Highway crosses Kailua Stream at approximately 6 m (20 ft) ASL, between H. A. Baldwin Park and the Maui Country Club golf course. A 3-m (10-ft) wide box culvert provides passage for flow under the highway. Given the multiple connections with several water supply ditches upstream from the Project area, it is likely the infrequent flow in the stream here is the result of freshets and

water releases from the ditches. On November 20, 2013 and April 21 and 22, 2011, no segments of the stream investigated had flowing water, although, in April 2011, mudcracks and wrack lines in the Project area provided evidence of relatively recent water flow (Fig. 3a). Evidence of recent water flow was present but much less obvious in November 2013 (Fig. 3b). The bottom of the gulch is well vegetated with upland vegetation.

Fig. 3a. Dry streambed of Kailua Stream with mudcracks at Hāna Highway (April 2011).

Fig. 3b. Dry streambed of Kailua Stream overgrown with Guinea grass at Hāna Highway (November 2013).

Between Hāna Highway and the shore, the streambed within Kailua Gulch is well-defined and well-shaded by grasses and trees growing on the approximately 1-m (3-ft) high banks. A small stagnant pool, likely fed by brackish groundwater and high spring tides, was present in Kailua Stream *makai* of Hāna Highway, just upstream from the *muliwai*, on both April 20, 2011 and November 20, 2013 (Fig. 4).

Near the ocean shore, the gulch widens and American mangrove (*Rhizophora mangle*) populates a *muliwai* (dry on both April 21, 2011 and November 20, 2013). A *muliwai* is a wide, shallow basin at the mouth of a stream usually isolated from the ocean by a beach berm (Fig. 5a and 5b). In this area, grading is undertaken to isolate the stream bed from the beach park and parking lot.

Figure 4. Culvert under a footpath over Kailua Stream appears to hold water on a regular basis (November 2013).

Fig. 5a. Dry *muliwai* of Kailua Stream in April 2011.

Fig. 5a. Graded *muliwai* of Kailua Stream in November 2013.

In the central watershed, the gulch widens and, in some places, is indistinguishable from the surrounding agricultural landscape. In other places, the banks have been modified as levees to protect adjacent sugar cane fields from flooding. Between approximately 350 m (1150 ft) and 1300 m (4265 ft) distance upstream from Hāna Highway, in what is currently a sugar cane field (investigated in 2011; *AECOS*, 2011) , Kailua Stream is confined within a man-made ditch with 3- to 6-m (10- to 20-ft) high banks. In some places, the gulch widens out and is indistinguishable from the surrounding agricultural landscape. The streambed and banks are overgrown with Guinea grass (*Urochloa maxima*). *Koa haole* (*Leucaena leucocephala*) shrubs and trees at the top of the banks shade the ditch. Where not overgrown with Guinea grass, the stream bed comprises bare bedrock and silt.

Approximately 2 km (1 mi) upstream from Hāna Highway at around the 60-m (200-ft) elevation, Pā'ia Mill Road crosses Kailua Stream. Investigated in 2011 (*AECOS*, 2011) and briefly in November 2013, the banks of the gulch are approximately 6 m (20 ft) high and fairly steep; boulders and silt make up the streambed. Vegetation, including Guinea grass and *koa haole*, shades approximately 90% of the streambed (Fig. 6). Haiku Ditch (Fig. 7) transports water from east to west via siphons under Kailua Stream.

Figure 6. Kailua Stream, approximately 2170 m (7110 ft) upstream from Hāna Highway (April 2011).

Figure 7. Haiku Ditch entering a siphon under Kailua Stream, approximately 2167 m (7110 ft) upstream from Hāna Highway (April 2011).

Well upslope of the Project area, Kailua Gulch is a well-defined, steep-sided gulch. Approximately 7 km (4 mi) upstream from Hāna Highway at around the 290-m (950-ft) elevation, Hali'imaile Road crosses Kailua Stream. Here the stream is in a deeply-incised gulch with steep banks 30 m (100 ft) or so high. Boulders and silt make up the gulch bottom; moist soil was apparent in November 2013, but no water was visible. Chinaberry (*Melia azedarach*) and eucalyptus (*Eucalyptus saligna*) trees growing on the banks shade the gulch and Guinea grass is dominant in the streambed (Fig. 8). Hamakua Ditch transports water from east to west via siphons under Kailua Stream, though it was dry at the time of our survey in November 2013.

Another 2.7 km (1.7 mi) upstream from Hali'imaile Road, Makani Road crosses Kailua Stream. Though five very large culverts provide passage for water under the road (Fig. 9), the gulch is indistinct from the landscape (i.e., no bed and banks) both upstream and downstream from the road.

Though the stream bed and banks are not continuous with the main branch of Kailua Stream, an unnamed tributary arises at approximately 950 m (3120 ft)

Figure 8. Kailua Stream in a deeply-incised gulch, approximately 7 km (4 mi) upstream from Hāna Highway at Hali'imaile Road (November 2013).

Figure 9. Culverts provide passage for freshets under Makani Road, though the gulch up and down from the road is indistinct from the surrounding landscape.

ASL—this tributary is likely fed in part by Waihou Spring. The unnamed tributary enters the floodplain of Kailua Stream somewhere between the 619-m (2030-ft) and 494-m (1620-ft) elevation, approximately 12 km (7.5 mi) upstream from Hāna Highway.

At the 583-m (1913-ft) elevation ASL, Hanamu Road crosses Kailua Stream. No culverts are present at the road, so when flowing, the stream must over-top the road. Here the stream is in a deeply-incised gulch with a bedrock bottom. A plunge pool downstream from the road appeared to have recently held water, but was dry at the time of our site visit in November 2013 (Fig. 10). The gulch is heavily forested here with silver oak (*Grevillea robusta*) trees.

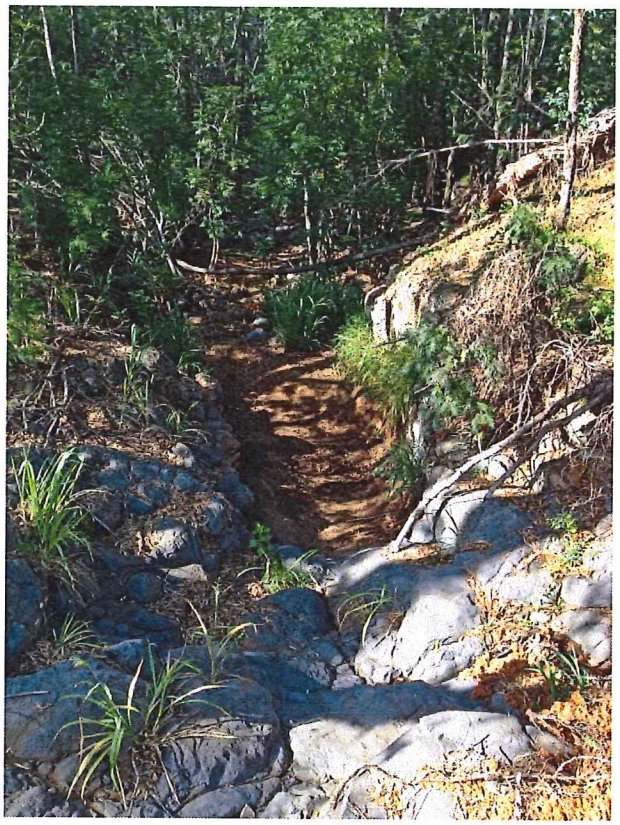


Figure 10. Dry plunge pool downstream of Hanamu Road (November 2013).

The main branch of Kailua Stream extends to the steep slopes of East Maui Mountain, with a poorly-defined gulch arising above the 1,980-m (6,500-ft) elevation ASL (Fig. 11). Stream flow here is obviously very infrequent.

Figure 11. "Headwaters" of Kailua Stream upstream of Haleakala Highway (Crater Road) at 1942-m (6,372-ft) ASL (November 2013).

Survey Methods

AECOS, Inc. biologists surveyed Kailua Gulch on November 20, 2013 to evaluate water quality, identify riparian vegetation, survey aquatic species, and mark the ordinary high water mark (OWHM) within the Project area. Locations along the entire length of the channel were surveyed to assess the potential for migration of native amphidromous[3] animals and the distribution of naturalized organisms throughout the gulch.

[3] Meaning they move between fresh and salt water as part of their life cycle.

Water Quality Survey

On November 20, 2013 (and April 21, 2011), *AECOS* biologists attempted to collect samples and make water quality measurements in the Project area; however, water was not present at either time.

Biological Survey

The biologists covered the survey area on foot and, as they were encountered, noted plant species within and along the sides of the gulch. As the survey progressed, notes were made on relative abundances of each species (e.g., rare, common, abundant). Biologists also made observations of aquatic organisms. Similar to the botanical survey, the biologists made notes on the relative abundances of each aquatic species observed (though none was observed on November 20, 2013).

OWHM Survey

The OHWM is defined in the federal regulations [33 CFR 328.3(e)] as:

> "... the line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas."

AECOS biologist established the OHWM in the Project area upstream and downstream of Hanā Highway. Within this survey area, the following physical characteristics—as provided in a regulatory guidance letter (USACE, 2005)—were considered when establishing an OHWM for the stream:

- Natural line impressed on the bank
- Shelving
- Changes in the character of the soil
- Destruction of terrestrial vegetation
- Presence of litter and debris
- Wracking
- Vegetation matted down, bent, or absent
- Sediment sorting
- Leaf litter disturbed or washed away
- Scour
- Deposition
- Multiple observed flow events
- Bed and banks
- Water staining
- Change in the plant community

The biologists marked the OHWM in the field with four pairs of wire stake flags placed on both sides of the stream approximately every 10 m (33 ft) and painted a line inside the culvert under Hāna Highway. A set of photographs (left and right bank and upstream and downstream) were taken from the center of the stream at every pair of flags to document the marking and to characterize the environment. Subsequent to flagging of the OHWM, land surveyors measured the elevation of the line in the culvert and added that information to Project survey maps.

Results

Biological Survey

Flora

Our flora listing (Table 2) covers plants observed in the Project area and at various points investigated on November 20, 2013 and April 2011.

Table 2. Checklist of plants in Project area and elsewhere throughout Kailua Gulch observed on April 21 and 22, 2011 and November 20, 2013.

Family Species	Common name	Status	Abundance <Notes>
	FERNS		
DENNSTAEDTIACEAE			
Pteridium aquilinum (L.) Kuhn	bracken fern	**end**	$C_{<U,H>}$
	DICOTYLEDONES		
ACANTHACEAE			
Asystasia gangetica (L.) T. Anderson	Chinese violet	nat	$O_{<E>}$ $U_{<L,M,U>}$ $R_{<2>}$
AIZOACEAE			
Sesuvium portulacastrum (L.) L.	*'akulikuli*	**ind**	$R_{<E,2>}$
Tetragonia tetragonioides (Pall.) Kuntze	New Zealand spinach	nat	$R_{<E>}$
AMARANTHACEAE			
Amaranthus spinosus L.	spiny amaranth	nat	$O_{<E,M>}$ $C_{<2>}$
ANACARDIACEAE			
Schinus terebinthifolius Raddi	Christmasberry	nat	$C_{<E,L,M>}$
APIACEAE			
Centella asiatica (L.) Urb.	Asiatic pennywort	nat	$R_{<E>}$

Table 2 (continued).

Family Species	Common name	Status	Abundance <Notes>
APOCYNACEAE			
Cascabela thevetia (L.) Lippold	be still tree	nat	$R_{<E,M>}$
ASCLEPADACEAE			
Asclepias physocarpa (E. Mey) Schlechter	balloon plant	nat	$R_{<U>}$
ASTERACEAE			
Ageratum conyzoides L.	*maile hohono*	nat	$R_{<L,2>}$ $O_{<M>}$ $C_{<U>}$
Bidens pilosa L.	beggartick	nat	$U_{<L,M,2>}$
Cirsium vulgare (Savi) Ten.	bull thistle	nat	$R_{<H>}$
Conyza bonariensis (L.) Cronq.	hairy horseweed	nat	$R_{<U,H>}$
Crassocephalum crepidioides (Benth.) S. Moore	---	nat	$R_{<L,2>}$
Eclipta prostrata (L.) L.	false daisy	nat	$R_{<2>}$
Emilia fosbergii Nicolson	Flora's paintbrush	nat	$R_{<2>}$
Pluchea indica (L.) Less.	Indian fleabane	nat	$R_{<E>}$
Senecio madagascariensis Poir.	fireweed	nat	$R_{<L,2>}$ $U_{<U,H>}$
Sonchus oleraceus L.	sow thistle	nat	$R_{<E,L,2>}$
Synedrella nodiflora (L.) Gaertn.	nodeweed	nat	$R_{<E>}$
Taraxacum officinale W.W. Weber	common dandelion	nat	$U_{<U,H>}$
Verbesina encelioides (Cav.) Benth. & Hook	golden crown-beard	nat	$O_{<U,H>}$
BRASSICACEAE			
Lepidium virginicum L.	---	nat	$U_{<M,2>}$ $O_{<U>}$
CACTACEAE			
Opuntia ficus-indica (L.) Mill.	*pānini*	nat	$R_{<2>}$
CASUARINACEAE			
Casurina equisetifolia L.	common ironwood	nat	$C_{<E>}$
CHENOPODIACEAE			
Chenopodium murale L.	*'aheahea*	nat	$R_{<2>}$
CONVOLVULACEAE			
Ipomoea obscura (L.) KerGawl.	---	nat	$U_{<2>}$
Ipomoea triloba L.	little bell	nat	$U_{<E,L,2>}$ $C_{<M>}$
EPACRIDACEAE			
Styphelia tameiameiae (Cham. & Schlechtend.)	*pukiawe*	**ind**	$C_{<H>}$
ERICACEAE			
Vaccinium calycinum Sm.	*'ohelo*	**end**	$C_{<H>}$
EUPHORBIACEAE			
Aleurites moluccana (L.) Willd.	*kukui*	**pol**	$R_{<E,M,2>}$

Table 2 (continued).

