DAVID Y. IGE
GOVERNOR OF
HAWAII

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

KEKOA KALUHIWA
FIRST DEPUTY

JEFFREY T. PEARSON, P.E.
DEPUTY DIRECTOR - WATER

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

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

REF:OCCL:TM

CDUA: MA-3788
Acceptance Date: February 8, 2017
180-Day Exp. Date: August 7, 2017

FEB - 9 2017

MEMORANDUM

TO: Scott J. Glenn, Director
Office of Environmental Quality Control

FROM: for Suzanne D. Case, Chairperson Kekoa Kaluhiwa
Board of Land and Natural Resources

SUBJECT: Draft Environmental Assessment (EA) for Conservation District Use Application (CDUA) MA-3788 for a Single Family Residence and Related Improvements Located at Honolua, Lahaina, Maui, Tax Map Keys: (2) 4-2-004:019 &062

The Department of Land and Natural Resources has reviewed the draft EA for the subject project, and anticipates a Finding of No Significant Impact (FONSI) determination. Please publish notice of availability for this project in the February 23, 2017 issue of the Environmental Notice. We have enclosed a hard copy and a pdf. copy on CD of the draft EA document. A copy of the Publication Form is also enclosed. An electronic copy of the Publication Form will also be e-mailed to OEQC.

Please contact Tiger Mills of our Office of Conservation and Coastal Lands staff at 587-0382 should you have any questions.

Enclosures

RECEIVED
'17 FEB -9 P4:17
OFC. OF ENVIRONMENTAL
QUALITY CONTROL

17-345

APPLICANT
PUBLICATION FORM

Project Name:	ENGEL RESIDENCE
Project Short Name:	ENGEL RESIDENCE
HRS §343-5 Trigger(s):	Use of Conservation District land
Island(s):	Maui
Judicial District(s):	Lahaina
TMK(s):	(2) 4-2-004:019 & 062
Permit(s)/Approval(s):	Conservation District Use Permit, Building Permit
Approving Agency:	Board of Land & Natural Resources, State of Hawaii
Contact Name, Email, Telephone, Address	K. Tiger Mills kimberly.mills@hawaii.gov 808-587-0382 1151 Punchbowl Street, Room 131 Honolulu, HI 96813
Applicant:	William E. Engel
Contact Name, Email, Telephone, Address	William E. Engel bengel@peglion.com 858-414-6569 590 15th Street Del Mar, CA 92014
Consultant:	Chris Hart & Partners, Inc.
Contact Name, Email, Telephone, Address	R. Raymond Cabebe rcabebe@chpmaui.com 808-242-1955 x556 115 N. Market Street Wailuku, HI 96793

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

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

Project Summary
Provide a description of the proposed action and purpose and need in 200 words or less.

The applicant proposes to dismantle and relocate the existing 1,012 square foot structure offsite in order to construct an approximately 3,498 square foot, two-story, single-family residence with two car garage, covered decks, driveway, retaining walls, and related landscape plantings and site amenities. The existing carport will be demolished. A portion of the existing driveway and retaining wall will be removed and the driveway will be realigned to the new garage.

The project site has a total area of 33,914 square feet which includes a 15,426 square foot access easement on the adjoining parcel. The project site has been in residential use since before the 1848 Mahele, according to the cultural study. Since the project site lies within the State Conservation District (Resource Subzone), the applicant is submitting a Conservation District Use Application to the DLNR for review and approval.

HRS 343 DRAFT ENVIRONMENT ASSESSMENT
IN SUPPORT OF

CONSERVATION DISTRICT USE APPLICATION
AND
SPECIAL MANAGEMENT AREA
ASSESSMENT APPLICATION

THE
ENGEL RESIDENCE

6245 Honoapiilani Highway
Lahaina, Maui, Hawaii
Tax Map Key: (2) 4-2-004:019 & 062

Prepared for:
William Engel
590 15th Street
Del Mar, California 92014
Phone: (858) 414-6569

Prepared by:
Chris Hart & Partners, Inc.
Landscape Architecture & City and Regional Planning
115 North Market Street
Wailuku, Hawaii 96793
Phone: (808) 242-1955
Facsimile: (808) 242-1956

NOVEMBER 2016
Revised February 2017

HRS 343 DRAFT ENVIRONMENT ASSESSMENT
IN SUPPORT OF

CONSERVATION DISTRICT USE APPLICATION
AND
SPECIAL MANAGEMENT AREA
ASSESSMENT APPLICATION

THE
ENGEL RESIDENCE

6245 Honoapiilani Highway
Lahaina, Maui, Hawaii
Tax Map Key: (2) 4-2-004:019 & 062

Prepared for:
William Engel
590 15th Street
Del Mar, California 92014
Phone: (858) 414-6569

Prepared by:
Chris Hart & Partners, Inc.
Landscape Architecture & City and Regional Planning
115 North Market Street
Wailuku, Hawaii 96793
Phone: (808) 242-1955
Facsimile: (808) 242-1956

NOVEMBER 2016
Revised February 2017

TABLE OF CONTENTS

I. PROJECT INFORMATION 1

A. PURPOSE OF THE REQUEST 1
B. PROJECT PROFILE 1
C. IDENTIFICATION OF THE APPLICANT 2
D. IDENTIFICATION OF THE OWNERS 2
E. CONSULTANTS 2
F. ACCEPTING AGENCY 2
G. MAJOR LAND USE, DEVELOPMENT AND CONSTRUCTION APPROVALS 3
H. PRE-CONSULTED AGENCIES & PRIVATE INTERESTS 3

II. DESCRIPTION OF THE PROPERTY AND PROPOSED ACTION 5

A. PROPERTY LOCATION 5
B. EXISTING LAND USE 5
C. LAND USE DESIGNATIONS 6
D. ALTERNATIVES 6
1. No Action 6
2. Demolish Existing Residence 7
3. Renovate Existing Residence 7
E. DESCRIPTION OF PROPOSED ACTION 7
F. SHORELINE SETBACK ASSESSMENT 9

III. DESCRIPTION OF THE EXISTING ENVIRONMENT, POTENTIAL IMPACTS AND MITIGATION MEASURES 11

A. PHYSICAL ENVIRONMENT 11
1. Land Use 11
2. Topography and Soils 12
3. Flood and Tsunami Zone 13
4. Terrestrial Biota (Flora and Fauna) 13
5. Air Quality 14
6. Noise Characteristics 15
7. Archaeological/Historical Resources 15
8. Visual Resources 16
B. SOCIO-ECONOMIC ENVIRONMENT 17
1. Population 17
2. Economy 17
3. Cultural Resources 18
C. PUBLIC SERVICES 19
D. INFRASTRUCTURE 19
1. Water 19
2. Wastewater 20
3. Drainage 20
4. Roadway 21
5. Electrical, Telephone, Cable and Data Systems 22

IV. RELATIONSHIP TO GOVERNMENTAL PLANS, POLICIES, AND CONTROLS 23

A. STATE LAND USE LAW 23
B. MAUI COUNTY ZONING 23
C. COUNTYWIDE POLICY PLAN 23
D. MAUI ISLAND PLAN 25
E. WEST MAUI COMMUNITY PLAN 27

V. SPECIAL MANAGEMENT AREA ASSESSMENT 31

VI. HRS CHAPTER 343 SIGNIFICANCE CRITERIA 35

VII. FINDINGS AND CONCLUSIONS 38

VIII. REFERENCES 39

ATTACHMENTS

FIGURES

Figure No. 1	Regional Location Map
Figure No. 2	Tax Map
Figure No. 3	Aerial Map
Figure No. 4.1-4.2	Site Photographs
Figure No. 5.1-5.8	Architectural Plans
Figure No. 5.8	Landscape Concept Plan
Figure No. 6	State Land Use Map
Figure No. 7	West Maui Community Plan
Figure No. 8	Maui County Zoning Map
Figure No. 9	Flood Insurance Rate Map
Figure No. 10	SMA Map
Figure No. 11	Erosion Rate Map
Figure No. 12	Soils Map
Figure No. 13	Tsunami Evacuation Map

APPENDICES

Appendix A	Pre-consultation Correspondence
Appendix B	Cultural Impact Assessment
Appendix C	Grant of Access and Landscaping Easement
Appendix D	Certified Shoreline Survey Map
Appendix E	Honolua Parcel 19 Shoreline Analysis
Appendix F	Archaeological Inventory Survey
Appendix G	Archaeological Monitoring Plan
Appendix H	Preliminary Engineering Report

INTENTIONALLY BLANK PAGE

I. PROJECT INFORMATION

A. PURPOSE OF THE REQUEST

The William Engel Trust, the owner of subject 0.43 acre (18,519 square feet) parcel, wishes to remove and relocate the existing single family residence and reconstruct a new single family residence, along with site retaining walls, driveway improvements, landscape plantings, and infrastructure improvements. Since the property lies within the State Land Use Conservation District, a Conservation District Use Permit (CDUP) from the State Department of Land and Natural Resources (DLNR) is required. In addition, the property lies within the Special Management Area (SMA) which requires compliance with SMA Rules of the Maui Planning Commission and Chapter 205A Hawaii Revised Statutes (HRS) "Coastal Zone Management." The DLNR has determined that the project must also comply with Chapter 343 HRS "Environmental Impact Statements" since the action is a "major alteration" occurring within the Conservation District; thus, this Environmental Assessment (EA) has been prepared in support of these applications to analyze the potential impacts related to the removal/relocation of the existing single family residence and the reconstruction of a new single family residence.

The subject property is situated on the *makai* side of Honoapiilani Highway along the coastline in Honolua, Maui, Hawaii at Tax Map Key (2) 4-2-004: 019. The project site includes the 15,426 square foot easement on Tax Map Key (2) 4-2-004: 062 for access purposes. The site is presently County zoned *Interim* and the West Maui Community Plan's designation is *Conservation*. The site is located within the SMA District.

B. PROJECT PROFILE

Proposed Project:	Engel Residence
Project Address:	6245 Honoapiilani Highway, Lahaina, HI 96761
Project TMK:	(2) 4-2-004: 019 & 062
Parcel Size:	Parcel 09: 18,519 square feet (0.425 Acres)
	Parcel 062: 15,426 square feet of 13.587 acres
Existing Land Use:	Single Family Residence with Landscaping
Access:	Honoapiilani Highway before Honolua Bay

C. IDENTIFICATION OF THE APPLICANT

Applicant:	Mr. William E. Engel
Address:	590 15th Street Del Mar, CA 92014
Phone:	Voice: (858) 414-6569

D. IDENTIFICATION OF THE OWNERS

TMK: (2) 4-2-004:019	William Engel 2012 Residence Trust
Contact:	Mr. William E. Engel. Trustee
Address:	590 15th Street Del Mar, CA 92014
Phone:	Voice: (858) 414-6569
TMK: (2) 4-2-004:062	Maui Land & Pineapple Company, Inc.
Contact:	Mr. Tim T. Esaki, President
Address:	200 Village Road Lahaina, Hawaii 96761
Phone:	Voice: (808) 665-5480

E. CONSULTANTS

Land Use Planner & Landscape Architect:	Chris Hart & Partners, Inc. 155 North Market Street Wailuku, Maui, Hawaii 96793
Phone:	Voice: (808) 242-1955 Facsimile: (808) 242-1956
Contact:	Mr. Jordan E. Hart
Architect:	Kasprzycki Designs, Inc. PO Box 10517 Lahaina, Maui, Hawaii 96761
Phone	Voice: (808) 667-6116
Contact:	Mr. Atom Kasprzycki, AIA

F. ACCEPTING AGENCY

Agency:	Office of Conservation and Coastal Lands Department of Land & Natural Resources P.O. Box 621 Honolulu, Hawaii 96809

Phone: Voice: (808) 587-0377
Facsimile: (808) 587-0322
Contact: Mr. Samuel J. Lemmo, Administrator

G. MAJOR LAND USE, DEVELOPMENT AND CONSTRUCTION APPROVALS

1. Special Management Area (SMA) Assessment.
2. Grading/Grubbing Permit approval from the Department of Public Works and Environmental Management (DPWEM), County of Maui.
3. Building, Electrical and Plumbing Permits for the structure from the DPWEM.
4. Conservation District Use Permit Application (CDUA) from Department of Land and Natural Resources.
5. Special Flood Hazard Area Development Permit from Department of Planning.

H. PRE-CONSULTED AGENCIES & PRIVATE INTERESTS

The following agencies and individuals/organizations responded to requests for comment prior to submittal of the Draft EA (**See**: Appendix "A", "Pre-Consultation Correspondence")

COUNTY OF MAUI

1. Department of Planning
2. Department of Public Works

STATE OF HAWAII

1. Office of Hawaiian Affairs
2. Department of Health
    a. Maui District
    b. Environmental Planning
    c. Environmental Quality Control
3. Department of Land and Natural Resources
    a. Engineering
    b. Historic Preservation
    c. Office of Conservation and Coastal Lands
4. Department of Transportation

PRIVATE INTERESTS

1. Kapalua Water Company
2. Neighboring property owners

The CDUA will be for the Engel Residence will be submitted to the DLNR for review. Once the application is deemed complete, the Draft EA will be transmitted to relevant government agencies for review and comment. A list of potential agencies to review the application are listed below. The applicant will respond and address any agency comments received.

PUBLIC AGENCIES:

Federal

1. Natural Resource Conservation Services
2. U.S. Army Corp of Engineers

State

1. Department of Health
2. Department of Land and Natural Resources
3. Department of Transportation
4. Historic Preservation Division
5. Office of Environmental Quality Control
6. Office of Hawaiian Affairs
7. Sea Grant Extension Service, University of Hawaii

County

1. Department of Planning
2. Department of Public Works
3. Department of Water Supply
4. Fire Department
5. Police Department

PRIVATE INTERESTS:

1. Maui Electric Company
2. Kapalua Water Company
3. Carlsmith Ball LLP for TY Management Corporation
4. Plantation Estates Owners Association

II. DESCRIPTION OF THE PROPERTY AND PROPOSED ACTION

A. PROPERTY LOCATION

The subject project site is located at 6245 Honoapiilani Highway, *makai* of Honoapiilani Highway in Honolua, Maui, Hawaii; TMK (2) 4-2-004: 019 & 062. The northwestern property boundary is defined by the Pacific Ocean. Kahauiki Gulch channels to a drainage ditch along the northeastern boundary that outflows to the Pacific Ocean. Beyond the gulch is a vacant parcel that is currently undeveloped. Honoapiilani Highway runs along the southeastern property line and the southwestern property boundary abuts another vacant lot that is undeveloped except for the driveway to the subject parcel, (**See**: Figure No. 1 "Regional Location", Figure No. 2 "Tax Map", and Figure No. 3 "Aerial Map").

B. EXISTING LAND USE

Honolua, along the shoreline and *makai* of Honoapiilani Highway, is designated as conservation lands. On either side of the subject property there is vacant undeveloped land. The lands *mauka* of the project site, across Honoapiilani Highway, was previously used for large scale agricultural purposes and golf course uses. Pineapple production began in 1912 as Honolua Plantation and became Maui Pineapple Company in 1932 and Maui Land and Pineapple Company in 1969 with the first golf course being built in 1975. Pineapple production ended in 2009 with the closing of Maui Land and Pineapple Company.

Maui County records indicate that the existing single family residence was constructed in 1971, however the research done for Cultural Impact Assessment (Engledow & Smith 2016) prepared for the project concludes "that this property and the adjacent lot were inhabited by Hawaiians before the first land transactions of the Hawaiian Kingdom were recorded in 1848, and continuously to modern times." (**See**: Appendix "B") The subject property is within the State Conservation District. Landscape planting associated with the current residence consists of an open lawn, a large Ficus tree for shade, a few different varieties of palms, and other various flowing shrubs and trees for shade and screening, (**See:** Figure Nos. 4.1-4.2 "Site Photographs").

Kahauiki Gulch, identified as a non-perennial stream in the on Water Resource Management (CWRM) Commission, Department of Land and Natural Resources (DLNR) database, runs through the parcel north of the property.

The existing 1,012 square foot dwelling and 407 square foot carport were constructed in 1971 and is located in the southern part of the property, adjacent to Honoapiilani Highway, outside of the shoreline setback area. Access to Parcel 019 is via a 15,462 square foot perpetual easement on Parcel 062, granted to the applicant on March 11, 2015 by Maui Land & Pineapple Company, Inc. (**See**: Appendix "C"). On November 3, 2016, the shoreline along the western boundary of the subject parcel was certified by the Department of Land and Natural Resources (**See**: Appendix "D", "Certified Shoreline Map"). Sea Engineering, Inc. prepared the *Honolua Parcel 19 Shoreline Analysis* report for the proposed project (**See**: Appendix "E"). This report describes the shoreline:

> *The shoreline fronting Parcel 19 is a boulder beach composed of weathered basalt cobble and boulders of the Honolua Volcanics series. These rocks are characteristically hard, durable, and resistant to erosion.*

The report calculates the Annual Erosion Hazard Rate (AEHR) for the shoreline fronting the property to be -0.02 feet.

C. LAND USE DESIGNATIONS

State Land Use Classification:	Conservation, Resource Subzone (**See:** Figure No. 6 "State Land Use Map")
West Maui Community Plan:	Conservation (**See**: Figure No. 7 "Community Plan")
County Zoning:	Interim (**See**: Figure No. 8 "County Zoning")
Flood Zone Designation:	VE & X (**See**: Figure No. 9 "Flood Map")
Special Designations:	Special Management Area (SMA) (**See**: Figure No. 10 "SMA Map")

D. ALTERNATIVES

1. **No Action**

No redevelopment would result in the existing residence remaining in place.

Analysis. There would be no change to existing conditions. The owners would not be able to improve the condition of the property and structure and enjoy the benefits of a larger living space.

2. **Demolish Existing Residence**

This alternative would remove the existing structure from the subject property.

Analysis. Demolishing the existing structure would allow the property revert to its natural state and provide open space. The parcel has been designated Conservation (State Land Use) and Open Space (West Maui Community Plan). However, according to the Cultural Impact Assessment (Engledow & Smith 2016) prepared for this EA, the property has been in continuous residential use since the *Great Mahele* of 1848 (**See**: Appendix "B"). In addition, the existing residential use has been authorized by a previous Conservation District Use Permit. Demolishing the existing residence would break the continuous residential use.

3. **Renovate Existing Residence**

This alternative would allow for renovation of the existing residence within the existing building envelope.

Analysis. Although the appearance and functionality of the structure would improve, the owners would not enjoy the benefits of a larger living space. This alternative would likely qualify as an exempt action from compliance with HRS Chapter 343 "Environmental Impact Statements."

E. DESCRIPTION OF PROPOSED ACTION

The Applicant wishes to relocate the existing 1,012 square foot structure offsite in order to construct an approximately 3,498.12 square foot, two-story, single-family residence with a two car garage, covered decks, driveway, retaining walls, and related landscape plantings and site amenities (**See:** Figure Nos. 5.1–5.8, "Architectural Plans"). The existing structure is being donated to a family in Paia. The existing carport will be demolished. According to the Applicant, the building will be dismantled and transported to a property that already has a permit for it. A portion of the existing driveway and retaining wall will be removed along with the large overgrown Ficus tree and the driveway will be realigned to the new garage.

Approximate Floor Area (square feet)

Main Dwelling	Gross Living	Covered Deck	Garage	Total Building Area
First Floor	1,102.79	436.47		
Intermediate Floor	792.95			
Second Floor	602.66	96.00		
Total	**2,498.40**	**532.47**	**467.25**	**3,498.12**

The overall depth of the dwelling is approximately 84 feet including stairs and its width is approximately 41 feet including stairs but not including any roof overhangs. The highest point of the structure is approximately 25 feet above grade.

The proposed residence consists of 3 bedrooms, 3 bathrooms, 1 powder room, kitchen, dining room, living room, study, laundry room, entry foyer, and two car garage with direct access to the structure. There is a covered entry deck and a covered decks off the living/dining areas and the master bedroom upstairs. Both covered lanais face the ocean to the north.

The Engel Residence is designed to blend in with the existing architectural style of Honolua and Kapalua. It is a modern adaptation of the plantation era house which is reflected in the earth-tone color scheme, wood and metal building materials, and post and pier construction. The two-story open floor plan with large covered decks and fully retractable sliding doors emphasize the indoor/outdoor living design approach and also allowing for maximum cross ventilation and reduced need for mechanical ventilation. Additionally, the exterior materials were all selected for their "Hawaiian" and "Plantation" feel. The finish materials include painted 1x4 base surrounding the lower portion of the first floor covered decks, a stone façade at the base of the structure with wood shingle siding on all exterior walls, and standing seam metal roofing. Lanais are supported by painted wood wrapped columns with trim. The railings are painted wood with a stained wood cap. The covered entry way is connected to the concrete parking area and driveway by a stamped concrete pathway. The two car garage is attached to the residence and finished in the same materials. It opens onto the new proposed driveway and parking area. The garage can also be accessed from inside the residence.

The remaining open space on the site will remain primarily untouched with the exception for the removal of the large overgrown and unmaintained Ficus tree. The existing lawn areas will remain. New landscape plant material will be added where portions of the old drive is removed.

The primary landscape changes will occur around the new proposed dwelling (**See:** Figure No. 5.8 "Landscape Concept Plan"). Here landscape plantings will be tropical and zone appropriate so plants will thrive with minimal water requirements and add to the "Hawaiian" and "Plantation" feel of the architecture. Design and layout will be natural and curvilinear in an effort to blend the transition between developed area and the natural surrounds of Kahauiki Gulch and shoreline. Plantings will help to ground the structures to the property and soften the transition from a built environment to outdoor open space. Additional landscape planting along the southwestern property line will be planted in a way as to not block any remaining existing view corridors to the ocean from Honoapiilani Highway which are extremely limited.

New trees include Singapore plumeria, areca palms, and various citrus varieties. New shrubs include pigmy date palms, papaya, Queen Emma lily, rhapis palm, *kulu'i*, green and red ti (50/50 mix), *ilima*, and *lilikoi*. Groundcover include beach *naupaka*, beach vitex, golden glory, *lauae* fern, *nehe*, and *pauhiiaka*. Approximately half of the listed species are native. The species selection, which include a number of edibles, represents a variety of colors and textures and is compliant with the Maui County Planting Plan. No species classified as "invasive" are included.

Conclusion: Single Family Residential use is allowable within the Resource Conservation District Subzone, subject to §13-5 HAR standards. According to the Cultural Impact Assessment (**See**: Appendix "B"), the subject property has been in continuous residential use since before the *Great Mahele* of 1848. The existing structure was constructed in 1971 (CDUP MA-163). The land use in the area varies from vacant, to residential, agricultural, and golf course. While the subject property lies in the conservation district, the use of the property will not change.

The proposed action is not considered "development" pursuant to HRS Chapter §205A-22:

(1) Construction or reconstruction of a single-family residence that is less than seven thousand five hundred square feet of floor area and is not part of a larger development;

As such, the proposed action is exempt from SMA permitting requirements.

F. SHORELINE SETBACK ASSESSMENT

As the shoreline is rocky and hardened fronting the subject property, no erosion rate is shown on the University of Hawaii Coastal Geology Group map to calculate the setback distance using the Annual Erosion Hazard Rate (AEHR) method, (**See**: Figure No. 11 "Erosion Rate Map").

Using the Average Lot Depth (ALD) method, the shoreline setback is calculated as follows:

Average Lot Depth:	169.80
	201.16
	+208.55
	579.51
	579.51 / 3 = 193.17 feet

State Setback:	Pursuant to HAR Chapter 13-5, Exhibit 4, since ALD is between 181 and 200 feet, the minimum ALD setback = **90 feet**
County Setback:	Pursuant to Chapter 203 Maui Planning Commission Shoreline Rules, the ALD setback is calculated thusly: 193.17 x 0.25 = **48.29 feet**

Sea Engineering, Inc. (SEI) prepared the *Honolua Parcel 19 Shoreline Analysis* (May2016) to determine that the Average Annual Coastal Erosion Rate (AACER) is 0.02 feet per year (**See**: Appendix "E").

Using the County of Maui's AEHR method, the setback distance is calculated as follows:

0.02 feet x 50 years + 25 feet = **26 feet**.

However, since the property lies within the State Conservation District, the erosion rate shoreline setback is calculated using HAR Chapter 13-5 method. This method requires that a shoreline erosion analysis be prepared to determine the erosion rate, if one has not been established. Pursuant to HAR Chapter 13-5, Exhibit 4, the AACER setback is calculated as follows:

AACER	x 70	+ 40 feet	
0.02 feet/year	1.40 feet	**41.40 feet**	Shoreline Setback

Also pursuant to HAR Chapter 13-5, Exhibit 4, "The applicant may choose the lesser of the two methods, but in no case shall the shoreline setback line be calculated to be less than 40 feet." The applicant chooses the lesser setback of 41.40 feet.

The shoreline was certified on November 3, 2016 (**See:** Appendix "D", "Certified Shoreline Map"). The shoreline survey identifies an erosion area of 31 square feet resulting in a net parcel area of 18,488 square feet.

The proposed structure will be located approximately 51 feet from the certified shoreline, and therefore, outside of both the State and County shoreline setback area.

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

A. PHYSICAL ENVIRONMENT

1. Land Use

Existing Conditions. The subject property is located within the Honolua Bay region of west Maui on the Makai side of Honoapiilani Highway. The area consists primarily of single family residences and the Kapalua Plantation Golf Course Mauka of the Highway. The main attractions to the area are the beach and ocean for surfing, fishing, snorkeling, paddling, and other various water activities and the golf course. There are also different trails for hiking up towards the West Maui Mountains which create the backdrop for the area. The Kapalua Golf Club House and Plantation House Restaurant draw many visitors and residents for various events throughout the year. The Ritz Carlton Hotel provides high quality overnight accommodations for both visitors and residents looking spend time in a luxurious resort and spa. The area's significant features – high end resort community, dramatic coast line, and its array of outdoor activities – are embodied in the various pullouts and beaches along the Honoapiilani Highway environs.

The following is a description of zoning, community plan designations, and existing land uses adjacent and in close proximity to the subject property:

North:	The Pacific Ocean
South:	Zoning: Agricultural Community Plan: Agricultural State Land Use: Agricultural **Existing uses**. Single family residential (*mauka* of Honoapiilani Highway which is immediate boundary)
East:	Zoning: Interim Community Plan: Conservation State Land Use: Conservation **Existing uses.** Vacant land
West:	Zoning: Interim Community Plan: Conservation State Land Use: Conservation **Existing uses.** Vacant land

The subject property has been in residential use since the *Great Mahele* of 1848. Landscape plantings associated with the dwelling and property consist mainly of lawn, various palms, a large Ficus tree, and other ornamental plantings, (**See**: Figure Nos. 4.1-4.2, "Site Photographs"). The site is relatively flat sloping towards the ocean with an elevation averaging about 22 feet above sea level. As the subject property has been in residential use for over a century and a half, there is not much undisturbed area remaining on the site. The east and west property boundaries are heavily vegetated as both neighboring properties are vacant and unmaintained.

Potential Impacts and Mitigation Measures. The site of the proposed project is located within an area that is County zoned Interim, community planned for Conservation, designated by the State as Conservation. The proposed long-term residential use of the property is permitted within the land use designation, with certain restrictions, and the site is currently in use as a single family residence. The proposed action will not increase the density or intensity of land use in relation to its existing use and will therefore not impact public or private infrastructure and service systems. In the context of the West Maui Community Plan, which was adopted in order to guide future development in the area, the proposed project is consistent with existing use.

2. Topography and Soils

Existing Conditions. The project site generally level averaging around 22 feet above mean sea level (MSL). According to the Soil Survey of the Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii, prepared by the United States Department of Agriculture, Soil Conservation Service, August 1972, the soil classifications found on the project site are rock land (rRK) and rough broken land (rRR), (**See:** Figure No. 12, "Soils Map"). rRK ranges from almost level to very steep slopes. Exposed rock can cover the surface of this soil type from 25 to 90 percent. It ranges in elevation from nearly sea level to more than 6,000 feet and is used primarily for pasture, wildlife habitat, and water supply. It is also used for urban development but has a high shrink-swell potential. rRR, has a slope of about 40 to 70 percent, it occurs in gulches and on mountainsides, and it ranges from nearly sea level to 8,000 feet. Erosion is active and runoff is rapid. Uses range from watershed, wildlife habitat, pasture, and woodlands. The soil type is on the portion of the property where the existing structure is located and the proposed work will be completed.

Potential Impacts and Mitigation Measures. The site is suitable for the proposed action as it has been previously developed with residential uses.

3. Flood and Tsunami Zone

According to Panel Number 150003 0262F and 0266F dated September 19, 2012, of the Flood Insurance Rate Map, prepared by the United States Federal Emergency Management Agency, the project site is situated within Zones VE & X (**See**: Figure No. 9, "Flood Insurance Rate Map"). The portion of the subject property that runs along the shoreline, the northern boundary, is designated Zone VE, an area of 100-year coastal flood with a wave action velocity and a base flood elevation of 19 feet. The remainder and majority of the parcel is designated Zone X, areas determined to be outside the 0.2% annual chance floodplain.

A map showing the tsunami evacuation zones for the Honolua area shows that the subject property is within the tsunami inundation zone and must be evacuated when a tsunami warning is issued (See: Figure 13, "Tsunami Evacuation Map"). The proposed dwellings will be constructed in compliance with all applicable flood plain management regulations.

Potential Impacts and Mitigation Measures. All proposed site activity, the dwelling, garage, site walls, driveway, lanais, and pathway for the proposed project will be constructed entirely in the Zone X portion of the property and will not be subject to flood hazards. No activity or construction is proposed or will occur in Zone VE. There are no anticipated impacts to any environmentally sensitive areas. Additionally, the proposed project should not be affected by or have adverse impacts upon its neighbors with regards to flood hazard potential. There are no properties downstream of the project site. See Section III.D.3 for a discussion on drainage.

According to the National Oceanic and Atmospheric Administration's (NOAA) West Coast & Alaska Tsunami Warning Center website, the run up (maximum vertical elevation wave reached above sea level) for the 1946 Tsunami in Lahaina was 2.0 meters (6.6 feet). The 1960 Tsunami recorded a slightly higher run up of 2.1 meters (6.9 feet). The subject property is relatively flat with an elevation of between 20 and 24 feet above mean sea level.

4. Terrestrial Biota (Flora and Fauna)

Existing Conditions. No wetlands are present on or around the subject property. Existing vegetation on the property primarily consists of lawn and native and non-native landscape planting typical of residential properties in the area. No wetland indicator plants were found on the property. Avifauna typically found in the area includes the common myna, several species of dove, cardinal, house finch, and house sparrow. Mammals common to this area include cats, dogs, rats, mice, and mongoose. No known rare, endangered, or threatened species of flora or fauna were discovered on the subject property. The waters around all of the Hawaiian Islands are known habitats for the

Hawaiian monk seal and the green and hawksbill turtles (endangered species); however, there are no officially designated "critical habitats" for these species in the waters surrounding Maui at this time.

Potential Impacts and Mitigation Measures. There are no known significant habitats of rare, endangered or threatened species of flora and fauna located on the subject property. Thus, rare, endangered, or threatened species of flora and fauna will not be impacted by the proposed project.

5. Air Quality

Existing Conditions. Air quality refers to the presence or absence of pollutants in the atmosphere. It is the combined result of the natural background and emissions from many pollution sources. The impact of land development activities on air quality in a proposed development's locale differs by project phase (site preparation, construction, occupancy) and project type. In general, air quality in Honolua is considered relatively good. Non-point source emissions (automobile) are not significant to generate a high concentration of pollutants. The relatively high quality of air can also be attributed to the region's exposure to wind, which quickly disperses concentrations of emissions. West Maui is currently in attainment of all pollutant criteria established by the Clean Air Act, as well as, the State of Hawaii Air Quality Standards.

Potential Impacts and Mitigation Measures. Air quality impacts attributed to the proposed project could include dust generated by the short-term construction related activities. Site work such as grading and building construction, for example, could generate airborne particulate. Adequate dust control measures that comply with the provisions of Hawaii Administrative Rules, Chapter 11-60.1, "Air Pollution Control," Section 11-60.1-33, Fugitive Dust, will be implemented during all phases of construction. Some of these measures will include:

- Providing adequate water source on site prior to start-up of construction activities.
- Landscaping and rapid covering of bare areas, including slopes, beginning with the initial grading phase.
- Controlling of dust from shoulders, project entrances, and access roads.
- Providing adequate dust control measures during weekends, after hours, and prior to daily start-up of construction activities.
- Controlling of dust from debris hauled away from project site.

The proposed project is not expected to increase the volume of traffic in the region, which would increase vehicular emissions such as carbon monoxide. Thus, the proposed project is not anticipated to be detrimental to local air quality.