Family Species	Common name	Status	Abundance <Notes>
EUPHORBIACEAE (continued)			
Chamaesyce hirta (L.) Millsp.	garden spurge	nat	$U_{<E>}$
			$R_{<2>}$
Chamaesyce prostrata (Aiton) Small	*prostrate spurge*	nat	$R_{<E,2>}$
Euphorbia heterophylla L.	*kaliko*	nat	$R_{<L,2>}$
			$U_{<U>}$
Ricinus communis L.	castor bean	nat	$O_{<E,M>}$
			$U_{<L>}$
			$C_{<2>}$
FABACEAE			
Chamaecrista nictitans (L.) Moench	partridge pea	nat	$U_{<E,L,M,2>}$
Crotalaria incana L.	fuzzy rattlepod	nat	$O_{<E,2>}$
			$U_{<L,M>}$
Crotalaria cf. *retusa* L.	rattlepod	nat	$R_{<2>}$
Desmanthus pernambucanus (L.) Thellung	virgate mimosa	nat	$R_{<E>}$
Indigofera spicata Forssk.	creeping indigo	nat	$U_{<E>}$
Indigofera suffruticosa Mill.	indigo	nat	$O_{<U>}$
Neonotonia wightii (Wight & Arnott) Lackey	glycine vine	nat	$C_{<E,L,M,2>}$
			$O_{<U>}$
Leucaena leucocephala (Lam.) de Wit	*koa haole*	nat	$A_{<E,L,2>}$
			$C_{<M>}$
Pithecellobium dulce (Roxb.) Benth.	*'opiuma*	nat	$R_{<2>}$
Prosopis pallida (Humb. & Bonpl. ex Willd.) ?	*kiawe*	nat	$U_{<E>}C_{<2>}$
Samanea saman (Jacq.) Merr.	monkeypod	orn	$U_{<E>}$
Senna occidentalis (L.) Link	coffee senna	nat	$U_{<M>}$
Ulex eurpaeus L.	gorse	nat	$U_{<H>}$
LAMIACEAE			
Leonotis leonurus (L.) R. Br.	lion's ear	nat	$O_{<E,L,2>}$ $R_{<M>}$
LYTHRACEAE			
Lythrum maritimum Kunth	*pukamole*	**ind**	$C_{<H>}$
MALVACEAE			
Abutilon grandifolium (Willd.) Sweet	hairy abutilon	nat	$R_{<E,M,2>}$ $O_{<U>}$
Malva parviflora L.	cheese weed	nat	$A_{<E>}$ $O_{<L>}$ $R_{<2>}$
Malvastrum coromandelianum (L.) Garcke	false mallow	nat	$U_{<E,2>}$
Sida rhombifolia L.	Cuba jute	nat	$R_{<2>}$
Sida spinosa L.	prickly sida	nat	$R_{<E,2>}$
Thespesia populnea (L.) Sol. ex Correa	milo	ind?	$O_{<E>}$

Table 2 (continued).

Family Species	Common name	Status	Abundance <Notes>
MELIACEAE			
Melia azedarach L.	Chinaberry	nat	$C_{<M>}$ $O_{<U>}$ $R_{<2>}$
MORACEAE			
Ficus microcarpa L.	Chinese banyan	nat	$U_{<E,M,U>}$ $R_{<2>}$
MYRTACEAE			
Eucalyptus saligna Sm.	Sydney blue bum	nat	$O_{<M>}$ $C_{<U,H>}$
Psidium guajava L.	common guava	nat	$U_{<E>}$ $O_{<L,M>}$
Syzygium cumini (L.) Skeels	Java plum	nat	$U_{<L,M,2>}$
NYCTAGINACEAE			
Boerhavia coccinea Mill.	false *alena*	nat	$R_{<E,2>}$
Mirabilis jalapa L.	four-o-clock	nat	$R_{<U>}$
OLEACEAE			
Fraxinus uhdei (Wenzig) Lingelsh.	tropical ash	nat	$O_{<U>}$
Olea europaea L.	olive	nat	$O_{<M>}$
ONAGRACEAE			
Ludwigia octovalvis (Jacq.) Raven	primrose willow	**pol?**	$R_{<E>}$
PAPAVERACEAE			
Argemone mexicana L.	Mexican poppy	nat	$R_{<E>}$ $O_{<2>}$
PASSIFLORACEAE			
Passiflora edulis Sims	*lilikoi*	nat	$R_{<E,2>}$
PLANTAGINACEAE			
Plantago lanceolata L.	nrw-leaved plantain	nat	$U_{<U,H>}$
PROTEACEAE			
Grevillea robusta A. Cunn. Ex R. Br.	silver oak	nat	$O_{<M,U>}$
RHIZOPHORACEAE			
Rhizophora mangle L.	red mangrove	nat	$U_{<E,2>}$
RUBIACEAE			
Coprosma ernodioides A. Gray	*kukaenene*	**end**	$C_{<H>}$
SOLANACEAE			
Datura stramonium L.	Jimson weed	nat	$R_{<M,2>}$
Solanum americanum Mill.	*pōpolo*	**ind**	$C_{<U>}R_{<2>}$
Solanum linnaeanum Hepper & P. Jaeger	apple of Sodom	nat	$R_{<U>}$
Nicotiana glauca Graham	tree tobacco	nat	$R_{<E,L,2>}$
STERCULIACEAE			
Waltheria indica L.	‘uhaloa	ind	$R_{<L,2>}$ $O_{<M>}$ $U_{<U>}$
VERBENACEAE			
Stachytarpheta urticifolia (Salisb.) Sims	---	nat	$R_{<E,L>}$
Verbena litoralis Kunth	*owi*	nat	$R_{<U>}$

Table 2 (continued).

Family Species	Common name	Status	Abundance <Notes>
MONOCOTYLEDONES			
AGAVACEAE			
Furcraea fooetida (L.) Haw.	Mauritius hemp	nat	$R_{<L,M,2>}$
CYPERACEAE			
Cyperus rotundus L.	nutgrass	nat	$R_{<2>}$
POACEAE			
Cenchrus ciliaris L.	buffelgrass	nat	$U_{<E,2>}$
Cynodon dactylon (L.) Pers.	Bermuda grass	nat	$O_{<E,L,2>}$
Digiteria ciliaris (Retz.) Koeler	Henry's crabgrass	nat	$R_{<E,2>}$
Digiteria insularis (L.) Mez- ex Ekman	sourgrass	nat	$U_{<E,2>}$ $C_{<L>}$ $A_{<M>}$
Echinochloa crus-gali (L.) P. Beauv.	barnyard grass	nat	$U_{<2>}$
Eleusine indica (L.) Gaertn.	wire grass	nat	$C_{<2>}$
Leptochloa fusca (L.) Kunth	Mexican sprangletop	nat	R<2>
Melinus repens (Willd.) Zizka	Natal redtop	nat	$U_{<2>}$
Panicum maximum Jacq.	Guinea grass	nat	$A_{<E,L,2>}$ $C_{<M,U>}$
Paspalum urvillei Steud.	Vasey grass	nat	$R_{<E,2>}$
Pennisetum clandestinum Chiov.	kikuyu grass	nat	$A_{<U,H>}$
Pennisetum purpureum Schumach.	elephant grass	nat	$O_{<E,M>}$ $A_{<2>}$
Saccharum officianarum L.	sugar cane cult.	orn	$A_{<E,L,M,U,2>}$
Setaria verticillata (L.) P. Beauv.	bristly foxtail	nat	$R_{<L>}$
Urochloa mutica (Forssk.) T.Q. Nguyen	para grass	nat	$A_{<E,M>}$

KEY to Table 2

Status = distributional status

end = endemic; native to Hawai'i and found naturally nowhere else.
ind = indigenous; native to Hawai'i, but not unique to the Hawaiian Islands.
nat = naturalized, exotic, plant introduced to the Hawaiian Islands since the arrival of Cook Expedition in 1778, and well-established outside of cultivation.
orn = exotic, ornamental; plant not naturalized (not established outside of cultivation); includes plants cultivated for food.
pol = Polynesian introduction before 1778.

Abundance = abundance for the vegetation at each stream:

R - Rare - a plant species observed only one to three times;
U - Uncommon - a plant species observed less than six times;
O - Occasional - a plant that was observed regularly, but not abundant;
C - Common - a plant observed with regularity, observed numerous times;
A - Abundant - a plant found in large numbers, dominant or locally dominant.

Table 2 (continued).

Notes:

<E> - Observed between the coast line and 1-m elevation ASL.
<L> - Observed between 1- and 20-m elevation ASL.
<M> - Observed between 20- and 200-m elevation ASL.
<U> - Observed between 200- and 750-m elevation ASL.
<H> - Observed above 750-m elevation ASL.
<2> - Reported in *AECOS* (2011) from Estuary, Lower, or Middle reach.

The Project area is rather limited floristically. Sugar cane (*Sacchrum officinarum*) is cultivated in the fields upstream of Hānā Highway, and introduced and ruderal species such as *koa haole* (*Leucaena leucocephala*) and Guinea grass (*Urochloa maxima*) dominate the vegetation in the gulch and surrounding roadway in the Project area. Of the 27 plant species listed in Table 2 as occurring in the lower reach, only 1, *'uhaloa* (*Waltheria indica*), is a native species. There are very few plants of interest and none of concern[4] in the areas of Kailua Gulch surveyed by *AECOS*. Only the headwaters (above 750-m elevation ASL) are dominated by native species—of the 15 plant species observed in the headwaters, 6 are native species.

Fauna

Water was not present in the Project area or elsewhere in Kailua Stream and, as a result, *AECOS* biologists did not observe any fishes, crustaceans, or mollusks on November 20, 2013. In 2011, aquatic animals were observed only in ditches connecting to Kailua Stream and aquatic insects (adult damselflies and dragonflies) were observed flying in the gulch. The DLNR-DAR Watershed Atlas (DLNR-DAR, 2008) reports results of studies of fauna from stations upstream from the Project area and these data are presented in Table 3.

One individual adult *Ischnura ramburii* damselfly was observed flying in the Project area in 2011 (*AECOS*, 2011). Only the larvae of damselflies are aquatic. Flume clams (*Corbicula fluminea*) and the red-rimmed melania snail (*Melanoides tuberculata*) are abundant in irrigation ditches connected to Kailua Stream. Tilapia is common in reservoirs in the area (*AECOS*, 2011) and reported by DLNR-DAR from the middle and upper reaches of Kailua watershed). Poeciliid fishes (*Gambusia affinis* and *Poecilia salvatoris/mexicana*) are common in flowing (i.e., ditches and flumes) and standing (i.e., stagnant pool) waters of Kailua Stream. Although not expected to occur at the low elevation of the

[4] *Nicotiana glauca* (tree tabacco) could serve as a food resource for larvae of the endangered Blackburn's sphinx moth *(Manduca blackburni)*. This species is discussed further in the assessment section.

Project area, two species of endemic damselflies (*Megalagrion hawaiiensis* and *M. nigrohamatum nigrohamatum*) have been reported from the upper reaches of Kailua Stream.

Table 3. Checklist of aquatic biota observed in Kailua Stream.

Species	Common name	Status	Abundance
	INVERTEBRATES		
MOLLUSCA, BIVALVIA			
VENEROIDA, CORBICULIDAE			
Corbicula fluminea	flume clam	naturalized	A(2) (ditch)
MOLLUSCA, GASTROPODA			
NEOTAENIOGLOSSA, THIARIDAE			
Melanoides tuberculata	red-rimmed melania	naturalized	A(2) (ditch)
ARTHROPODA, INSECTA			
ODONATA, COENAGRIONIDAE	pond damsels		
Ischnura ramburii	Rambur's forktail	naturalized	*R(2)*
Megalagrion hawaiiensis	Hawaiian upland damsel	**endemic**	$P(3_U)$
Megalagrion nigrohamatum nigrohamatum	blackhook Hawaiian damsel	**endemic**	P(3U)
ODONATA, AESHNIDAE			
Anax junius	Hawaiian darner	**endemic**	R(2)
Orthemis ferruginea	roseate skimmer	naturalized	U(2)
	VERTEBRATES		
CHORDATA, ACTINOPTERYGII			
PERCIFORMES, KUHLIIDAE			
Tilapia sp.	tilapia	naturalized	$P(3_{M,U})$
CYPRINODONTIFORMES, POECILIIDAE			
Gambusia affinis	mosquitofish	naturalized	A(2) (ditch)
Poecilia sp. hybrid complex (salvatoris/mexicana group)	liberty/Mexican molly	naturalized	C(2) (ditch)

KEY TO TABLE 3 SYMBOLS:

Status column:

naturalized - an introduced or exotic species.
indigenous - a native species also found elsewhere in the Pacific.
endemic - a native species found only in the Hawaiian Islands.

Table 3 (continued).

Abundance column:

P - present; not common, but unable to assess abundance.
R - rare; only one or two individuals seen.
U - uncommon; several to a dozen individuals seen, in some habitat places visited.
O - occasional; seen irregularly in small numbers.
C - common; numerous individuals seen, or seen in most habitat places visited.
A - abundant; numerous in most habitat places visited

Notes:

(2) – Observed in 2011 (*AECOS*, 2011). *Italic* type indicates organism was found in Project area.
(3) – Reported in DLNR-DAR (2008) from various surveys. (L=lower, M=middle, U=upper, H=headwaters).

OHWM

Section 404 of the Clean Water Act (CWA) assigns regulatory authority to the U.S. Army Corps of Engineers (USACE) over certain activities in waters of the U.S. If Kailua Stream is considered to be "waters of the U.S." as defined in the CWA and construction of the pedestrian walkway/bikeway requires work below the Ordinary High Water Mark (OHWM; bounding limit of federal jurisdiction in the absence of wetlands), the Project will require a Department of the Army permit.

Though certainly not perennial, within the Project area, Kailua Stream appears contain flowing water often enough and for a long enough duration to make a physical mark in the stream channel at the OHWM. A change in plant community and shelving are the strongest indicators of the OHWM in Kailua Stream, though neither indicator is particularly robust nor obvious throughout the Project area. Most *koa haole* trees root at or above the OWHM. Guinea grass is the dominant plant below the OWHM. Within the existing culvert, the concrete appears to have eroded below the OWHM, but remains largely intact above the OWHM (Fig. 12). Attachment A presents the OHWM elevation (8.5 ft ASL) swithin the culvert as delineated in the field by *AECOS* scientists and surveyed by R. T. Tanaka. Photographs taken to document the process are included in Attachment B.

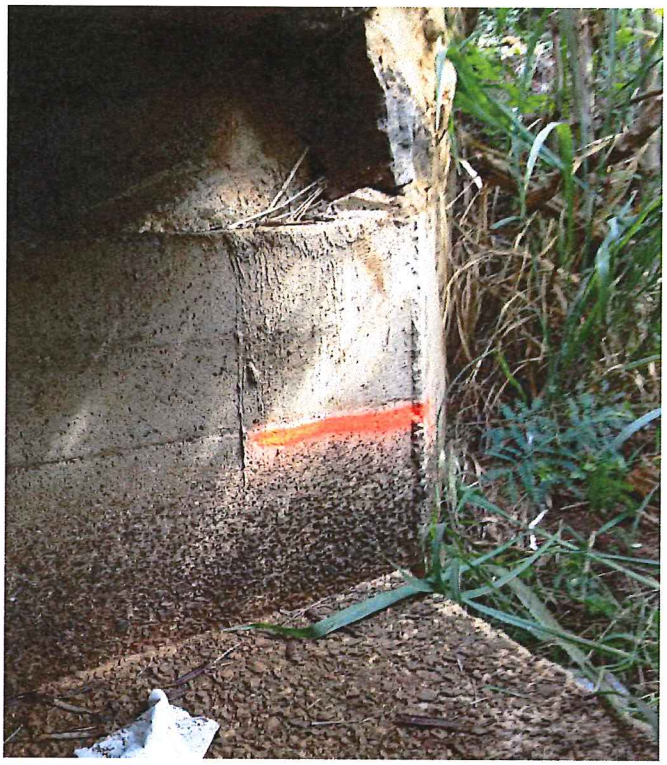


Figure 12. Eroded concrete below the OWHM (orange line) within the existing culvert under Hāna Highway (November 2013).

Assessment

Water quality

Because the stream channel connects to the Pacific Ocean, construction plans should incorporate Best Management Practices (BMP) to prevent degradation of water quality in Kailua Stream and the nearshore waters. To conduct work below the ordinary high water mark, the US Army Corps of Engineers would need to issue a Department of Army permit and the Hawai'i Department of Health could issue a Water Quality Certification (WQC) under Section 401 of the CWA. The WQC would require an Applicable Monitoring and Assessment Plan (AMAP) to be developed for work in Kailua Stream. The AMAP would monitor the effectiveness of the BMPs, although the fact that the stream flows very infrequently would be a challenge to create an effective AMAP.

Flora and fauna

No aquatic resources were present in the Project area at the time of the survey. No observed flora or fauna species are federally listed as endangered (USFWS, 2008, 2012) or protected by State of Hawai'i Administrative Rules (DLNR, 1998, 2007). None of the plants observed in the Project area are endemic (unique to the Hawaiian Islands) and most are species that have been introduced. These species are widespread on Maui and have no specific intrinsic value that would be lost due to Project activities.

The stream macrofauna native to Hawai'i are diadromous: eggs are laid in the stream and the larvae that hatch from these eggs move down stream and out into the ocean where they develop for a time before migrating back into fresh water to grow to maturity (Ford and Kinzie, 1982; Kinzie, 1988). The migration pathway in Kailua Stream from the ocean to the Project area is not blocked by man-made obstructions, and freshets would allow migration of native amphidromous species through the Project area. Project design should include a continuous open pathway in the Project area. Construction BMPs developed to protect water quality will also protect aquatic biota.

OHWM

Section 404 of the Clean Water Act regulates discharge of dredged and fill material into "Waters of the United States" or jurisdictional waters. The bounding limit of federal jurisdiction is the OHWM, unless adjacent wetlands are present. Section 404 of the Clean Water Act (CWA) assigns regulatory authority to the U.S. Army Corps of Engineers (USACE) over certain activities in waters of the U.S. and an initial step in this permit process is a determination of the limits of federal jurisdiction in relation to Project activities. Our delineation of the OHWM is based upon our best professional judgment. However, federal jurisdiction is solely determined by the USACE, and is based upon the USACE first accepting our delineation and then deciding whether other factors warrant taking jurisdiction (e.g., that Kailua Stream is, in fact, jurisdictional). Our delineated line is not official until accepted by the USACE as a prelude to the permitting process.

Critical Habitat

No critical habitat areas have been designated by the federal government for the Project area. However, critical habitat for the endangered Blackburn's sphinx moth (*Manduca blackburni*) has been designated in the Kanahā Pond and beach areas west of the Project area (USFWS, 2003). Tree tobacco (*Nicotiana glauca*),

a plant in the Solanaceae family, was observed in the project area. Tree tobacco has the potential to be utilized by the hornworm larva of *M. blackburni.*

References

AECOS, Inc. (*AECOS*). 2011. Water quality and biological surveys of streams and reservoirs for the Pā'ia Relief Route Project, Pā'ia, Maui. Prep. for: SSFM, International. *AECOS* No. 1160: 34 pp.

Hawai'i Department of Health. 2012. Hawai'i Administrative Rules, Title 11, Department of Health, Chapter 54, Water Quality Standards. State of Hawai'i, Department of Health. 86 pp.

Hawai'i Department of Land and Natural Resources (DLNR). 1998. Indigenous Wildlife, Endangered and Threatened Wildlife and Plants, and Introduced Wild Birds. State of Hawai'i. Administrative Rule §13-124-1 through §13-124-10.

_____. 2007. Hawai'i Fishing Regulations. State of Hawai'i. Administrative Rule §13-95, §13-100, and §188-43.

_____, Division of Aquatic Resources (DLNR-DAR). 2008. Atlas of Hawaiian Watershed and Their Aquatic Resources. Island of Maui. Available online at http://www.hawaiiwatershedatlas.com/watersheds/maui/; last visited June 13, 2011.

Grasshoff, K., K. Kremling, & M. Ehrhardt (eds). 1999. Methods of Seawater Analysis (3rd ed). Wiley-VCH; 632 pp.

Hawaii Cooperative Park Service Unit (HCPSU). 1990. Hawaii stream assessment. A preliminary appraisal of Hawaii's stream resources. Prep. for State of Hawaii, Commission on Water Resource Management. National Park Service, Hawaii Cooperative Park Service Unit, Rept. No. R84: 294 pp.

Hawai'i Department of Land and Natural Resources (DLNR). 1998. Indigenous Wildlife, Endangered and Threatened Wildlife and Plants, and Introduced Wild Birds. State of Hawai'i. Administrative Rule §13-134-1 through §13-134-10.

Kinzie, R. A. III. 1988. Habitat utilization by Hawaiian stream fishes with reference to community structure in oceanic stream islands. *Environ. Biol. of Fishes,* 22: 179-192.

R. T. Tanaka Engineers, Inc. (Tanaka Engineers). 2013. County of Maui, Department of Public Works Engineering Division, Plans for Northshore Greenway—Phase IV, Ulupala Place to H. A. Baldwin Park, July 2013.

U.S. Army Corps of Engineers (USACE). 2005. Regulatory Guidance Letter 05-05 Ordinary High Water Mark (OHWM) Identification. 4 pp.

U.S. Environmental Protection Agency and U.S. Army Corps of Engineers (USPEA and USACE). 2011. Draft guidance on identifying waters protected by the Clean Water Act. Available online at URL: http://water.epa.gov/lawsregs/guidance/wetlands/upload/wous_guidance_4-2011.pdf; last accessed on May 13, 2013.

U.S. Environmental Protection Agency (USEPA). 1977. Protection of Environment. 40 CFR §122.2

U.S. Fish and Wildlife Service (USFWS). 2003. Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the Blackburn's Sphinx Moth. *Federal Register*, 68(111; Tuesday, June 10, 2003): 34710-34766.

_____. 2008. Part II. Department of the Interior. Fish and Wildlife Service. 50 CFR 17. Endangered and Threatened Wildlife and Plants; Review of Native Species That Are Candidates or Proposed for Listing as Endangered or Threatened: Annual Notice of Findings on Resubmitted Petitions: Annual Description of Progress on Listing Actions. Proposed Rule. *Federal Register,* 73(238; December 10, 2008): 75175-75244.

_____. 2012. USFWS Threatened and Endangered Species System (TESS). Available online at URL: http://ecos.fws.gov/tess_public/; last accessed December 7, 2013.

Attachment A

OWHM Elevation

TMK: (2) 3-8-01: 71
MAUI COUNTRY CLUB LIMITED
(Owners)

H. A. BALDWIN PARK

ORDINARY HIGH WATER MARK (ELEV.=8.5) BOUNDARY BASED ON FIELD DELINEATIONS BY AECOS INC. (NOVEMBER 2013)

KAILUA STREAM

CONC HEADWALL

4.2'x 9.7' CONC. BOX CULVERT

TO KAHULUI

HANA HIGHWAY

TO PAIA

NORTH SHORE GREENWAY - PHASE IV

ULUPUA PLACE TO H. A. BALDWAIN PARK

JOB NO. 12-35

SCALE: 1" = 10'

10 5 0 10 20
GRAPHIC SCALE IN FEET

Revised: DECEMBER 13, 2013
DECEMBER 11, 2013

JOB NO. 12-026

871 KOLU STREET, SUITE 201
WAILUKU, MAUI, HAWAII 96793

R. T. TANAKA ENGINEERS, INC.
LAND SURVEYORS - CIVIL & STRUCTURAL ENGINEERS

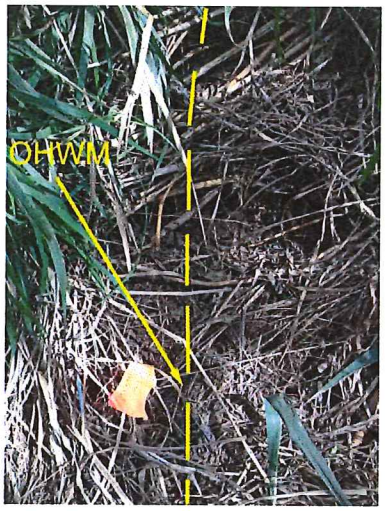
(Layout1)
Z:\DRAW\2012\12-026\Construction Plans\HANA HWY BIKEWAY Plan and Profile.dwg 12-DEC-2013 : Revised BY:Nancy

Attachment B

Ordinary High Water Mark Figures

Flag 1 Upstream

Flag 1 Left

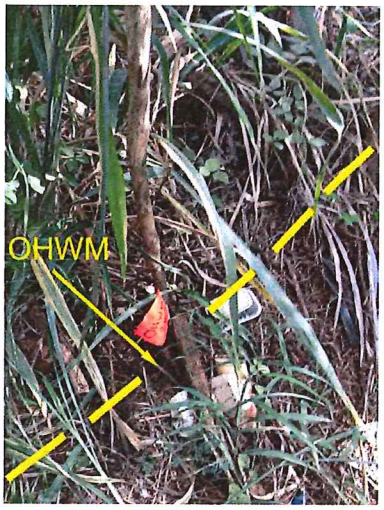


Flag 1 Right

Flag 1 Downstream

Flag 2 Upstream

No photo



Flag 2 Left

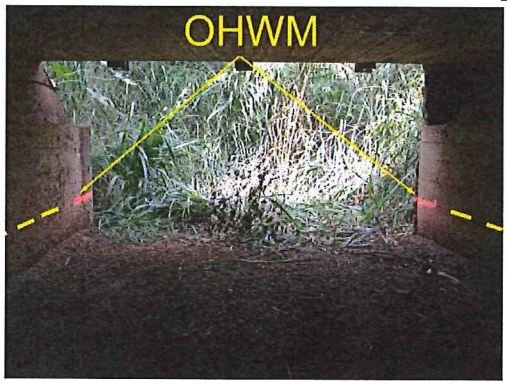
Flag 2 Right

Flag 2 Downstream

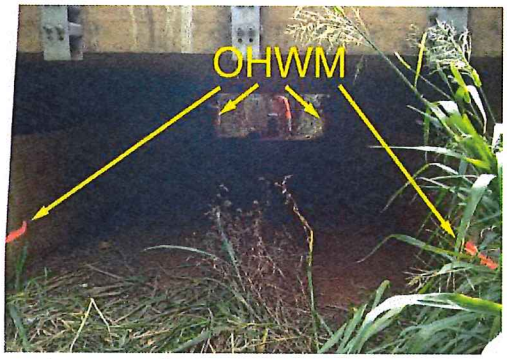
Flag Culvert Upstream

Flag Culvert Left

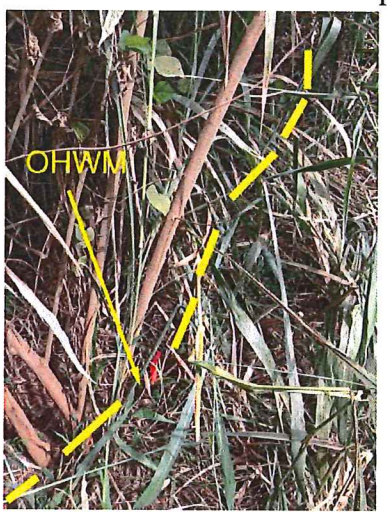
Flag Culvert Right



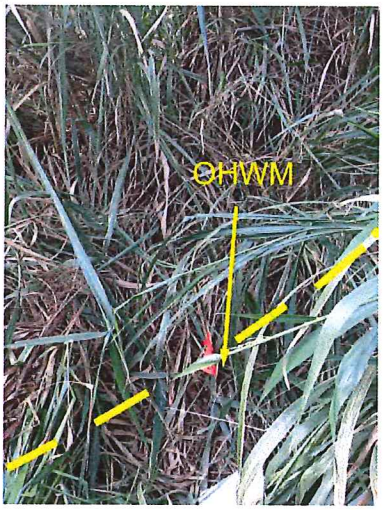
Flag Culvert Downstream



Flag 3 Upstream

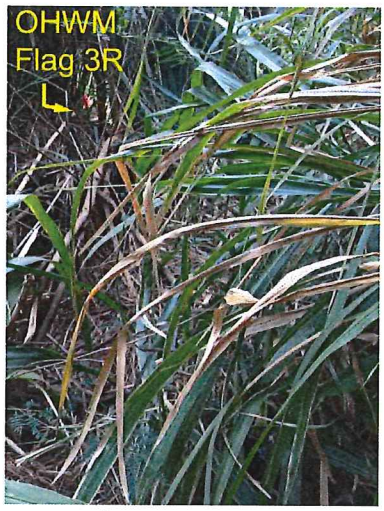


Flag 3 Left

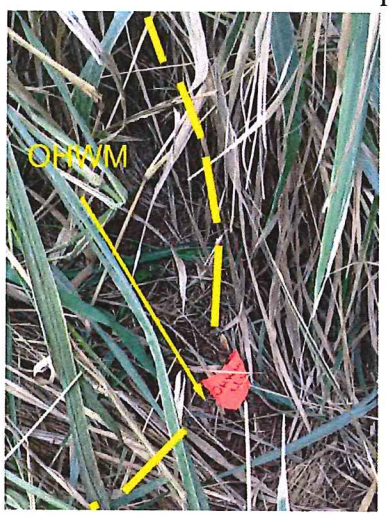


Flag 3 Right

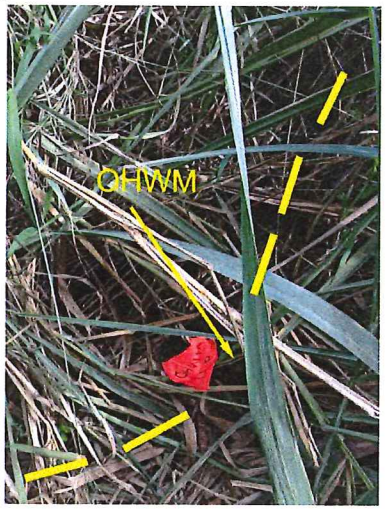
Flag 3 Downstream



Flag 4 Upstream



Flag 4 Left



Flag 4 Right

Flag 4 Downstream

APPENDIX B.