6. Noise Characteristics

Existing Conditions. The noise level is an important indicator of environmental quality. In a residential environment, noise is due primarily to vehicular traffic, maintenance equipment, human activities, and the natural environment such as wind, rain, and ocean noises. Ramifications of various sound levels and types may impact health conditions and an area's aesthetic appeal. Noise levels in the vicinity of the project area are generally low. Traffic noise from Honoapiilani Highway and noise associated with the neighboring residential uses are the predominant source of background noise in the vicinity of the subject property.

Potential Impacts and Mitigation Measures. In the short-term, the proposed project could generate some adverse impacts during construction. Noise from heavy construction equipment, such as material-carrying trucks and trailers, would be the dominant source of noise during the construction period. To minimize construction related impacts to the surrounding neighbors, the applicant will limit construction activities to normal daylight hours and adhere to the Department of Health's Administrative Rules, Chapter 11-46, "Community Noise Control." In the longer-term, the proposed project should not significantly impact existing noise conditions in the area due to the relatively small increase in traffic generated by the project and continued residential use.

7. Archaeological/Historical Resources

Existing Conditions. As previously noted, the subject property has been in continuous residential use since the *Great Mahele* of 1848, according to the Cultural Impact Assessment (**See**: Appendix "B"). Historical evidence indicates that the area was sparsely populated and there are sections of Honolua that are considered as sensitive areas for cultural deposits and burial sites. However, previous use of the site as residential has left little to no areas of the site undisturbed.

A Draft Archaeological Inventory Survey (AIS) Report was prepared by Archaeological Services Hawaii, LLC (May 2016) (**See**: Appendix "F") for the purpose of determining the presence or absence of surface and/or subsurface historic properties and buried cultural remains. The AIS was submitted to the State Historic Preservation Division (SHPD) for review and approval.

Potential Impacts and Mitigation Measures. As the subject property was used as residential, there is not much undisturbed area remaining on the site with the exception of the area along the shoreline.

The Archaeological Inventory Survey identified two features: a segment of corroded cast iron pipe and a historic to modern fire pit. The iron pipe was determined to be a probable sewer lateral from a previous residence and the fire pit appeared to be a single use pit possibly from the previous owners. Archaeological monitoring is recommended and an Archaeological Monitoring Plan (AMP) was prepared by Archaeological Services Hawaii, LLC (May 2016) (**See**: Appendix "G") and submitted to SHPD for review and approval. Procedures outlined in the AMP will be implemented.

8. Visual Resources

Existing Conditions. The subject property is situated along the *makai* side of Honoapiilani Highway within a residential area of Honolua. The parcel maintains approximately 100 feet of frontage along Honoapiilani Highway with existing landscape plantings and a retaining wall parallel to the highway. The average lot depth is approximately 194 feet. The approximately 85 foot rear (northwest) boundary of the property abuts the shoreline which is primarily rocky and windblown with minimal vegetation. Running along the approximate 170 foot northeast boundary is a drainage ditch fed by Kahauiki Gulch. The adjacent parcel contains larger native and nonnative trees and shrubs. The southwest boundary borders a vacant lot with larger mature trees and shrubs similar to those found in Kahauiki Gulch to the southeast. The subject property is relatively flat with a gentle slope towards the ocean. The existing residence and carport is approximately 42 feet wide.

The area offers sweeping views of the Pacific Ocean and the West Maui Mountains. Public views of these resources exist in various locations from Honoapiilani Highway and beaches and pullouts alongside of the highway. *Mauka* and *makai* views along the highway are extremely limited in the immediate vicinity of the property due to existing vegetation and elevation difference (**See**: Figure No. 4.1-4.2, "Site Photographs").

Potential Impacts and Mitigation Measures. There are numerous scenic views that exist in the area but none of which will be affected by the proposed project. The Maui Scenic Coastal Resources Study from August 1990 does not take inventory of the Honolua area. Thus the resource/inventory map in this report does not identify any unique scenic resources in the area of the proposed project.

Since there is currently a dwelling, retaining and privacy walls, and lush vegetation on the subject property lining Honoapiilani Highway that obstruct and limit public views to the shoreline, the proposed residence is not expected to alter any existing public views. The height of the proposed residence will be approximately 11 feet taller, however the width (41 feet) will be slightly less than the existing structure (42 feet) and will be setback approximately 51 feet from the shoreline. The building pad is approximate 6 feet below the elevation of the road. Existing areca palm hedge that buffers the existing residence from the road and the *makai* view through the 15-foot wide driveway will remain. As such, the proposed project is not anticipated to significantly impact any public view corridors, or the visual character of the site and its immediate environs.

B. SOCIO-ECONOMIC ENVIRONMENT

1. Population

Existing Conditions. The population of the County of Maui has exhibited relatively strong growth over the past decade with a 2010 population of 154,834, a 20.9% increase over 2000 population of 128,094. The 2010 population of the Lahaina Region was 21,514, or 13.9% of Maui County's population (U.S. Census Bureau, Census 2010). Maui Island is expected to increase to 162,370 in 2020 and to 186,254 in 2030 (14.7% increase). Lahaina Region is expected to increase to 25,171 in 2020 (15.5% of Maui Island) and to 28,870 in 2030.

Potential Impacts and Mitigation Measures. The proposed action will not have an impact on population.

2. Economy

Existing Conditions. Like most of the population centers of Maui, the Lahaina economy was once based primarily upon the agricultural industry with the establishment of sugar mills in the 1800s. The closure of the Pioneer Sugar Mill in 1999 symbolized the final demise of large scale agriculture in the community. Today, tourism is the predominant industry. Also in the economic mix are small professional offices (financial, medical, legal), specialty retail (clothing, jewelry, book, antique), and ethnic restaurants.

Potential Impacts and Mitigation Measures. On a short-term basis, the project will support construction and construction-related employment. In the long term, the proposed improvements will enhance the value of the property and increase the County's economic tax base.

3. Cultural Resources

Existing Conditions. A *Cultural Impact Analysis* (CIA) was prepared by Ms. Jill Engledow and Ms. Katherine Kama'ema'e Smith (March 2016) for the project site (**See**: Appendix "B"). The CIA identifies property in the *moku* (district) of Ka'anapali, now known as Lahaina, within the *ahupua'a* land division of Honolua.

> *Ka'anapali Moku was known for its fishing grounds, rich 'uala (sweet potato) farming and cattle grazing land. Many kuleana parcels were held by small farmers at the time of the Mahele.* (Engledow & Smith 2016: 10)

The CIA contains results of archival research and oral interviews with individuals who lived in the Kapalua area or worked for Maui Land & Pineapple Company when the plantation and ranch were operating. One of authors of the CIA, Ms. Smith, knew one of the families that lived on the subject property in the 1970s. The subject property was part of a 3.42 acre Land Court Award to Naiwimawaho, a result of the *Great Mahele* of 1848.

The CIA did not identify any specific cultural resources, however, swimming, fishing, diving, and reflection along the shoreline are common traditions practiced throughout Hawaii. The CIA does note that the five valleys north of Lahaina had a "large fishing population which presumably inhabited this leeward coast." It also notes the practice of Hawaiian families to bury their loved ones near or under their homes and "in the soft lepo and sandy soils near the shore."

Potential Impacts and Mitigation Measures. Research from the CIA concludes that the property was inhabited by Hawaiians prior to the *Great Mahele* and continuously to modern times. A documented *heiau* in the gulch *mauka* of the highway indicates that habitation may have extended into pre-contact times.

The CIA did not identify any cultural resources, i.e. medicinal plants, shoreline resources, religious sites that will be impacted by the project. Nor are there cultural sites in the immediate vicinity of the subject property that require access through the property. However, the CIA notes:

> *It was the practice of Hawaiian families to bury their loved ones near or under their homes. Even today, Hawaiians often scatter the ashes of their ancestors in the vicinity of their homes. Ancient Hawaiian burial practice was to bury the dead in the soft lepo and sandy soils near the shore.*
>
> *Based on these observations, any disturbance of soil on this property should be monitored by an archaeologist for the presence of burials and cultural artifacts.* (Engledow & Smith 2016: 14)

As the CIA and AIS reports recommended, an Archaeological Monitoring Plan (AMP) was prepared by Archaeological Services Hawaii, LLC (May 2016) (**See**: Appendix "G")

and submitted to SHPD for review and approval. According to the AMP, full time monitoring during all ground-disturbing activities is the protocol for this project. The AMP's recommended procedures:

- The State Historic Preservation Division (SHPD) will be notified of the onset and completion of the proposed undertaking.
- One archaeological monitor per piece of ground-disturbing equipment.
- Prior to commencement of construction, all pertinent parties including but not limited to construction and archaeological personnel will be informed of the monitoring procedures.
- If subsurface sites or human remains are inadvertently exposed, all activities in the immediate area will temporarily halt and construction may shift to other areas of the project. SHPD will be consulted for the appropriate mitigation measures as required by HRS Chapter 6E and HAR Title 13.

C. PUBLIC SERVICES

Potential Impacts and Mitigation Measures. Due to its location within an existing residential area, previously developed site, and limited scope, the proposed project will not extend existing public services (recreational facilities, police and fire protection, schools, medical facilities and solid waste) limits; therefore, the impact on public services will be minimal.

D. INFRASTRUCTURE

Linda Taylor Engineering, Inc. prepared a *Preliminary Engineering Report for The William Engel Trust* (PER), dated May 24, 2016 (**See**: Appendix "H").

1. Water

The Kapalua Water System, managed by Aqua Engineers, provides potable, fire protection, and irrigation water for the Kapalua Resort and surrounding areas. The system is comprised of three (3) wells, two (2) of which are in operation, with a capacity of 1 million gallons per day (MGD). The system also provides non-potable surface water drawn from the Honokohau Tunnel. Domestic consumption averages approximately 0.5 MGD. (*County of Maui Infrastructure Assessment Update*, Wilson Okamoto 2003)

The subject property is serviced by a 5/8" water meter. According to the PER, "There is no apparent fire protection existing for the site."

Potential Impacts and Mitigation Measures. Low flow fixtures, drought tolerant plants, and efficient irrigation, such as drip, will be implemented in order to conserve water. It is anticipated that the existing water meter will be adequate for the proposed project. Since the previous residence was served by the existing water meter, it is expected that the proposed project will not create significant additional demand on the Kapalua Water System. A sprinkler system is proposed to provide fire protection.

2. Wastewater

The existing residence is connected to a private cesspool. There is no other collection method available in the area currently nor is there an accessible wastewater treatment facility. The existing cesspool will be backfilled and abandoned.

Potential Impacts and Mitigation Measures. According the PER, a new Individual Wastewater System (IWS) will be installed with a new septic tank, pursuant to State Department of Health rules. The soil absorption field will be sized for a capacity of 3 bedrooms and an aerobic treatment will be utilized, if required.

3. Drainage

Kahauiki Gulch runs along the east boundary and collects some of the area's immediate natural runoff. The general existing natural drainage pattern (southeast to northwest direction) will not be altered. As noted previously, the soil classification (rough broken land and rock land), indicates that the soil has low runoff and high permeability. There is no drainage system in the vicinity.

According to the PER, the 50 year, one hour rainfall is 3.00 inches. Pre-development storm runoff is 1.23 cubic feet per second (cfs).

Potential Impacts and Mitigation Measures. Post-development runoff is calculated at 1.43 cfs for an increase of 0.20 cfs. The increased runoff will be retained on site in an above ground retention basin or underground retention system.

The following measures may be instituted to control erosion during the construction period:

1. Minimize time of construction.
2. Retain existing ground cover until latest date to complete construction.
3. Use temporary area sprinklers in non-active construction areas when ground cover is removed.
4. Use temporary berms and cut-off ditches, where needed, for control of erosion.

5. Thoroughly water graded areas after construction activity has ceased for the day and on weekends.
6. Provide temporary irrigation system and grass all cut and fill slopes within 30 days after grading work is completed.
7. Install silt screens wherever appropriate.

With ultimate ground cover and extensive landscaping, any appreciable onsite erosion will be precluded. With these erosion control measures, the proposed development will not have a significant impact on the nearby Kahauiki Gulch, ocean, or beaches.

4. Roadway

The project site is accessed from a private driveway that intersects with Honoapiilani Highway which is the only two-way north-south road in and out of Honolua. It continues north to Honolua Bay and south to Kapalua. Honoapiilani Highway has an approximately 40 foot right-of-way that traverses the southern boundary of the subject parcel.

Potential Impacts and Mitigation Measures. The proposed project is in an area that has been in residential use since. As the proposed project is to dismantle and relocate the existing structure and reconstruct a single family dwelling, and since the total number of dwellings on the property does not exceed three, the project is exempt from Section 16.26.3304 "Improvements to Public Streets", Maui County Code (MCC).

The PER notes that the site distance to the left of the existing driveway does not meet the prescribed 350-foot sight distance. However in 2014, the State Department of Transportation (DOT) reviewed and approved a Permit to Perform Work Upon State Highways (MA-13-31) for improvements to the existing driveway. The plans included a sight distance analysis that was accepted by the State DOT.

It is anticipated that there will be short term impacts during construction which will be minimized by taking precautions to limit impediment of traffic on Honoapiilani Highway. However, there will be no significant long term impacts on traffic on Honoapiilani Highway because of the limited scope of the project.

5. Electrical, Telephone, Cable and Data Systems

The existing overhead electrical, telephone, and cable lines that run along Honoapiilani Highway will continue to service the subject property. Services will be maintained as currently provided. Any additional onsite electrical, telephone, and cable facilities will be designed to meet the requirements of the utility companies.

Potential Impacts and Mitigation Measures. The proposed project is not anticipated to significantly impact electrical, telephone, and cable service in the area.

IV. RELATIONSHIP TO GOVERNMENTAL PLANS, POLICIES, AND CONTROLS

A. STATE LAND USE LAW

Chapter 205, Hawaii Revised Statutes, relating to the Land Use Commission, establishes four major land use districts into which all lands in the State are placed. These districts are designated Urban, Rural, Agricultural, and Conservation. The subject property is located within the Conservation District. The purpose of this Environmental Assessment is to address any impacts of the proposed removal and reconstruction of the existing single family residence will have on the Resource Subzone and support the Conservation District Use Application (CDUA).

All identified uses within the Conservation District subzones, as defined in Hawaii Administrative Rules (HAR) Chapter 13-5, may require a CDUA. HAR Chapter 13-5 regulates land use in the Conservation District "for the purpose of conserving, protecting, and preserving the important natural and cultural resources of the State through appropriate management and use to promote their long-term sustainability and the public health, safety, and welfare." The proposed action requires a Conservation District Use Permit (CDUP) approved by the Board of Land and Natural Resources (BLNR).

The CDUA contains information on the proposed use, evaluation criteria, and analysis of cultural and other impacts.

B. MAUI COUNTY ZONING

The subject property is situated within the County of Maui's Interim District (**See**: Figure No. 8, "Maui County Zoning Map"). The proposed project is an allowable uses within the Interim district. Single family dwelling development requirements will be adhered to.

C. COUNTYWIDE POLICY PLAN

The General Plan of the County of Maui (2010 update) provides long-term goals, objectives, and policies directed toward improving living conditions in the County. The following General Plan Themes, Objectives and Policies are applicable to the proposed project:

Countywide Goals, Objectives, Policies, and Actions:

A. Protect the Natural Environment

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

Objective: 3 ***Improve the stewardship of the natural environment.***

Policies:

c. *Evaluate development to assess potential short-term and long-term impacts on land, air, aquatic, and marine environments.*

Analysis. The proposed use will not alter the current use of the property or result in the development of any previously undeveloped land. The new residence will be constructed in the same location of the current structure with a small portion of the dwelling and deck extending into the current lawn area. There are potential short term impacts to the air resulting from construction related activities; however, BMPs will be implemented to mitigate any potential issues and control dust during construction. There are no anticipated negative long-term impacts on land, aquatic, or marine environments.

J. Promote Sustainable Land Use and Growth Management

Goal: ***Community character, lifestyles, economies, and natural assets will be preserved by managing growth and using land in a sustainable manner.***

Objective: 2 ***Design all developments to be in harmony with the environment and to protect each community's sense of place.***

Analysis. As the site is currently developed with an existing single family residence, the proposed project will not change the use of the site. The project will not use any undeveloped lands or place any increased demand on public systems and infrastructure. The architectural design and style of the proposed structure will incorporate elements of the plantation era along with natural materials and colors to soften the buildings presence. Existing public views and access in the project vicinity will be preserved to the extent they exist currently.

D. MAUI ISLAND PLAN

The 2030 update to the General Plan of the County of Maui was approved by the Maui County Council and signed into law by the Mayor of Maui County on December 28, 2012. The Maui Island Plan determines the appropriateness of discretionary development proposals. The subject property is not within the Growth Boundaries nor is it designated as a Protected Area. The following Goals, Objectives and Policies of the Maui Island Plan are applicable to the proposed project:

HERITAGE RESOURCES

Shoreline, Reefs, & Nearshore Waters

Objective:

2.2.2 ***Improved reef health, coastal water quality, and marine life.***

Policies:

2.2.2.c *Require, where appropriate, a buffer between landscaped areas and the shoreline, gulches, and streams to reduce the runoff of fertilizers, pesticides, herbicides, and other pollutants into coastal waters.*

Implementing Actions:

2.2.2.-Action 1 *Adopt coastal landscaping provisions that include standards such as setbacks, buffers, and other measures that promote the use of native plants and xeriscaping.*

Objective:

2.2.3 ***Water quality that meets or exceeds State Clean Water Act Standards.***

Policies:

2.2.3.a *Reduce the amount of impervious surface and devise site plan standards that aim to minimize storm runoff and NPS pollution.*

Analysis. The subject property abuts the shoreline on a previously developed site with a single family residence. All proposed work will be outside the of the shoreline setback with the structure being located approximately 51 feet from the shoreline. BMPs will be

used to ensure no impacts from construction runoff or waste impact the ocean, shoreline, or other areas. Shoreline access will not be affected or limited by the proposed project. The majority of the site will remain in open space, lawn areas, or landscape planting use. Native plantings and species suited to the region will be used to help reduce water use.

Scenic Resources

Objective:

2.5.1 ***A greater level of protection for scenic resources.***

Policies:

2.5.1.a *Protect views to include, but not be limited to, Mauna Kahalawai (West Maui Mountains)…the Pacific Ocean, and significant water features, ridgelines, and landforms.*

2.5.1.b *Identify, preserve, and provide ongoing management of important scenic vistas and open space resources, including mauka-to-makai and makai-to-mauka view plans.*

2.5.1.e *Protect scenic resources along Maui's scenic roadway corridors.*

Analysis. The proposed project will not impact any existing public views to or from the shoreline or mountains. The majority of any views in the project vicinity are currently restricted and very limited due to the heavy vegetation growth and natural topography. The proposed reconstructed dwelling will not impact the views and any new landscaping will be maintained at a height as to not impact any remaining view corridors that may exist.

Infrastructure & Public Facilities

Water

Goal:

6.3 ***Maui will have an environmentally sustainable, reliable, safe, and efficient water system.***

Objective:

6.3.2 ***Increase the efficiency and capacity of the water systems in striving to meet the needs and balance the island's water needs.***

Policies:

6.3.2.b *Encourage increased education about and use of private catchment systems where practicable for nonpotable uses.*

Analysis. The subject property is serviced by the Kapalua Water System, a private water company provides potable, fire protection, and irrigation water for the Kapalua Resort and surrounding areas. The system is comprised of three (3) wells, two (2) of which are in operation, with a capacity of 1 million gallons per day (MGD). The system also provides non-potable surface water drawn from the Honokohau Tunnel. Domestic consumption averages approximately 0.5 MGD (*County of Maui Infrastructure Assessment Update*, Wilson Okamoto 2003). As the proposed project is a replacement dwelling, it is anticipated that there will be minimal impact to the island's water resources.

E. WEST MAUI COMMUNITY PLAN

Nine community plan regions have been established in Maui County. Each region's growth and development is guided by a community plan, which contains objectives and policies in accordance with the Maui County General Plan. The purpose of the community plan is to outline a relatively detailed agenda for carrying out these objectives.

The subject property is located within the West Maui Community Plan region and has a Conservation designation (**See**: Figure No. 7, "West Maui Community Plan"). The West Maui Community Plan was adopted by ordinance No. 2476 on February 27, 1996.

The following West Maui Community Plan goals, objectives, and policies are applicable to the proposed action:

Goal: **Land Use. An attractive, well-planned community with a mixture of compatible land uses in appropriate areas to accommodate the future needs of residents and visitors in a manner that provides for the stable social and economic well-being of residents and the preservation and enhancement of the region's open space areas and natural environmental resources.**

Objectives and Policies for the West Maui Region in General:

2. *Preserve and enhance the mountain and coastal scenic vistas and the open space areas of the region.*

3. *Preserve the current State Conservation District and the current State Agriculture District boundaries in the planning region, in accordance with this Community Plan and its land use map. Lands north of Kapalua and south of Puamana to the region's district boundaries should ensure the preservation of traditional lifestyles, historic sites, agriculture, recreational activities and open space.*

Analysis. The proposed project will not impact any scenic mountain or coastal vistas. Dense vegetative growth and natural topography in the project vicinity limit views both toward the ocean and mountains. Any existing remaining views will be maintained.

The subject property is located in the State Conservation District. However, according the Cultural Impact Assessment, it has been in continuous residential use since the *Great Mahele* of 1848. Thus, the proposed project will not change the use of the property. All work will be outside of the shoreline setback and all existing access and views will be preserved. The proposed work will not impact traditional lifestyles, historic sites, agriculture, recreational activities, or open space in the area.

Goal: **<u>Environment</u>. A clean and attractive physical, natural and marine environment in which man-made developments on or alterations to the natural and marine environment are based on sound environmental and ecological practices, and important scenic and open space resources are preserved and protected for public use and enjoyment.**

Objectives and Policies:

2. *Preserve agricultural lands and open space with particular emphasis on natural coastal areas along major highways.*

6. *Integrate stream channels, gulches and other areas deemed unsuitable for development into the region's open space system for the purposes of safety, open space relief, greenways for public use and visual separation…*

14. *Protect the shoreline and beaches by preserving waterfront land as open space wherever possible…*

Analysis: As described in Section III of this report, West Maui's unique and fragile environmental resources, including its shoreline, near and off-shore water quality,

drinking water, visual resources, archeological resources, endangered species of flora and fauna, and agricultural resources will not be impacted by this project. Additionally, as mentioned in the analysis above, the subject property has been in continuous residential use since the *Great Mahele* of 1848 and the proposed action will not change the use of the property or impact any open space. Kahauiki Gulch, which runs along the eastern property boundary, will not be impacted and will be preserved with the existing privacy wall and planted buffer to separate it from the residential use on the property. This will also provide a visual separation for the subject property when traveling along Honoapiilani Highway. Existing shoreline access points on adjoining properties are not impacted.

Goal: **Cultural Resources. To preserve, protect and restore those cultural resources and sites that best represent and exemplify the Lahaina region's pre-contact, Hawaiian Monarchy, missionary and plantation history.**

Analysis: The subject property has been in continuous residential use since the *Great Mahele* of 1948, according to the Cultural Impact Assessment (**See**: Appendix "B"). No impacts to any cultural resources are anticipated as a result of the proposed project due to the fact that the residential use has left little to no areas of the site undisturbed. No development is proposed within the shoreline setback to the north and Kahauiki Gulch along the eastern boundary.

Goal: **Urban Design. An attractive and functionally integrated urban environment that enhances neighborhood character, promotes quality design at the resort destinations of Kaanapali and Kapalua, defines a unified landscape planting and beautification theme along major public roads and highways, watercourses, and at major public facilities, and recognizes the historic importance and traditions of the region.**

Objectives and Policies for the West Maui Region in General:

1) Enhance the appearance of major public roads and highways in the region.

6. …Hedge planting should be spaced and limited in height, in order to provide vistas to the shoreline and mountains.

9. Save and incorporate healthy mature trees in the landscape planting plan of subdivisions, roads or any other construction or development.

10. Incorporate drought-tolerant plant species in future landscape planting.

15. Emphasize contrasting earth-tone color schemes for buildings and avoid bright or garish colors.

Analysis: The Engel Residence is designed to blend in with the existing architectural style of Honolua and Kapalua. It is a modern adaptation of the planation era house which is reflected in the earth-tone color scheme, wood and metal building materials, and post and pier construction. The healthy plantings along Honoapiilani Highway will remain and native and drought-tolerant plants will be used on the subject property when and where possible. Landscape plantings will be designed to provide privacy, create a soft presence, and define public and private open areas while maintaining any existing ocean and mountain views.

Goal: **Infrastructure. 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 efficient transportation systems which meets the needs of the community.**

Analysis: Section III of this report addresses the impact that the proposed project will have upon existing public and private infrastructure, facilities, and service systems. Based upon the analysis, public and private infrastructure and services the subject property currently has available to it, or will have in the foreseeable future, contains adequate capacity to serve the development and will therefore not be significantly impacted by the project. Thus, the necessary infrastructure, public and private facilities, and services will be available prior to and/or concurrent with development of the site.

V. SPECIAL MANAGEMENT AREA ASSESSMENT

Maui Planning Commission Special Management Area Rules 12-202-12 (e):

In considering the significance of potential environmental and ecological effects, the director shall evaluate:

1) The environmental setting of the subject property.

The 18,519 square feet property is located within the State Conservation District in the *ahupua'a* of Honolua and *moku* of Lahaina. The site is bound by vacant properties to the northeast and southwest; Honoapiilani Highway and vacant parcel to the southeast; and the Pacific Ocean to the northwest.

2) A description of anticipated impacts of the proposed project:

(A) ***Affects natural or cultural resources (i.e. historic site, excavation on vacant land).***

The proposed action is not expected to have any adverse impact or destruction upon any natural, historical, or cultural resources. The applicant has prepared and submitted an archeological inventory survey (AIS) and an archeological monitoring plan (AMP) to the State Historic Preservation Division (SHPD). The AMP will be implemented during construction and in the event that significant historical artifacts or human remains are found, the applicant will stop work and contact SHPD immediately (**See**: Appendix "F" "Archeological Inventory Survey" and Appendix "G" "Archeological Monitoring Plan").

(B) ***Curtails the range of beneficial uses of the environment.***

The proposed action is consistent with the existing residential use that has continuous since the *Great Mahele* in 1848 (**See**: Appendix "B" "Cultural Impact Assessment"). Residential use is allowed in the State Conservation District within the parameters of HAR Chapter 13-5. The improvements proposed will not significantly curtail the beneficial uses of the existing environment.

(C) ***Conflicts with the county's or the state's long-term environmental policies or goals (i.e. State Plan, County General Plan, and Community Plan).***

The project is in compliance with the state's long term environmental goals. Adequate mitigation measures will be implemented to minimize the potential for negative impacts to the environment. In the context of the West Maui Community

Plan, which guide future development in the area, and the State Conservation District, the proposed project will require a Conservation District Use Permit.

(D) ***Affects the economic or social welfare and activities of the community, county, or state.***

Due to the limited scope of the project, the proposed action will not substantially affect the economic or social welfare and activities of the community, county, or state. The action will have a positive short term effect by creating an opportunity for free enterprise in the creation of additional construction related jobs.

(E) ***Involves secondary impacts, such as population changes (i.e. increase/decrease) and increased effects on public facilities, streets, drainage, sewage, and water systems, and pedestrian walkways (i.e. increased demands and deficiencies).***

A Preliminary Engineering Reports was prepared by Linda Taylor Engineering, Inc. (**See**: Appendix "H" "Preliminary Engineering Report"). The report identifies existing conditions and proposed impact mitigation measures. Since the project is a replacement residential structure, the proposed action will not involve substantial secondary impacts, such as population changes and increased effects on public facilities, streets, drainage, sewage, water systems and pedestrian walkways. There will be no significant impact on county water supply and energy resources.

(F) ***By itself has no significant adverse effects but cumulatively has considerable effect upon the environment (i.e. increased traffic and deficiencies in services) or involves a commitment for larger actions (i.e. more public infrastructure, such as roads, waterlines, sewers, etc.).***

The project does not involve a commitment for larger actions on behalf of the applicant or any public agency. In terms of cumulative impacts, the project site is situated within the State Conservation District and adjacent to vacant properties. Existing infrastructure and utilities are available and will be adequate to service the proposed project. Therefore, the project will not result in cumulative negative impacts on the environment.

(G) ***Affects a rare, threatened, or endangered species of animal or plant, or its habitat (i.e. wetlands, natural area reserves, refuge).***

There are no known rare, threatened, or endangered species of animal or plant, or associated habitat on the property.

(H) ***Is contrary to the state plan, county's general plan, appropriate community plans, zoning and subdivisions ordinances.***

The subject parcel lies in the State Conservation District and is designated for Conservation use by the West Maui Community Plan. The Maui County Zoning designation is Interim. The subject property is not located within any Growth Boundaries of the Maui Island Plan Directed Growth Map and is not identified as "Preservation" or "Sensitive" Lands. Residential uses are allowed within the Conservation District under certain parameters. The subject property is also located within the limits of the Special Management Area for this part of the island (**See:** Figure No. 6 "State Land Use Map", Figure No. 7 "Community Plan Map", Figure No. 8 "Maui County Zoning Map", & Figure No. 10 "Special Management Area Map").

(I) ***Affects air or water quality or ambient noise levels (i.e. construction impacts).***

The proposed action is not anticipated to result in any long-term impacts to air or water quality or noise levels. Ambient noise levels during construction will be mitigated by limiting construction during daylight hours.

(J) ***Located in or does affect an environmentally sensitive area, such as flood plain, shoreline, dunes, tsunami-zone, erosion-prone area, geologically hazardous land, estuary, fresh waters, or coastal waters.***

The majority of the project area is located within Flood Zone "X", outside the 0.2% annual change floodplain, with the exception of a portion approximately 100 feet mauka of the western boundary that lies within Flood Zone "AE", within the 1% annual chance floodplain where the base flood elevations have been determined (**See**: Figure No. 9, "Flood Map"). Any development within Zone "AE" will comply with MCC Chapter 19.62 "Flood Hazard Areas." The subject property lies within the Tsunami Evacuation Zone indicating the potential of tsunami inundation (**See:** Figure No. 13, "Tsunami Evacuation Map"). The project will be constructed in compliance with all applicable flood plain management regulations and there are no anticipated impacts to any environmentally sensitive areas. The subject property does not abut the shoreline.

(K) ***Alters natural land forms (i.e. cut and fill, retaining walls) and existing public views to and along the shoreline.***

Minor grading for the proposed replacement dwelling will be required for the purpose of leveling out the house site. The project site is at a lower elevation than Honoapiilani Highway and, as such, will not significantly impact any public views to or along the shoreline from the road since existing heavy vegetation currently blocks sightlines.

(L) ***Is contrary to the objectives and policies of Chapter 205A, HRS.***

As described within this Environmental Assessment, the proposed project does not have a potentially significant environmental and ecological effect on the SMA. Therefore, the project is not contrary to the objectives and policies of Chapter 205A, HRS.

The proposed action is not considered "development" pursuant to HRS Chapter §205A-22 and, as such, the proposed action is exempt from SMA permitting requirements.

VI. HRS CHAPTER 343 SIGNIFICANCE CRITERIA

A finding of no significant impact (FONSI) is anticipated and therefore an environmental impact statement will not be required for the proposed action. This determination has been made in accordance with the following significance criteria specified in Section 11-200-12 of the Department of Health rules relating to Environmental Impact Statements:

A. *Involves an irrevocable commitment to loss or destruction of any natural or cultural resource.*

As documented in this report, the proposed project will not result in the loss or destruction of any natural or cultural resource.

B. *Curtails the range of beneficial uses of the environment.*

The proposed project represents a continuation of the previous residential uses and does not introduce a new use to the property. The project will not curtail the range of beneficial uses of the environment in the project vicinity.

C. *Conflicts with the state's long-term environmental policies or goals and guidelines as expressed in Chapter 344, HRS, and any revisions thereof and amendments thereto, court decisions, or executive orders.*

The project is being developed in compliance with the state's long term environmental goals. As documented in this report, adequate mitigation measures will be implemented to minimize the potential for negative impacts to the environment.

D. *Substantially affects the economic or social welfare of the community or state.*

In the short term, the project will result in increased employment and business opportunities. As documented in this report, there will be no significant negative long term impacts to the socio-economic environment.

E. *Substantially affects public health.*

There are no special or unique aspects of the project which will have an impact on public health.

F. *Involves substantial secondary impacts, such as population changes or effects on public facilities.*

The proposed project will not lead to an impact on population levels since the project is proposes to replace a single family residence. As documented in this report, the project will not result in a significant negative impact on public facilities.

G. *Involves a substantial degradation of environmental quality.*

Mitigation measures will be implemented during construction to minimize negative short term construction impacts such as soil erosion and sedimentation. The project design will incorporate a drainage system that will retain stormwater generated by the proposed action onsite in order to prevent runoff from degrading the quality of nearshore waters.