Archaeological Field Inspection

SCIENTIFIC CONSULTANT SERVICES, Inc.
1347 Kapiolani Blvd., Suite 408 Honolulu, Hawai'i 96814

Colleen Suyama
Munekiyo & Hiraga, Inc.
305 High Street , Suite 104
Wailuku, HI 96793

November 12, 2013

RE: Archaeological Field Inspection for the North Shore Greenway Phase 4, Spreckelsville, Hoku`ula Ahupua`a, Wailuku District, Maui Island, Hawaii [TMK: (2) 2-5-005:046 por., 3-8-001, and 3-8-001:071 por.].

Overview of Field Inspection

This letter provides an overview of an Archaeological Field Inspection for a 3,500 linear foot (1067 m) corridor for the proposed development of the North Shore Greenway Phase IV pedestrian path in Spreckelsville, Hoku`ula Ahupua`a, Wailuku District, Maui Island, Hawai`a [TMK: (2) 2-5-005:046 por., 3-8-001, and 3-8-001:071 por.] (Figures 1-4). The subject path is located along the north flank of Hana Highway and lies within the highway's right-of-way. The inspection was requested to provide a brief description of the archaeological landscape within the project area, assess the presence/absence of extant surface features, assess the potential for subterranean cultural resources, and give recommendations for future archaeological work.

Setting

The project area corridor is located at an elevation of less than 20 feet above mean sea level (A.M.S.L.) and lies a variable 800-1500 feet from the coastline. The corridor lies along the shoulder on the north (seaward-*makai*) side of Hana Highway. The corridor is bounded by Baldwin Beach Park to the east, Maui Country Club and private residences to the north, and Hana Highway to the south.

The c. 3,500 project area corridor extends along the Hana Highway right-of-way between Ulupua Place and the eastern flank of H.A. Baldwin Park. The eastern terminus of the greenway connects into an existing segment of the H.A. Baldwin Park Bikeway.

Rainfall in the area of Pā`ia is consistent throughout the year, averaging about 4 to 6 inches of rain per month for a yearly average of approximately 30 inches (Armstrong 1973). Foote *et al.* (1972:Sheets 103& 104) indicate that the primary soil series in the project area corridor are associated with the Pulehu Series (PpA, PpB) and the Molokai Series. These series are both associated with sugarcane, truck crops, pasture, home sites, and wildlife habitat (*Ibid.*). Vegetation along the corridor were comprised of mowed grass, though within a small drainage, taller guinea grass, *kiawe*, palms and *haole koa* were noted.

Field Methods

The Field Inspection was conducted on November 6, 2013 by SCS Archaeologists D. Perzinski, B.A. and M. Dega, Ph.D. (Principal Investigator). Survey consisted of a 100% pedestrian survey walking approximate 2 m transects along the shoulder of Hana Highway. Photographs were taken of the corridor land surface, as well as the soils of the area, observed in profile on the *mauka* flank of the highway. Notes were taken of project area vegetation and soil regimes within and near the corridor. Modern land uses were also noted.

Results of Field Inspection

The Field Inspection commenced on the western terminus of the project area at the intersection of Hana Highway and Ulupua Place. The western ca. 1,300 feet extends along a cement brick and vine wall that buffers the residences from highway traffic noise. The ground surface is graded, covered in sparse mowed grasses, and is level (Figure 5). From the end of the residential wall and extending another 1,350 feet, the corridor runs along the Maui Country Club Golf Course. In this section, the road and corridor are built up to create an approximate 10 foot soil berm. The berm appears to consist of imported fill material (Figure 6). No cultural resources or surface deposits were noted in this section. The soils were also primarily composed of fill, with some reddish-brown clay, common to the area, also documented.

The eastern ca.1,000 feet of the corridor extends along a thin strip of wooded land bordering the Maui Country Club lands and the H.A. Baldwin Beach Park land. This strip contains monkeypod, palms, and *koa haole,* as well as various invasive grasses. The road is cut along the western end and levels off as it nears H. A. Baldwin Beach Park (Figure 7). No cultural resources or surface deposits were noted along this section. Similarly, the soils appeared to be reddish-brown silty clays common in the area. Sandy deposits were only identified later, far into the beach park and at some distance from the project area.

The current Archaeological Field Inspection did not lead to the identification of any surface cultural features or deposits. Historic era and modern agricultural activities and road construction along the proposed corridor have presumably disturbed any previously existing sites or surface deposits. The project area corridor was confirmed to also have fill and reddish-brown silty clay deposits in subsurface contexts; no sand was present within or near the project corridor. It is our estimation, based on this inspection that the proposed undertaking would not have an adverse impact on any historic properties.

Archaeological Monitoring

An Archaeological Monitoring Plan has been produced as a proactive measure. While the general coastal area near the project area is sensitive for archaeological cultural deposits and/or burials due to the presence of sandy sediment, the current project area corridor does not contain sandy contexts. Rather, the soils are similar to the soils on the *mauka* (south) flank of the highway (silty clays) and associated with sugarcane cultivation. Thus, there appears to be only a very modest probability of identifying any cultural deposits in subsurface contexts. Such has been the case with multiple projects previously conducted in these former sugarcane lands.

Thank you for the opportunity to conduct this Field Inspection. If you have any questions regarding this Field Inspection, please feel free to call or email us.

Regards,

David Perzinski, B.A.
Scientific Consultant Services, Inc (Maui Office)
Email: dperzinski@gmail.com
Tel: 808.268.7665

Michael Dega, Ph.D.
Senior Archaeologist
Scientific Consultant Services, Inc. (SCS)
1347 Kapiolani Blvd., Suite 408
Honolulu, HI 96813
(808) 597-1182 tel
(808) 597-1193 fax
mike@scshawaii.com

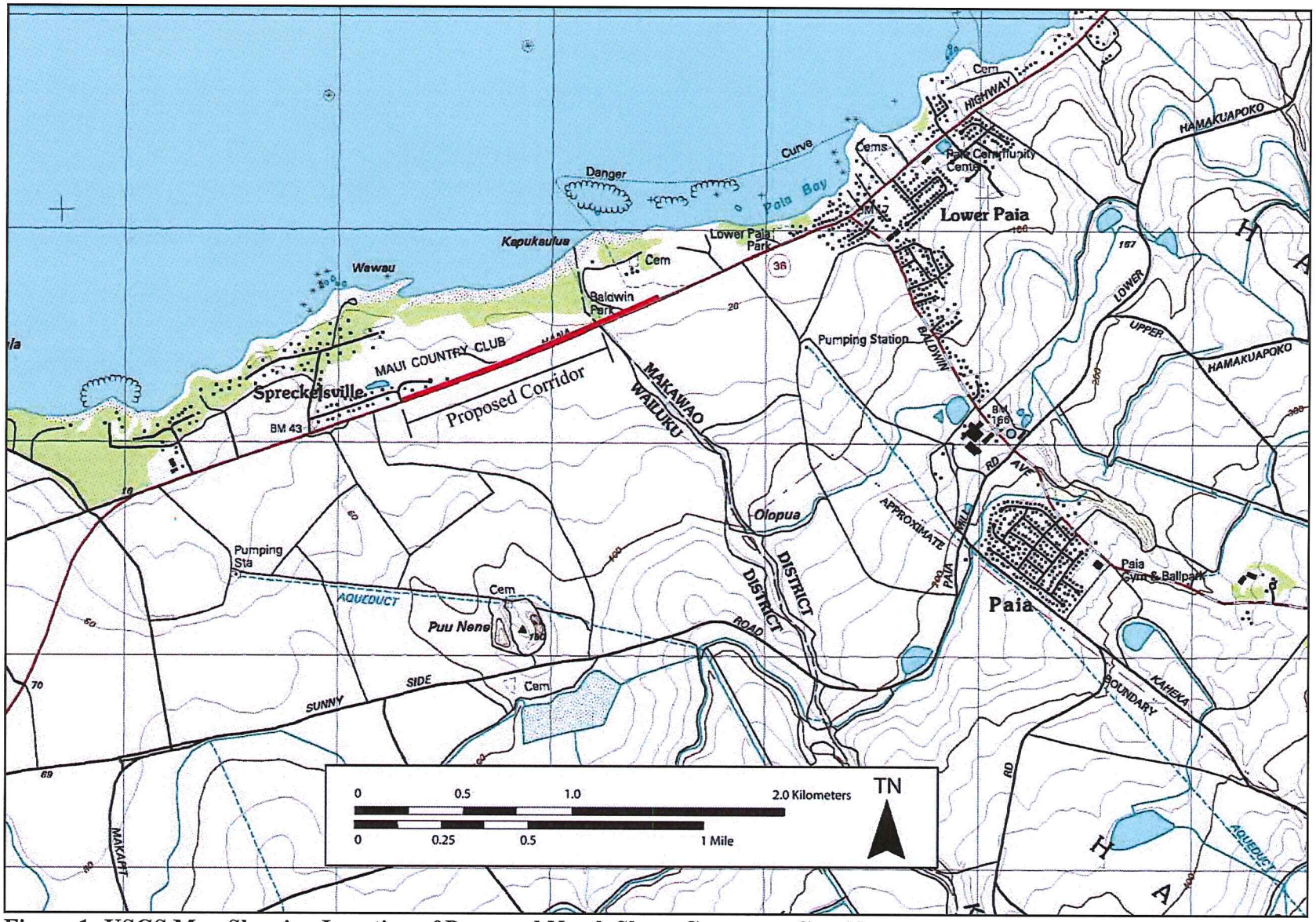


Figure 1: USGS Map Showing Location of Proposed North Shore Greenway Corridor.

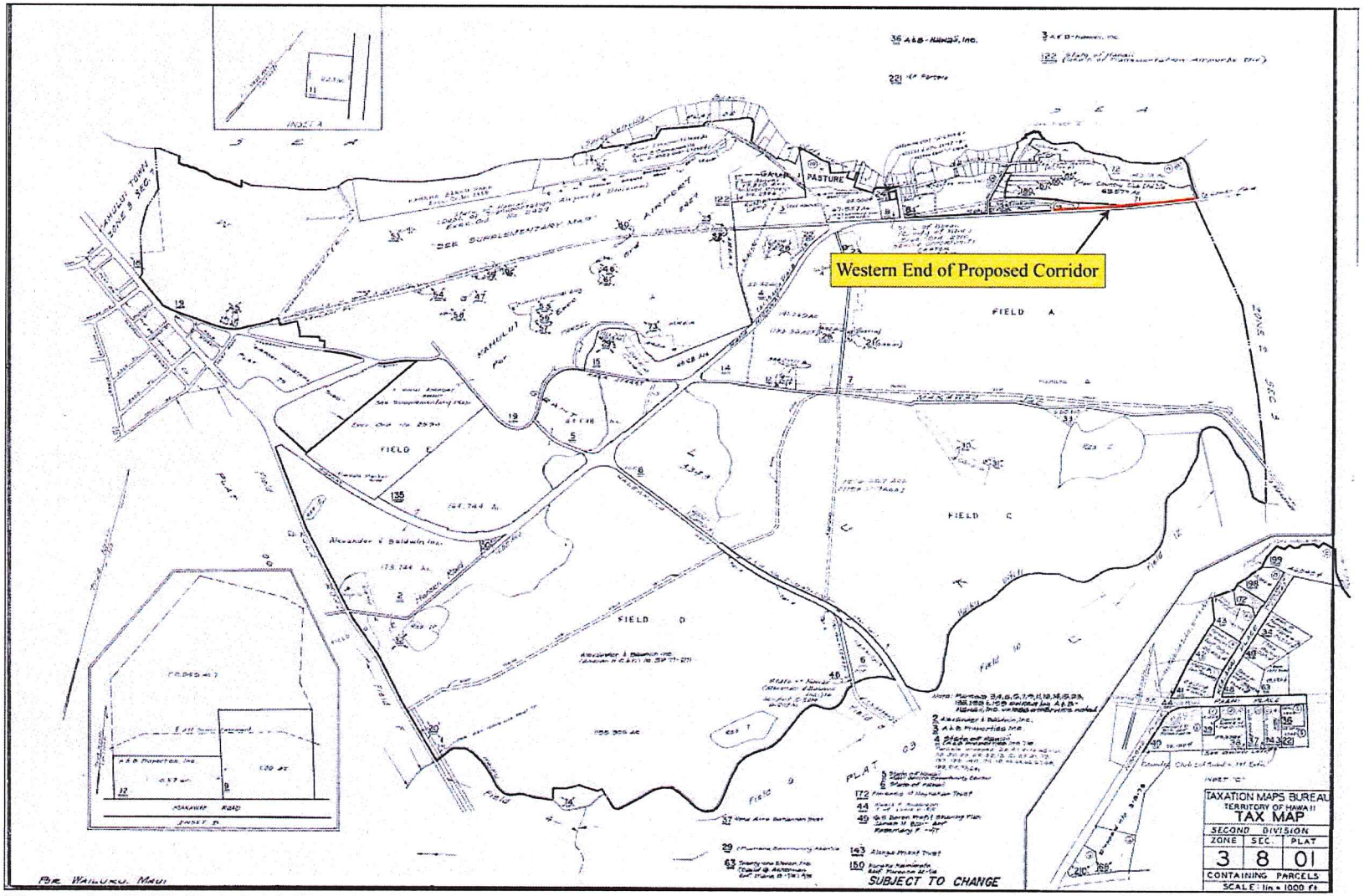


Figure 2: TMK (2) 3-8-01 Showing Location of Eastern Extent of Proposed Corridor.

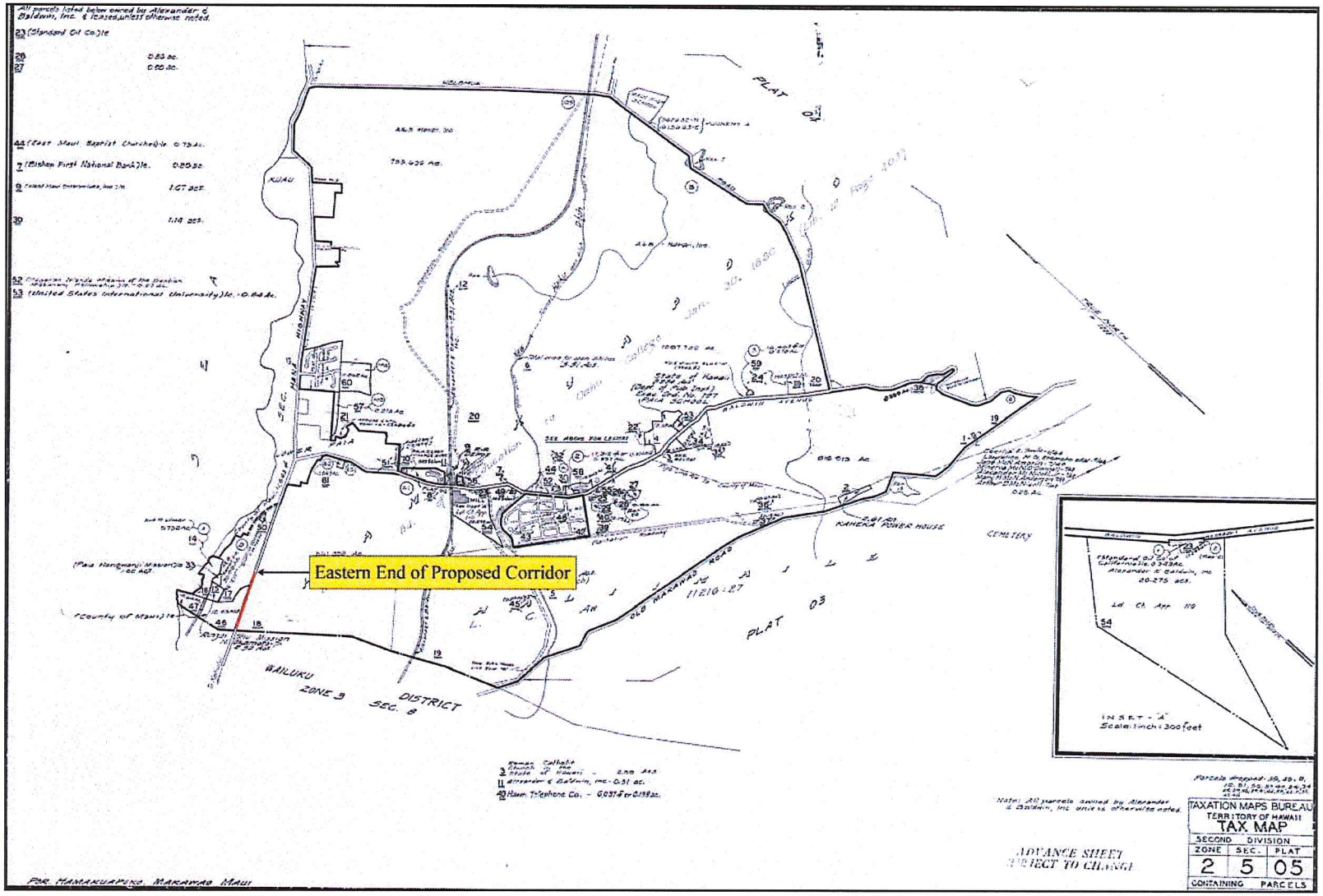


Figure 3: TMK (2) 2-5-05 Showing Eastern Extent of Proposed Corridor.

Figure 4: Aerial View of Proposed North Shore Greenway Corridor.

Figure 5: Western End of Proposed Corridor. View to East.

Figure 6: Middle Section of Proposed Corridor. View to East.

Figure 7: View of Road Cut on Eastern End of Corridor. View to West.

APPENDIX B-1.

Archaeological Monitoring Plan

SCS Project Number 1486-AMP-2

AN ARCHAEOLOGICAL MONITORING PLAN FOR THE PROPOSED NORTH SHORE GREENWAY PHASE IV: ULUPUA PLACE TO H.A. BALDWIN PARK PROJECT NUMBER 12-35 HALIIMAILE AHUPUA'A, MAKAWAO DISTRICT AND HOKUULA AHUPUA`A, WAILUKU DISTRICT ISLAND OF MAU I, HAWAI`I

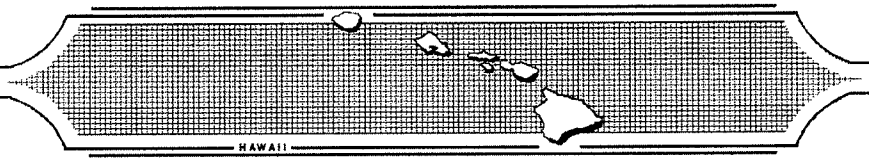
[TMK (2) 2-5-005:046 por., 3-8-001, and 3-8-001:071 (por.)]

Prepared by:
Michael F. Dega, Ph.D.

November 2013
DRAFT

Prepared For:
Munekiyo and Hiraga, Inc.
305 High Street, Suite 104
Wailuku, HI 96793

SCIENTIFIC CONSULTANT SERVICES Inc.



1347 Kapiolani Blvd., Suite 408 Honolulu, Hawai`i 96814

TABLE OF CONTENTS

LIST OF FIGURES

INTRODUCTION

Scientific Consultant Services (SCS), Inc. has prepared this Archaeological Monitoring Plan (AMP) in advance of proposed development for the North Shore Greenway-Phase IV in Haliimaile Ahupua`a, Makawao District and Hokuula Ahupua`a, Wailuku District, Island of Maui, Hawai`i [TMK: (2) 2-5-005:046 por., 3-8-001, and 3-8-001:071 por.] (Figures 1, 2 and 3). The proposed greenway consists of a c. 3,500 foot linear corridor from Ulupua Place to the eastern extent of H.A. Baldwin Beach Park. The project proposal is to construct a pedestrian walkway/bikeway on the *makai* (northern) shoulder area of Hana Highway (State Route 36). The greenway will primarily follow Hana Highway, although limited right-of-way width may require the greenway to deviate from the highway.

The current AMP document follows a 2013 Archaeological Field Inspection of the entire project area corridor and environs (Perzinski and Dega 2013). The Field Inspection was conducted by full pedestrian survey of the project area. No historic properties were identified on the surface of the project corridor. That the corridor is a built environment was confirmed during the survey. Finally, there was no evidence that sandy deposits will be present in the project area. Soils along the corridor are red/reddish brown silty clays exclusively.

Archaeological Monitoring is required due to the potential for the inadvertant discovery traditional or historic cultural deposits and/or human burials in subsurface contexts. The present Monitoring program will also ensure that any human remains found during subsurface work are identified and mitigated, as deemed appropriate and lawful under Hawai'i State Law for the Inadvertent Discovery of Human Remains (pursuent to 13-300-40a, b, c, HAR). This AMP will also ensure that if cultural deposits are identified, the work will satisfy reporting requirements outlined in §13-279-5(5) through (6).

This AMP will require the approval of the State Historic Preservation Division (SHPD-Maui) prior to the commencement of any ground altering activities for the park. The following text provides more detailed information on the reasons for monitoring, potential site types to be encountered during excavation, monitoring conventions and methodology for both field and laboratory work, as well as discusses curation and reporting.

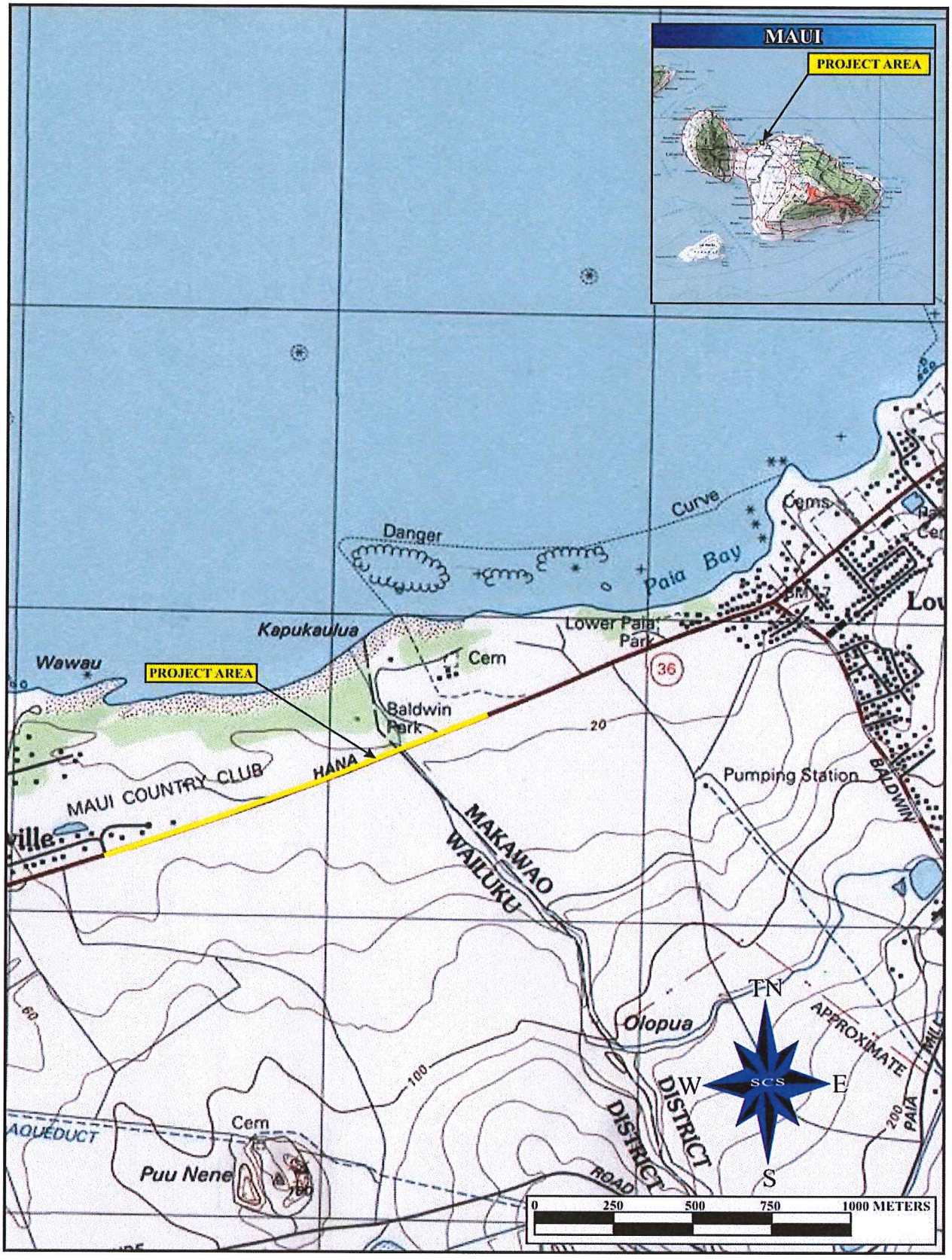
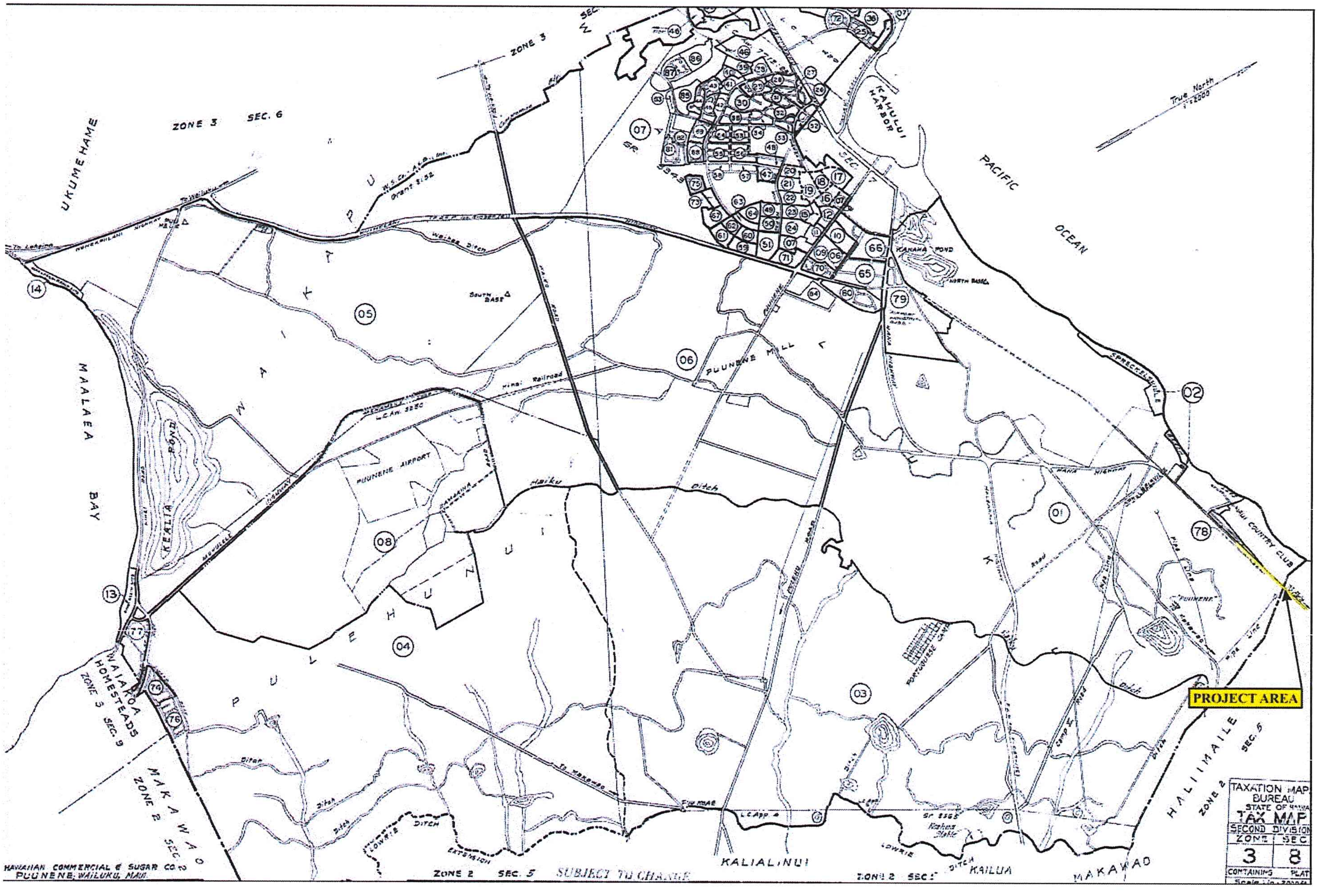


Figure 1: USGS Quadrangle Map Showing Project Area and Environs.