H. *Is individually limited but cumulatively has considerable effect upon the environment or involves a commitment for larger actions.*

The project does not involve a commitment for larger actions on behalf of the applicant or any public agency. In terms of cumulative impacts, the project site is situated within the State Conservation District and is currently developed for residential uses. Public and private infrastructure and utilities are adequate to service the proposed project. Therefore, the project will not result in cumulative negative impacts on the environment.

I. *Substantially affects a rare, threatened, or endangered species, or its habitat.*

There are no known rare, threatened, or endangered species or habitat at the project site.

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

As documented, there will be short term impacts on air and water quality and ambient noise levels during construction; however, mitigation measures will be employed to minimize these impacts. Adverse long-term impacts are not anticipated.

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

The project site is located within a flood plain (partially) and tsunami zone. However, the dwelling, decks, garage, and driveway for the proposed project will all be constructed entirely in the Zone X portion of the property, an area determined to be outside the 0.2% annual chance floodplain. Additionally, the proposed reconstruction dwelling is located approximately 51 feet from the shoreline and will be constructed on a post and pier foundation. Only the proposed garage will be constructed on concrete slab on grade. No work is proposed or required in the shoreline setback area. Thus, hazard to life and property from tsunami, storm waves, stream flooding, erosion, subsidence and pollution is not expected to be significant.

L. *Substantially affects scenic vistas and view planes identified in county or state plans or studies.*

As discussed in Section III.A.8, there are extremely limited views in the area due to the vegetation and natural topography. The proposed project will not negatively affect ocean views along Honoapiilani Highway nor obstruct major view corridors.

M. *Requires substantial energy consumption.*

Construction of proposed structure will comply with Chapter 16.16.A, "Energy Code", Maui County Code. Where practical and economically feasible, the proposed structure will exceed the building efficiency standard for the State of Hawaii. Energy consumption will likely be more with the proposed reconstructed dwelling than the previous residence; however given existing levels of usage in the area, increased building efficiency, and newer, more efficient equipment and appliances, the increase is considered insignificant.

VII. FINDINGS AND CONCLUSIONS

This Environmental Assessment report examines the environmental and socio-economic impacts associated with the applicant's proposal to construct improvements in connection with the reconstruction of a single family dwelling. The project site has an area of 0.78 acre (parcel 019: 0.43 acre; parcel 062: 0.35 acre) located in Honolua, Maui, Hawaii.

The proposed development is not anticipated to result in significant environmental impacts to surrounding properties, nearshore waters, natural resources, and/or archaeological and historic resources on the site or in the immediate area. Public infrastructure and services including roadways, medical facilities, police and fire protection, parks, and schools are adequate to serve the project and are not anticipated to be significantly impacted by the project. Water service provided by Kapalua Water Company is adequate as a potable water source to the project since the property has an existing residence. Sewerage will be disposed of via an approved individual wastewater system. The proposed project is not anticipated to negatively impact public view corridors and is not anticipated to produce significant adverse impact upon the visual character of the site and its immediate environs.

The subject property is situated within the State's Conservation District, is County zoned Interim, and community planned for Conservation. Therefore, the proposed project is in conformance with County land use plans and policies, including Chapter 205A, HRS, and a permitted use with the State's Conservation District Resource Subzone and the West Maui Community Plan Land Use Map.

This Environmental Assessment report is consistent with applicable decision making criteria as identified in the Maui Planning Commission's rules and regulations relating to the Special Management Area (MC-12 Chapter 202), with the Department of Land and Natural Resources' Conservation District rules (HAR Chapter 13-5), and with the criteria outlined in section §11-200-12 of the Department of Health's rules and regulations relating to environmental impact statements. The authority will consider all agency and public comments.

Based on the foregoing analysis and conclusion, the proposed project will not result in significant impacts to the environment and is consistent with the requirements of HRS Chapter 343, and a Finding of No Significant Impact (FONSI) is warranted.

VIII. REFERENCES

County of Maui, Department of Planning. 2010. *Countywide Policy Plan County of Maui 2030 General Plan Update.* Wailuku, Hawaii.

County of Maui, Department of Planning. 2012. *Maui Island Plan*. Wailuku, Hawaii.

County of Maui, Department of Planning. 1996. *West Maui Community Plan.* Wailuku, Hawaii.

County of Maui, Office of Economic Development. 2015. *Maui County Data Book.* Wailuku, Hawaii.

Environmental Planning Associates. August 31, 1990. *Maui Coastal Scenic Resources Study.* Kihei, Hawaii.

Federal Emergency Management Agency. September 19, 2012. *Flood Insurance Rate Map.* Community Panel Map Number 150003 0266F.

National Geophysical Data Center, National Oceanic and Atmospheric Administration. 2005. *Natural Hazards Website: Tsunami Database.*

U.S. Department of Agriculture, Soil Conservation Service in Cooperation with the University of Hawaii, Agricultural Experiment Station. 1972. *Soil Survey of the Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii.* Washington, D.C.

University of Hawaii at Manoa, Coastal Geology Group, Department of Geology and Geophysics, School of Ocean and Earth Science and Technology. 1997. *Maui Shoreline Study Erosion Maps, Olowalu, Maui, Hawaii.* Honolulu, Hawaii.

FIGURES

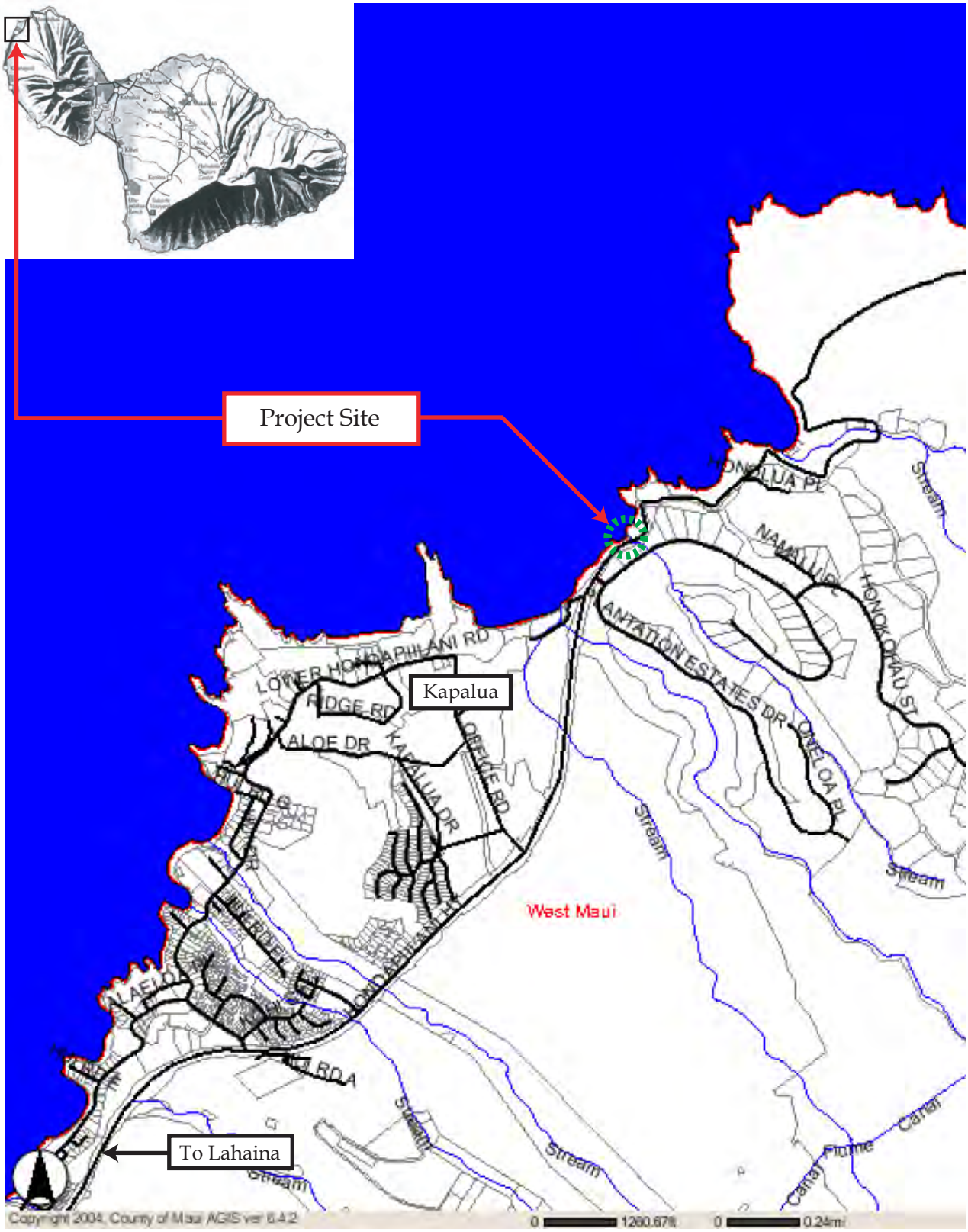


FIGURE 1

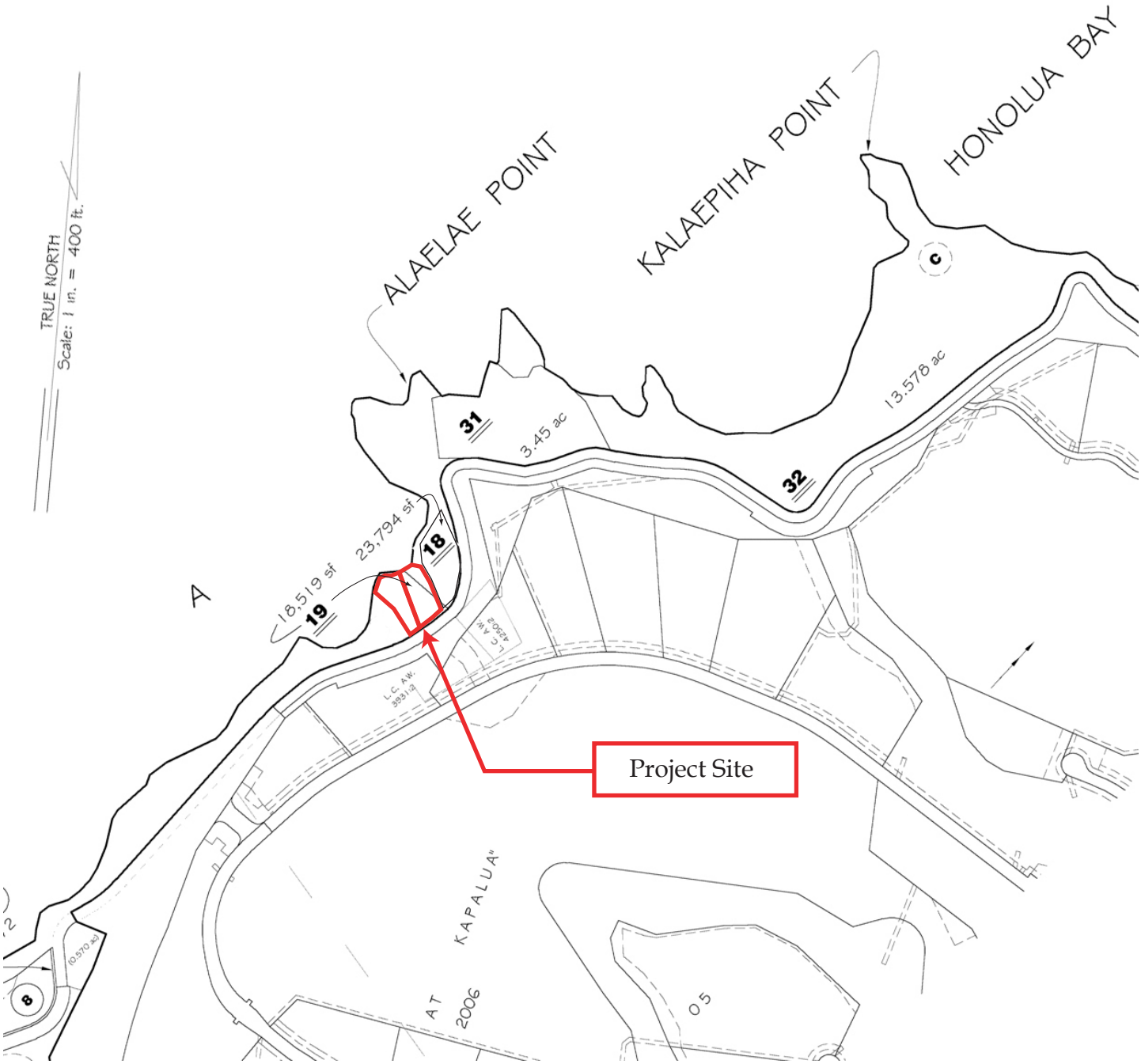
Location Map

Not to Scale

Engel Residence

Source: County of Maui

CHRIS HART & PARTNERS, INC.



DEPARTMENT OF FINANCE
REAL PROPERTY DIVISION
TAX MAP

COUNTY OF MAUI		
ZONE	SECTION	PLAT
4	2	04

SCALE: 1 IN = 400'

FIGURE 2

Tax Map Key

Not to Scale

Engel Residence

Source: County of Maui

CHRIS HART & PARTNERS, INC.

FIGURE 3

Aerial Map

Not to Scale

Engel Residence

Source: Google Earth

CHRIS HART & PARTNERS, INC.

1. Looking east along the shoreline of the subject property.

2. Looking west along the shoreline of the subject property.

3. Looking north at the shoreline.

4. Looking east along the existing slope at the shoreline of the subject property.

5. Looking south from the shoreline through the subject property at the existing residence.

6. Looking south across the subject property from the shoreline at the existing residence, driveway, retaining walls, and ficus trees.

FIGURE 4.1
Site Photographs

Engel Residence

Taken August 2015

CHRIS HART & PARTNERS, INC.

1. Existing residence, lawn, driveway, and retaining walls.

2. Existing driveway and retaining wall.

3. Exisiting lush landscape plantings along Honoapiilani Highway looking east from inside the subject property.

4. Looking west along Honoapiilani Highway at the subject property, landscape plantings, and limited shoreline views.

5. Looking east along Honoapiilani Highway at the subject property, landscape plantings, and limited shoreline views.

6. Looking north to shoreline at subject property entrance from Honoapiilani Highway.

FIGURE 4.2
Site Photographs

Engel Residence

Taken August 2015

CHRIS HART & PARTNERS, INC.

Shoreline Setback Calculations

North East Property Line	169.80'
Center Of Property	201.16'
South West Property Line	206.01'
	576.97

576.97 / 3 = 192.32' Avg. Lot Depth

192.32' x 25% = 48.08'

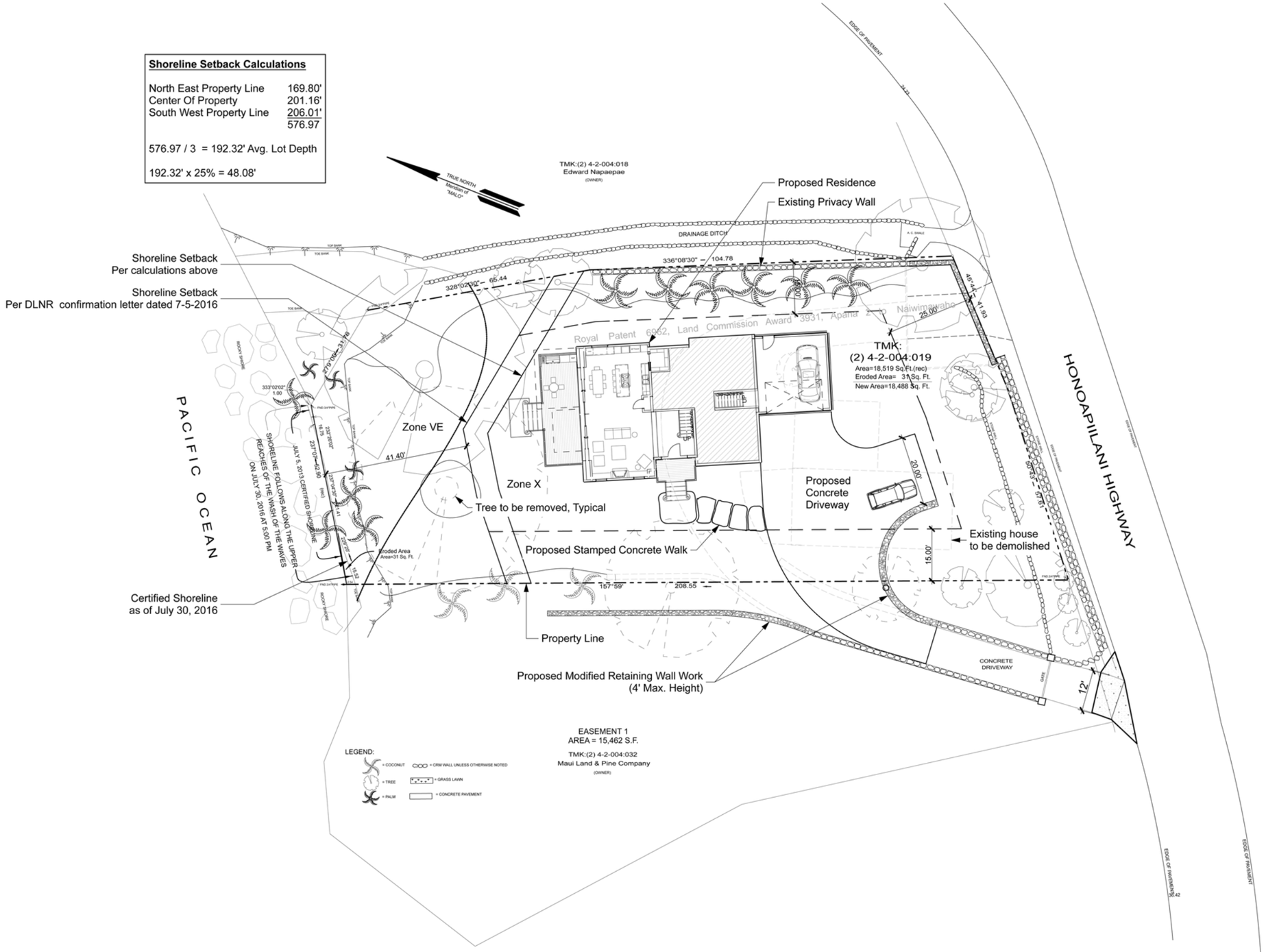


FIGURE 5.1

Scale 1 inch = 30 feet

DECEMBER
2016

CHRIS HART & PARTNERS, INC.

Revisions:	By:

KASPRZYCKI DESIGNS, INC.
Hawaii Architects
Main (808) 667-6116
P.O. Box 10517 Lahaina HI 96761 USA
kasprzyckidesigns@hawaii.rr.com
www.KasprzyckiDesigns.com

ATOM K. KASPRZYCKI
LICENSED PROFESSIONAL ARCHITECT
NO. AR-16158
HAWAII U.S.A.

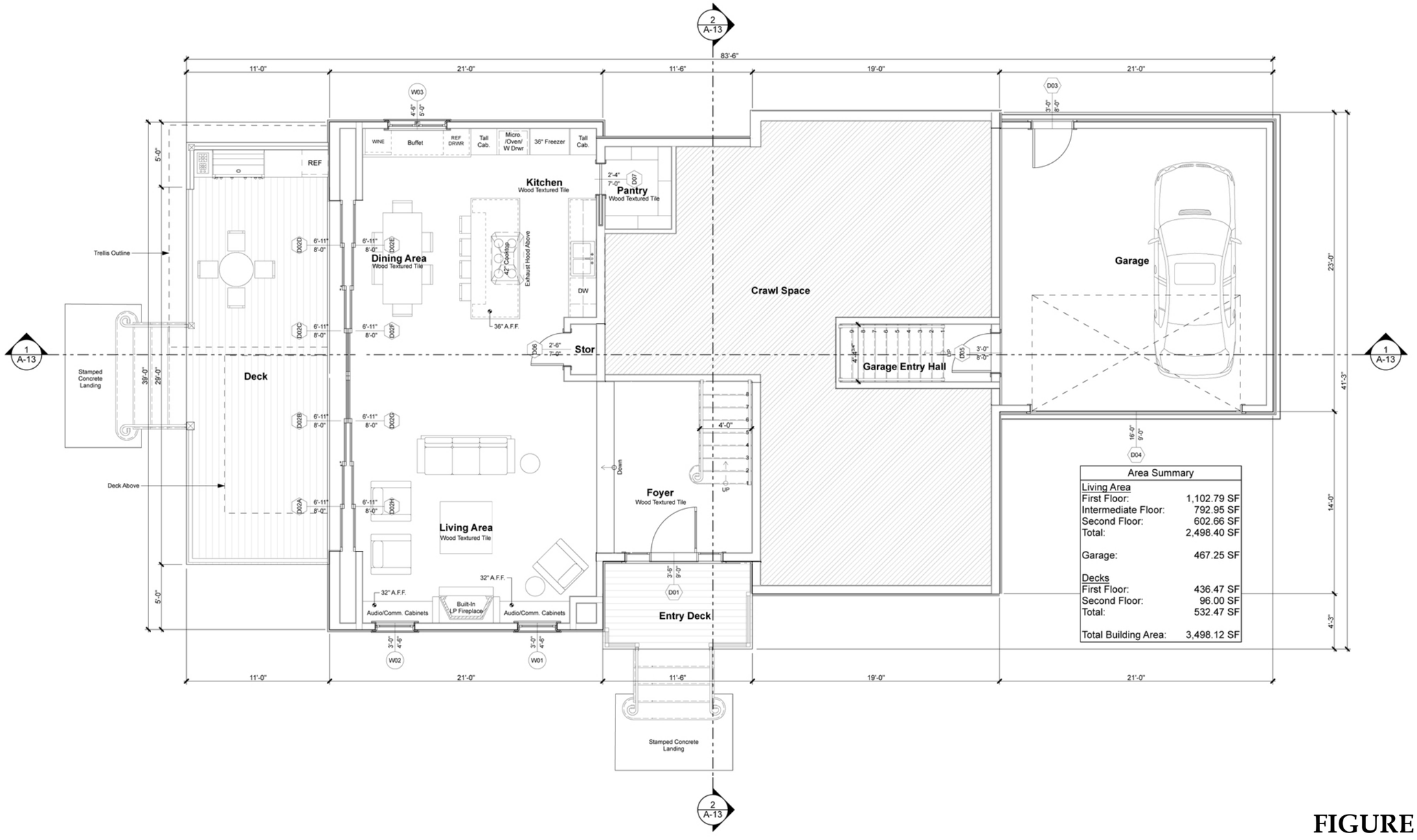
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. EXPIRATION DATE OF LICENSE 4/30/16

Signature

Engel Residence
A Proposed Residence
6245 Honoapiilani Hwy., Lahaina HI 96761 USA
TMK: (2) 4-2-004:019

Preliminary Site Plan

Date:	7-4-2015
Phase:	DD Set V3
Drawn:	AA
Job:	14-ERK
Sheet Number:	A-1
Total Sheet Count:	##



Area Summary	
Living Area	
First Floor:	1,102.79 SF
Intermediate Floor:	792.95 SF
Second Floor:	602.66 SF
Total:	2,498.40 SF
Garage:	467.25 SF
Decks	
First Floor:	436.47 SF
Second Floor:	96.00 SF
Total:	532.47 SF
Total Building Area:	3,498.12 SF

1 First Floor Plan
SCALE: 1/4" = 1'-0"

FIGURE 5.2

Half Scale

JULY
2016

CHRIS HART & PARTNERS, INC.

Revisions:	By:

KASPRZYCKI DESIGNS, INC.
Hawaii Architects
Main (808) 667-6116
P.O. Box 10517 Lahaina HI 96761 USA
kasprzyckidesigns@hawaii.rr.com
www.KasprzyckiDesigns.com

ATOM K. KASPRZYCKI
LICENSED PROFESSIONAL ARCHITECT
NO. AR-16158
HAWAII U.S.A.

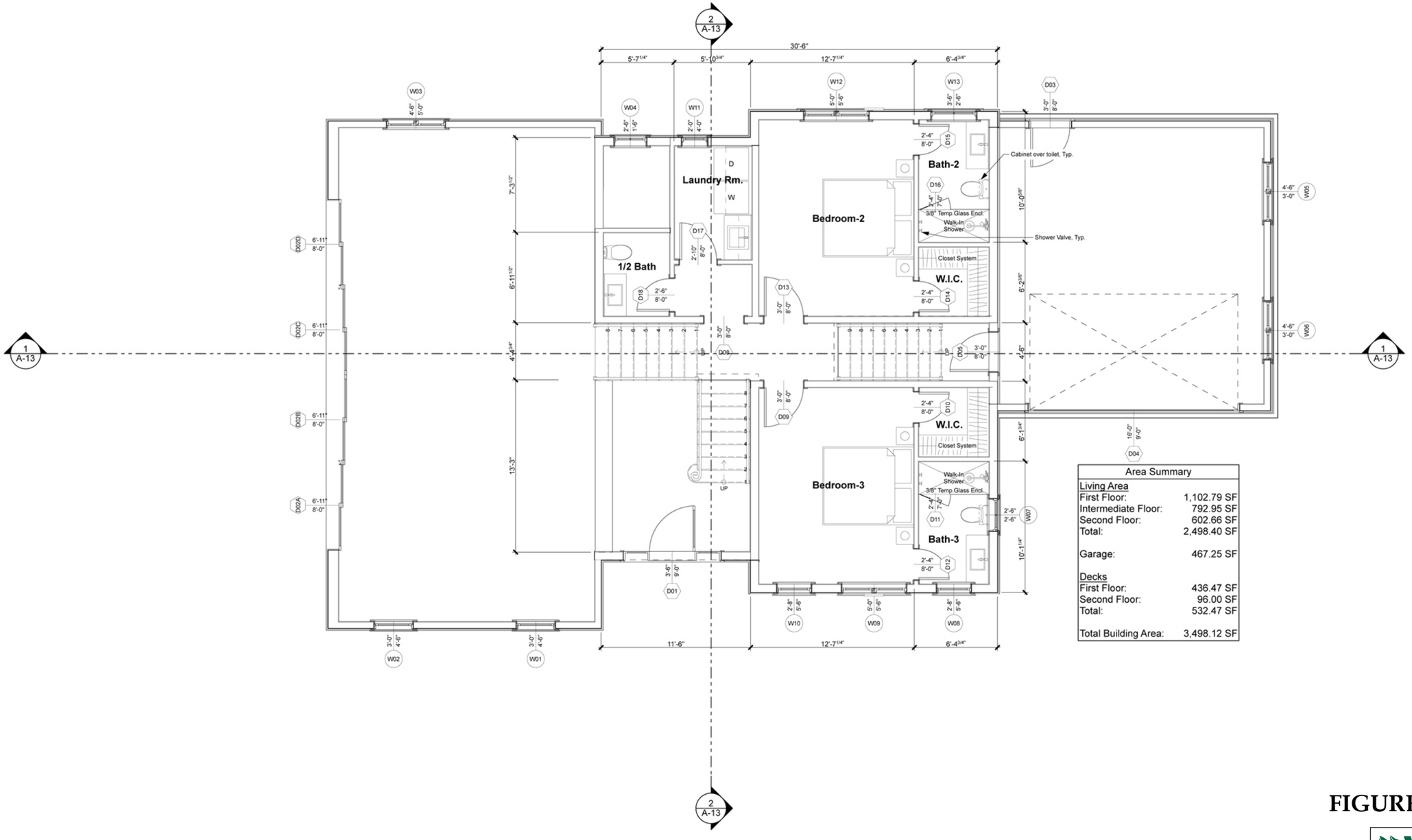
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. EXPIRATION DATE OF LICENSE 4/30/16

Signature

Engel Residence
A Proposed Residence
6245 Honoapiilani Hwy., Lahaina HI 96761 USA
TMK: (2) 4-2-004:019

First Floor Plan

Date: 7-4-2015
Phase: DD Set V3
Drawn: AA
Job: 14-ERK
Sheet Number: A-2
Total Sheet Count: ##



Area Summary	
Living Area	
First Floor:	1,102.79 SF
Intermediate Floor:	792.95 SF
Second Floor:	602.66 SF
Total:	2,498.40 SF
Garage:	467.25 SF
Decks	
First Floor:	436.47 SF
Second Floor:	96.00 SF
Total:	532.47 SF
Total Building Area:	3,498.12 SF

1 Intermediate Floor Plan
SCALE: 1/4" = 1'-0"

FIGURE 5.3

Half Scale

JULY
2016

CHRIS HART & PARTNERS, INC.

Revisions:	By:

KASPRZYCKI DESIGNS, INC.
Hawaii Architects
Main (808) 667-6116
P.O. Box 10517 Lahaina HI 96761 USA
kasprzyckidesigns@hawaii.rr.com
www.KasprzyckiDesigns.com

ATOM K. KASPRZYCKI
LICENSED PROFESSIONAL ARCHITECT
NO. AR-16158
HAWAII U.S.A.

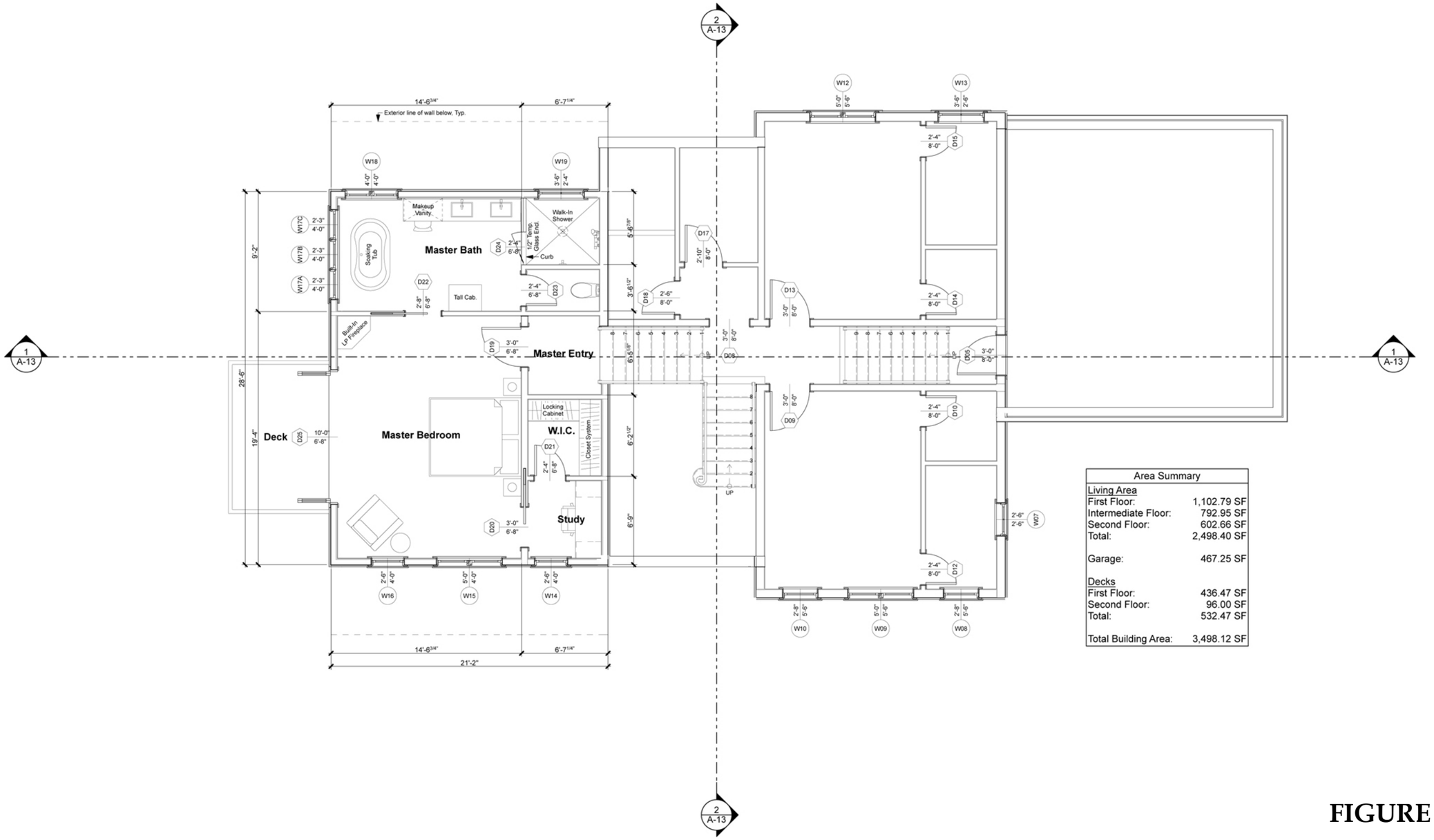
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. EXPIRATION DATE OF LICENSE 4/30/16

Signature

Engel Residence
A Proposed Residence
6245 Honoapiilani Hwy., Lahaina HI 96761 USA
TMK: (2) 4-2-004:019

Intermediate Floor Plan

Date: 7-4-2015
Phase: DD Set V3
Drawn: AA
Job: 14-ERK
Sheet Number: A-3
Total Sheet Count: ##



Area Summary	
Living Area	
First Floor:	1,102.79 SF
Intermediate Floor:	792.95 SF
Second Floor:	602.66 SF
Total:	2,498.40 SF
Garage:	467.25 SF
Decks	
First Floor:	436.47 SF
Second Floor:	96.00 SF
Total:	532.47 SF
Total Building Area:	3,498.12 SF

1 Second Floor Plan
SCALE: 1/4" = 1'-0"

FIGURE 5.4

Half Scale

JULY
2016

CHRIS HART & PARTNERS, INC.