PROJECT AREA
TAXATION MAP BUREAU
STATE OF HAWAII
TAX MAP
SECOND DIVISION
ZONE 3
SEC 8
PACIFIC OCEAN
KAHULUI HARBOR
KANAHA POND
SPRECKELSVILLE
MAUI COUNTRY CLUB
MAALAEA BAY
KEALIA POND
UKUMEHAME
ZONE 3 SEC. 6
ZONE 3
WAIAKOA HOMESTEADS
ZONE 3 SEC. 9
MAKAWAO
ZONE 2 SEC. 2
ZONE 2 SEC. 5
SUBJECT TO CHANGE
KALIALINUI
KAILUA
HALIIMAILE
ZONE 2 SEC. 5
PUUNENE AIRPORT
PUUNENE MILL
Haiku Ditch
HAWAIIAN COMMERCIAL & SUGAR CO.
PUUNENE, WAILUKU, MAUI

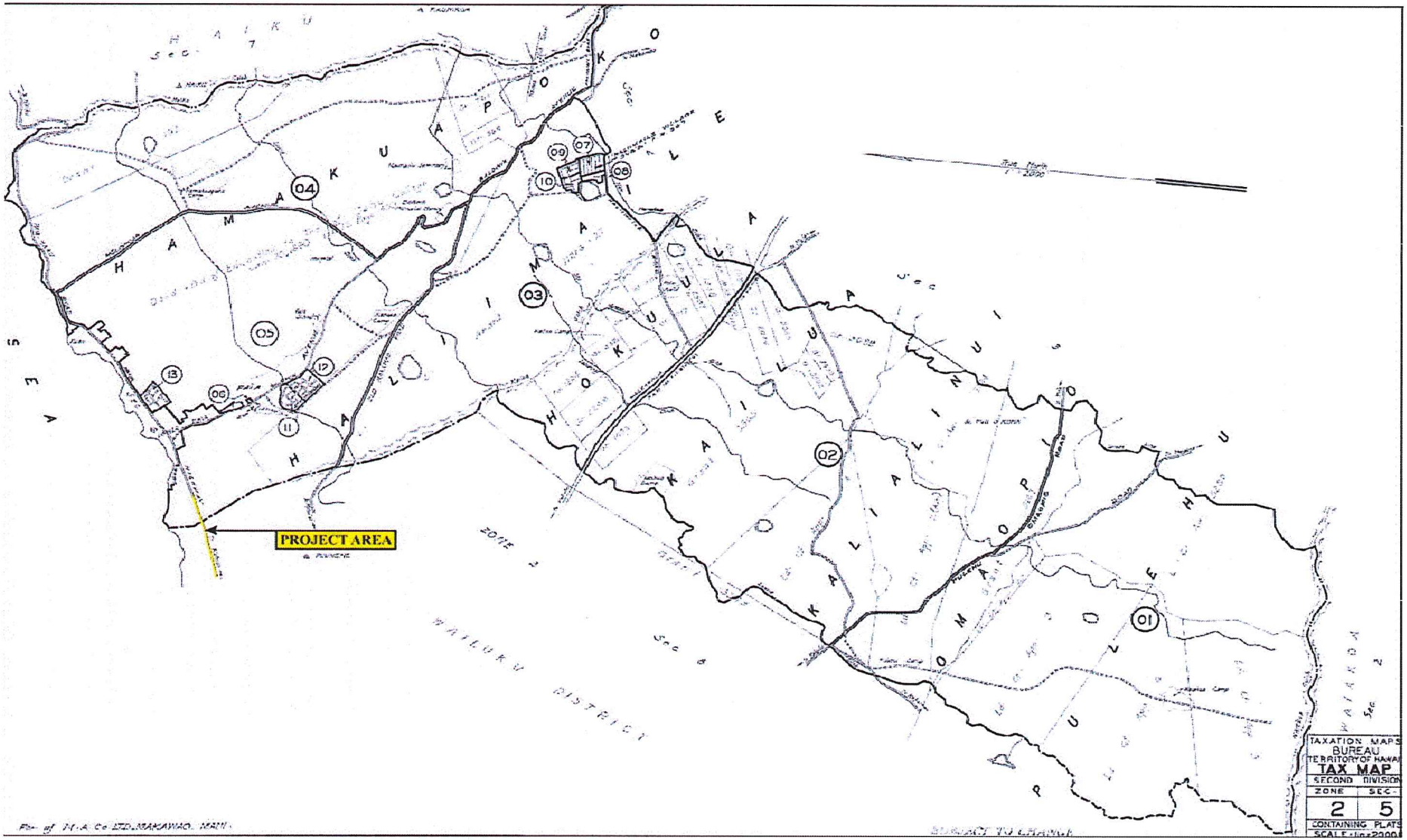


Figure 2a and 2b: Tax Map Key [TMK] Showing Project Area.

REASON FOR MONITORING

Archaeological Monitoring during this project was requested as a pro-active measure by the client, and likely concurrence by the SHPD. Monitoring is based on the sensitivity of the corridor location (see below), and also determined through a comprehensive review of previous archaeological studies conducted in the vicinity of the current project area. Based on these archaeological findings and studies conducted in similar environments throughout the Hawaiian Islands, coastal regions are known to contain human remains and traditional or historic cultural deposits in subsurface strata. While the sediments generally associated with this project appear to be fill and silty clays, there is the potential for identifying sand dune soil deposits, which do often contain pre-Contact and historic era burials and cultural deposits. Thus, a program of full-time Archaeological Monitoring is proposed for the greenway corridor. This strategy will be enforced as a measure of ensuring that any identified cultural materials or deposits are adequately documented, mitigated, and assessed for their significance.

LOCATION AND ENVIRONMENTAL SETTING

The c. 3,500 project area corridor extends along the Hana Highway right-of-way between Ulupua Place and the eastern flank of H.A. Baldwin Park (see Figures 1 and 2). The eastern terminus of the greenway connects into an existing segment of the H.A. Baldwin Park Bikeway. From east to west along the corridor, the route passes by undeveloped land owned by Alexander and Baldwin, H.A. Baldwin Park, the Maui Country Club, and c. eight residential plots near the western terminus. The greenway is bordered by these lands on the north and Hana Highway to the south, east, and west as it occurs within the right-of-way.

Foote *et al.* (1972, Sheets 103& 104) indicate that the primary soil series in the project area corridor are associated with the Pulehu Series (PpA, PpB), well-drained soils on alluvial fans and stream terraces and in basins (Foote *et al.* 1972:115-116). These soils are primarily clay loam developed in alluvium from basic igneous rock and are level to moderately sloping. Elevations range from sea level to c. 300 feet above mean sea level (amsl). This series is associated with sugarcane, truck crops, pasture, home sites, and wildlife habitat (*Ibid.*). The second series within the project area, particularly along the western side of the corridor, is composed of the Molokai Series (Foote *et al.* 1972:96). These soils formed in material weathered from basic igneous rock and have a silty clay texture (*Ibid.*). The soils are level to moderately sloping and are present from sea level to 1,000 ft. amsl. The series is associated with industrial-level cultivation (cane, pineapple), home sites, and wildlife habitat. The final soil series, occurring to the North of the corridor, consists of Dune Land (DL). At present the

corridor does not extend into DL, but given potential deviations given right-of-way width, this series should be included. According to Foote *et al.* (*ibid*: 29), DL is comprised of aeolian deposits of sand-sized bits of coral and marine shell. These deposits have developed along the coastal regions of Maui at elevations ranging from sea level to 150 feet above mean sea level (amsl). As these deposits are constantly shifting soil horizons have not been able to develop. Rainfall in these coastal regions ranges from 15 to 90 inches annually (*ibid*). Use of Dune land areas includes recreation and wildlife habitats. The naturally occurring vegetation consists of ironwood trees, *koa haole*, *kiawe*, and mixed grasses (*ibid*).

The current project area exists in a highway right-of-way, the Maui Country Club, and H.A. Baldwin Park, a built environment. As such, there is an expectation that upper level sediments will likely be fill layers associated with highway construction, as well as golf course and parking lot construction. Given the depth of excavation work for the project (down c. 1-2 ft below surface), there is the possibility that natural soils will not be encountered, just fill layers.

The current project area sits at an average elevation of 15-20 ft. amsl. Rainfall in the area of Pā`ia is consistent throughout the year, averaging about 4 to 6 inches of rain per month for a yearly average of approximately 30 inches (Armstrong 1973). Vegetation in the proposed corridor is fairly non-existent, given its current use as highway right-of-way.

TRADITIONAL AND HISTORICAL SETTING

PRE-CONTACT PERIOD

During traditional times, the division of Maui's lands into districts (*moku*) and sub-districts was reportedly performed by a *kahuna* named Kalaiha`ohia, during the time of the *ali`i,* Kaka`alaneo (Beckwith 1940:383; Fornander places Kaka`alaneo at the end of the 15th century or the beginning of the 16th century [Fornander 1916/17, Vol. 6:248]. Further land divisions within the *moku* were *ahupua`a*, smaller land segments which ideally incorporated all the terrestrial and marine resources necessary for traditional subsistence strategies. The ancient subdivisions of *ahupua`a* were said to have been established approximately 500 years ago and have remained relatively unchanged to present times, even though systems of land tenure themselves have gone through radical changes (Sterling 1998:3).

Traditionally, Wailuku and Lāhainā were the main population centers on Maui (Kirch 1985). Both settlements were associated with *ali`i* and chiefly seats of power (Sterling 1998:74-93; Kolb 1991:326). The valleys at the base of the West Maui Mountains in Wailuku (*e.g.*, `Īao

Valley) were extremely fertile grounds containing permanent streams and supported extensive taro cultivation. Agricultural terraces spilled over onto the slopes at the entrances of valleys (in areas which Wailuku town now occupies) and the taro was fed by mountain rains (Handy 1940:108, in Sterling 1998:75). Kihapai or small gardens were cultivated throughout Wailuku Valley while royal residences were located nearby at Pihana and Kalanihale. Oral histories and ethnohistoric accounts indicate that while primary activities occurred within the Wailuku area, coastal areas like Pā`ia supported smaller scale agricultural endeavors such as sweet potato cultivation, and was a primary source of a variety of readily available marine resources. This includes areas within and near the current project area.

Oral histories also indicate that both frequent and intermittent battles, between polities of Maui and Hawai`i Island (c. 1700s), occurred in the coastal sands of Wailuku and in upland valleys. In the sand dunes between Wailuku and Pu`unene, Kalaniopu`u's most prized Alapa guard was slaughtered by Kahekili's warriors (Sterling 1998:88). Kamakau (1961:85-89) states:

> ...They slew the Alapa on the sandhills at the southeast of Kalua (sic). There the dead lay in heaps strewn like kukui branches; the corpses lay heaped in death; they were slain like fish enclosed in a net....

On the day of Kalaniopu`u's departure from Maui, it was said that his war canoes covered the sands from Kahului to Pā`ia (I`i 1983:11).

Due to the frequent wars and battles occurring in and around the northern coast of Maui, it is conceivable that the dunes of Pā`ia acted as a final resting place of fallen warriors. A description of such pertaining to the area near present day Spreckelsville reads:

> In returning from Makawao to Wailuku...you will ride over fine white sand-hills, as pure and crinkled as a drift of new fallen snow...One sand hill in that vicinity has been an old burying- ground or battle-place, now laid bare by the winds. Skulls, having jaws in perfect preservation, with thirty four teeth sound ...and all the bones of the human body, some of them of gigantic size, lie bleaching all around (Cheever in Sterling 1998:97).

POST-CONTACT PERIOD

In the late 1840s, drastic changes in traditional land tenure systems resulted in a division of island lands and a system of private ownership based on Western law. While a complex issue, many scholars believe that in order to protect Hawaiian sovereignty from foreign powers, Kauikeaouli (Kamehameha III) was forced to establish laws changing the traditional Hawaiian

society to that of a market economy (Daws 1968:111; Kuykendall Vol. I, 1938:145 footnote 47,152,165-6, 170; Kame`eleihiwa 1992:169-70.176). Among other things, foreigners demanded private ownership of land to insure their investments (Kuykendall Vol. I, 1938:138, 145, 178, 184, 202, 206, 271; Kame`eleihiwa 1992:178). Once lands were made available and private ownership was instituted, native Hawaiians, including *maka`ainana* (commoners), were able to claim the plots they were cultivating and living on, if they had been made aware of the foreign procedures. This land division, or Māhele, occurred in 1848. The awarded parcels were called Land Commission Awards (LCAs). If occupation or use of a plot could be established through the testimony of witnesses, petitioners were issued a Royal Patent number and could then take possession of the property. Commoners claiming houselots in Honolulu, Hilo, and Lahaina were required to pay commutation to the government before obtaining a Royal Patent on their land (Chinen 1961:16).

During the *Māhele* of 1848, Wailuku Ahupua`a was designated as Government Land. As such, there are no known LCAs in that portion of the project area or within the other portions as well. In the 1860s, lands that would later become sugarcane cultivation parcels around Pu`unene, directly south of the Maui Country Club, were described as:

> ... a complete desert, a great, barren stretch of sand and dust spread from Wailuku to Pā`ia, except for a little cattle grazing land around the present location of Spreckelsville. (Burns 1991:72).

The sugarcane industry utilized this portion of Maui to cultivate the plants that became a major industry. The Hawaiian Commercial Company, formed by Spreckels, developed the area around and to the west of Spreckelsville. Concurrently, the S.T. Alexander and H.P. Baldwin Company developed the area east of Spreckelsville up to, and including, Pā`ia. In 1880, Claus Spreckels managed to acquire fee simple title to Wailuku Ahupua`a (approximately 440,000 acres, Grant 3343), including the Wailuku Commons that had been Crown Lands owned by Ruth Ke`elikolani. In 1926, Alexander and Baldwin acquired Spreckels' Hawaiian Commercial Company interests in Maui.

The growth of the sugar industry was augmented by imported labor from foreign lands. The various ethnic groups that provided needed labor to fuel a large plantation economy is reflected in the names of the various labor camps surrounding the Pā`ia area: Hawaiian Camp, Russian Camp, Spanish Camp, Portuguese Camp, Chinese Camp, and Japanese Camp. A total of thirteen camp communities were formed and situated throughout the sugar lands and towns appeared at Pu`unene and Spreckelsville (USGS 1922 Pā`ia and Kihei Quads).

Railroads constructed by the sugar companies facilitated communication between the camps and provided transportation for hauling sugarcane. Remnants of the railroad bed are still evident at the western end of Puna Road in Pā`ia, and a section of a railroad berm was encountered during testing at the Maui Country Club. Labor camps were consolidated and relocated over time, with some having developed into modern urban centers such as Kahului and Wailuku. Remnants of these former camps remain in the form of small, scattered cemeteries that occur along the coastline near Pā`ia and Kuau. Historic period artifacts, including ceramics, bottle glass, metal objects, square nails, marbles, and other objects relating to daily activities in the sugar camps, have been documented in nearby sugarcane fields (Clark and Toenjes 1987:10).

With the outbreak of World War II, 3,800 acres of sugar land at Pu`unene and Kahului were annexed by the military for use as the Kahului Naval Air Station. In preparation for the construction of runways, several marshy areas were filled utilizing sand from nearby beach areas (Welch 1991). Support facilities, in addition to training structures, were built along the coast from Kahului northward up the coastline.

Modern construction activities have impacted, through grading and sediment removal, large portions of the lands near the project area. More specifically, residential development, automobile access roads, everyday pedestrian use, and refuse dumping activities have all impacted the area significantly. The current project area primarily occurs in the highway right-of-way, a built environment.

PREVIOUS ARCHAEOLOGY

Early archaeological studies conducted on Maui primarily included recording *heiau* sites along the coastline in 1909 and 1916 by Thrum and Stokes respectively, and an island-wide site survey in 1928 conducted by Winslow Walker (1931). Walker identified one site near the current project area named Kailua Heiau, located near Kailua Gulch approximately 0.50 mile west of Pā`ia Road. The site was recorded as a platform measuring 50 x 80 feet and was probably destroyed during sugarcane cultivation (Walker in Sterling 1998:97).

Many archaeological sites are present in the general vicinity of the project area. Some of these sites, including Kanahā and Mau`oni fishponds, located on the east end of Kahului, have been preserved. These fishponds have been classified as *loko wai* or fresh water ponds by Kikuchi (1973). This type of pond was originally a natural lake or marsh area that was fortified

through human intervention. Kikuchi (1973) states that a stone wall that separates the two ponds was constructed in the early part of the 16th century by the Maui chief Kiha-a pi`ilani.

Clark and Toenjes (1987) conducted a study along the northern Maui shoreline. Six subsurface cultural features were identified during the survey; several of these are located in close proximity to the project area. The sites were functionally interpreted as traditional Hawaiian fishing and habitation sites (Clark and Toenjes 1987). Charcoal samples submitted for dating from this study yielded dates of A.D. 1420-1810 for coastal occupation. Burials were also identified during the study (*ibid.*). The Baldwin Beach Burial Site (State Site No. 50-50-05-1171) is located along the western portion of the H.A. Baldwin Park (*ibid.*).

State Site No. 50-50-05-1063, representing the Ku`au Petroglyphs, are located southwest of Ku`au peninsula. The petroglyphs have been cut into a boulder located on a coral sand beach near an intermittent drainage. The boulder itself is 2.2 m in diameter by 0.7 m high and is inscribed with five linear human figures (Clark and Toenjes 1987:12). Associated with the Ku`au Petroglyphs, a modified boulder occurring 16 m to the south of the petroglyphs and measuring 2.4 m long by 1.4 m wide, exhibits a shallow linear groove 0.36 m long that has been carved across the central portion of the boulder's surface. The groove is surrounded by at least ten shallow, smooth depressions ranging from 0.18 m to 0.33 m in diameter. The modifications to the boulder have been interpreted to represent adze sharpening grooves. The depressions are undoubtedly the result of grinding and polishing adzes in the later stages of adze manufacture (*ibid.*).

North of lower Pā`ia, near Ku`au Bay, State Site No. 50-50-05-1064, known as the Kalahau Burials, has been the focus of much archaeological attention. Human remains have been eroding from within this beach area for a number of years. Excavations conducted by Bowen (1968) revealed two separate cultural layers, providing evidence for both traditional habitation and human burials. These endeavors exhibited two distinctive periods of Hawaiian occupation, however, no radiocarbon dates have been obtained Another study at this site, conducted by Borthwick (1990), revealed a pre-contact cultural layer. Samples collected from a cultural stratum in the dune resulted in a radiocarbon date of c. A.D. 1100. To date, over 44 burials have been removed from the area (Conte 1999).

Subsurface testing conducted in 1991 on either side of Spreckelsville Beach Road led to the identification of several cultural deposits (State Site No. 50-50-04-2849) (Toenjes *et al.* 1991). Radiocarbon dates from documented cultural layers yielded occupation ranges of A.D.

1230 to 1765. One radiocarbon sample from the shoreline yielded a very early date of A.D. 410 to 615 (*ibid.*).

Archaeological subsurface testing of the Ku`au Beach lots subdivision consisted of the excavation of nine trenches. Testing results revealed that dune deposits were located makai or north of the existing beach road. However, no archaeological sites or features were identified within the project area (Hammatt 1997).

To the east of the current project area, Fredericksen and Fredericksen (2004) conducted fieldwork for any Archaeological Assessment in a portion of former sugarcane lands (TMK:2-5-05: por. 18). Fourteen power poles were to be installed by MECO in the area. The Assessment and subsequent monitoring, during which fourteen holes 2.0-2.3 m deep were excavated, did not reveal the presence of cultural deposits.

Along the eastern flank of the current project area, Rotunno-Hazuka and Pantaleo (2005) conducted Archaeological Monitoring for the installation of fifty-three steel power poles from Baldwin Park to Holomua (TMK:2-5-05:18). The authors note the presence of Kalahau Cemetery (Site -1064), Hamakuapoko burials, and Kuau petroglyphs (Site -1063) nearby the project area. The Archaeological Monitoring Report for this project was not available at the SHPD office to discuss the results in this document.

An Archaeological Assessment was conducted on a 9.262-acre parcel in Paia, Hamakuapoko Ahupua`a (TMK:2-5-05: 18 and 61 pors.) by Fuentes *et al.* (2011). This project area is to the southeast of the current project area, nearer Paia Town. Both survey and testing, the latter via fourteen stratigraphic trenches, only revealed till-zone soils associated with expansive sugarcane cultivation, as is common along the southern flank of the Hana Highway in this area.

Near the central and western portion of the current greenway project area, SCS conducted multiple phases of work at the Maui Country Club. This work included Archaeological Inventory Survey (AIS), Burial Treatment (BTP), Monitoring, and preparation of a Cultural Impact Assessment.

O'Rourke (2004) conducted pedestrian survey and testing of approximately 1400 m^2 of land in the Maui Country Club, a 65-acre parcel located between Spreckelsville and Pā`ia, in the *ahupua`a* of Wailuku, Wailuku District, Maui Island, Hawai`i [TMK: 3-8-78:01]. Subsurface

testing was conducted on two occasions: approximately 400 m^2 of land immediately surrounding the Clubhouse along its north, east, and west sides, including the service driveway, were tested from December 15 to 17, 2003. The second testing program was conducted from April 19 to 21, 2004; it focused solely on approximately 1000 m^2 on the open lawn area located immediately to the north of the Clubhouse. Pedestrian survey of the project area failed to reveal the presence of extant surface features of a traditional nature, not at all surprising considering the high degree of alterations the area has undergone in the 20th century. Trenching did yield positive results. Part of a late 19th/early 20th century railroad berm was encountered in one unit (State Site # 50-50-05-5562). Numerous modern subsurface features were encountered, including various modern *imu* associated with the Maui Country Club's annual *luau*, and a concrete cistern embedded in a reddish clay matrix (State Site # 50-50-05-5561). Although no *in situ* traditional features were encountered, human remains were found in the sand fill associated with the cistern. The human remains consisted primarily of post-cranial skeletal fragments of one individual (State Site Number 50-50-05-5563) and was preserved, following an accepted BTP (O'Rourke 2005). Finally, as a historic structure, the Clubhouse was given the following State Site Number: 50-50-05-5502. Monitoring around the Clubhouse and along an adjacent golf course pathway did not lead to the identification of cultural resources (O'Rourke-personal communication).

POTENTIAL SITE TYPES TO BE ENCOUNTERED

Based on archival research and previous archaeology conducted near the project area, expected findings of the Monitoring Program are as follows:

1. There is essentially no expectation of finding any Traditional or Historic sites or features on the present greenway ground surface. The route goes along a built environment (highway, golf course, park).
2. There is limited expectation, within the corridor itself, that subsurface cultural deposits will be identified. Upper layers of sediment consist of fill, with natural sediments occurring below the presumed 1-2 foot excavation level. Soils in this area are also predominantly silty clay and clays, not sand, and associated with former cane fields.
3. If the corridor goes beyond the right-of-way perimeter width to the north, there is the slight chance that sand dune deposits may be encountered. If so, there is the high potential for the identification of pre-Contact/Historic-era cultural deposits and burials of both periods. Again, this is partially dependent upon the depth of project excavations.

MONITORING CONVENTIONS AND METHODOLOGY

This AMP has been outlined in accordance with DLNR/SHPD administrative rule 13-279. Archaeological monitors will adhere to the following guidelines during monitoring procedures:

1. A qualified archaeologist familiar with the project area and the results of previous archaeological work conducted in the general area, will monitor ground altering activities associated with the project. If significant deposits or features are identified and additional field personnel are required, the archaeologist will notify the contractor or representatives before additional personnel are brought to the site.

2. One archaeologist is required to Monitor for each piece of ground altering equipment.

3. If features or cultural deposits are identified during Archaeological Monitoring, the on-site archaeologist will have the authority to temporarily suspend construction activities at the significant location so that the cultural feature(s) or deposit(s) may be fully evaluated and appropriate treatment of the cultural deposit(s) is conducted. SHPD will be consulted to establish feature significance and potential mitigation procedures. Treatment activities primarily include documenting the feature/deposit through plotting its location on an overall site map, illustrating a plan view map of the feature/deposit, profiling the deposit in three dimensions, photographing the finds (with the exception of human burials), artifact and soil sample collection, and triangulation of the finds. Construction work will only continue in the significant location when all documentation has been completed.

4. Control stratigraphy in association with subsurface cultural deposits will be noted and photographed, particularly those containing significant quantities or qualities of cultural materials. If deemed significant, these deposits will be sampled.

5. In the event that human remains are encountered, all work in the immediate area of the find will cease; the area will be secured from further activity until burial protocol has been completed. The SHPD island archaeologist and SHPD-Cultural Historian will both be immediately notified about the inadvertent discovery of human remains on the property. Notification of the inadvertent discovery will also be made to the Maui/Lanai Islands Burial Council by SHPD. A determination of minimum number of individuals (MNI), age(s), and ethnicity of the burial(s) will be ascertained in the field, following standard osteological procedures (*e.g.,* White and Folkens 2000). Rules outlined in Chapter 6E, Section 43 shall be followed. Profiles, plan view maps, and illustrative documentation of skeletal parts will be recorded to document the burial(s). The burial location will be identified and marked. If a burial is disturbed, materials excavated from the vicinity of the burial(s) will be manually screened through 1/8-inch wire mesh screens in order to recover any displaced skeletal material. If the remains are to be removed, the work will be in compliance with HRS 6.E-43.6, Procedures Relating to Inadvertent Discoveries after approval from all parties (SHPD, Burial Council). All remains recovered from the site will be temporarily stored in a secure, on-site location until final disposition is determined and completed.

6. To ensure that contractors and the construction crew are aware of this AMP and possible site types to be encountered on the parcel, a brief coordination meeting will be held between the construction personnel and monitoring archaeologist prior to initiation of the

7. The contracting archaeologist shall provide all coordination with the contractor, SHPD, and any other group involved in the project. The archaeologist will coordinate all monitoring and sampling activities with the safety officers for the contractors to ensure that proper safety regulations and protective measures meet compliance. Close coordination will also be maintained with construction representatives in order to adequately inform personnel of the possibility that open archaeological units or trenches may occur in the project area.

8. As necessary, verbal reports will be made to SHPD and any other agencies as requested.

LABORATORY ANALYSIS

All samples collected during the project, except human remains, will undergo analysis at the SCS laboratory on Maui. In the event that human remains are identified and the SHPD authorizes their removal, these remains and all associated cultural materials will be curated on-site. Photographs, illustrations, and all notes accumulated during the project will be curated at the Maui laboratory of SCS. All retrieved artifact and midden samples will be sent to the SCS laboratory on Maui to be cleaned, sorted, and analyzed. Significant artifacts will be photographed, sketched, and classified (qualitative analysis). All metric measurements and weights will be recorded (quantitative analysis). This data will be presented in tabular form within the final monitoring report. Midden samples will be minimally identified to major 'class' (*e.g.*, bivalve, gastropod mollusk, echinoderm, fish, bird, and mammal). All data will be clearly recorded on standard laboratory forms which also include number and weight (as appropriate) of each constituent category. These counts will also be included in the final report.

Should any samples amenable to dating be collected from a significant cultural deposit, they will be prepared in the SCS laboratory and submitted for specialized radiocarbon analysis. While primary emphasis for dating is placed on charcoal samples, we do not preclude the use of other materials such as marine shell or nonhuman bone materials. SCS will consult with SHPD and the client if radiocarbon dates are deemed necessary.

All stratigraphic profiles will be drafted for presentation in the final report. Representative plan view sketches showing the location and morphology of identified sites/features/deposits will be compiled and illustrated.

CURATION

If requested by the landowner, SCS will curate all recovered materials on Maui (except human remains, which would remain on-site) until a permanent, more suitable curation locale is identified. The land owner(s) may request to curate all recovered materials once analysis has been completed.

REPORTING

An Archaeological Monitoring report documenting the project findings and interpretation, following SHPD guidelines for Archaeological Monitoring reports, will be submitted within 180 days of the completion of fieldwork. This time line is requested to account for any radiocarbon age determinations (typically 60 days), if necessary.

If cultural features or deposits are identified during fieldwork, the sites will be evaluated for historical significance and assessed under State and Federal Significance Criteria. The Archaeological Monitoring report will be drafted until accepted by SHPD and will be submitted to both SHPD and to the client.

REFERENCES

Beckwith, Martha
1940 *Hawaiian Mythology*. Yale University Press.

Borthwick, Douglas F.
1990 *Archaeological Reconnaissance of a 12.4 Acre Parcel, Pā`ia, Makawao, Maui.* Cultural Surveys Hawai`i. MS. on file State Historic Preservation Division, Kapolei, Hawai`i.

Chinen, Jon
1961 *Original Land Titles in Hawai'i.* Library of Congress Catalogue Card No. 61-17314.

Clark, Stephen D. and James H. Toenjes
1987 *Archaeological Monitoring of sewer line construction from Spreckelsville to Ku`au, Maui, State of Hawai`i.* B.P. Bishop Museum, Honolulu.

Daws, G.
1982 *Shoal of Time: History of the Hawaiian Islands*. University of Hawai`i Press, Honolulu.

Foote, D.E., E.L. Hill, S. Nakamura, and F. Stephens
1972 *Soil Survey of the Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawai`i, U.S. Dept. of Agriculture, Soil Conservation Service and University of Hawai`i Agricultural Experiment Station*. Washington, D.C., Government Printing Office.

Fornander, Abraham.
1969 *An Account of the Polynesian Race: Its Origins and Migrations*. Charles E. Tuttle & Co. Rutland, VT.

Fredericksen, D. and E. Fredericksen
2004 *An Archaeological Assessment Report for a Portion of Land in Paia, Hamakuapoko Ahupua`a, Makawao District, Island of Maui (TMK:2-5-05: 18 por.)*. Xamanek Researches, Pukalani, Maui.

Fuentes, R., L. Rotunno-Hazuka, and J. Pantaleo
2011 *Archaeological Assessment for a Parcel of Land in Spreckelsville, Hamakuapoko Ahupua`a, Makawao District, Island of Maui TMK: (2) 2-5-005:061.* Archaeological Services Hawaii, LLC., Wailuku.

Hammett, H. Hallett
1997 *Archaeological Subsurface Testing of the Ku`au Beach Lots Subdivision, Ku`au, Hāmākuapoko Ahupua`a, Makawao District, Maui.* Prepared for A&B Properties. MS. on file State Historic Preservation Division, Kapolei, Hawai`i.