Revisions:	By:

KASPRZYCKI DESIGNS, INC.
Hawaii Architects
Main (808) 667-6116
P.O. Box 10517 Lahaina HI 96761 USA
kasprzyckidesigns@hawaii.rr.com
www.KasprzyckiDesigns.com

ATOM K. KASPRZYCKI
LICENSED PROFESSIONAL ARCHITECT
NO. AR-16158
HAWAII U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. EXPIRATION DATE OF LICENSE 4/30/16

Signature

Engel Residence
A Proposed Residence
6245 Honoapiilani Hwy., Lahaina HI 96761 USA
TMK: (2) 4-2-004:019

Second Floor Plan

Date: 7-4-2015
Phase: DD Set V3
Drawn: AA
Job: 14-ERK
Sheet Number: A-4
Total Sheet Count: ##

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

2 East Elevation
SCALE: 1/4" = 1'-0"

FIGURE 5.5

Half Scale

AUGUST 2016

Revisions:	By:

KASPRZYCKI DESIGNS, INC.
Hawaii Architects

Main (808) 667-6116

P.O. Box 10517 Lahaina HI 96761 USA
kasprzyckidesigns@hawaii.rr.com
www.KasprzyckiDesigns.com

ATOM K. KASPRZYCKI
LICENSED PROFESSIONAL ARCHITECT
NO. AR-16158
HAWAII U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. EXPIRATION DATE OF LICENSE 4/30/16

Signature

Engel Residence
A Proposed Residence
6245 Honoapiilani Hwy., Lahaina HI 96761 USA
TMK: (2) 4-2-004:019

Exterior Elevations

Date: 7-4-2015
Phase: DD Set V3
Drawn: AA
Job: 14-ERK
Sheet Number: A-10
Total Sheet Count: ##

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

2 West Elevation
SCALE: 1/4" = 1'-0"

FIGURE 5.6

Half Scale

AUGUST 2016

Revisions:	By:

KASPRZYCKI DESIGNS, INC.
Hawaii Architects
Main (808) 667-6116
P.O. Box 10517 Lahaina HI 96761 USA
kasprzyckidesigns@hawaii.rr.com
www.KasprzyckiDesigns.com

ATOM K. KASPRZYCKI
LICENSED PROFESSIONAL ARCHITECT
NO. AR-16158
HAWAII U.S.A.

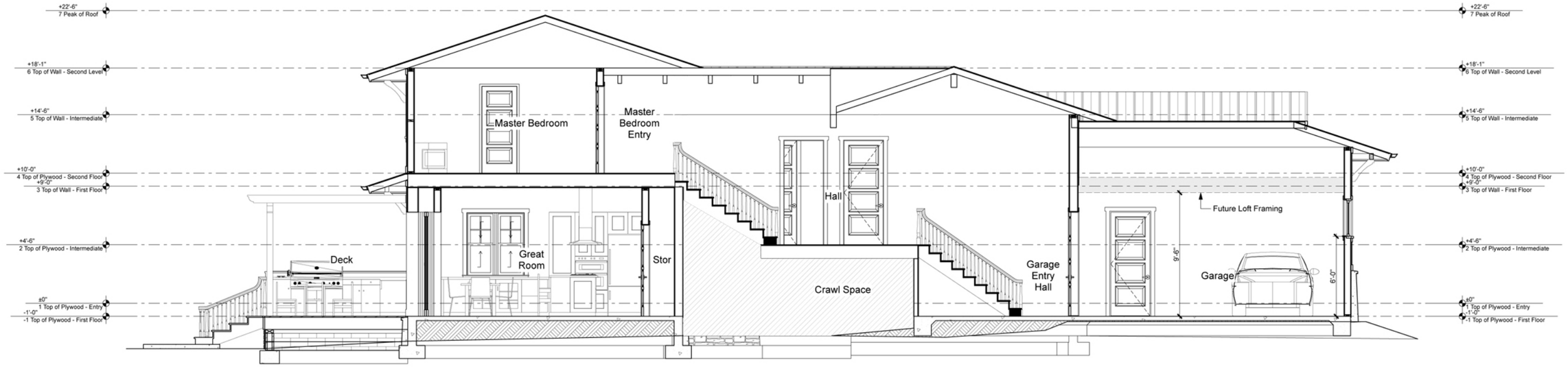
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. EXPIRATION DATE OF LICENSE 4/30/16

Signature

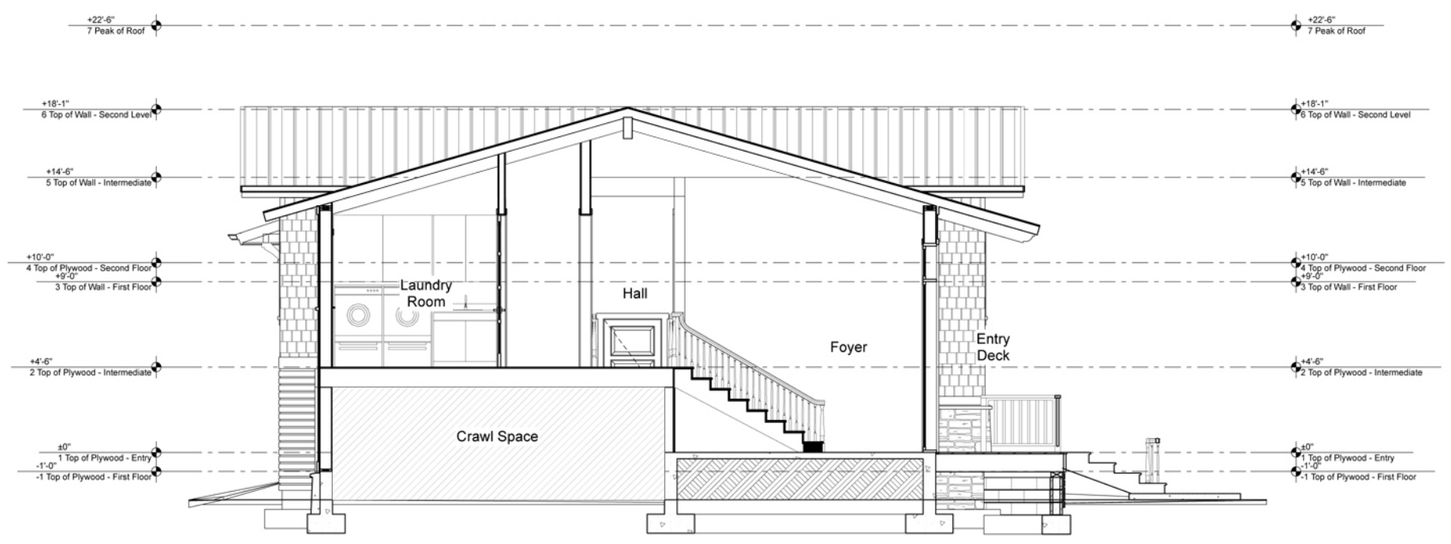
Engel Residence
A Proposed Residence
6245 Honoapiilani Hwy., Lahaina HI 96761 USA
TMK: (2) 4-2-004:019

Exterior Elevations

Date: 7-4-2015
Phase: DD Set V3
Drawn: AA
Job: 14-ERK
Sheet Number: A-11
Total Sheet Count: ##



1 Building Section A
SCALE: 1/4" = 1'-0"



2 Building Section B
SCALE: 1/4" = 1'-0"

FIGURE 5.7

Half Scale

AUGUST 2016

Revisions:	By:

KASPRZYCKI DESIGNS, INC.
Hawaii Architects
Main (808) 667-6116
P.O. Box 10517 Lahaina HI 96761 USA
kasprzyckidesigns@hawaii.rr.com
www.KasprzyckiDesigns.com

ATOM K. KASPRZYCKI
LICENSED PROFESSIONAL ARCHITECT
NO. AR-16158
HAWAII U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. EXPIRATION DATE OF LICENSE 4/30/16

Signature

Engel Residence
A Proposed Residence
6245 Honoapiilani Hwy., Lahaina HI 96761 USA
TMK: (2) 4-2-004:019

Building Sections

Date: 7-4-2015
Phase: DD Set V3
Drawn: AA
Job: 14-ERK
Sheet Number: A-13
Total Sheet Count: ##

TMK:(2) 4-2-004:018
Edward Napaepae

HEADER, TYP.

DRAINAGE DITCH

EXISTING TREE, TYP.

336°08'30" – 104.78

328°08'30" – 65.44

LAWN

15.00

25.00

45°44'

RAISED VEGETABLE GARDEN

EXISTING INVASIVE FICUS TREE
TO BE REMOVED

CERTIFIED SHORELINE
AS OF JULY 30, 2016

279°00' 31.76

333°02'02"
1.00

242°08'02"
16.75

237°07'
52.90

41.40

LAWN

PACIFIC OCEAN

SHORELINE FOLLOWS ALONG THE UPPER REACHES OF THE WASH OF THE WAVES ON MAY 24, 2013 AT 2:00PM

RECORD BOUNDARY

HONOAPIILANI HIGHWAY

EXISTING AREACA PALM HEDGE
TO REMAIN

LAWN

20.00

LAWN

15.00

EXISTING TREE TO REMAIN, TYP.

EXISTING PATH TO REMAIN

CONCRETE
DRIVEWAY

12'

SITE WALLS,
SEE ARCHITECTURE PLANS

TMK:(2) 4-2-004:032
Maui Land & Pine Company

LANDSCAPE CONCEPT PLAN

Engel Residence

HONOLUA, MAUI, HAWAII

TMK: (2) 4-2-004: 019

CHRIS HART & PARTNERS

0 ft. 5' 10' 20' 30'

SCALE: 1"= 20'-0"
PROJECT: 15-061
DATE: 11/06/15
REV. DATE: 12/27/16

PLANT LEGEND

TREES AND PALMS

- Singapore Plumeria
- Areca Palm
- Citrus Tree

SHRUBS AND GROUNDCOVER

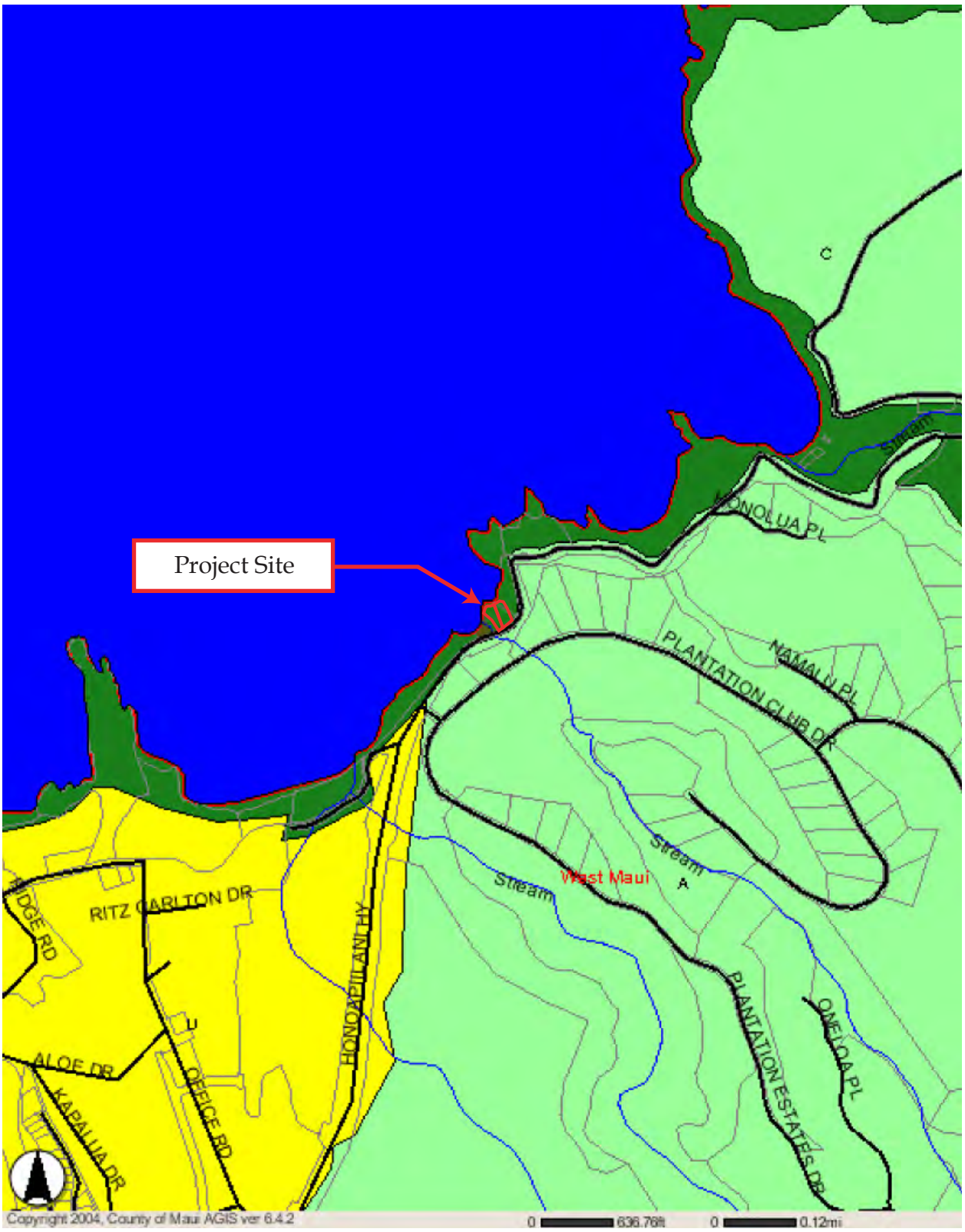
SHRUBS:

- Pigmy Date Palm
- Papaya Tree
- Naio papa (Native)
- Gardenia 'Nanu' (Native)
- Rhapis Palm
- Kulu'i (Native)
- Green Ti & Red Ti (50/50 Mix)(Native)
- Ilima (Native)
- Lilikoi

GROUNDCOVER:

- Beach Naupaka (Native)
- Beach Vitex (Native)
- Golden Glory
- Lauae Fern
- Nehe (Native)
- Pauhiiaka (Native)

FIGURE 5.8



Agricultural
Conservation
Rural
Urban

FIGURE 6

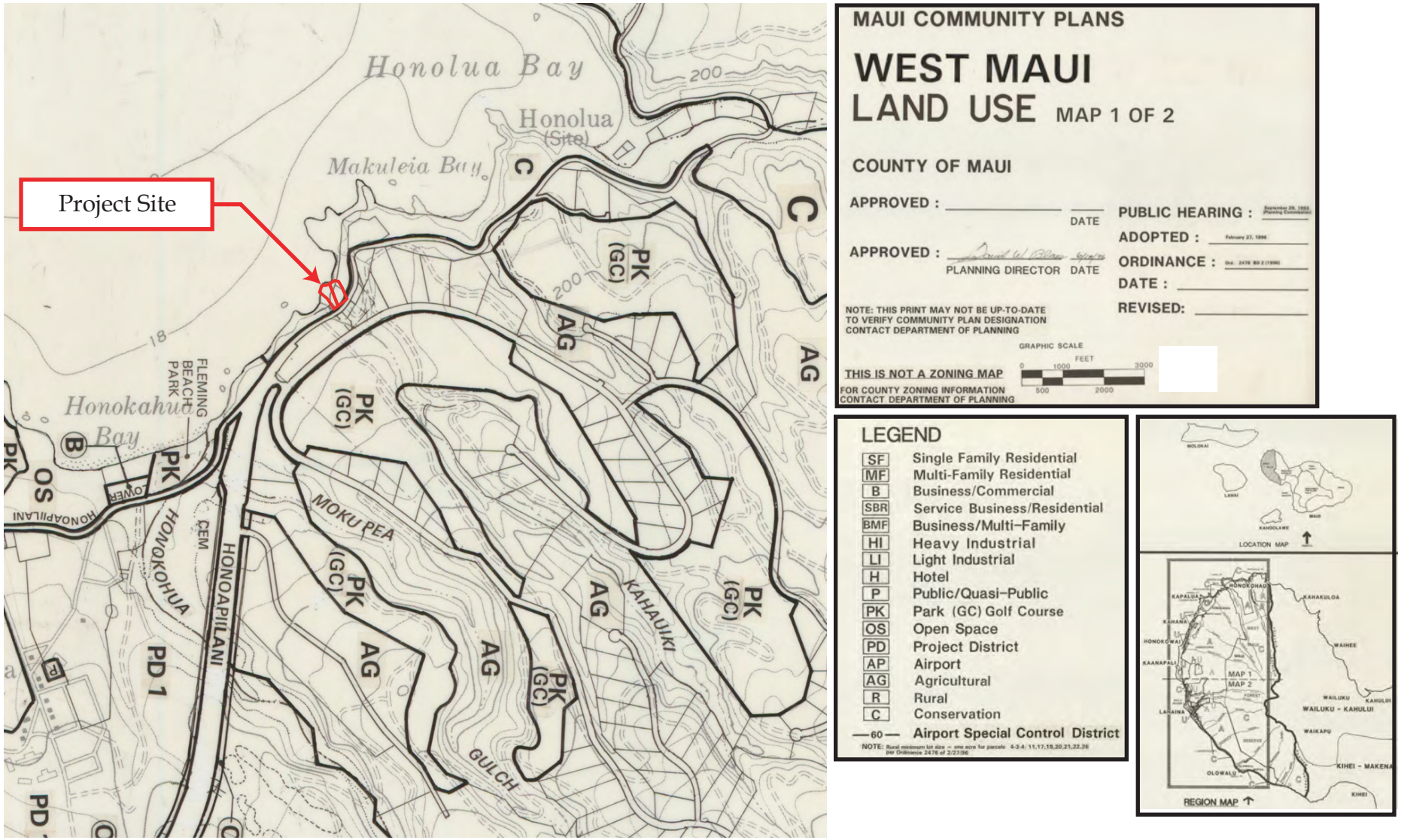
State Land Use Map

Not to Scale

Engel Residence

Source: County of Maui

CHRIS HART & PARTNERS, INC.



Not to Scale

FIGURE 7

West Maui Community Plan Map

Engel Residence

Source: Maui County Planning Department

CHRIS HART & PARTNERS, INC.

Zoning Legend

- Agricultural District (AG)
- Interim District (INT)

FIGURE 8

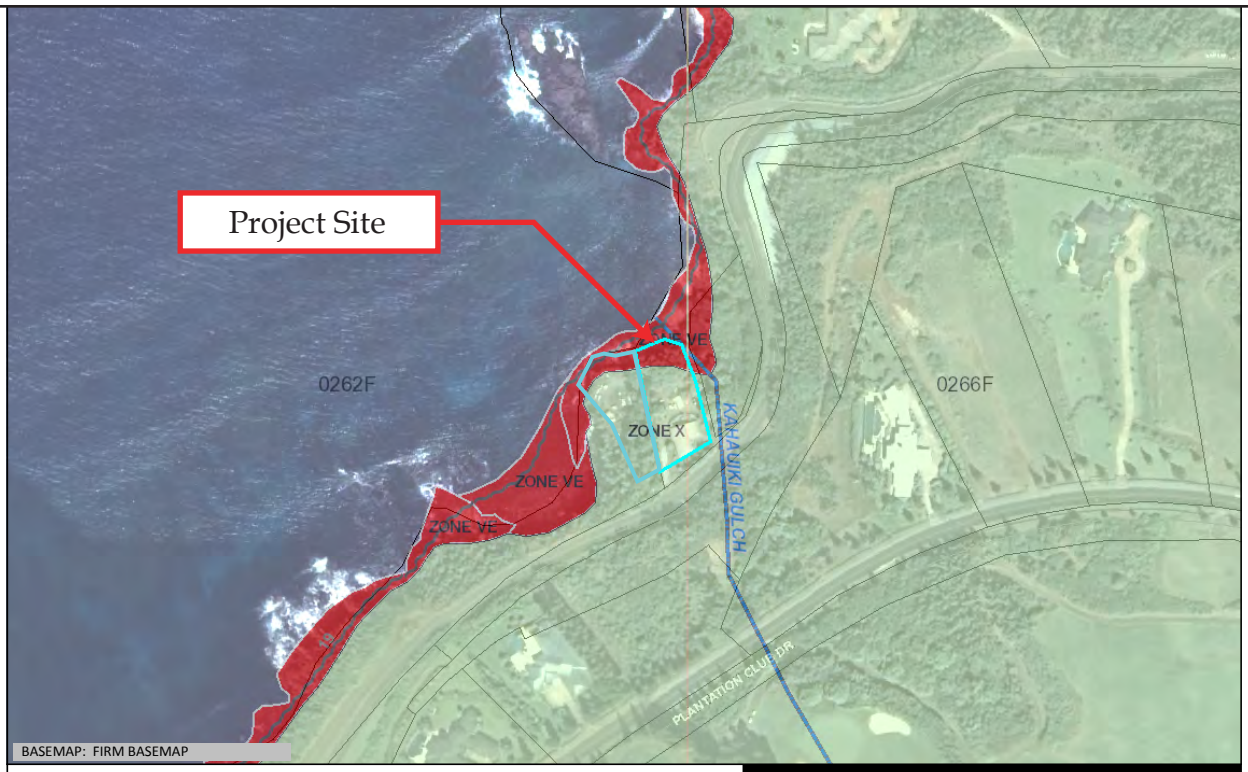
Maui County Zoning Map

Engel Residence

Source: County of Maui

Not to Scale

CHRIS HART & PARTNERS, INC.



Flood Hazard Assessment Report

www.hawaiinfip.org

Property Information

COUNTY:	MAUI
TMK NO:	(2) 4-2-004:019
WATERSHED:	HONOKAHUA
PARCEL ADDRESS:	6245 HONOAPIILANI HWY LAHAINA, HI 96761

Notes:

Flood Hazard Information

FIRM INDEX DATE:	SEPTEMBER 19, 2012
LETTER OF MAP CHANGE(S):	NONE
FEMA FIRM PANEL - EFFECTIVE DATE:	1500030262F - SEPTEMBER 19, 2012 1500030266F - SEPTEMBER 19, 2012

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

THIS PROPERTY IS WITHIN A DAM EVACUATION ZONE: NO
FOR MORE INFO, VISIT: http://dlnreng.hawaii.gov/dam/

0 200 400 ft

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

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

FLOOD HAZARD ASSESSMENT TOOL LAYER LEGEND
(*Note: legend does not correspond with NFHL*)

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

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

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

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

OTHER FLOOD AREAS

	Zone D: Unstudied areas where flood hazards are undetermined, but flooding is possible. No mandatory flood insurance purchase apply, but coverage is available in participating communities.

FIGURE 9

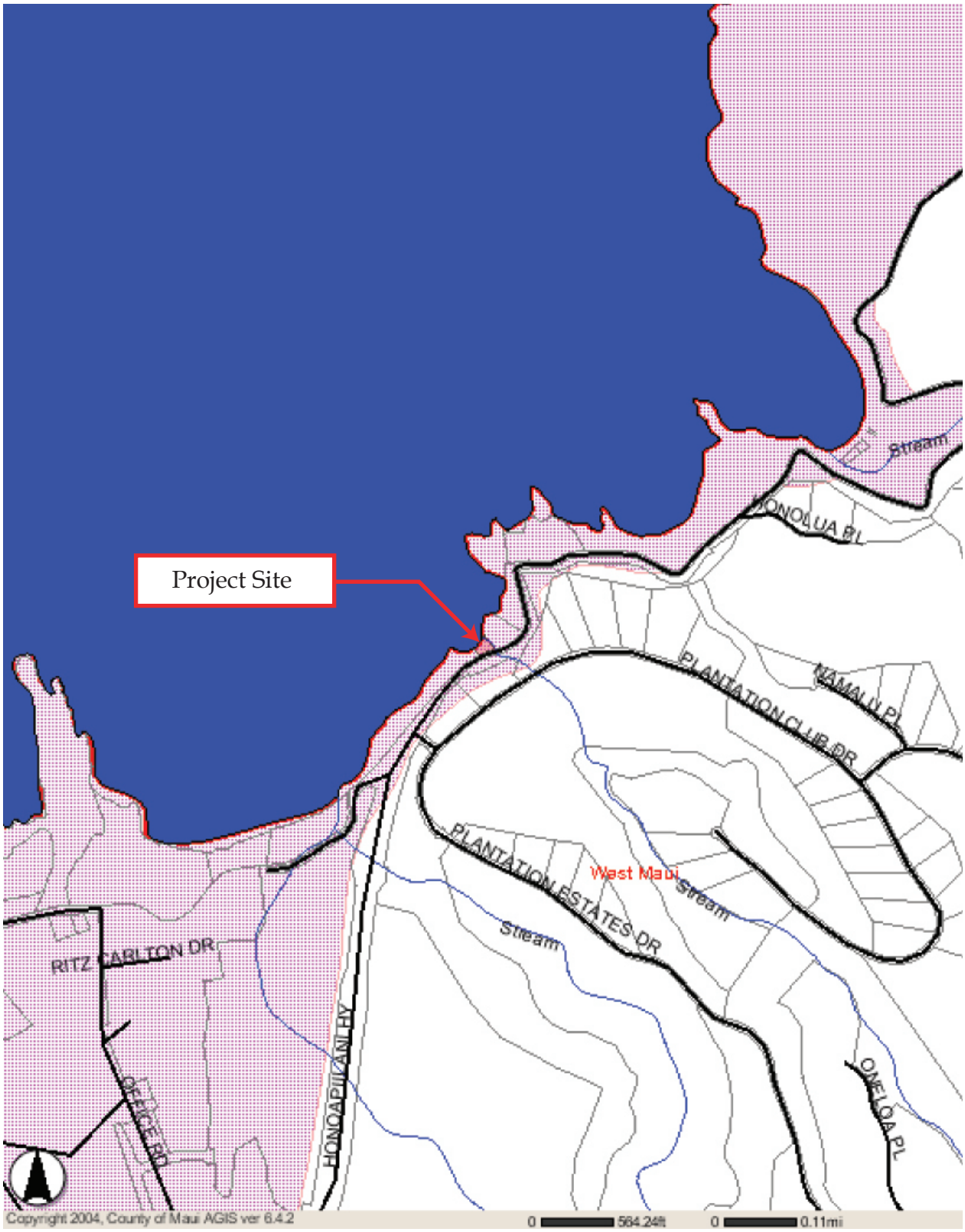
Flood Map

Not to Scale

Engel Residence

Source: National Flood Insurance Program

CHRIS HART & PARTNERS, INC.



Special Management Area

FIGURE 10

Special Management Area Map

Engel Residence

Source: County of Maui

Not to Scale

CHRIS HART & PARTNERS, INC.

HISTORICAL SHORELINES

- 1912
- Nov 1949
- 1960
- Mar 1975
- Aug 1987
- Mar 1988
- Nov 1992
- May 1997
- Erosion rate measurement locations (shore normal transects)

FIGURE 11

Erosion Rate Map

Not to Scale

Engel Residence

Source: County of Maui

CHRIS HART & PARTNERS, INC.

FIGURE 12

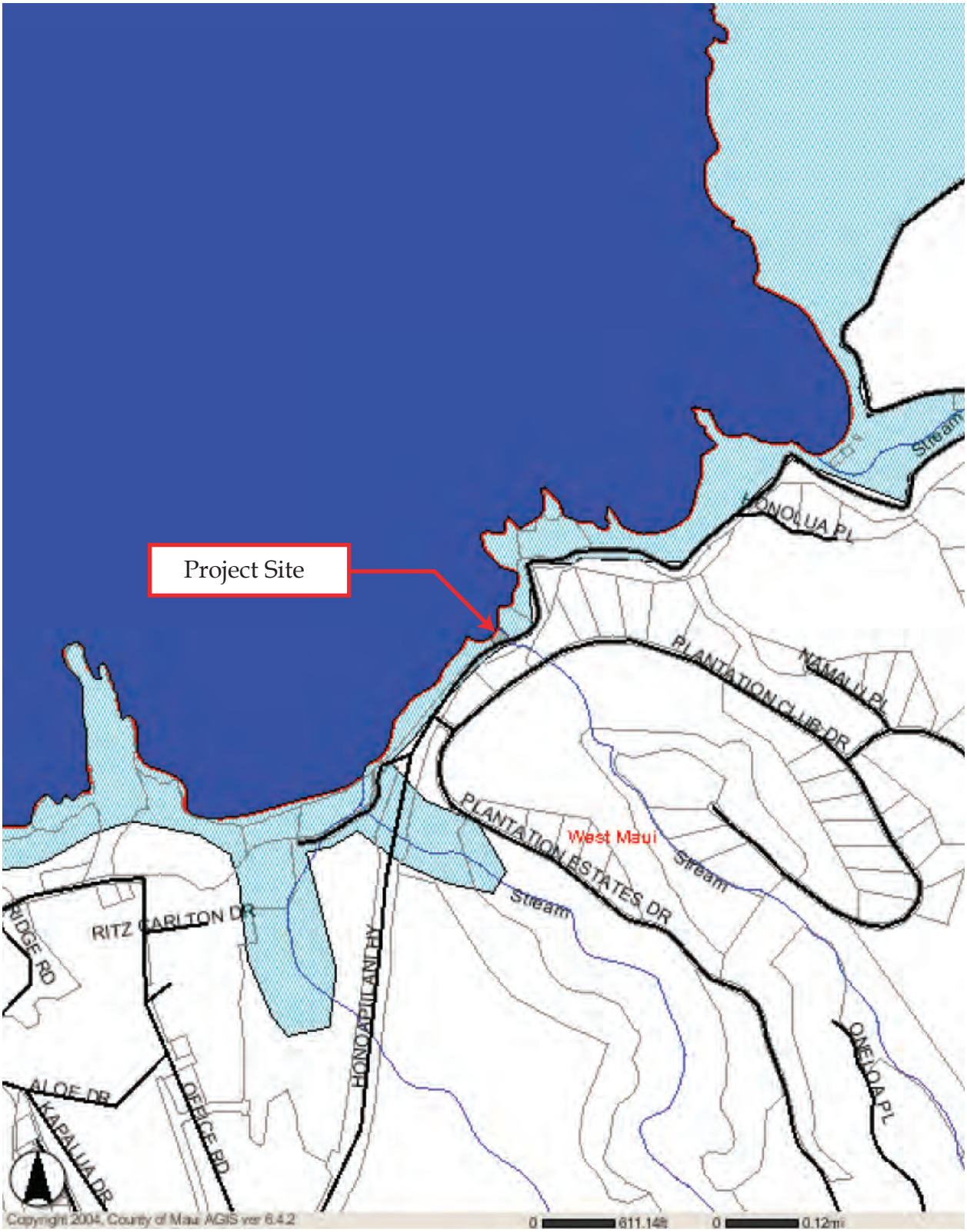
Soil Classification Map

Not to Scale

Engel Residence

Source: NRCS

CHRIS HART & PARTNERS, INC.



Tsunami Evacuation Zones

FIGURE 13

Tsunami Evacuation Map

Engel Residence

Source: County of Maui

Not to Scale

CHRIS HART & PARTNERS, INC.

APPENDICES

APPENDIX A
Pre-Consultation Correspondence

CHRIS HART
& PARTNERS, INC.
Landscape Architecture
City & Regional Planning

August 25, 2016

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

Dear Ms. Kitkowski:

RE: Comment response to Pre-Consultation for the Proposed Engel Residence situated at 6245 Honoapiilani Hwy, Lahaina, Maui, Hawaii; TMK: (2) 4-2-004: 019.

Thank you for your letter of January 20, 2016. Our response to your comments are provided below.

1. Wastewater will be disposed of with an approved Individual Wastewater System designed specifically to meet the needs of the proposed project. The existing cesspool will be backfilled and abandoned.
2. If a National Pollutant Discharge Elimination System (NPDES) permit is required, the contractor will obtain one.
3. If construction noise is anticipated to exceed the maximum allowable levels set forth in Hawaii Administrative Rules, Chapter 11-46, "Community Noise Control", a noise permit will be obtained by the contractor.
4. Standard Comments found on the Department's website will be reviewed for applicability to the proposed project.

Thank you again for providing us with your letter. If you have any questions, please contact Raymond Cabebe at 808-242-1955 or rcabebe@chpmaui.com, or me.

Sincerely yours,

Jordan E. Hart, President

cc: Mr. William Engel
Project File 15-061

115 N. Market Street, Wailuku, Maui, Hawaii 96793-1717 • Ph 808-242-1955 • Fax 808-242-1956
www.chpmaui.com

DAVID Y. IGE
GOVERNOR OF HAWAII

VIRGINIA PRESSLER, M.D.
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 96793-3378

January 20, 2016

Mr. Raymond Cabebe
Chris Hart & Partners, Inc.
115 North Market Street
Wailuku, Hawai'i 96793

Dear Mr. Cabebe:

Subject: Pre-Consultation for an Environmental Assessment (EA) and Applications for a Conservation District Use Permit (CDUA) and Special Management Area (SMA) Assessment for the Proposed Engel Residence at 6245 Honoapiilani Highway, Lahaina, Maui
TMK: (2) 4-2-004:019

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

1. Please provide the wastewater disposal method for this project. If you have any questions, please contact Roland Tejano, Environmental Engineer, at 808 984-8232.

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

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

It is strongly recommended that the Standard Comments found at the Department's website: http://health.hawaii.gov/epo/home/landuse-planning-review-program/ be reviewed and any comments specifically applicable to this project should be adhered to.

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

Sincerely,

Patti Kitkowski

Patti Kitkowski
District Environmental Health Program Chief

c EPO

CHRIS HART
& PARTNERS, INC.
Landscape Architecture
City & Regional Planning

August 25, 2016

Ms. Laura McIntyre, Program Manager
State of Hawaii
Department of Health
P.O. Box 3378
Honolulu, HI 96801

Dear Ms. McIntyre:

RE: Comment response for Pre-Consultation for the Proposed Engel Residence situated at 6245 Honoapiilani Hwy, Lahaina, Maui, Hawaii;
TMK: (2) 4-2-004: 019.

Thank you for your letter of December 29, 2015. Our response to your comments are provided below.

Thank you for routing our pre-consultation letter to the District Health Office on Maui and the Indoor and Radiological Health Branch. As recommended in your letter, we will review the standards comments and strategies available to support sustainable and healthy design from the website you provided. The proposed project will adhere to applicable standard comments, as required. Additionally, the Hawaii Environmental Health Portal will be examined for applicability to this project.

Thank you again for providing us with your letter. If you have any questions, please contact Raymond Cabebe at 808-242-1955 or rcabebe@chpmaui.com, or me.

Sincerely yours,

Jordan E. Hart, President

cc: Mr. William Engel
Project File 15-061

115 N. Market Street, Wailuku, Maui, Hawaii 96793-1717 • Ph 808-242-1955 • Fax 808-242-1956
www.chpmaui.com

DAVID Y. IGE
GOVERNOR OF HAWAII

VIRGINIA PRESSLER, M.D.
DIRECTOR OF HEALTH

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

In reply, please refer to:
File:

EPO 15-339

December 29, 2015

Mr. Raymond Cabebe
115 N. Market Street
Wailuku, Hawaii 96793
Via email: rcabebe@chpmaui.com

Dear Mr. Cabebe:

SUBJECT: Pre Consultation for an Environmental Assessment (PC EA) and Application for a Conservation District Use Permit (CDUA) and Special Management Area (SMA) Assessment for the Proposed Engel Residence
6245 Honoapiilani Highway, Lahaina, Maui

The Department of Health (DOH), Environmental Planning Office (EPO), acknowledges receipt of your PC EA to our office on December 28, 2015. Thank you for allowing us to review and comment on the proposed project. The PC EA was routed to the District Health Office on Maui and the Indoor and Radiological Health Branch. They will provide specific comments to you if necessary. EPO recommends that you review the standard comments and available strategies to support sustainable and healthy design provided at: http://health.hawaii.gov/epo/landuse. Projects are required to adhere to all applicable standard comments.

EPO also encourages you to examine and utilize the Hawaii Environmental Health Portal. The portal provides links to our e-Permitting Portal, Environmental Health Warehouse, Groundwater Contamination Viewer, Hawaii Emergency Response Exchange, Hawaii State and Local Emission Inventory System, Water Pollution Control Viewer, Water Quality Data, Warnings, Advisories and Postings. The Portal is continually updated. Please visit it regularly at: https://eha-cloud.doh.hawaii.gov

We request that you utilize all of this information on your proposed project to increase sustainable, innovative, inspirational, transparent and healthy design.

Mahalo nui loa,

Laura Leialoha Phillips McIntyre, AICP
Program Manager, Environmental Planning Office

LM:nn

Attachment: U.S. EPA EJSCREEN Map 3 page report - http://www2.epa.gov/ejscreen

c: DHO Maui, IRHB (via email only)

CHRIS HART
& PARTNERS, INC.
Landscape Architecture
City & Regional Planning

August 25, 2016

Mr. Carty Chang, Chief Engineer
Department of Land and Natural Resources
Engineering Division
Kalanimoku Building
1151 Punchbowl Street, Room 221
Honolulu, HI 96813

Dear Mr. Chang:

RE: Comment response for the Pre-Consultation Letter for the Proposed Engel Residence, situated at 6245 Honoapiilani Hwy, Lahaina, Maui, Hawaii; TMK: (2) 4-2-004: 019.

Thank you for your memorandum of January 8, 2016. Our response to your comments are provided below:

1. We acknowledge that the north section of the parcel/project site, according to the Flood Insurance Rate Map (FIRM), is located in Zone VE and that the remainder of the parcel is located in Zone X. No development or construction is anticipated to occur in Zone VE.
2. Construction of the proposed project will not occur within the Special Flood Hazard Area.
3. The owner understands that 44CFR represents is the minimum standard set forth by the NFIP and that the local flood ordinance may be more restrictive. The County NFIP Coordinator will review the project for compliance with Maui County standards.

Thank you again for providing us with your memorandum. If you have any questions, please contact Raymond Cabebe at 808-242-1955 or rcabebe@chpmaui.com, or me.

Sincerely yours,

Jordan E. Hart, President

cc: Mr. William Engel
Project File 15-061

115 N. Market Street, Wailuku, Maui, Hawaii 96793-1717 • Ph 808-242-1955 • Fax 808-242-1956
www.chpmaui.com

DAVID Y. IGE
GOVERNOR OF HAWAII

SUZANNE D. CASE
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

'16 JAN 05 PM 04:08 ENGINEERING

January 4, 2015

MEMORANDUM

TO: TR.

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
X Office of Conservation & Coastal Lands
X Land Division – Maui District
X Historic Preservation

FROM: TD. Russell Y. Tsuji, Land Administrator
SUBJECT: Pre-Consultation Letter: Processing of an Environmental Assessment (EA) and Application for a Conservation District Use Permit (CDUA) and Special Management Area (SMA) Assessment for the Proposed Engel Residence
LOCATION: Lahaina, Island of Maui; TMK: (2) 4-2-004:019
APPLICANT: Chris Hart & Partners, Inc. on behalf of William Engel Trust

Transmitted for your review and comment is information on the above referenced *project*. Please submit any comments by **January 13, 2016**.

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: Carty S. Chang, Chief Engineer
Date: 1/8/16

cc: Central Files

DEPARTMENT OF LAND AND NATURAL RESOURCES
ENGINEERING DIVISION

LD/ Russell Y. Tsuji
REF: Pre-Consultation Letter: Processing of an Environmental Assessment (EA) and Application for a Conservation District Use Permit (CDUA) and Special Management Area (SMA) Assessment for the Proposed Engel Residence, Lahaina, Maui, HI
Maui.001

COMMENTS

(X) **We confirm that the north section of the parcel/project site, according to the Flood Insurance Rate Map (FIRM), is located in Zones VE. The remainder of the parcel is located in Zone X. The National Flood Insurance Program regulates developments within Zones VE as indicated in bold letters below, but not in Zone X.**

( ) Please take note that the project site, according to the Flood Insurance Rate Map (FIRM), is also located in Zone ____.

( ) 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 site 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 of the City and County of Honolulu, Department of Planning and Permitting.

( ) Mr. Carter Romero (Acting) at (808) 961-8943 of the County of Hawaii, Department of Public Works.

(X) **Ms. Carolyn Cortez at (808) 270-7253 of the County of Maui, Department of Planning.**

( ) Mr. Stanford Iwamoto at (808) 241-4896 of the County of Kauai, Department of Public Works.

( ) The applicant should include project water demands and infrastructure required to meet water demands. Please note that the implementation of State-sponsored projects requiring water service from the Honolulu Board of Water Supply system must first obtain water allocation credits from the Engineering Division before it can receive a building permit and/or water meter.

( ) 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.

( ) Additional Comments: _____

( ) Other: _____

Should you have any questions, please call Mr. Rodney Shiraishi of the Planning Branch at 587-0258.

Signed: _____
CARTY S. CHANG, CHIEF ENGINEER

Date: 1/9/14

CHRIS HART
& PARTNERS, INC.
Landscape Architecture
City & Regional Planning

August 25, 2016

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

Attention: Mr. James Buika

Dear Mr. Spence:

RE: Comment response to Pre-Consultation for the Proposed Engle Residence situated at 6245 Honoapiilani Hwy, Lahaina, Maui, Hawaii; TMK: (2) 4-2-004: 019.

Thank you for your letter of January 22, 2016. Our response to your comments are provided below.

1. Chris Hart and Partners will submit a Special Management Area (SMA) Assessment Application for compliance with the objectives and policies of the Coastal Zone Management Act, Hawaii Revised Statutes 205A, as amended.
2. All proper permits will be obtained for the proposed project and permits for unauthorized improvements have been resolved. The owner has a recorded perpetual easement agreement for use of the adjoining land owned by Maui Land & Pineapple Co. for access and landscaping purposes.
3. Shoreline access will be considered, however there are several more convenient and appropriate shoreline access points directly south of the property, including the D.T. Fleming Park. Also, note that the beach fronting this parcel is composed of medium to large boulders.
4. Views to and along the shoreline from Honoapiilani Highway in the vicinity of the proposed project are very limited due to topography and natural vegetation. Existing views will be preserved to maximum extent possible.
5. A shoreline survey has been submitted to the State for certification.
6. A pre-consultation letter has been sent to the Save Honolua Coalition as part of the Environmental Assessment (EA) process requesting comments. No response has been received to date.

115 N. Market Street, Wailuku, Maui, Hawaii 96793-1717 • Ph 808-242-1955 • Fax 808-242-1956
www.chpmaui.com

7. Communication with the State Department of Land and Natural Resources (DLNR) has been ongoing and the DLNR will be the accepting authority of the Environmental Assessment since the property is within the Conservation District.

Thank you again for providing us with your letter. If you have any questions, please contact Raymond Cabebe at 808-242-1955 or rcabebe@chpmaui.com, or me.

Sincerely yours,

Jordan E. Hart, President

cc: Mr. William Engel
Mr. Clayton Yoshida
Project File 15-061

ALAN M. ARAKAWA
Mayor

WILLIAM R. SPENCE
Director

MICHELE CHOUTEAU McLEAN
Deputy Director

COUNTY OF MAUI

DEPARTMENT OF PLANNING

January 22, 2016

RECEIVED
JAN 25 2016
CHRIS HART & PARTNERS, INC
Landscape Architecture and Planning
CH Jordan, Raymond
+ Josh

Mr. Raymond Cabebe
Chris Hart & Partners, Inc.
115 North Market Street
Wailuku, Hawaii 96793

Dear Mr. Cabebe:

SUBJECT: COMMENTS REGARDING PROPOSED ENGEL RESIDENCE, LOCATED IN THE CONSERVATION DISTRICT AT 6245 LOWER HONOAPIILANI HIGHWAY, LAHAINA, MAUI, HAWAII; TMK: (2) 4-2-004:019 (RFC 2016/0001) 157061

The Department of Planning (Department) understands that you are the Authorized Representative for the William Engel Trust, Applicant. The Department has very limited information to respond to from the Pre-Consultation letter dated December 22, 2015. The intent of this inquiry is to gather initial permitting information about the project.

The Department provides the following comments:

1. A Special Management Area (SMA) Assessment permit is required to include review of and compliance with the objectives and policies of the Coastal Zone Management Act, Hawaii Revised Statutes 205A, as amended;

2. In the past, unauthorized improvements may have been completed without the proper permits. Please resolve all possible encroachments onto the neighboring Tax Map Key No.: (2) 4-2-004:018. Records indicate a driveway may have been built across the property boundary;

3. Examine possible development of a public shoreline access, including American with Disabilities Act access considerations;

4. Examine all construction methods, techniques, and designs to preserve or improve views to and along the shoreline from Honoapiilani Highway;

5. Obtain a State Certified Shoreline Survey, as necessary;

6. Communicate with the Honolua Bay Coalition as part of the Environmental Assessment (EA) process; and

7. Communicate with the State Department of Land and Natural Resources regarding the accepting authority for the EA.

Thank you for your cooperation. If additional clarification is required, please contact Staff Planner James Buika at james.buika@mauicounty.gov or at (808) 270-6271.

Sincerely,

CLAYTON I. YOSHIDA, AICP
Planning Program Administrator

For WILLIAM SPENCE
Planning Director

xc: John S. Rapacz, Planning Program Administrator (PDF)
James A. Buika, Staff Planner (PDF)
Tara Owens, University of Hawaii Sea Grant Extension Agent-Maui (PDF)
Department of Public Works
Daniel Ornellas, DLNR-Maui Land Division
Samuel Lemmo, Administrator, DLNR-OCCL
Project File
General File

WRS:CIY:JAB:sn
K:\WP_DOCS\PLANNING\RFC\2016\0001_Engelresidence\COMMENTS_Engle_EA.Doc

CHRIS HART
& PARTNERS, INC.
Landscape Architecture
City & Regional Planning

August 25, 2016

Mr. David C. Goode, Director
Department of Public Works
200 South High Street, Room No. 434
Wailuku, HI 96793

Attention: Ms. Rowena M. Dagdag-Andaya

Dear Mr. Goode:

RE: Comment response for Pre-Consultation for the Proposed Engel Residence situated at 6245 Honoapiilani Hwy, Lahaina, Maui, Hawaii;
TMK: (2) 4-2-004: 019.

Thank you for your letter of January 13, 2016. Our response to your comments are provided below:

1. The owner has a recorded perpetual exclusive easement agreement (Doc. No. A-55540702) for use of the adjoining property, TMK: (2) 4-2-004:062, owned by Maui Land & Pineapple Co., for "yard and landscaping purposes, and for vehicular and pedestrian access ..."
2. A pre-consultation letter has been sent to the State of Hawaii, Department of Transportation for review and comment.

Thank you again for providing us with your letter. If you have any questions, please contact Raymond Cabebe at 808-242-1955 or rcabebe@chpmaui.com, or me.

Sincerely yours,

Jordan E. Hart, President

cc: Mr. William Engel
Project File 15-061

115 N. Market Street, Wailuku, Maui, Hawaii 96793-1717 • Ph 808-242-1955 • Fax 808-242-1956
www.chpmaui.com

ALAN M. ARAKAWA
Mayor

DAVID C. GOODE
Director

ROWENA M. DAGDAG-ANDAYA
Deputy Director

Telephone: (808) 270-7845
Fax: (808) 270-7955

COUNTY OF MAUI
DEPARTMENT OF PUBLIC WORKS
200 SOUTH HIGH STREET, ROOM NO. 434
WAILUKU, MAUI, HAWAII 96793

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

CARY YAMASHITA, P.E.
Engineering Division

Highways Division

January 13, 2016

Mr. Raymond Cabebe
CHRIS HART & PARTNERS, INC.
115 North Market Street
Wailuku, Maui, Hawaii 96793

Dear Mr. Cabebe:

SUBJECT: PRE-CONSULTATION REQUEST FOR PROCESSING OF AN ENVIRONMENTAL ASSESSMENT (EA) AND APPLICATIONS FOR A CONSERVATION DISTRICT USE PERMIT (CDUA) AND A SPECIAL MANAGEMENT AREA (SMA) ASSESSMENT FOR THE PROPOSED ENGEL RESIDENCE SITUATED AT 6245 HONOAPIILANI HIGHWAY, LAHAINA, MAUI, HAWAII; TMK: (2) 4-2-004:019

We reviewed the pre-consultation request and have the following comments:

Comments from the Highways Division:

1. The aerial survey map exhibit shows the physical access to the property over the adjoining TMK: (2) 4-2-004:062 owned by Maui Land & Pineapple. Permitted access should be documented, if not already.

2. The property is off a segment of Honoapiilani Highway under the jurisdiction of the State of Hawaii.

Please call Rowena M. Dagdag-Andaya at 270-7845 if you have any questions regarding this letter.

Sincerely,

DAVID C. GOODE
Director of Public Works

RECEIVED
JAN 19 2016
CHRIS HART & PARTNERS, INC.
Landscape Architecture and Planning

CC: Jordan & Josh Raymond
151061

DCG:RMDA:da
xc: Highways Division
S:\DSA\Engr\CZM\Draft Comments\42004019_engel_res_pre-consult_ea_cdua_sma.wpd

CHRIS HART
& PARTNERS, INC.
Landscape Architecture
City & Regional Planning

August 25, 2016

Mr. Kamana'opono Crabbe, CEO
State of Hawaii
Office of Hawaiian Affairs
560 N. Nimitz Highway, Suite 200
Honolulu, Hawaii 96817

Dear Mr. Crabbe:

RE: Comment response to Pre-Consultation for the Proposed Engel Residence situated at 6245 Honoapiilani Hwy, Lahaina, Maui, Hawaii; TMK: (2) 4-2-004: 019

Thank you for your letter of January 27, 2016. We acknowledge that your agency has no specific comments at this time and that you are looking forward to review of the Draft Environmental Assessment.

Thank you again for providing us with your letter. If you have any questions, please contact Raymond Cabebe at 808-242-1955 or rcabebe@chpmaui.com, or me.

Sincerely yours,

Jordan E. Hart, President

cc: Mr. William Engel
Project File 15-061

115 N. Market Street, Wailuku, Maui, Hawaii 96793-1717 • Ph 808-242-1955 • Fax 808-242-1956
www.chpmaui.com

PHONE (808) 594-1888

FAX (808) 594-1938

STATE OF HAWAI'I
OFFICE OF HAWAIIAN AFFAIRS
560 N. NIMITZ HWY., SUITE 200
HONOLULU, HAWAI'I 96817

RECEIVED
FEB - 3 2016
CHRIS HART & PARTNERS, INC.
Landscape Architecture and Planning

CC: Raymond + Josh

HRD15-7718 157061

January 27, 2016

Raymond Cabebe
Chris Hart & Partners Inc.
115N. Market Street
Wailuku, HI 96793-1717

Re: Pre-Consultation on Environmental Assessment, Conservation District Use Permit Application, and Special Management Area Assessment
Proposed Engel Residence
Honolua Ahupua'a, Kā'anapali Moku, Maui Mokupuni
Tax Map Key: (2) 4-2-004:019

Aloha e Raymond Cabebe:

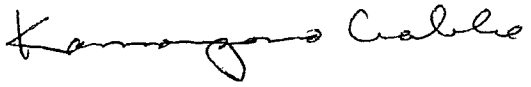
The Office of Hawaiian Affairs (OHA) is in receipt of your December 22, 2015 request for comments ahead of a draft environmental assessment (DEA), conservation district use permit application (CDUA), and special management area (SMA) assessment for the proposed project (project) along the coastline in a conservation area of Honolua.

According to your letter, the proposed project consists of the demolition of an existing single-family residence and construction on a 0.43 acre parcel for a new two-story, 3,498 square foot single-family residence with retaining wall, driveway improvements, and landscaping.

The DEA will be the primary document to support the necessary approvals of the CDUA and the SMA. OHA has no specific comments at this time and look forward to reviewing the DEA.

Thank you for the opportunity to provide comments on the Engle Residence pre-assessment consultation. Should you have any questions, please contact Kathryn Keala at (808) 594-0272 or kathyk@oha.org.

'O wau iho nō me ka 'oia 'i'o,



Kamana'opono M. Crabbe, Ph.D.
Ka Pouhana, Chief Executive Officer

KC:kk

**Please address replies and similar, future correspondence to our agency:*

Dr. Kamana'opono Crabbe
Attn: OHA Compliance Enforcement
560 N. Nimitz Hwy, Ste. 200
Honolulu, HI 96817

CHRIS HART
& PARTNERS, INC.
Landscape Architecture
City & Regional Planning

August 25, 2016

Mr. Scott Glenn, Interim Director
Office of Environmental Quality Control
Department of Health
235 South Beretania Street, Suite 702
Honolulu, HI 96813

Dear Mr. Glenn:

RE: Comment Response for Pre-Consultation for the Proposed Engel Residence situated at 6245 Honoapiilani Hwy, Lahaina, Maui, Hawaii; TMK: (2) 4-2-004: 019.

Thank you for your letter of January 14, 2016. Our response to your comments are provided below.

In addition to the use of erosion and stormwater BMPs during construction, the applicant proposes either an above ground retention basin or an underground retention system as a permanent mitigation measures for pollution and runoff prevention. Additionally, where feasible and applicable, the applicant will consider Low Impact Development design ideas. Native, zone specific, and drought tolerant plantings are proposed in the landscape concept plan. Climate change and sea level rise have been considered in the siting and design of the proposed house.

Thank you again for providing us with your letter. If you have any questions, please contact Raymond Cabebe at 808-242-1955 or rcabebe@chpmaui.com, or me.

Sincerely yours,

Jordan E. Hart, President

cc: Mr. William Engel
Project File 15-061

115 N. Market Street, Wailuku, Maui, Hawaii 96793-1717 • Ph 808-242-1955 • Fax 808-242-1956
www.chpmaui.com

DAVID Y. IGE
GOVERNOR OF HAWAI'I

SCOTT GLENN
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

January 14, 2016

Chris Hart and Partners, Inc.
Attn: Raymond Cabebe
115 N. Market Street
Wailuku, Hawaii 96793

Dear Mr. Cabebe,

SUBJECT: Pre-Consultation Request for Proposed Engel Residence, Lahaina, Maui

The Office of Environmental Quality Control has reviewed the information contained in your December 22, 2015 letter about the subject project, and offers the following comments for your consideration.

Based on the information provided, the OEQC recommends in addition to the use of erosion and stormwater BMPs during construction, using permanent mitigation measures for pollution and runoff prevention. The project's proximity to the shoreline could lead to direct water and sediment pollution from the property. Water quality testing before and after the project is also recommended to help determine if the mitigation measures are successful. Low Impact Development design ideas are recommended, such as a pervious driveway. The use of native vegetation in landscaping is encouraged. Lastly, OEQC recommends taking future climate change into consideration. Sea level is projected to rise and heavy precipitation events to increase, which the siting and design of the house should take into consideration. OEQC looks forward to reviewing a Draft EA that includes sufficient information to enable recipients and the public to understand the project and to provide substantive feedback.

Thank you for your role in Hawaii's environmental review process and for the opportunity to comment at this early stage of this project. If you have any questions as you navigate this process, please consult our website at http://health.hawaii.gov/oeqc (see in particular the link to the Environmental Assessment Preparation Toolkit on the right panel) or contact our office at (808) 586-4185.

Sincerely,

Scott Glenn, Interim Director

RECEIVED
JAN 19 2016
CHRIS HART & PARTNERS, INC.
Landscape Architecture and Planning
CC: Jordan + Josh
Raymond
15061

CHRIS HART
& PARTNERS, INC.
Landscape Architecture
City & Regional Planning
August 25, 2016

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

Dear Mr. Tsuji:

RE: Comment response for the Pre-Consultation Letter for the Proposed Engle Residence, situated at 6245 Honoapiilani Hwy, Lahaina, Maui, Hawaii; TMK: (2) 4-2-004: 019;

Thank you for your letter of January 14, 2016, our response to your comments are provided below.

Thank you for routing our pre-consultation letter to the DLNR Divisions for review and comment. We will await for comment letters from these offices.

Thank you again for providing us with your letter. If you have any questions, please contact Raymond Cabebe at 808-242-1955 or rcabebe@chpmaui.com, or me.

Sincerely yours,

Jordan E. Hart, President

CC: Mr. William Engel
Project File 15-061

115 N. Market Street, Wailuku, Maui, Hawaii 96793-1717 • Ph 808-242-1955 • Fax 808-242-1956
www.chpmaui.com

DAVID Y. IGE
GOVERNOR OF HAWAII

SUZANNE D. CASE
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

January 14, 2016

RECEIVED
JAN 19 2016
CHRIS HART & PARTNERS, INC.
Landscape Architecture and Planning

CC: Jordan & Josh
Raymond 15061

Chris Hart & Partners, Inc.
Attention: Mr. Jordan E. Hart, President
115 N. Market Street
Wailuku, Hawaii 96793

Dear Mr. Hart:

SUBJECT: Pre-Consultation Letter: Processing of an Environmental Assessment (EA) and Application for a Conservation District Use Permit (CDUA) and Special Management Area (SMA) Assessment for the Proposed Engel Residence

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, 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

CHRIS HART
& PARTNERS, INC.
Landscape Architecture
City & Regional Planning

August 25, 2016

Mr. Ford N. Fuchigami, Director
State of Hawaii
Department of Transportation
869 Punchbowl Street
Honolulu, Hawaii 96813-5097

Dear Mr. Fuchigami:

RE: Comment response to Pre-Consultation for the Proposed Engel Residence situated at 6245 Honoapiilani Hwy, Lahaina, Maui, Hawaii; TMK: (2) 4-2-004: 019.

Thank you for your letter of March 2, 2016. Our response to your comments are provided below:

1. Plans for any work proposed within the Honoapiilani Highway will be submitted to the Maui District Highways Division for review and approval.
2. Any surface water runoff generated by the proposed project will be contained onsite.
3. If oversized equipment or overweight loads are planned to be transported over State highways, a permit will be obtained from the Highways Division.

A copy of the Draft Environmental Assessment will be provided to the Maui District Engineer for review and comment.

Thank you again for providing us with your letter. If you have any questions, please contact Raymond Cabebe at 808-242-1955 or rcabebe@chpmaui.com, or me.

Sincerely yours,

Jordan E. Hart, President

cc: Mr. William Engel
Project File 15-061

115 N. Market Street, Wailuku, Maui, Hawaii 96793-1717 • Ph 808-242-1955 • Fax 808-242-1956
www.chpmaui.com

DAVID Y. IGE
GOVERNOR

FORD N. FUCHIGAMI
DIRECTOR

DEPUTY DIRECTORS
JADE T. BUTAY
ROSS M. HIGASHI
EDWIN H. SNIFFEN
DARRELL T. YOUNG

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
869 PUNCHBOWL STREET
HONOLULU, HAWAII 96813-5097

IN REPLY REFER TO:
HWY-PS 2.1761

March 2, 2016

Mr. Jordan Hart
Chris Hart and Partners, Inc.
115 North Market Street
Wailuku, Hawaii 96793-1717

RECEIVED
MAR 04 2016
CHRIS HART & PARTNERS, INC.
Landscape Architecture and Planning

Attn: Mr. Raymond Cabebe

CC: Raymond 15/061

Dear Mr. Hart:

Subject: Early Consultation for Environmental Assessment, Conservation District Use Permit and Special Management Area Assessment for the Proposed Engel Residence
6245 Honoapiilani Highway – Lahaina, Maui
TMK: (2) 4-2-004:019

The Hawaii Department of Transportation (HDOT) received your letter of December 22, 2015, requesting an early consultation on the preparation of an Environmental Assessment (EA) required by Chapter 343, Hawaii Revised Statutes, as well as for applications for a Conservation District Use Permit and Special Management Area Assessment on the subject project. The proposed work will involve the demolition of an existing residential dwelling and the construction of a new single-family dwelling. The project site is a 0.43-acre parcel located Makai of Honoapiilani Highway, a State facility.

The HDOT has the following comments:

1. Construction plans for all work done within the Honoapiilani Highway right-of-way must be submitted to Highways Division - Maui District for review and approval.

2. This project shall not result in additional discharge of surface water runoff onto State right-of-way.

3. A permit is required from the Highways Division if Applicant plans to transport oversized equipments/overweight loads within our highway facilities.

An additional copy of the EA should be sent to our Maui District Engineer, Highways Division.

From: Raymond Cabebe
Sent: Wednesday, August 24, 2016 1:55 PM
To: 'Roy Silva'
Cc: Joshua Circle-Woodburn
Subject: RE: Engle Residence Pre-Consultation Letter

Roy,

Thank you for your February 11, 2016 email. We acknowledge that the Kapalua Water Company has no comments on the Engel Residence project at this time.

Thank you again for providing a response.

Sincerely,

R. Raymond Cabebe, LEED® AP BD+C
Land Planner
CHRIS HART & PARTNERS, INC.
115 N. Market Street
Wailuku, Maui, Hawaii 96793
voice: 808.242.1955 x556
facsimile: 808.242.1956
direct: 808.270.1556
www.chpmaui.com

From: Roy Silva [mailto:rsilva@aquaengineers.com]
Sent: Thursday, February 11, 2016 1:28 PM
To: Joshua Circle-Woodburn <JCircle-Woodburn@chpmaui.com>
Cc: Raymond Cabebe <RCabebe@chpmaui.com>
Subject: RE: Engle Residence Pre-Consultation Letter

Good Afternoon Josha,

Kapalua Water Company has no comment on this project at this time.

Thank you

AQUA ENGINEERS
SUSTAINABLE SOLUTIONS

Roy J Silva
808 - 681-9311
rsilva@aquaengineers.com

From: Joshua Circle-Woodburn [mailto:JCircle-Woodburn@chpmaui.com]
Sent: Friday, January 29, 2016 10:41 AM
To: Roy Silva
Cc: Raymond Cabebe
Subject: Engle Residence Pre-Consultation Letter

Aloha Roy,

Attached as requested, please find the letter we attempted to mail to Kapalua Water Company on January 19, 2016. The letter was returned to us as undeliverable. The letter asks for comments by February 5, 2016 but as you are only receiving this now, we would like to request any comments back by February 12, 2016. Please let me know if you have any questions.

Mahalo,
Josh

Joshua Circle-Woodburn, RLA, LEED AP
Planner

CHRIS HART & PARTNERS, INC.
115 N. Market Street
Wailuku, Maui, Hawaii 96793

(T) 808-242-1955 ext. 573
(F) 808-242-1956
www.chpmaui.com

CHRIS HART
& PARTNERS, INC.
Landscape Architecture
City & Regional Planning

August 29, 2016

Mr. and Ms. Resmo
199 Plantation Club Drive
Lahaina, HI 96761

Dear Mr. and Ms. Resmo:

RE: Comment response to Pre-Consultation for the Proposed Engel Residence situated at 6245 Honoapiilani Hwy, Lahaina, Maui, Hawaii; TMK: (2) 4-2-004: 019

Thank you for your letter which we received on of January 19, 2016. Our responses to your comments are provided below.

Mr. Engel has informed Chris Hart & Partners that he will no longer be hosting or allowing weddings/events to take place on his property. He communicated with us that the wedding last year was for a family friend and he did not rent his property out. We acknowledge your concerns with regards to the disruptive nature of these events.

Thank you again for providing us with your letter. If you have any questions, please contact Raymond Cabebe at 808-242-1955 or rcabebe@chpmaui.com, or me.

Sincerely yours,

Jordan E. Hart, President

cc: Mr. William Engel
Project File 15-061

115 N. Market Street, Wailuku, Maui, Hawaii 96793-1717 • Ph 808-242-1955 • Fax 808-242-1956
www.chpmaui.com

CHRIS HART AND PARTNERS INC

THIS IS IN RESONSE TO THE LETTER YOU CONVEYED TO THE PLANTATION ESTATES OWNERS.
WE LIVE IN CLOSE TO THE PROPERTY ON THE WILLIAM ENGLE TRUST LAND. DURING THE PAST THEY WERE

INVOLVED IN BUSINESS AT THE PROPERTY WE ARE DISCUSSING. THEY HAD WEDDINGS AND EVENTS THAT WENT ON QUITE LATE AND WERE QUITE DISRUPTING TO US. THEY HAD LOUD BANDS UNTIL AFTER MID-NIGHT. WE HAVE LIVED IN OUR HOME FOR ALMOST 12 YEARS. THE ORIGINAL OWNERS HAD PIGS CHICKENS AND OTHER ANIMALS BUT THIS DID NOT DISTURB US AS DO THE BIG WEDDING AND OTHER PARTIES. WE ARE NOT AWARE THAT THEY HAVE A COMMERCIAL PROPERTY LICENSE.