I`i, John Papa
1959 *Fragments of Hawaiian History.* Bishop Museum Press, Honolulu.

Kamakau, Samuel K.
1961 *Ruling Chiefs of Hawai`i.* Kamehameha Schools Press, Honolulu.

Kame`eleihiwa, Lilikalā
1992 *Native Land and Foreign Desires: Pehea La E Pono Ai?* Bishop Museum Press, Honolulu.

Kelly, Marion
1998 *Gunboat Diplomacy, Sandalwood Lust and National Debt.* In Ka Wai Ola o Oha, Vol. 15, No. 4, April 1998.

Kikuchi, W.K.
1973 *Hawaiian Aquacultural Systems.* Ph.D. Dissertation, University of Arizona, Tucson.

Kirch, Patrick V.
1985 *Feathered Gods and Fishhooks: An Introduction to Hawaiian Archaeology and Prehistory.* University of Hawai`i Press, Honolulu.

Kolb, M.
1991 *Social Power, Chiefly Authority, and Ceremonial Architecture, in an Island Polity, Maui Hawai`i.* Ph.D. Dissertation. University of California, Los Angeles.

Kuykendall, R.S.
1938 *The Hawaiian Kingdom.* Vol. 1, University of Hawai`i Press, Honolulu.

McGerty, Leann and R.L. Spear
2000 *Archaeological Monitoring Plan for Waterline Installation Within Ohata Subdivision, Hamakuapoko Ahupua`a, Makawao District, Island of Maui, Hawai`i (TMK:2-6-04:10).* Scientific Consultant Services, Inc. for Douglas J. Sameshima.

Morawski, Lauren and R.L. Spear
2001 *Archaeological Inventory Survey of 0.25 Acres in Hamakuapoko Ahupua`a, Makawao District, Island of Maui, Hawai`i (TMK:2-6-01:1 and 2-5-05:50).* Scientific Consultant Services, Inc. for Mr. Blaze Anderson, Pā`ia Youth and Cultural Center, Maui.

O'Rourke, L.
2005 *Archaeological Inventory Survey of Approximately 1400 m^2 of Land Located in the Maui Country Club, Spreckelsville, Wailuku Ahupua`a, Wailuku District, Maui Island, Hawai`i [TMK:(2)3-8-78:01*

Rotunno-Hazuka, L. and J. Pantaleo
2005 *Archaeological Monitoring Plan for the Installation of MECO Steel Power Poles Along Hana Highway at Paia at TMK: 2-5-05: 18. Haliimaile and Hamakuapoko Ahupua`a, Makawao District, Island of Maui.* Archaeological Services Hawaii, LLC., Wailuku.

Sterling, Elspeth P.
1998 *Sites of Maui.* Bishop Museum Press, Honolulu.

Walker, Winslow.
1931 *Archaeology of Maui.* Manuscript at B.P. Museum Press, Honolulu.

Welch, David J.
1991 Archaeological Subsurface Testing for Kanaha Beach Park Addition and Kanaha Airport Transient Apron, Kahului Airport, Wailuku, Maui, Hawai`i. IARII. MS. on file State Historic Preservation Divisi

APPENDIX B-2.

State Historic Preservation Division Letter Dated February 27, 2014

HISTORIC PRESERVATION DIVISION
DEPARTMENT OF LAND AND NATURAL RESOURCES

STATE HISTORIC PRESERVATION DIVISION
601 KAMOKILA BOULEVARD, ROOM 555
KAPOLEI, HAWAII 96707

February 27, 2014

LOG NO: 2013.6506
DOC NO: 1402MD38
Archaeology

Michael F. Dega, Ph.D.
Scientific Consultant Services, Inc.
1347 Kapiolani Blvd., Suite 408
Honolulu, Hawai'i 96814

Aloha Dr. Dega:

SUBJECT: **Chapter 6E-8 and 6E-42 Historic Preservation Review-**
Draft Archaeological Monitoring Plan for the Proposed North Shore Greenway Phase IV
Hali'imaile and Hōkū'ula Ahupua'a, Makawao and Wailuku Districts, Island of Maui
TMK (2) 2-5-005:046, 3-8-001, and 3-8-001:071 (all por.)

Thank you for the opportunity to review the draft titled *An Archaeological Monitoring Plan for the Proposed North Shore Greenway Phase IV: Ulupua Place to H.A. Baldwin Park, Project Number 12-35, Halimaile Ahupua`a, Makawao District and Hokuula Ahupua`a, Wailuku District, Island of Maui, Hawai`i [TMK (2) 2-5-005:046 por., 3-8-001, and 3-8-001:071 (por.)]* (Dega; November 2013), which we received in November 2013. We apologize for the delay in our reply.

The monitoring plan was prepared in advance of the construction of a proposed bike and pedestrian path *makai* of a portion of the Hana Highway, at the request of Munekiyo and Hiraga, Inc. on behalf of the County of Maui. The proposed corridor would be along the Hana Highway right-of-way between Ulupua Place and the eastern side of H.A. Baldwin Park, extending approximately 3,500 feet. A field inspection was done on behalf of the County prior to the submission of this monitoring plan; no surface historic properties were encountered.

A program of full-time archaeological monitoring is proposed for the greenway corridor, and we concur with that recommendation. The proposed corridor would be a route through land owned by Alexander and Baldwin; the H.A. Baldwin Park; the Maui County Club; and eight residential plots near the western terminus. The greenway is bordered by these lands on the north and Hana Highway to the south, east and west as it occurs within the right-of-way.

The archaeological monitoring plan meets the requirements of Hawai'i Administrative Rule 13-279 and is accepted as final. We look forward to reviewing the monitoring plan for this project. Please send one hardcopy of the final document, clearly marked FINAL, along with a copy of this review letter and a text-searchable PDF version on CD to the Kapolei SHPD office, attention SHPD Library. We request that for the Final document, and for all future submittals, individual names of SHPD employees not be included in report and plan submittals. Simply state that the SHPD Archaeology Branch and the Culture and History Branch will both be notified upon the inadvertent discovery of historic cultural remains or burial sites. We kindly remind you to notify our Maui office of project initiation and completion. Please contact me at (808) 243-4641 or Morgan.E.Davis@hawaii.gov if you have any concerns about this letter.

Mahalo,

Morgan E. Davis
Lead Archaeologist, Maui Island Annex

APPENDIX C.

Cultural Interviews

NORTH SHORE GREENWAY PHASE IV
CULTURAL INTERVIEW

Interview with: Raymond Hew

Interview date: September 20, 2013

Interviewed by: Colleen Suyama, Senior Associate
Munekiyo & Hiraga, Inc.

The interview with Raymond Hew took place at the offices of Munekiyo & Hiraga, Inc. on September 20, 2013. Raymond Hew was born in Wailuku, Maui 65 years ago to Kui Seu Hew and Gladys Fong Hew, whose family ties are with the Fong and Ching families in Keokea, Kula, Maui. He has a brother Leslie who lives in Long Beach, California and a sister Janice who lives on Oahu.

Raymond Hew is the President and general manager of Ah Fooks Supermarket. Mr. Hew's connection to Ah Fooks Supermarket is through his mother's sister Margaret Fong who married Tam Ah Fook. Mr. Hew's ties to Paia are through his grandparents whom he visited every Sunday as a boy until the sixth grade. His grandfather owned the two-story house on Hana Highway located just pass the basketball courts and Paia Youth Center. His aunt Ah Keen Hew inherited the house from his grandfather. The home was sold in 2005 and is currently used as a business. Mr. Hew remembered the Paia-Kuau area as a plantation town with only a few homes. The area has since changed, with a number of new homes and businesses in the area.

Mr. Hew remembers visiting the Paia Chinese Cemetery located on the ocean-side of Hana Highway before the Paia Mantokuji Mission with his father. Mr. Hew is the current President of the association that manages the cemetery. As a youth Mr. Hew remembers swimming and fishing along the shoreline from the Lime Kiln area east of Baldwin Beach Park to the bunkers and the Iwamoto Factory area in Paia Town. Although Mr. Hew no longer swims or fishes in the area, these activities still continue today. At the Maui Country Club near the tennis courts there is a protected area in the ocean that families with small children use. The area from the Country Club to Paia Town is used by beach goers.

Mr. Hew's connection to the area is also as a member of the Maui Country Club. Mr. Hew has been a member since 1989. Mr. Hew is also a past director and treasurer of the Club. Mr. Hew served for four years from approximately 1994 through 1998. Mr. Hew used to golf every Sunday with friends, however, many of whom have since passed away. Mr. Hew continues to golf at the Country Club but not as often as he used to.

The triangular lot on the eastern side of the nearby Maui Country Club Subdivision was formerly owned by Mr. Hew. The vacant lot was sold around 1997. Since then a house has been built on the property.

Mr. Hew voiced concern for the project since the high volume of vehicular traffic and speeding along Hana Highway toward Kahului is a problem in the area. Mr. Hew voiced his concern whether there was enough room along the highway for the bike path to keep it safely away from the highway, especially in the area where the wiliwili trees are located.

Mr. Hew was made aware that an easement will be sought through the Maui Country Club property and voiced concern that the path could affect the golf course. The path will cross the entrance of the golf course's maintenance road and affect the property's fencing. Mr. Hew also, voiced concern that holes number 6 and 15 running along the highway will pose a safety problem to users of the path. There is the potential for golf balls being hit toward the path and highway. Users of the path should be made aware of this potential problem. Mr. Hew noted that County of Maui will need to coordinate with the Maui Country Club, to ensure that proper design mitigation measures are included in the plans.

Regarding possible burials or cultural sites, Mr. Hew was not aware of any burials, cultural sites, or cultural practices in the area of the proposed project.

NORTH SHORE GREENWAY PHASE IV
CULTURAL INTERVIEW

Interview with: Reverend Ryozo Yamaguchi

Interview date: October 1, 2013

Interviewed by: Colleen Suyama, Senior Associate
Munekiyo & Hiraga, Inc.

The interview with Reverend Ryozo Yamaguchi took place at the Paia Rinzai Zen Mission on October 1, 2013. Reverend Yamaguchi was born in Japan 61 years ago. Reverend Yamaguchi became a monk in Japan when he was 14 years old. According to Reverend Yamaguchi he became a monk at an early age because his parents were concerned for his well-being. In addition to his ministerial commitment, he has practiced several professions as a historian, businessman, and teacher, and has lived outside of Japan for several years.

Reverend Yamaguchi arrived on Maui in 1987 from Toronto, Canada with his family. As a minister, who is conversant in Japanese and English, Reverend Yamaguchi came to replace Reverend Seido Chisaka and has been at the Paia Rinzai Zen Mission ever since. He raised his family in Paia and has a son and two (2) daughters.

The Paia Rinzai Zen Mission was established in 1932 by the Okinawan plantation community. The current church is the third church built on the site. The original church was destroyed by a tsunami in 1946 and the second church by fire in 1987, the year of Reverend Yamaguchi's arrival. The current church was built in 1989 after an extensive permitting process with the County of Maui. The church and its main buildings were built to be above the tsunami flood elevation.

As a historian Reverend Yamaguchi obtained his knowledge of the area by listening to the older members of his church and the community.

During the plantation days workers lived near their work place. At one time there was a camp at the nearby Lime Kiln area made up of Japanese and Korean workers and their families. A cemetery for these plantation families is located adjacent to the Paia Rinzai Zen church property, which is currently land-locked and leased by the Makawao Hongwanji Mission (formerly the Paia Hongwanji Mission). The cemetery contains the remains of both Japanese and Korean plantation workers and their families. Reverend Yamaguchi for several years has been taking care of this cemetery. Reverend Yamaguchi noted his concern that he has encountered people not respecting the graves in the cemetery.

Alawai Road which connects to Hana Highway and runs through Baldwin Beach Park currently ends at the church property. While the Lime Kiln was in operation, an unimproved portion of the roadway provided access to the Lime Kiln area and was used by the plantation trucks. This portion of the roadway is no longer in existence.

Reverend Yamaguchi noted that the beach sand areas along this stretch of the shoreline from Spreckelsville to Paia contain Hawaiian burials that are periodically exposed by shoreline erosion. During discussion of a shoreline alignment of the bikeway he and other community members walked along the proposed alignment. Community members noted their concerns that the undisturbed sand may contain Hawaiian burials.

Reverend Yamaguchi noted that in the past, people have mistaken the existing bike path as a roadway. During the church's Obon festival the grassed area of Baldwin Beach Park is used for parking and the parking attendants will direct people back to Alawai Road to exit the park so they do not mistake the bike path as a roadway.

According to Reverend Yamaguchi the Paia Rinzai Zen Mission encourages the continuation of the Okinawan culture and the history of its first (Issei) and second (Nisei) generation members to the next generation.

Other than the Hawaiian burials in the beach sand, Reverend Yamaguchi was not aware of any traditional Hawaiian traditions or culture in the area. However, the shoreline area is heavily used for recreation by both residents and visitors. Reverend Yamaguchi felt construction of the greenway was a wonderful improvement that would not affect users of H.A. Baldwin Park.

APPENDIX D.

Engineering Assessment

Tanaka
ENGINEERS, INC.
CIVIL ENGINEERING • LAND SURVEYING • CONSTRUCTION MANAGEMENT & INSPECTIONAL SERVICES

November 8, 2013

Munekiyo & Hiraga, Inc.
305 High Street, Suite 104
Wailuku, HI 96793

Attention: Ms. Colleen Suyama

Re: Northshore Greenway, Phase IV
Ulupua Place to H.A. Baldwin Park
Project No. 12-35
District of Makawao, Maui, Hawaii

Ladies & Gentlemen:

Pursuant to your request, the following is our engineering assessment of the potential impact to existing infrastructure by the subject project:

1. Grading and Drainage - The proposed bikeway will be graded to maintain the existing drainage flow patterns in the area and is anticipated to create no adverse effect to adjacent and downstream properties.

2. Sewer - The proposed bikeway will have no effect on the existing 10" County sewer force main in the area.

3. Water - The proposed bikeway will have a minimal effect on the existing 8" and 12" waterlines in the area. Any water valve covers affected by the proposed bikeway will be lifted to match the finish grade of said bikeway.

   The proposed bikeway will be routed around the Country Club water booster pumps.

4. Electrical/Telephone - The proposed bikeway will not require nor interfere with any existing overhead electrical or telephone service/lines in the area.

Should you have any questions or comments, please do not hesitate to contact me.

Very truly yours,

Kirk T. Tanaka, P.E., L.S.
President

KTT:sh
cc: Mr. Kurt Watanabe (via Email)

871 KOLU STREET SUITE 201 • WAILUKU, MAUI, HAWAII 96793-1436 • PHONE (808) 242-6861
FAX (808) 244-7287 • E-MAIL - mail@tanakaeng.com