LET IT BE KNOWN THAT WE DO OBJECT TO THE ABOVE ACTIVITIES.

SINCERELY,

MIKE AND BOBBI RESMO
199 PLANTATION CLUB DR.
THE PLANTATION
KAPALUA MAUI HI 96761

Mr & Mrs. Michael Resmo

RECEIVED
JAN 19 2016
CHRIS HART & PARTNERS, INC.
Landscape Architecture and Planning

CC: Jordan + Raymond Josh
151061

CHRIS HART
& PARTNERS, INC.
Landscape Architecture
City & Regional Planning

August 29, 2016

Mr. and Ms. Reiswig
201 Plantation Club Drive
Lahaina, HI 96761

Dear Mr. and Ms. Reiswig:

RE: Comment response to Pre-Consultation for the Proposed Engel Residence situated at 6245 Honoapiilani Hwy, Lahaina, Maui, Hawaii; TMK: (2) 4-2-004: 019

Thank you for your email of January 13, 2016. Our responses to your comments are provided below.

Mr. Engel has informed Chris Hart & Partners that he will no longer be hosting or allowing weddings/events to take place on his property. He communicated with us that the wedding last year was for a family friend and he did not rent his property out. We acknowledge your concerns with regards to the disruptive nature of these events and use of conservation land for uses other than residential.

Thank you again for providing us with your letter. If you have any questions, please contact Raymond Cabebe at 808-242-1955 or rcabebe@chpmaui.com, or me.

Sincerely yours,

Jordan E. Hart, President

cc: Mr. William Engel
Project File 15-061

115 N. Market Street, Wailuku, Maui, Hawaii 96793-1717 • Ph 808-242-1955 • Fax 808-242-1956
www.chpmaui.com

Raymond Cabebe

From:	lee.reiswig@yahoo.com
Sent:	Wednesday, January 13, 2016 2:25 PM
To:	Raymond Cabebe
Cc:	Lois Reiswig
Subject:	Preconsultation Letter response for William Engle Trust

Aloha Raymond,

We received the subject letter from your firm and wish to comment. We purchased our home at 201 Plantation Club Dr, Lahaina HI 96761 in October 2012. We have been full time residents on Maui since March 1999. Our Realtor shared with us that the Engle's intended to tear down their existing residence and build a new one. So it is not a surprise that they are now proceeding to do so. Your letter states that the residential use would be consistent with the land uses currently existing on the subject property and vicinity. The Engles are well aware that we have objected to their use of the property to hold commercial catering and wedding events on the property. We have complained to the Engles that the loud public address and musical entertainment associated with these events sometimes running into the early morning hours is very offensive to us and is an improper use on conservation land. We also on multiple occasions asked the Maui Police department to investigate the loud events and they confirmed to us that weddings were being conducted there.

Approximately a year ago Mr. Engle communicated with my wife that he planned to discontinue these events. We were surprised when he called to tell us that he was hosting another wedding event just last week. We are acquaintances of the parents of the bride and a number of our friends were invited guests. The wedding party was loud with a public address system and band but ended promptly at 10pm.

We believe that these catering and wedding events are inconsistent with the permitted uses of a single family residence and conservation zoning. Building a new, larger residence may in fact be a way of further expanding these offensive uses and therefore we oppose the granting of a permit for this new residence unless there is a corresponding commitment that there will be no further events conducted there in perpetuity.

Feel free to contact us if you wish to discuss.

Sincerely,

Leland and Lois Reiswig
201 Plantation Club Dr
Lahaina, HI 96761
808-665-1491

CHRIS HART
& PARTNERS, INC.
Landscape Architecture
City & Regional Planning

August 29, 2016

Ms. Victoria Caputo
203 Plantation Club Drive
Lahaina, HI 96761

Dear Ms. Caputo:

RE: Comment response to Pre-Consultation for the Proposed Engle Residence situated at 6245 Honoapiilani Hwy, Lahaina, Maui, Hawaii; TMK: (2) 4-2-004: 019.

Thank you for your email of January 14, 2016. Our responses to your comments are provided below:

Mr. Engel has informed Chris Hart & Partners (CHP) that he will no longer be hosting or allowing weddings/events to take place on his property. He communicated with us that the wedding last year was for a family friend and he did not rent his property out. We acknowledge your concerns with regards to the disruptive nature of these events and use of conservation land for uses other than residential.

No construction or development is proposed in the drainage channel adjacent to the subject property and drainage patterns will remain as they currently exist on site. The proposed project will not affect or otherwise interfere with the continued flow of water runoff through the channel. During construction Best Management Practices will be implemented to prevent any construction related runoff from entering the ocean or gulch. No impact to the surround environment or wildlife is anticipated. Additionally, CHP is processing all required redevelopment permits and reports necessary for the proposed project including but not limited to a Special Management Area (SMA) Assessment, Environmental Assessment (EA), and Conservation District Use Application (CDUA).

CHP has helped Mr. Engel resolve permit or easement issues that may have existed previously on the property. All proposed construction will comply with building setback and property lines. Mr. Engel has secured a perpetual easement for land being used outside of his property boundaries. The appropriate associations and agencies, including the Kapalua Water Company and Plantation Estates Owners Association, have been notified of the potential project as required by the EA process. The property will remain in residential use so water use is not expected to increase significantly. The Kapalua Water Company did not express any concern.

115 N. Market Street, Wailuku, Maui, Hawaii 96793-1717 • Ph 808-242-1955 • Fax 808-242-1956
www.chpmaui.com

Thank you again for providing us with your letter. If you have any questions, please contact Raymond Cabebe at 808-242-1955 or rcabebe@chpmaui.com, or me.

Sincerely yours,

Jordan E. Hart, President

cc: Mr. William Engel
Project File 15-061

Raymond Cabebe

From: Victoria Caputo <vscaputo@yahoo.com>
Sent: Thursday, January 14, 2016 3:15 PM
To: Raymond Cabebe
Subject: Proposed Engel Residence Pre- Construction comment Letter from Caputo

Dear Sirs,

I have owned in Plantation Estates for 12 years. I have watched the changes on the property now owned by the Engels. Prior to their ownership, I would hear Friday night pig squealing about once a month. Outside of those noises, the previous Hawaiian owners lived peacefully and quietly. When the Engels took possession of the property, the parties began occurring on school nights, Sunday nights and of course weekends into late in the night. I have two children attending school, it was very difficult for them to sleep with all the music echoing and people on microphones shouting. My dying husband with brain cancer who passed away in November 2014, had to endure the party sounds all night long too.
On extreme cases, we contacted Kapalua security and then finally the police. Out of being neighborly, I didn't want to complain but the blatant disrespect and disregard for year round residents living in close proximity to the Engel's is cause for alarm. Sound shouldn't travel beyond the property lines on any night. I am opposed to the Engel's use of the property for any commercial use. Especially since it is in conservancy Land.

I have watched the construction of stone walls along the river bed that is fed by the Kahauiki Gulch. I am not sure if county permits were issued for such a structure given the close proximity of the walls to the river bed, which manages runoff water flow from Kapalua developments to the ocean. I believe that any new construction on this property, which sits inside the sole storm run-off area for Plantation Estates, Plantation Golf Course, Honolua Ridge and Mahina Estates, should trigger an SMA Permit and review, regardless of what may have been grandfathered in previously. Recent ecological problems resulting from silt and debris running into Honokahua Bay tell us that Kahauiki Gulch is a funnel to the sea and all of it should be subject to SMA regulations.

Within 150 yards of the Engels property large Sea turtles feed on the reefs. These turtles can be seen from the Beach road above Fleming Beach.There are unobstructed views of the coves fronting the Engel's property, Fleming Beach and turtle feeding grounds. My concern is the impact of any development of the Engel's property will impact the turtles and reef. I believe the subject parcel is defined as conversancy land, and as such, any remediation should require a site plan from Department of Natural Resources and an Environment Assessment for the coral reefs fronting property and Fleming Beach close proximity to the parcel. This property is the only beach front property so close to Fleming Beach, that it warrants developing an Environment Impact Statement.

Given that the existing structure is practically in the water during high tides, any modifications to the property would trigger a Conversation District Use Application and review and approval by the Department of Land and Natural Resources or the Board of Land and Natural Resources, who work to maintain our beautiful Hawaiian landscape and environment, prior to the start of the project.

I have observed additional new structures, paving, driveways (impermeable surfaces) that appear to extend onto Maui Land and Pineapple land, which adjoins the Engel's property on the south. This can be seen on the aerial map provided by Chris Hart. It clearly shows the cement driveway on MLP land TMK 420040620000. Additionally, the Engels have developed steps and a cosy quiet lookout with a bench created all on the bluff above the ocean which appears to be all on land owned by MLP. This cozy bluff lookout can only be accessed from the Engel's property but can be seen from the Kapalua Lookout on Honoapiilani Highway. This creates a fine setting for commercial use with the use of Maui Land and Pineapple property.

Additionally, half of the waterfront land of the Engels property actually belongs to MLP (see tax map code TMK 420040620000). Again, this reinforces the fact that the Engels are developing MLP land for personal/commercial use. MLP does not consider any of their land to be vacant. This parcel is a large parcel maybe subject to Kapalua Resort Association consideration. As most of the land in Kapalua is under the conditions and land use of Kapalua Resort Association so is the TMK 420040620000 and I believe the Engels property should be as well.

In my opinion, MLP,Ltd. and Kapalua Resort Association both should be notified about the plans for this property. The Kapalua security (provided by the Kapalua Resort Association) has been called to this property on a regular basis for noise over the past several years. I am sure they would be interested parties to any development or expansion of this property that takes place on or encumbers KRA or MLP land.

Lastly, Kapalua water company provides the water to the Engel property by means of an easement across my property. Any expansion of the home would change water use and potential piping of the water. This may cause additional expense from Kapalua Water Company(KWC), owned by MLP and any incurred expenses for landscape repair on my property. The KWC and MLP would again be interested in any development of this property.

I am available for any further questions,

Respectfully,
Victoria Caputo
203 Plantation Club Drive
Lahaina, HI 96761
(808) 868-4172

CHRIS HART
& PARTNERS, INC.
Landscape Architecture
City & Regional Planning

August 25, 2016

Mr. Robert E. Strand
Carlsmith Ball, LLP
ASB Tower, Suite 2100
1001 Bishop Street
Honolulu, HI 96813

Dear Mr. Strand:

RE: Comment response to Pre-Consultation for the Proposed Engle Residence situated at 6245 Honoapiilani Hwy, Lahaina, Maui, Hawaii; TMK: (2) 4-2-004: 019

Thank you for your letter of January 13, 2016, our responses to your comments are provided below.

1. **Gulch/Drainage Channel.**
   No construction or development is proposed in the drainage channel adjacent to the subject property and drainage patters will remain as they currently exist on site. The proposed project will not affect or otherwise interfere with the continued flow of water runoff through the channel.

2. **Environmental Assessment (EA).**
   Chris Hart & Partners (CHP) is in the process of preparing an EA for the proposed project. Once completed and submitted to the DLNR, a copy of the EA will be provided to your office for your use.

3. **Notices.**
   CHP as sent a pre-consultation letter to the Plantation Estates Lot Owners Association pursuant to your recommendation.

Thank you again for providing us with your letter. If you have any questions, please contact Raymond Cabebe at 808-242-1955 or rcabebe@chpmaui.com, or me.

Sincerely yours,

Jordan E. Hart, President

cc: Mr. William Engel
Project File 15-061

115 N. Market Street, Wailuku, Maui, Hawaii 96793-1717 • Ph 808-242-1955 • Fax 808-242-1956
www.chpmaui.com

CARLSMITH BALL LLP

A LIMITED LIABILITY LAW PARTNERSHIP

ASB TOWER, SUITE 2100
1001 BISHOP STREET
HONOLULU, HAWAII 96813
TELEPHONE 808.523.2500 FAX 808.523.0842
WWW.CARLSMITH.COM

DIRECT DIAL NO.
808.523.2525

RSTRAND@CARLSMITH.COM

OUR REFERENCE NO.:
062720-00001

January 13, 2016

VIA U.S. MAIL AND EMAIL (RCABEBE@CHPMAUI.COM)

Raymond Cabebe
Chris Hart & Partners, Inc.
115 N. Market Street
Wailuku, Maui, Hawaii 96793-1717

Re: William Engel Trust
TMK: (2) 4-2-004:019

Dear Mr. Cabebe:

We are the attorneys for TY Management Corporation, the owner of the Kapalua Plantation Golf Course, and Jordan Hart's letter of December 22, 2015 regarding the proposed construction of a new residence on the above property was referred to our office for review and response.

As you may know, in the 1990's Maui Land & Pineapple ("MLP") constructed a box culvert on the mauka side of Honoapiilani Highway near the Engel property that resulted in water runoff from the Kapalua Plantation Golf Course and the Plantation Estates Subdivision flowing through a channel next to the Engel property at historical, pre-development levels. That drainage system remains in active use and any proposed construction on the Engel property should not adversely affect or otherwise interfere with the continued flow of water runoff through that channel.

Mr. Hart's letter mentioned that your office is preparing an Environmental Assessment ("EA") for review by the Department of Land and Natural Resources of the State of Hawaii. Please provide our office with a copy of the EA when it is submitted to the DLNR so that we can continue monitoring the proposed redevelopment of the Engel property and its impact on the drainage channel on behalf of TY Management Corporation. Your office may also want to confirm that notices and other communications regarding the proposed redevelopment of the Engel property are sent to the Plantation Estates Lot Owners Association which our office does not represent.

Thank you.

Sincerely,

Robert E. Strand

RES/lhm

c. TY Management Corporation
Mike Jones, Kapalua Plantation Golf Course

4853-2276-4076.1.062720-00001

APPENDIX B
Cultural Impact Assessment

Engel Residence

Cultural Impact Assessment

for

6245 Honoapi‘ilani Highway

Honolua, Maui, Hawai‘i

TMK: (2) 4-2-004: 019

by

Katherine Kama‘ema‘e Smith and Jill Engledow
Historical Consultants

March 2016

Prepared for
The William Engel Trust

William Engel Residence
Cultural Impact Assessment
Table of Contents

Figures……..……3

Introduction……..6

Report Methodology/Resource Materials Reviewed……6

Study Area Description……7

Study Area History……....8

Oral Interviews……10

Confidential Information Withheld/Conflicts in information or data….11

Effects on Plan…….12

Individuals and Groups Contacted ……..12

References…….……...13

Appendices……14

Figure 1. The subject property is near the center of the photo, with a crescent-shaped driveway.

Figures 2 and 3. Existing house, left. Beach fronting subject property, looking down from adjoining ML&P property, right.

Figures 4 and 5. Front lawn and beach, left. Cliff-side parcel owned by ML&P abutting the south boundary of subject property, right.

Figures 6 and 7. Drainage ditch on north edge of property, left. Retaining wall on north edge of study property, running parallel to drainage ditch, right.

Figure 8. Low ridge and rocky cliff on the adjacent Conservation District parcel 32, abutting the Engel property on the southwest.

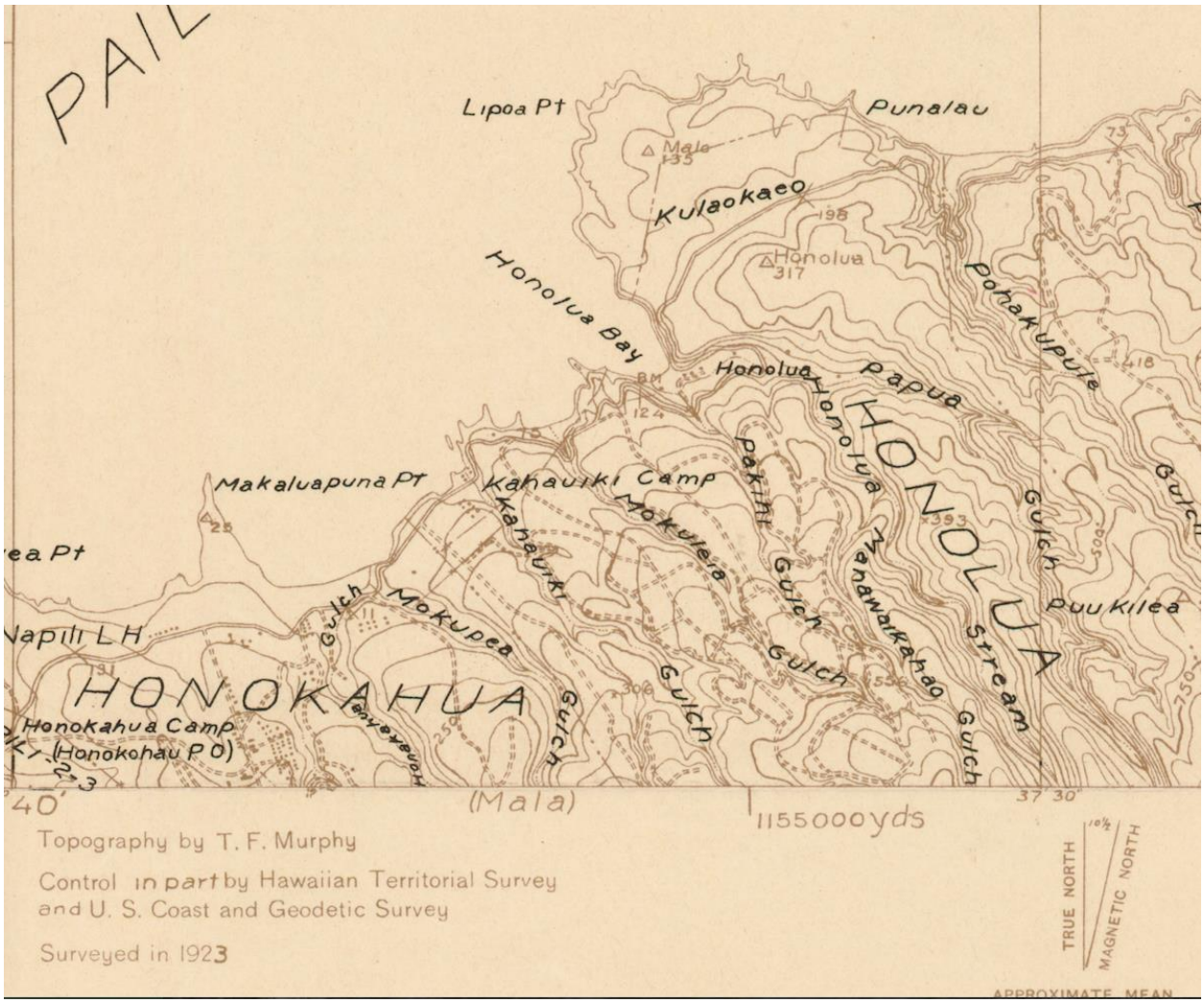


Figure 9. Hawaiian Territorial Survey map showing Kahauiki Gulch and Camp, 1923. Subject property is at the ocean end of Kahauiki Gulch.

Figure 10. Portion of a U.S. Geological Survey map showing part of Kāʻanapali Moku, which began at Kekaʻ a (Black Rock) and ran to Waiheʻ e.

William Engel Residence

Cultural Impact Assessment

I. Introduction

At the request of Chris Hart & Partners, Inc., historical consultants Katherine Kamaʻemaʻe Smith and Jill Engledow prepared this Cultural Impact Assessment of the property owned by William Engel at 6245 Honoapiʻilani Highway, TMK (2) 4-2-004: 019. It lies in the *moku* (district) of Kāʻanapali (Fig10), which is now called Lāhainā. It is in the *ahupuaʻa* land division of Honolua, at the base of a gulch named Kahauiki, meaning "the small *hau* tree" (Appendix 8).

This 0.43-acre property faces northwest in a cove fronted by a small, stony beach. It is backed on the southeast by Honoapiʻilani Highway, and flanked on either side by undeveloped land with rocky cliffs along the shoreline. The southwestern boundary is a small ridge (Figure 8), and the eastern boundary is an *ʻauwai* or drainage ditch (Figure 6). Part of the eastern boundary is lined with a stone retaining wall, which is of modern design (Figure 7). An existing single-family house on the site was built in 1971. Encircling the house from the southwest to the east boundaries is a concrete driveway (Figure 2). The proposed project will include demolition of this house and construction of a new single-family residence and a modified retaining wall. The proposed action that requires this Cultural Impact Assessment is an HRS Chapter 343 Environmental Assessment in support of a Conservation District Use Application and a Special Management Area Assessment Application.

II. Report Methodology/Resource Materials Reviewed

Sources cited in archival research are listed in the attached bibliography. Additional searches included the Internet and the indexes of a variety of books on Hawaiian culture and history. A number of commonly used texts about Hawaiian history found few references to Honolua and none to Kahauiki, the name of the gulch in which this property is located. Among the works consulted without success were: *Ruling Chiefs of Hawaii* (Samuel Kamakau), *Ke Alaloa O Maui* (Inez Ashdown),), *Sugar Water* (Carol Wilcox), *Native Planters in Old Hawaii* (Handy, Handy & Kukui), *The Index to the Maui News* (Gail Bartholomew Ainsworth), *Hawaiian Mythology* by Martha Beckwith, *ʻ Olelo Noʻ eau* by Pukui and www.ulukau.org, which includes digital copies of old Hawaiian-language newspapers.

Several references relating to the general area were found in *Sites of Maui* by Elspeth P. Sterling. In the Civil Code of 1859, "the twelve ancient districts of the island of Maui were reduced to four by combining Kaanapali with Lahaina. . ." (King, quoted in Sterling). Prior to this time, the district of Lāhainā extended to Kekaʻa, in the area that now is the Kāʻanapali Resort. The district

of Kāʻanapali extended from Kekaʻa around the north coast of West Maui, past Kahakuloa, to Hulu Island. (See Figure 10)

Māhele ʻAina records of the Kingdom of Hawaiʻi (Appendices 1-4) were accessed at www.papakilodatabase.com of the Office of Hawaiian Affairs (OHA). Hand-drawn copies of the original survey and Land Commission claim were found in The Fleming Journals (Appendices 5&6), on University of Hawaiʻi EVols.com. Primary source information in Hawaiian was researched, translated and extracted by Katherine Smith, who reads, writes and speaks Hawaiian under the training of Kumu Liko Rogers, teacher at Ke Kula Kaiapuni o Maui ma Nāhiʻenaʻena.

Smith also conducted interviews with local residents who remember land uses in the area over the past 50 years.

III. Study Area Description

This site is a small, low-lying residential parcel just off Honoapiʻilani Highway, a government road shown in a survey of this parcel in 1936 (Appendix 7) It is bordered on the east by a drainage ditch that apparently channels water flowing from Kahauiki Gulch, which is managed by large drainage pipes on the *mauka* side of the highway, below Kapalua's Plantation Estates and the Plantation Golf Course (Figure 1). The closest neighbors are above the north wall of the gulch, #201 Plantation Club Drive, in the Plantation Estates. Otherwise, the property is isolated, bounded by Mokulēia Bay on one end and the highway on the other, and a rocky cliffs on the southwest side. Signs of earlier residential use of this area include extremely tall (estimated 150 feet tall) coconut palms to the east, across the drainage ditch. The study property is just outside the boundaries of the Kapalua Resort. Abutting this parcel to the southwest is a parcel of State Conservation District land parcel 32 (Figure 8) classified as Limited Subzone, for which Engel Trust owns an easement. The land is managed by Maui Land & Pineapple Company, Inc. The property to the east and separated from the Engel property by a drainage ditch and retaining wall is a triangular parcel owned by the descendants of Kiki Nāpaepae.

The Engel parcel appears in the Māhele ʻĀina records of the Kingdom of Hawaiʻi as Apana 1 and 2 of Royal Patent 6962, Land Commission Award Helu 3931, 3.42 acres granted to Naiwimawaho January 5, 1853 (Appendix 4). The Great Māhele of 1848 set up an allodial system of fee simple land transfer in Hawaiʻi. King Kamehameha III transferred crown lands to his *aliʻi* and to the commoners. While most of the *ahupuaʻa* of Honolua was given to Willam Charles Lunalilo, who was *Konohiki* of this *ahupuaʻa*, small *kuleana* lands within the *ahupuaʻa* were claimed and awarded to the individual farmer families who had tended their *kuleana* for generations. A survey of the study area *kuleana* land was done by A. Turner, December 20, 1852. Copies of survey documents appear on pages 68 and 69 in The Fleming Journals (Appendix 5). A note added to the survey page at a later date (author unknown, but presumably an employee of Honolua Ranch) mentions two other Hawaiian surnames: Paʻakaua and Kaimikaua. Another note indicates that H.P. Baldwin acquired a quarter interest in this land June 13, 1913, from Hattie K. Mailua.

The following Land Commission Claimant records for LCA 3931 were recovered: Native Register for Naiwimawaho for three parcels of *kula* land (Appendix 2), and both Native and Foreign Testimony of Halili on behalf of claimant Naiwimawaho (Appendices 1&3).

Halili states that the lands were given to Naiwimawaho (to steward) before 1839, "*i ka wa o Hoapili*" in the time of Hoapili, Aliʻi ʻAi Moku (governor) of Maui from 1824 until his death in 1840. This is the earliest reference to this land.

Naiwimawaho calls the *ʻili* of his land parcel a *moʻ omuku*, defined in *A Dictionary of Hawaiian Legal Land – Terms*, by Lucas as "High uneven ridges that extend from the uplands to the sea but are broken off in the uplands." Naiwimawaho further states that his kuleana is an ʻili called Puaʻakea (White Pig) located in the "kū" (flats or standng place) of Kahauiki, where he also has a house lot. Kū is interpreted as flats at the bottom of Kahauiki Gulch, an apt description of the study parcel. Lands bordering the Naiwimawaho *apana* were controlled by Kaui, Kaumaliialani, Kailioii and the *Konohiki* (Lunalilo).

IV. Study Area History

The subject property is located within the *ahupuaʻa* of Honolua in the *moku* (district) once known as Kāʻanapali, but now known as Lāhainā. Honolua Ahupuaʻa was awarded to High Aliʻi William Charles Lunalilo (1835-1874) at the Great Māhele, and the transfer from Kamehameha III was recorded January 28, 1848. Lunalilo was a successor to the throne after the death of Kamehameha V in 1873. The constitution required that the next monarch be elected, and Lunalilo won over David Kalākaua. He ruled for just over a year, then died of tuberculosis in February 1874. His lands were sold to build Lunalilo Home in Oʻahu, for poor, elderly and disabled Hawaiians.

Kāʻanapali Moku was known for its fishing grounds, rich *ʻuala* (sweet potato) farming and cattle grazing land. Many *kuleana* parcels were held by small farmers at the time of the Māhele. In the 1880s, sugar baron Henry Perrine Baldwin began acquiring undivided shares of *kuleana* lands in West Maui and eventually purchased nearly all of Honolua, Honokahua and Nāpili for Honolua Ranch, which began as a cattle ranch.

In 1911, David T. Fleming was brought in to manage the ranch and convert it to a pineapple plantation, which became Baldwin Packers, Ltd. in 1924. A few hundred acres of Honolua land remained in cattle, and Honolua had a slaughterhouse. In 1946, when ranch structures in the *makai* region of Honolua were destroyed by tsunami, ranch operations were discontinued. In 1962, Baldwin Packers merged with Maui Pineapple Company in East Maui. In 1969 Maui Land & Pineapple Company Ltd. was formed for the purpose of developing Kapalua Resort. Honolua Bay was the site from which *waʻa kaulua* (double-hull sailing canoe) *Hōkūleʻa* embarked on her first journey to Tahiti in 1976 -- the return of traditional voyaging to Hawaiʻi after 600 years. The double bay of Honolua-Mokulēʻia was designated a Marine Wildlife Conservation District in 1979, to protect marine life. The area is also a popular for sailing, surfing, diving and fishing.

Kāʻanapali Moku includes the famous Honoapiʻilani--the six bays of Piʻilani: Honokowai, Honokeana, Honokahua, Honolua, Honokohau, and Hononana. This name for the bays refers to the high chief Piʻilani, who controlled all of Maui Nui in the 16th century and loved the bays of West Maui. While Piʻilani is remembered for the peace and prosperity he brought to his kingdom, his sons, Lonoapiʻilani and Kihaapiʻilani, fought each other, and succeeding generations fought battles for control of this West Maui neighborhood, some of which are described below.

Rich with fish, fed by streams that watered *loʻi kalo* in their valleys, the bays drew admiring attention in *Molokai Nui Ahina.* This song about Molokai, whose people view West Maui from

across the channel, begins with the line *Ua nani na hono a Pi'ilani:* How beautiful are the bays of Pi'ilani. These lovely bays are a symbol of Maui in other songs as well, such as *Maui Nani* by Johanna Koana Wilcox and *Lei Lokelani* by Charles E. King.

Winslow M. Walker, in his notes on *Archeology of Maui*, describes a site in Kahuiki Gulch "mauka to Kahauiki Camp, as short distance up the west side of a gulch of the same name." It is described as "a small irregular platform of stones whose walls have been taken for stockpens"(see Appendix 8). This site is listed by Walker as a heiau or place of worship, (Walker, as quoted in Sterling, *Sites of Maui*). Hiking the west side of the gulch in January 2016 did not reveal any irregular platform as described. In 1990-91, the gulch was modified by the construction of Plantation Club Drive, which crosses the gulch 200-300 yards inland of Honoapi'ilani Highway, Route 30. A flat area in the gulch *makai* of Plantation Club Drive and the drains that run under it was revised and reinforced with concrete and large boulders between 2006 and 2009. Mauka from Plantation Club Drive, the gulch crosses the 1st and 2nd holes of Plantation Golf Course and continues uphill.

Handy, in *Hawaiian Planters*, says that:

> North of Lāhainā are five valleys, watered by streams draining the western slopes of West Maui watershed: Honokawai, Kahana, Honokahua, Honolua and Honokohau. The first four all had extensive lo'i lands in their valley bottoms, where terraces rose tier on tier in symmetrical stone-faced lo'i. On this part of the coast there is no sloping kula land seaward of the valleys as there is back of Lahaina and southeastward.
>
> and:
>
> The large fishing population which presumably inhabited this leeward coast (West Maui) ate more sweet potatoes than taro with their fish. (Handy, quoted in Sterling)

The area around the subject parcel played its part in the great battles of the 1700s. Here is Sterling's summary of battles at Lāhainā and Kā'anapali, taken from Fornander's *Account of the Polynesian Race:*

> [*Alapa'inui, on his return from O'ahu, hears of the uprising of Kauhiaimokuakama against his brother Kamehamehanui. Kamehamehanui is defeated in Lāhainā and flees with Alapa'inui to Hawai'i.]*
>
> In the following year, say 1738, Alapainui returned to Maui with a large fleet, well-equipped, accompanied by Kamehamehanui. With headquarters at Lahaina, his forces extended from Ukumehame to Honokowai. . .
>
> [*Kauhi sends to Peleioholani, mo'i of O'ahu, for help*] . . . which that restless and warlike prince accepted, and landing his fleet at Kekaha, encamped his soldiers about Honolua and Honokahua.

> It is said that Alapai proceeded with great severity against the adherents of Kauhi in Lahaina, destroying their taro patches and breaking down the watercourses out of the Kauaula, Kanaha, and Mahoma *[Kahoma]* valleys.
>
> *[Alapa'i reaches Lāhainā before Peleioholani can get there from O'ahu, and Kauhi retreats to the uplands and ravines behind Lāhainā. Peleioholani lands and attacks Alapa'inui's forces in the hopes that he can form a junction with Kauhi's forces.]*
>
> To this effect Peleioholani advanced to Honokowai where he found a detachment of Alapai's army, which he overthrew and drove back with great loss to Keawawa. Here they rallied upon the main body of the Hawaii troops. The next morning Alapai had moved up his whole force, and a grand battle was fought between the O'ahu and Hawai'i armies. The fortune of the battle swayed back-and-forth from Honokowai to near into Lahaina . . . (Fornander, quoted in Sterling)

Kamakau also describes this battle in *Ruling Chiefs.* He says that Alapa'i, in addition to drying up the streams in the Lāhainā area, also "kept close watch over the brooks of Olowalu, Ukumehame, Wailuku and Honokowai." The hardest fighting, he says, "even compared with that at Napili and at Honokahua in Kaanapali, took place at Puunene." This village of Pu'unēnē, *mauka* of Nāpili, can be seen on a U.S. Geological Survey map (Figure 10).

V. Oral Interviews

Methodology, Procedures, and Interviewee Biographical Information

In addition to personal contact with individuals listed below, a legal ad in *The Maui News* requested information from anyone with knowledge of cultural practices around this parcel (Appendix 9); no replies were received.

Informants were sought who lived in the Kapalua area or worked for Maui Land & Pineapple Company when the plantation and ranch were operating, who might have information about the property. The intention is to assess what cultural practices may have been or might still be carried out on or nearby the study area.

Informant: Historical consultant Katherine Kama'ema'e Smith, herself a resident of Kapalua Resort since 1986, was able to offer the following information:
In 2002 - 2004 I played guitar in the Hawaiian Choir of Sacred Hearts Mission Church in Kapalua, under the direction of Henrietta Mahuna. Miriam Ka'aihue also played guitar for the choir. In her youth, she played music in the hotels; she came from a musical family. Since the 1970s, Miriam and her husband had raised her kids in the house on this parcel. She told me that there was a *heiau* in the gulch *mauka* of her property. Miriam and her family raised chickens, and she planted a row of ironwoods to protect her rose bushes from the salt spray from the sea. Her family fished here, and she brought *'uhu* (parrot fish) to our potluck, which she baked, local style, stuffed with slices of Chinese sausage. She and her husband both passed, and their son who lived on the property died while skin diving. I believe he was still in his 30s. He had older sisters

who did not live here. After that, the property was sold.

Informants: Daryl and Victoria ʻAiwohi, residents of Honokohau Valley.
Daryl and Victoria Aiwohi were interviewed by telephone on February 11. They are both of Hawaiian descent. They grew up in Honokahua Camp, and their fathers worked for Baldwin Packers. Daryl lived with his maternal grandparents, members of the Pali family, and Victoria was one of four sisters and two brothers of the Chang Kekona family. They remember this area as a place of excellent fishing, where many camp families came to fish. Fishing was by traditional means: line fishing and throw net for inshore reef fish, and seine net fishing for schooling *ʻopelu* and *akule* (species of big-eyed scad). Daryl said that this area will always have plenty of fish because the cliffs make access difficult. The Aiwohis also recalled Kiki Nāpaepae who lived next door to the Kaʻaihue family. Kahauiki Camp was *mauka* of the government road and a little south of the Engel property. It was a small camp of Hawaiians that was one-fourth the size of Honokahua Camp where Daryl and Victoria lived.

Informant: Henrietta Mahuna (Mrs. Solomon Mahuna), 95 years old.
Mrs. Mahuna was interviewed at her home, 3602, Lower Honoapiʻ ilani Road, in Honokowai. She was raised in Hāna and Kīpahulu. Her husband was a *paniolo* (cowboy) in Kaupō and Nuʻu on East Maui before he came to work for Honolua Ranch (Baldwin Packers) in 1942. They lived in Honokahua Camp until 1953, when they built a home in Honokowai. She still lives in Honokowai.

Mrs. Mahuna remembers a house on the study property in the 1940s. A Hawaiian "bachelor man" lived there by himself. She remembered that he was related to the Victorino family in Lāhainā , and he was a tractor operator for Baldwin Packers, but she could not recall his name. All the land mauka of the government road was planted with pineapple—even inside the gulch. She said the soil got wet down there sometimes, but there was no stream. Mrs. Mahuna worked in the fields as the only female field supervisor. Her entire crew were "*wahine*:" Mrs. Ogawa, Mrs. Okinoto, Mrs. Haiachi, Mrs. Lihau Kaʻaihue, Mrs. Herman Kaʻaihue, and Mrs. Harada. She said at that time, Kahauiki Camp was a Filipino camp. Later Mrs. Mahuna was promoted to work as bookkeeper and cook for the Honolua Store on Office Road in Honokahua.

Mrs. Mahuna led the Hawaiian choir at Kapalua Mission Roman Catholic Church for 36 years, and Miriam Kaʻaihue played guitar and sang in the choir. Miriam and her brother Philabert were good musicians who entertained at the Mauian and at Nāpili Kai. Miriam and her husband Herman bought the study property and raised four girls and a boy. Mrs. Mahuna recalled a small *kahawai* (stream) went alongside the property, and Kiki Nāpaepae lived on the other side. He was related to the Naganuma family in Lāhainā.

Mrs. Mahuna said she never saw the Kahauiki *heiau*, but she understood that it was "up the gulch, *mauka* of the road." She said the Kaʻaihue family were nice quiet people and she and her husband Sol would often visit them on the weekend. The men would sit in the *pa* (yard), talk and drink beer. She recalled big eucalyptus trees at the back of the yard, by the ocean, and ironwood trees on the cliff. It was a pleasant place.

Mrs. Mahuna is a Native Hawaiian speaker, and when I showed her the survey of the Naiwimawaho property, she commented that the name means, "the bones outside."

VII. Confidential information withheld; Conflicts in information or data

No confidential information was withheld. Extended members of the Herman and Miriam Ka‘aihue family who lived here over 30 years were solicited by phone and email messages but none replied. There were no conflicts in information or data within the reports consulted for this Cultural Impact Assessment.

VIII. Effects on Plan

Native register and informant testimony indicate that this property and the adjacent lot were inhabited by Hawaiians before the first land transactions of the Hawaiian Kingdom were recorded in 1848, and continuously to modern times. Informants recall a house there in the 1940s and ’50s. A *heiau* documented by Winslow in the 1930s in Kahauiki gulch suggest that habitation may have extended back to pre-contact times.

It was the practice of Hawaiian families to bury their loved ones near or under their homes. Even today, Hawaiians often scatter the ashes of their ancestors in the vicinity of their homes. Ancient Hawaiian burial practice was to bury the dead in the soft *lepo* and sandy soils near the shore.

Based on these observations, any disturbance of soil on this property should be monitored by an archaeologist for the presence of burials and cultural artifacts.

IX. Individuals and Groups Contacted

Efforts to contact individuals with personal knowledge of cultural beliefs and practices connected to the study area resulted in relatively few successful interviews. Many of those with traditional knowledge have passed away, leaving what one informant called “the lost generation” who were raised as “modern Hawaiians.”

Individuals contacted for possible contribution to this report or for referrals to others with knowledge included the following individuals:

Uncle Daryl Aiwohi and his wife, Victoria Aiwohi, who grew up in this area.
Henrietta Mahuna, former employee of Maui Land & Pineapple Company, Inc.

Other informants who could not add any further information than that already included in the report:
Mike Jones, Director of Golf/General Manager of Golf Operations, Kapalua Golf
Diana Yamamoto, local fisher
Clifford Nae‘ole, Cultural Advisor, The Ritz-Carlton, Kapalua.

References for William Engel Residence Cultural Impact Assessment

Ainsworth, Gail Bartholomew.

The Index to the Maui News, 1900-1932. Maui Historical Society, Wailuku: 1985.

The Index to the Maui News, 1933-1950. Maui Historical Society, Wailuku: 1991.

The Index to the Maui News, 1951-1973. Maui Historical Society, Wailuku: 1991.

Cameron, Effie and Keane, D.E., editors. *Plantation Days: Remembering Honolua.* Kahului, Maui: Maui Land & Pineapple Company, Inc. 1987.

County of Maui Real Property Tax Division. www.mauipropertytax.com: accessed February, 2016.

The Fleming Journals: West Maui Land Records and Family History 1905-1910. Indexed by Katherine Kamaʻemaʻe Smith. 2011.

Handy, E.S. Craighill, Handy, Elizabeth Green and Pukui, Mary Kawena. *Native Planters in Old Hawaiʻi Their Life Lore, & Environment*. Revised Edition. Honolulu: Bishop Museum Press, 1991.

Kamakau, Samuel Mānaiakalani. *Ruling Chiefs of Hawaii.* Revised Edition. Honolulu: Kamehameha Schools/Bishop Estate, 1992.

Papakilo Database of Office of Hawaiian Affairs. www.papakilodatabase.com: accessed February, 2016.

Sterling, Elspeth P. *Sites of Maui.* Bishop Museum Press: Honolulu, 1998.

Ulukau: The Hawaiian Electronic Library. www.ulukau.org: accessed February 2016.

Appendices

Appendix 1. Native testimony for LCA 3931

138

3928 Nalepo Kaanapali Jan. 17, 1848
M Aloha oukou e na Luna hoona
Ke hoopii aku nei au ia oukou, he
mau loi koi he 17 e ako aoie, aia
nae i ka ae ia mai e oe
Na Nalepo

3929 Naumi Kaanapali Jan. 17, 1848.
M Aloha oukou e na Luna
hoona kuleana Aina Ke hoopii
aku nei au ia oukou no koi mau
loi he 18 loi. Na Naumi

3930 Nauwele Kaanapali January 17, 1848
M Aloha oukou e na Luna hoona
kuleana. Ke hoopii aku nei au ia oukou.
he mau loi 22 ka huina
Na Nauwele

3931 Naiwimawaho Kaanapali Jan. 18, 1848
M Aloha oukou e na Luna hoona
kuleana Aina. Ke hoopii aku nei au i
koi kuleana Aina. He ili aina, koi, aia
i loko o ke ku o Kahauiki, o ka inoa
o Puaakea, a he pahale kekahi nui,
aia no iloko o Kahauiki
Na Naiwimawaho

3932 Nalepo Kaanapali Jan. 17, 1848
M Aloha oukou e na Luna
Ke hoopii aku nei au ia oukou, he
mau loi 25 ka huina, he mau
waihae olua, he mau loaloa olua
ua pae Na Nalepo

Appendix 2. Native Register 01300, Naiwimawaho

The Olt rec^d these lands, from his parents, in the days of Kamehameha I. and his title has never been disputed.

No 1 is bounded Mauka, by Kani's land. Sakaina, by the same. Makai by Kaneikualani's land. Kahakuloa, by Keomuku.

No 2. is bounded Mauka, by the pali of Kokamilio. Sakai, by the pali of Mokolea, Makai by Hanalili's land. Kahakuloa, by Kani's land

No 3. is bounded Mauka, by Kani's land. Sakaina, by the Pali of Kahauiki. Makai, by the same. Kahakuloa by the ili of Keomuku.

C. 3931 Nuuiwaiwaiki

Hanalili Sw. I know the lands of the Olt they are in Kahauiki, Keomuku. They are in 3 pieces.

No 1 is a kula land

" 2. " " " " uka

" 3. " " " " uka loa.

The Olt rec^d these lands from Kaleiwa long before 1839 in very ancient times, and his title has never been disputed.

No 1 is bounded Mauka, by my land. Sakaina, by the Hanalili's land. Makai by the Sea Shore, Kahakuloa, by Kani's land.

No 2. is bounded, Mauka, by Keawakualani's land. Sakaina, by Kaikoko. Makai, by Kailiwai's land, Kahakuloa, by the ili of Keomuku.

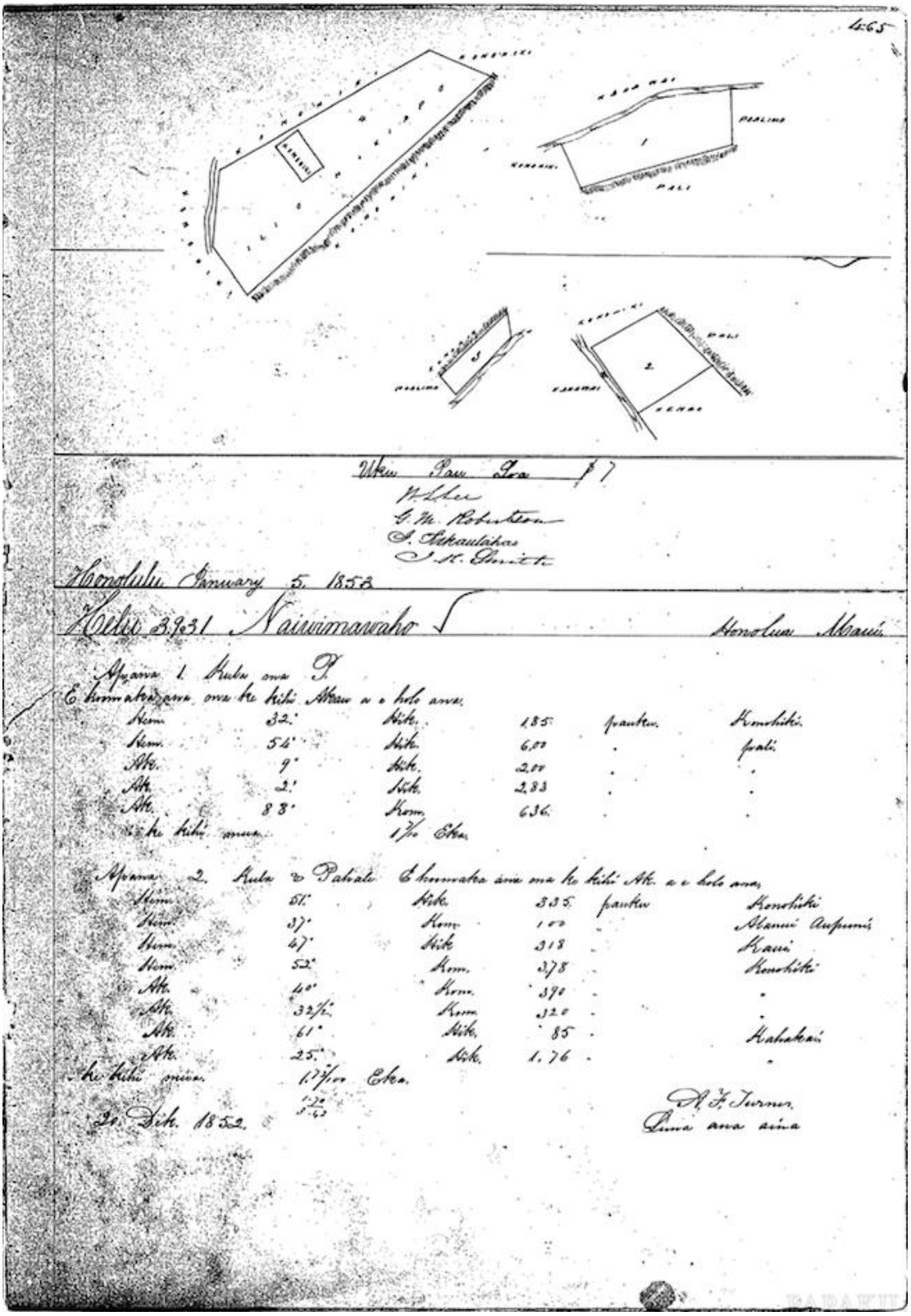
No 3. is bounded Mauka, by the Hanalili's land. Sakaina, by the Pali of Kahauiki. Makai, by the Hanalili's land. Kahakuloa, by the Pali of Kahauiki.

C. 4250 Kani

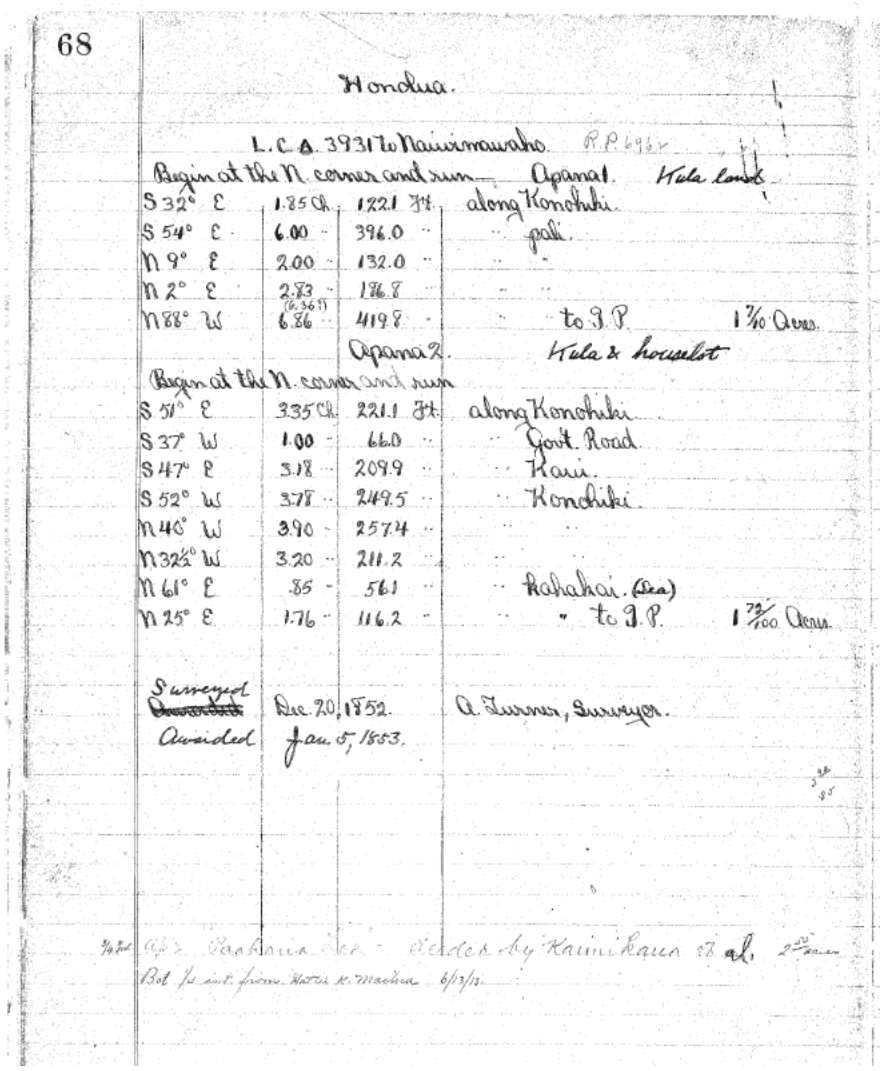
Hanalili Sw. I know the lands of the Olt they are in Ka

PAPAKILO DATABASE

Appendix 3. Foreign Testimony for LCA 3931



Appendix 4. Land Commission Original Survey 1852



68

Honolua.

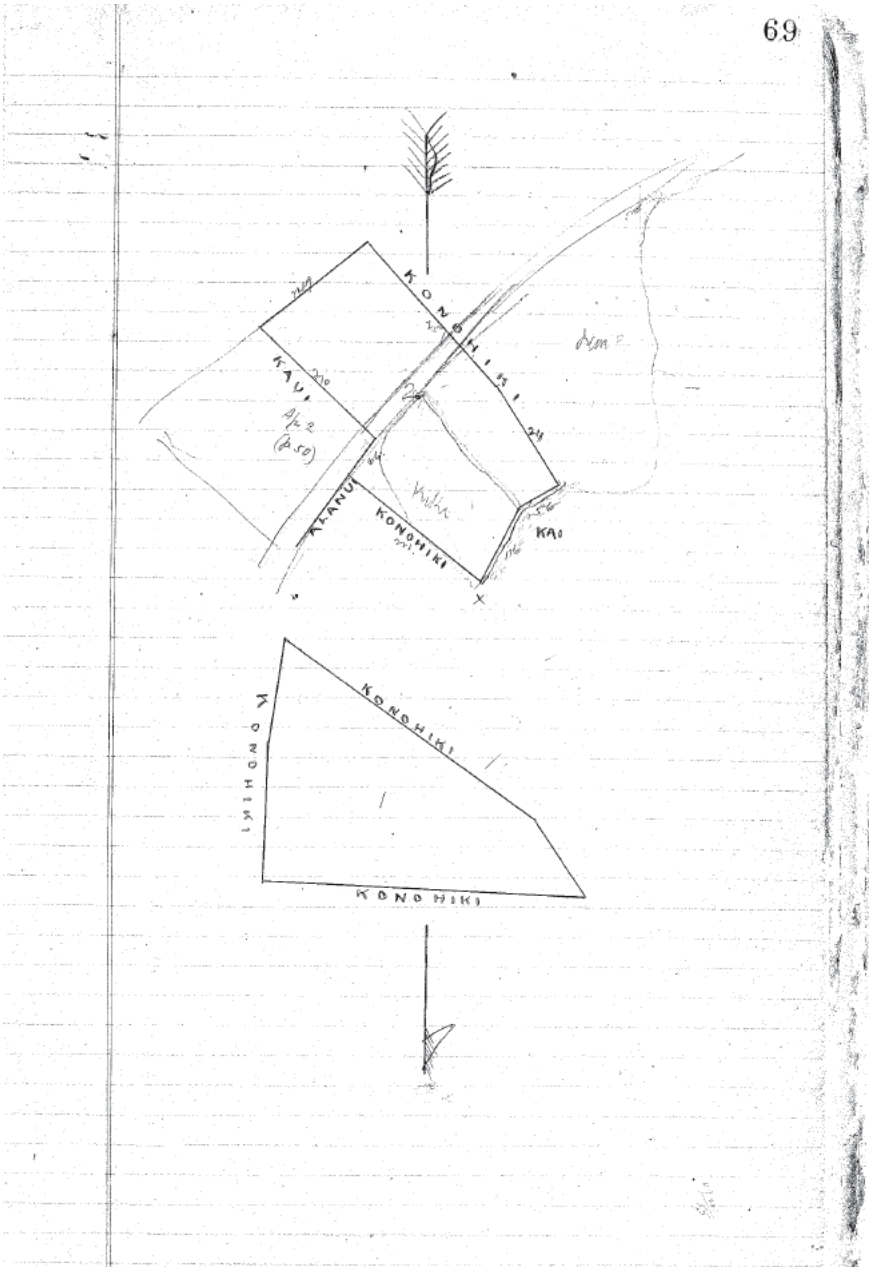
L.C.A. 3931 to Naiwinawaho. R.P. 6962

Begin at the N. corner and run			Apana 1.	Kula lands
S 32° E	1.85 Ch.	122.1 ft.	along Konohiki	
S 54° E	6.00 "	396.0 "	" pali.	
N 9° E	2.00 "	132.0 "	" "	
N 2° E	2.83 "	186.8 "	" "	
N 88° W	6.36 (6.369) "	419.8 "	" to G.P.	1 7/10 Acres.
		Apana 2.	Kula & house lot	
Begin at the N. corner and run				
S 51° E	3.35 Ch.	221.1 ft.	along Konohiki	
S 37° W	1.00 "	66.0 "	" Govt. Road.	
S 47° E	3.18 "	209.9 "	" Kani.	
S 52° W	3.78 "	249.5 "	" Konohiki	
N 46° W	3.90 "	257.4 "	" "	
N 32½° W	3.20 "	211.2 "	" "	
N 61° E	.85 "	56.1 "	" Kahakai. (Sea)	
N 25° E	1.76 "	116.2 "	" " to G.P.	1 79/100 Acres.

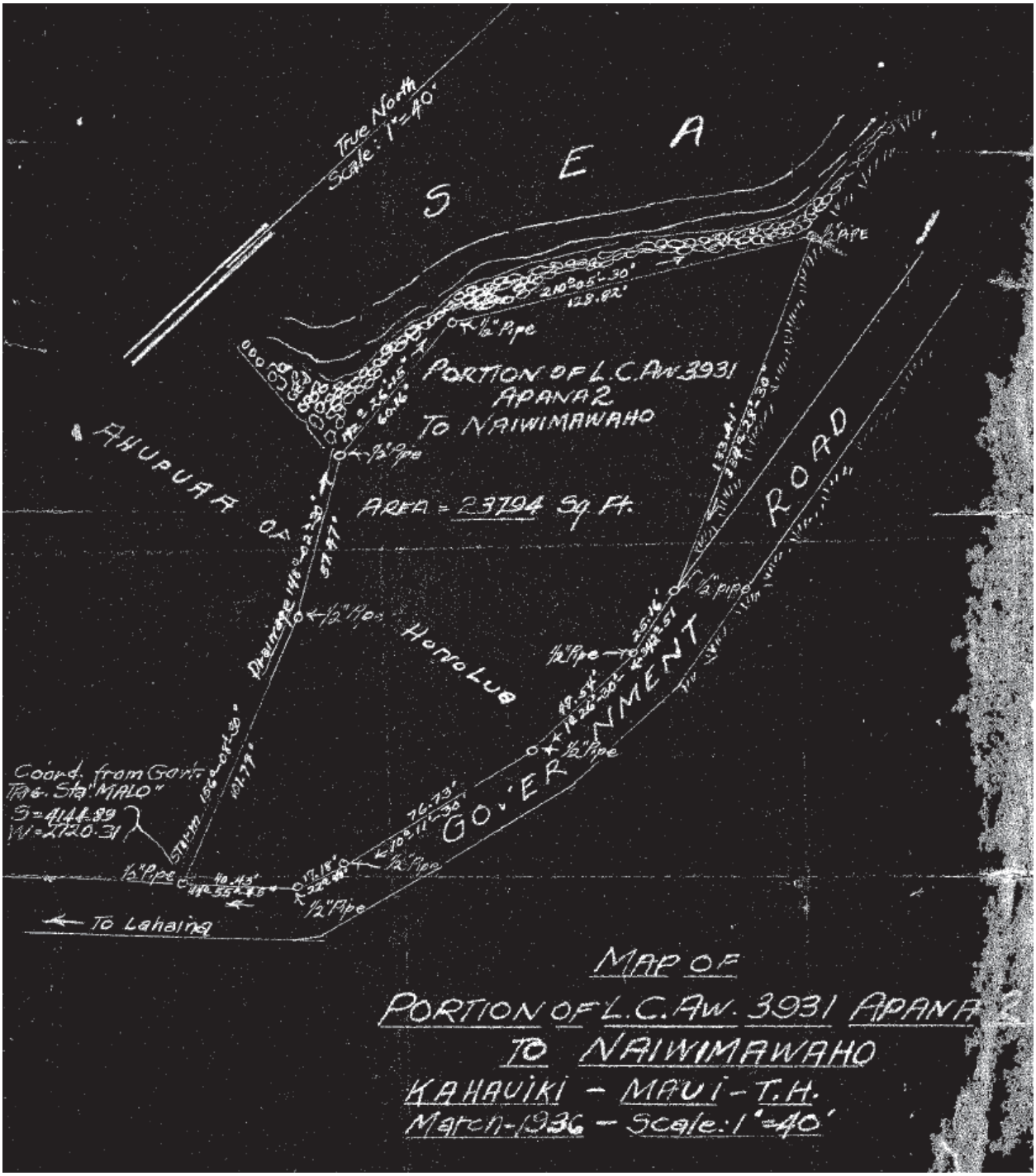
Surveyed ~~Awarded~~ Dec. 20, 1852. A. Turner, Surveyor.
Awarded Jan. 5, 1853.

Note Ap. 2. Paahana Ser. - Order by Kaimikaua et al. 2nd Ten
Bal. to int. from Hatch & Machina 6/13/12

Appendix 5. Page 68 from The Fleming Journals with notes



Appendix 6. Page 69 from The Fleming Journals



Appendix 7. Hawaii Territory Survey of Study Property in 1936

ULUKAU: THE HAWAIIAN ELECTRONIC LIBRARY

Kikokikona Hawai'i
Help
Extras...

HAWAIIAN PLACE NAMES

intro | search | browse | names

select one of the buttons on the above bar to access information

DETACH

Kahauiki

Island: Maui
Ahupuaa: Honolua
Feature: heiau
Comments: "Kahauiki Heiau, Walker Site 16. Mauka to Kahauiki Camp a short distance up the west side of a gulch of the same name. A small irregular platform of stones whose walls have been taken for stock pens."
Lexicology: ka-hau-iki. PEM: the small hau tree.
Source: Sterling 1998:52.
Quadrangle: 50-01
North:
East:
Catalog Number: 242.02.039

Look up any word by double-clicking on it.

Copyright © 2002-2010 by Lloyd J. Soehren, who is solely responsible for this product.

Computer Issues | More Information

Appendix 8. Screenshot from Ulukau.org of information on Kahauiki

AFFIDAVIT OF PUBLICATION

STATE OF HAWAII,
County of Maui. } ss.

Rhonda M. Kurohara being duly sworn deposes and says,that she is in Advertising Sales of the Maui Publishing Co., Ltd., publishers of THE MAUI NEWS, a newspaper published in Wailuku, County of Maui, State of Hawaii; that the ordered publication as to Information Wanted for Cultural Impact Assessment

of which the annexed is a true and correct printed notice, was published 2 times in THE MAUI NEWS, aforesaid, commencing on the 2nd day of February, 2016, and ending on the 4th day of February, 2016 (two days inclusive), to-wit: on February 2, 4, 2016

and that affiant is not a party to or in any way interested in the above entitled matter.

This 1 page Information Wanted, dated February 2, 4, 2016, was subscribed and sworn to before me this 4th day of February, 2016, in the Second Circuit of the State of Hawaii, by Rhonda M. Kurohara

Notary Public, Second Judicial Circuit, State of Hawaii

BETTY E. UEHARA
My Commission expires 09-26-2019

BETTY E. UEHARA NOTARY PUBLIC No. 83-344 STATE OF HAWAII

Information Wanted for Cultural Impact Assessment

Maui Island Press requests information on cultural resources or activities at or near 6245 Honoapiilani Highway, Honolua, Maui: TMK (2) 4-2-004:019.

Please contact MIP within 15 days at (808) 242-5459.

(MN: Feb. 2, 4, 2016)

Appendix 9. Affidavit of Publication in *The Maui News*

APPENDIX C
Grant of Access and Landscaping Easement

STATE OF HAWAII
BUREAU OF CONVEYANCES
RECORDED
March 17, 2015 10:45 AM
Doc No(s) A-55540702

/s/ NICKI ANN THOMPSON
REGISTRAR

1 2/2 TAW
B-32601120

Return by Mail ( ) Pickup (✓) To:
RJK
CADES SCHUTTE LLP
1000 Bishop Street, 12th Floor
Honolulu, Hawaii 96813

This document contains 14 pages.

Tax Map Key Nos.: (2) 4-2-004:019 & 032

GRANT OF ACCESS AND LANDSCAPING EASEMENT

THIS **GRANT OF ACCESS AND LANDSCAPING EASEMENT** ("***Agreement***") is made as of March 11, 2015, by **MAUI LAND & PINEAPPLE COMPANY, INC.**, a Hawaii corporation ("***Grantor***"), and **WILLIAM E. ENGEL and MARIA A. ENGEL**, husband and wife (collectively, "***Grantee***").

RECITALS

A. Grantor is the owner in fee simple of that certain parcel of land located in Honolua, Kaanapali, Island and County of Maui bearing Tax Map Key No. (2) 4-2-004-032, and more particularly described in **Exhibit A** attached hereto and made a part hereof (the "***Burdened Property***").

B. Grantee is the owner in fee simple of that certain parcel of land located in Honolua, Kaanapali, Island and County of Maui bearing Tax Map Key No. (2) 4-2-004-019, which is more particularly described in the attached **Exhibit B** attached hereto and made a part hereof (the "***Benefited Property***"). The Benefited Property is adjacent to and adjoins the Burdened Property.

C. Easement 1 is a portion of the Burdened Property and is more particularly described in **Exhibit C**, and is approximately shown on **Exhibit D**, which exhibits are attached

hereto and made a part hereof (the "***Easement Area***"). A portion of the concrete driveway and retaining rock wall from the Benefited Property is located within the Easement Area.

D. Grantor has agreed to grant to Grantee a perpetual exclusive easement for yard and landscaping purposes, and for vehicular and pedestrian access to and from the Benefited Property, on, over, under and across the Easement Area, which Easement Area is appurtenant to and for the benefit of the Benefited Property, subject to the terms and conditions of this Agreement.

AGREEMENT

NOW, THEREFORE, in consideration of the rights hereby granted and the acceptance thereof, Grantor and Grantee hereby covenant and agree as follows:

1. **Grant of Access and Landscaping Easement**. Subject to all encumbrances of record, Grantor for and in consideration of the sum of Ten Dollars ($10.00) and other valuable consideration paid by Grantee, the receipt whereof is hereby acknowledged, and in further consideration of the covenants and conditions in this Agreement contained by Grantor and Grantee to be observed and performed, does hereby grant, bargain, sell and convey unto Grantee, its successors and assigns, for the benefit of and as an appurtenance to the Benefited Property, a perpetual and exclusive easement over, under and across the Easement Area solely for access and landscaping purposes as more particularly described in Section 2 below, all upon and in accordance with the terms and conditions set forth in this Agreement (the "***Easement***").

2. **Permitted Use**. Grantee and its assigns, tenants, licensees, invitees and permittees (collectively, "***Permittees***") may use the Easement Area solely for (a) pedestrian and vehicular access between the Benefited Property and Honoapiilani Highway, and (b) yard and landscaping purposes.

3. **Maintenance of the Easement Area; No Other Improvements Permitted**. Grantee shall, at its sole expense, be solely responsible for maintaining and repairing the concrete driveway and retaining rock wall within the Easement Area (the "***Improvements***") in good order, repair and condition, reasonable wear and tear excepted. Grantee may, at its sole expense, replace the Improvements, provided that any replacements shall be no larger than the currently existing structures, and must comply with all applicable laws. Grantee shall also maintain at its expense any trees or other landscaping located within the Easement Area. No other improvements, structures, or uses of any kind are permitted in the Easement Area.

4. **Landscaping Restrictions.** Grantee must submit landscaping plans to Grantor for Grantor's approval prior to the installation of any landscaping improvements. Landscaping improvements shall not include the planting of any noxious species and the landscaping improvements shall not grow to a height greater than 25 feet in height. Grantor shall review and approve, approve with modifications, or deny within 30 days of Grantor's receipt of the plans. If Grantor does not disapprove or provide other comments or corrections to Grantee with 30 days after receipt, the submitted landscaping plans shall be deemed to be disapproved and Grantee may submit a second submittal to Grantor which shall be marked in bold letters: "This is a

second submittal. Failure to respond within 5 days will result in deemed approval of the enclosed materials."

5. **Drainage Maintenance Access**. Grantee agrees that Grantor and its agents and contractors may enter the Benefited Property as and when necessary to maintain the drainage channel located to the north of Benefited Property, provided that (a) except in emergencies Grantor shall provide at least forty-eight hours notice of such entry, (b) the activities pursuant to this paragraph shall cause a minimum of inconvenience and disturbance to any occupants of the Benefited Property; and (c) Grantor will repair any damage to Benefited Property caused by its entry and any work performed pursuant to this paragraph.

6. **Abandonment**. If Grantee abandons or ceases to use or maintain the Easement Area or any part thereof for a period of two (2) years, including removal of the Improvements and failure within two (2) years to reinstall the Improvements therein, then all rights herein granted shall thereupon cease and terminate with respect to all or part of the Easement Area, as the case may be, so abandoned, unused, or unmaintained.

7. **"AS IS" Condition; Assumption of Risk**. Grantee accepts the Easement Area and the Improvements in their "AS IS" condition and acknowledges that Grantor has made no representations concerning the condition of the Easement Area or the Improvements or the suitability or fitness of the Easement Area or Improvements for any particular use or purpose. Grantee accepts the Easement Area and the Improvements at its sole risk, without any obligation or liability whatsoever of Grantor for the condition thereof.

8. **Indemnity**. Grantee will save, protect, defend, indemnify and hold harmless Grantor and its successors and assigns from and against any and all claims or liability, including claims for personal injury or property damage, arising out of the existence, maintenance, use or repair of the Easement Area or the Improvements.

9. **Discharge of Liens**. Grantee shall not commit or permit any act or neglect whereby the Easement Area or any portion thereof, or the Burdened Property or any portion thereof, shall become subject to any attachment, judgment, lien, charge, or encumbrance whatsoever resulting from the acts or omissions of Grantee, or its guests, invitees or contractors. Grantee shall promptly discharge or cause to be discharged or dismissed, every such attachment, judgment, lien, charge, encumbrance, or any notice or application thereof, which may be filed against the Easement Area and/or the Burdened Property.

10. **Certain Expenses**. All costs and expenses related to the repair and maintenance of the Improvements installed in the Easement Area, and the landscaping and maintenance of the Easement Area, shall be borne by Grantee at no expense to Grantor. Grantor will pay as and when due all real estate taxes and assessments which shall become due with respect to the Burdened Property, including the Easement Area, except that Grantee will pay and reimburse to Grantor all such taxes and assessments which are properly allocable to the Improvements constructed by Grantee within the Easement Area.

11. **Responsibility**. Grantee at all times in connection with all uses of or actions within the Easement Area by Grantee or its Permittees, will (a) observe and perform all laws,

ordinances, rules and regulations now or hereafter imposed by any governmental authority which are applicable to the Easement Area or the Improvements; (b) not at any time make or suffer any strip or waste or unlawful, improper or offensive use of the Easement Area or the Improvements; (c) keep and maintain the Improvements and the Easement Area in good repair and condition; (d) be responsible for all liability, loss or damage occurring within the Easement Area, except to the extent caused solely by Grantor.

12. **Grantor's Reservation of Rights**. Each of Grantor and Grantee acknowledge and agree that (a) Grantor owns and shall continue to own the Easement Area, and the real property upon which such Easement Area is located and, (b) subject to the easements granted in this Agreement, Grantor shall have all rights attendant to fee simple ownership of such Easement Area under applicable law (including, without limitation, (i) the right to install utilities, drainage pipes, conduits and other items beneath the surface or above the Easement Area from time to time, (ii) the right grant easements to others to install, maintain, use, repair and replace for such utilities, drainage pipes, conduits and other items, and (iii) the right to all casualty and condemnation proceeds with respect to Grantor's interest in the Burdened Property).

13. **Binding Effect**. All the terms and conditions of this Agreement shall inure to the benefit of and be binding upon the parties hereto and their respective heirs, personal representatives, successors in interest and assigns. This Agreement shall be appurtenant to and for the benefit of the Benefited Property and shall run with the land. The terms "Grantor" and "Grantee" herein shall include their respective successors in interest.

14. **Severability.** If any provision of this Agreement, or any section, sentence, clause, phrase or word or the application thereof in any circumstances shall be held invalid, the validity of the remainder of this Agreement and of the application of such provision, sentence, clause, phrase or word under any other circumstances shall not be affected.

15. **No Waiver.** The failure to enforce any provision of this Agreement shall not constitute a waiver thereof or of the right to enforce such provision thereafter.

16. **Interpretation.** The captions of the sections of this Agreement are for convenience only and shall not be considered to expand, modify or aid in the interpretation, construction or meaning of this Agreement. As used herein, the singular shall include the plural and the masculine shall include the feminine and neuter.

17. **Enforcement**. Each party hereto may enforce its rights by an action for specific performance in the courts of the State of Hawaii in addition to any other remedies available at law or in equity.

18. **Amendments; Interpretation**. Any modifications of this Agreement must be in writing and signed by the parties hereto. The headings of sections in this Agreement are inserted only for convenience and shall in no way define, describe or limit the scope or intent of any provision of this Agreement. As used herein, the singular shall include the plural and the masculine shall include the feminine and neuter.

19. **Attorneys' Fees**. Should any party hereto employ an attorney for the purpose of enforcing or construing this Agreement, or any judgment based on this Agreement, in any legal

proceeding whatsoever, including insolvency, bankruptcy, arbitration, declaratory relief or other litigation, the prevailing party shall be entitled to receive from the other party or parties thereto reimbursement for all reasonable attorneys' fees and all costs, whether incurred at the trial or appellate level, including but not limited to service of process, filing fees, court and court reporter costs, investigative costs, expert witness fees and the cost of any bonds, whether taxable or not, and such reimbursement shall be included in any judgment, decree or final order issued in that proceeding.

20. **Jury Trial Waiver**. The parties each voluntarily and knowingly waive trial by jury in any action, proceeding or counterclaim brought by either party against the other on any matter arising out of or in any way connected with this Agreement or the relationship of the parties.

21. **Counterparts**. This Agreement may be executed in two or more counterparts, each of which shall be deemed to be an original, but all of which shall constitute one and the same instrument. Duplicate unexecuted and unacknowledged pages of the counterparts may be discarded and the remaining pages assembled as one document.

[*Signatures on following page*]

IN WITNESS WHEREOF, the Grantor and Grantee have caused this Agreement to be executed as of the date set forth in the introductory paragraph.

MAUI LAND & PINEAPPLE COMPANY, INC.

By _____
Ryan Churchill
President

By _____
Tim T. Esaki
Chief Financial Officer

Grantor

_____
WILLIAM E. ENGEL

_____
MARLA A. ENGEL

Grantee

Attachments:
Exhibit A - Description of Burdened Property
Exhibit B - Description of Benefitted Property
Exhibit C - Description of Easement Area
Exhibit D - Survey Map

IN WITNESS WHEREOF, the Grantor and Grantee have caused this Agreement to be executed as of the date set forth in the introductory paragraph.

MAUI LAND & PINEAPPLE COMPANY, INC.

By _____
Ryan Churchill
President

By _____
Tim T. Esaki
Chief Financial Officer

Grantor

_____
WILLIAM E. ENGEL

_____
MARLA A. ENGEL

Grantee

Attachments:
Exhibit A - Description of Burdened Property
Exhibit B - Description of Benefitted Property
Exhibit C - Description of Easement Area
Exhibit D - Survey Map

STATE OF HAWAII)
) ss.
COUNTY OF MAUI)

On this 10th day of March, 2015, before me personally appeared RYAN CHURCHILL and TIM T. ESAKI, to me personally known, who, being by me duly sworn, did say that such persons are the President and the Chief Financial Officer, respectively, of **MAUI LAND & PINEAPPLE COMPANY, INC.**, and that said instrument was duly authorized and executed on behalf of said company, and said officers further acknowledged said instrument to be the free act and deed of said company.

JADE WAGNER NOTARY PUBLIC COMMISSION No.03-312 STATE OF HAWAII

Jade Wagner

Notary Public, State of Hawaii

Printed Name: Jade Wagner

My commission expires: June 1, 2015

(Official Stamp or Seal)

NOTARY CERTIFICATION STATEMENT

Document Identification or Description: Grant of Access and Landscaping Easement

Doc. Date: _____, 2015 or ☑ Undated at time of notarization.

No. of Pages: 14 Jurisdiction: Second Circuit (in which notarial act is performed)

Jade Wagner
Signature of Notary

March 10, 2015
Date of Notarization and Certification Statement

JADE WAGNER NOTARY PUBLIC COMMISSION No.03-312 STATE OF HAWAII

Jade Wagner
Printed Name of Notary

(Official Stamp or Seal)

ImanageDB:3030920.1

A Notary Public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California)
County of San Diego) ss.
)

On 3/11/15, before me, Lanh Tran,

a Notary Public for the State of California, personally appeared **WILLIAM E. ENGEL** and **MARLA A. ENGEL**, who proved to me on the basis of satisfactory evidence to be the persons whose names are subscribed to the within instrument and who acknowledged to me that they executed the same in their authorized capacities, and by their signatures on the instrument the persons, or entity upon behalf of which the persons acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

(Official Stamp or Seal)

Notary Public in and for said County and State

LANH TRAN
Commission # 1939964
Notary Public - California
San Diego County
My Comm. Expires Jun 6, 2015

ImanageDB:3030920.1

EXHIBIT A

Burdened Property

All of that certain parcel of land situated at Lahaina, Maui, Hawaii, being more particularly described as a portion of Lot C-1 of the D. T. Fleming Park Subdivision, bearing Tax Key designation (2) 4-2-004-032, and containing an area of 13.587 acres, more or less.

END OF EXHIBIT A

TMK No. (2) 4-2-004-032

EXHIBIT B

Benefited Property

All of that certain parcel of land (being portion(s) of the land(s) described in and covered by Royal Patent Number 6962, Land Commission Award Number 3931, Apana 2 to Naiwimawaho, and Land Patent Number 8129, Land Commission Award Number 8559-B, Apana 23 to Wm. C. Lunalilo) situate, lying and being at Honolua, District of Kaanapali, Island and County of Maui, State of Hawaii, and thus bounded and described:

Commencing at a driven 3/4" pipe on side of Government Road, which bears 4152.33' south and 2727.95' west from Government Survey Triangulation Station "Malo" and running:

1.	45°	44'		41.93	feet to a 3/4" pipe along Government road; thence
2.	50°	43'		57.61	feet to a 3/4" pipe along Government road; thence
3.	157°	59'		208.55	feet to a 3/4" pipe on shoreline; thence
4.	237°	07'		52.90	feet to 3/4" pipe; thence
5.	279°	00'		31.76	feet to 3/4" pipe to storm drain; thence
6.	328°	02'	30"	65.44	feet along storm drain to 3/4" pipe; thence
7 .	336°	08'	30"	104.78	feet along storm drain to point of commencement, containing an area of 18,519 square feet, more or less.

Being the same premises conveyed to William E. Engel and Maria A. Engel, husband and wife, by Warranty Deed dated December 2, 2011, recorded in the Bureau of Conveyances of the State of Hawaii as Document No. 2011-207956.

END OF EXHIBIT B

TMK No. (2) 4-2-004-019

EXHIBIT C

Easement Area

EASEMENT 1
Exclusive Easement for Access & Landscaping Purposes

Dominant Tenement: TMK: (2) 4-2-04:019

Affecting portion of TMK: (2) 4-2-04:032, being portion of Land Patent 8129, Land Commission Award 8559-B, Apana 23 to Wm C. Lunalilo situate at Honolua, Kaanapali, Island and County of Maui, State of Hawaii and being more particularly described as follows:

Beginning at the southeast corner of this easement, said point being the southerly corner of TMK: (2) 4-2-04:019 at the northerly side of Honoapiilani Highway, the coordinates of said point of beginning referred to Government Survey Triangulation Station "MALO" being 4,218.07 feet South and 2,802.57 feet West and running by azimuths measured clockwise from true South:

1	50°	43'	30.41	feet along the northerly side of Honoapiilani Highway to a point;

Along same on a curve to the right with a radius of 265.00 feet, the radial azimuth to the point of curve being 320° 43' and the point of tangency azimuth from the radial point being: 323 °27', the chord azimuth and distance being:

2.	52°	05'	12.64	feet to a point;
3.	145°	51'	109.51	feet along remainder of Land Patent 8129, Land Commission Award 8559-B, Apana 23 to Wm C. Lunalilo to a point;
4.	130°	12'	87.88	feet along same to a point a point;

Along same, along the top bank of sea pali for the next 3 courses, the direct azimuth and distance between points being:

5.	196°	21'	53.40	feet to a point;
6.	244°	12'	21.00	feet to a point;
7.	270°	18'	20.00	feet to a point;

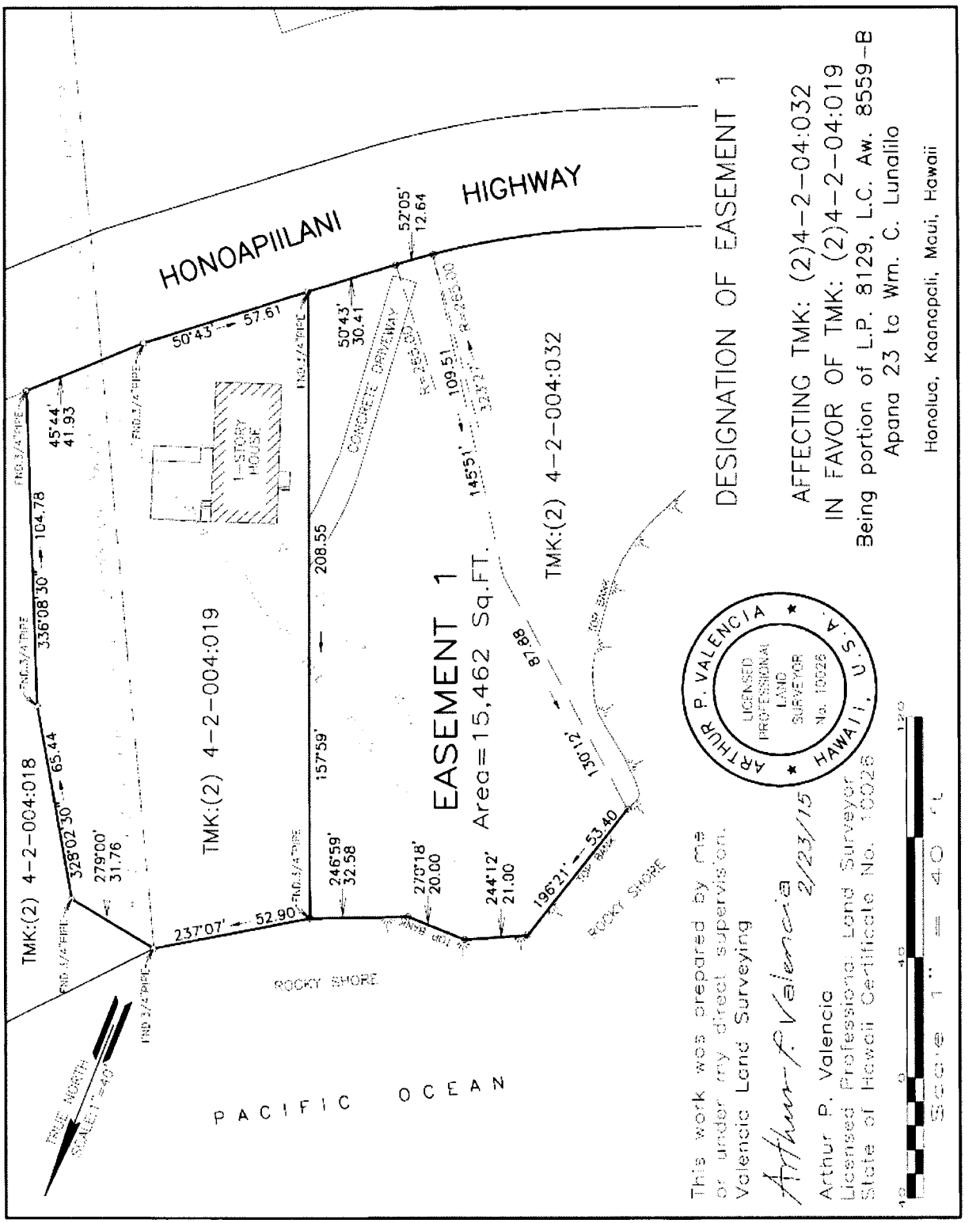
8.	246°	59'	32.58	feet along remainder of Land Patent 8129, Land Commission Award 8559-B, Apana 23 to Wm C. Lunalilo to a point;
9.	337°	59'	208.55	feet along TMK: (4) 4-2-04:019, along remainder of Land Patent 8129, Land Commission Award 8559-B, Apana 23 to Wm C. Lunalilo to the point of beginning and containing an area of 15,462 square feet, more or less.

This work was prepared by me
or under my direction
VALENCIA LAND SURVEYING

Arthur P. Valencia
Licensed Professional Land Surveyor
State of Hawaii Certificate No. 10026

END OF EXHIBIT C

EXHIBIT D


HONOAPIILANI HIGHWAY
DESIGNATION OF EASEMENT 1
AFFECTING TMK: (2)4-2-04:032
IN FAVOR OF TMK: (2)4-2-04:019
Being portion of L.P. 8129, L.C. Aw. 8559-B
Apana 23 to Wm. C. Lunalilo
Honolua, Kaanapali, Maui, Hawaii
TMK:(2) 4-2-004:018
TMK:(2) 4-2-004:019
TMK:(2) 4-2-004:032
EASEMENT 1
Area=15,462 Sq.FT.
1-STORY HOUSE
CONCRETE DRIVEWAY
ROCKY SHORE
PACIFIC OCEAN
TRUE NORTH
SCALE: 1"=40'
ARTHUR P. VALENCIA
LICENSED PROFESSIONAL LAND SURVEYOR
No. 10028
HAWAII, U.S.A.
This work was prepared by me or under my direct supervision.
Valencia Land Surveying
2/23/15
Arthur P. Valencia
Licensed Professional Land Surveyor
State of Hawaii Certificate No. 10028
SCALE: 1" = 40' ft.

APPENDIX D
Certified Shoreline Map

TRUE NORTH
Meridian of "MALO"
SCALE: 1"=10'

TMK:(2) 4-2-004:018
Edward Napaepae
(OWNER)

DRAINAGE DITCH

A. C. SWALE

336°08'30" — 104.78

328°02'30" — 65.44

279°00' — 31.76

45°44' — 41.93

50°43' — 57.61

157°59' — 208.55

FND.3/4"PIPE

TOP BANK
TOE BANK

ROCKY SHORE

333°02'02"
1.00

232°26'02"
16.75

237°07' — 52.90 (rec)

237°04'30"
21.41

239°29' — 15.52

Eroded Area
Area=34 Sq. Ft.

TMK:
(2) 4-2-004:019
Area=18,519 Sq.Ft.(rec)
Eroded Area= 34 Sq. Ft.
New Area=18,488 Sq. Ft.

Royal Patent 6962, Land Commission Award 3931, Apana 2 to Naiwimawaho

Land Commission Award 8559-B, Lunalilo

Land Patent 8129, Apana 23 to Wm. C.

A.C. DRIVEWAY

GATE

WOODEN FENCE

CONCRETE PAVEMENT

CARPORT

1-STORY HOUSE

CONCRETE DRIVEWAY

STONE WALL

EDGE OF PAVEMENT

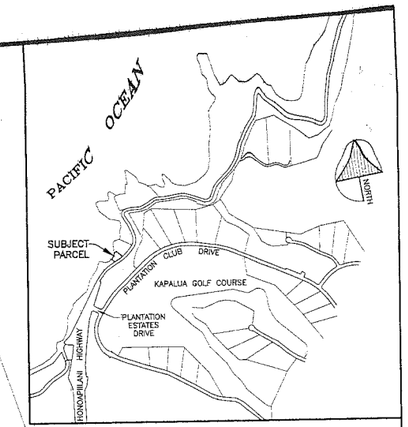
HONOAPIILANI HIGHWAY

PACIFIC OCEAN

SHORELINE FOLLOWS ALONG THE UPPER REACHES OF THE WASH/OF THE WAVES ON JULY 30, 2016 AT 5:00 PM

JULY 5, 2013 CERTIFIED SHORELINE

TMK:(2) 4-2-004:032
Maui Land & Pine Company
(OWNER)



VICINITY MAP
(NTS)

The shoreline as delineated in red is hereby certified as the shoreline as of
NOV - 3 2016
Chairperson, Board of Land and Natural Resources

Shoreline Verification

(FOR BUILDING SETBACK PURPOSES)

TMK:(2) 4-2-004:019

Being portions of Royal Patent 6962, Land Commission Award 3931 Apana 2 to Naiwimawaho and Land Patent 8129, Land Commission Award 8559-B, Apana 23 to Wm. C. Lunalilo

HONOLUA, KAANAPALI, MAUI, HAWAII

NOTES:

1. This map is based from a survey performed on May 24, 2013, and July 30, 2016.
2. Coordinates and azimuths are based from Triangulation Station "MALO" and its meridian was established from found boundary corner monuments of this lot.

LEGEND:

= COCONUT = CRM WALL UNLESS OTHERWISE NOTED
= TREE = GRASS LAWN
= PALM = CONCRETE PAVEMENT

T.M.K.: (2) 4-2-04:019

Scale 1" = 10 ft

Property Address:
6245 Honoapiilani Highway
Lahaina, Hawaii 96761

Owner:
William and Mary Engel
6245 Honoapiilani Highway
Lahaina, Hawaii 96761

Prepared by:
VALENCIA LAND SURVEYING
P.O. Box 546
Lahaina, Hawaii 96767
Tel. 808-661-3257 /385-6110

This work was prepared by me or under my direct supervision.
VALENCIA LAND SURVEYING
Arthur P. Valencia 8/12/16
ARTHUR P. VALENCIA
Licensed Professional Land Surveyor
State of Hawaii Certificate No. 10026
Exp. Date: 4-30-18
Tel. 808-661-3257 /385-6110

ARTHUR P. VALENCIA
LICENSED PROFESSIONAL LAND SURVEYOR
No. 10026
HAWAII, U.S.A.

APPENDIX E
Honolua Parcel 19 Shoreline Analysis

Honolua Parcel 19 Shoreline Analysis

6245 Honoapiilani Hwy, Lahaina, Maui, Hawaii

May 2016

Prepared for:
Mr. William Engels
Engels Trust
6245 Honoapiilani Hwy
Lahaina, HI 96761

Prepared by:
Sea Engineering, Inc.
Makai Research Pier
Waimanalo, HI 96795

Job No. 25520

This page intentionally left blank

TABLE OF CONTENTS

1. INTRODUCTION 1
2. METHODOLOGY 4
3. ANALYSIS 5
4. FINDINGS 7
5. REFERENCES 9

LIST OF FIGURES

FIGURE 1 | PROJECT LOCATION ON THE ISLAND OF MAUI (SOURCE: GOOGLE EARTH) 2
FIGURE 2 | LOCATION OF PARCEL 19, HONOLUA, MAUI (SOURCE: GOOGLE EARTH) 2
FIGURE 3 | BEACH PROFILE LOOKING SOUTH TOWARD PARCEL 19 (4/28/2016) 3
FIGURE 4 | BEACH PROFILE LOOKING NORTH ALONG PARCEL 19 (4/28/2016) 3
FIGURE 5 | AERIAL VIEW OF TRANSECT LAYOUT AND SHORELINE BASE (1962) 6
FIGURE 6 | AERIAL VIEW OF DIGITIZED SHORELINE POSITIONS (1962-2016) 6
FIGURE 7 | RESULTS OF LINEAR REGRESSION ANALYSIS FOR TRANSECTS 1 THROUGH 5 7

LIST OF TABLES

TABLE 1 | AERIAL IMAGERY USED TO DIGITIZE HISTORICAL SHORELINE POSITIONS 4
TABLE 2 | RESULTS OF DSAS SHORELINE CHANGE ANALYSIS 8

1. INTRODUCTION

Project Description

On April 28, 2016, Sea Engineering, Inc. (SEI) conducted a site investigation of the Engel Property located at Honolua, Maui (TMK (2) 4-2-004:019) to assess the potential for shoreline erosion. Parcel 19 was not included in the erosion analysis of the Maui coastline conducted by the University of Hawaii Coastal Geology Group (UHCGG), and has not been assigned an Annual Erosion Hazard Rate (AEHR). The site investigation was conducted in order to determine an appropriate method to determine the AEHR in compliance with the Maui County Shoreline Setback Rules, Title MC-12, Subtitle 02, Chapter 203. Figure 1 is an aerial image of Maui showing the project location, and Figure 2 is an aerial image of the project site.

Site Description

Parcel 19 is located at Alaelae Point, between Honokahua Bay and Mokuleia Bay, on the northwest coast of Maui. The property area is approximately 18,500 square feet with a 53-foot reach bordering the shoreline. The property is located in a shallow embayment that is approximately 400 feet wide and bounded by basaltic headlands to the north and south. There is a drainage in the central portion of the embayment that runs along the northern property boundary of Parcel 19. The topography of the upper portion of Parcel 19 is gently-sloping with a grade of 10-15%, while the lower portion of the property is relatively flat with a grade of 0-5%.

The backshore consists of unconsolidated reddish-brown soils of the Wailuku Volcanic series overlaid in some areas by light-colored, weathered lavas of the Honolua Volcanic series. The foreshore consists of a boulder beach composed of medium-large basalt cobble and boulders ranging in diameter from 6 to 36 inches. The intertidal area is uncolonized hardbottom consisting of basalt boulders, and the nearshore consists of a hardbottom shelf with intermittent coral cover. The offshore bathymetry steepens progressively before dropping off abruptly into Pailolo Channel. The shoreline is exposed to waves approaching from the north and west, but is shadowed from direct northwest swell by the island of Molokai and is sheltered from the prevailing tradewinds. The beach profile along Parcel 19 is shown in Figure 3 and Figure 4.

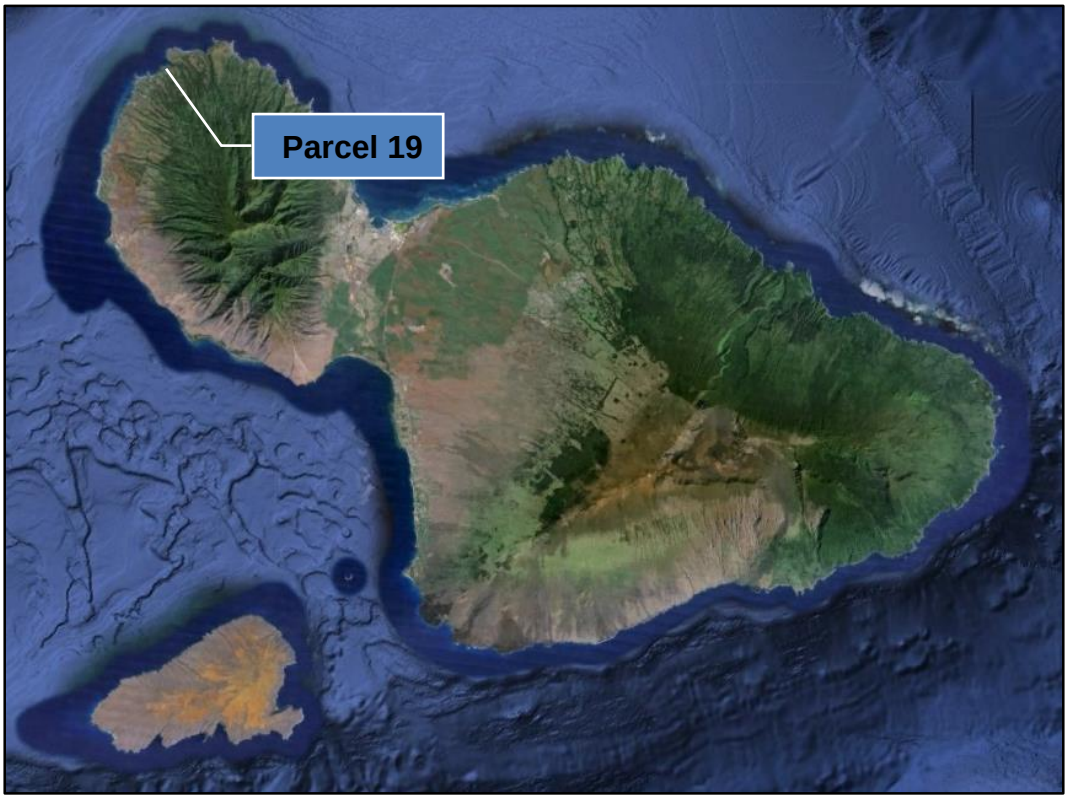


Figure 1 | Project location on the island of Maui (source: Google Earth)

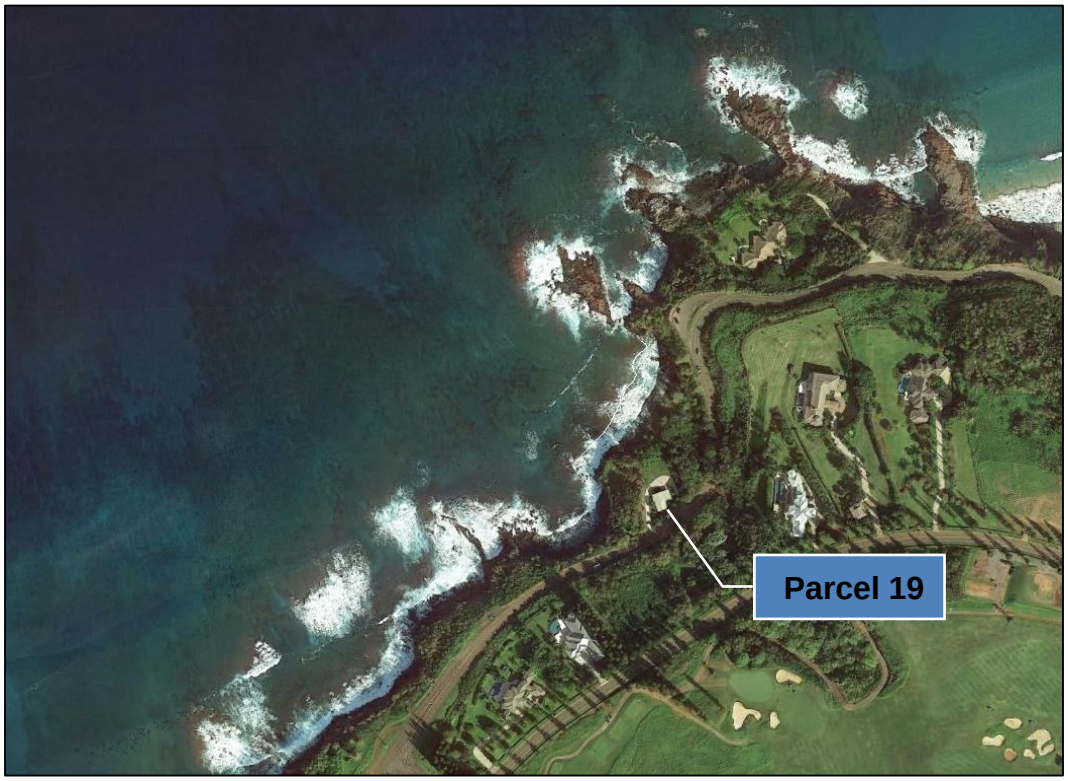


Figure 2 | Location of Parcel 19, Honolua, Maui (source: Google Earth)

Figure 3 | Beach profile looking south toward Parcel 19 (4/28/2016)

Figure 4 | Beach profile looking north along Parcel 19 (4/28/2016)

2. METHODOLOGY

The purpose of this investigation is to establish an Annual Erosion Hazard Rate (AEHR) for Parcel 19. The approach used to determine the AEHR is similar to previous studies by Fletcher et.al. (2003, 2007) that have focused on determining historical erosion rates for sandy beaches in Hawaii. SEI used historical aerial photographs and satellite imagery from 1962 through 2016 to locate historical shoreline positions. SEI then used the USGS Digital Shoreline Analysis System (DSAS), a software package that computes rate-of-change statistics from multiple historic shoreline positions residing in a Geographic Information System (GIS) (Thieler et al. 2009). The DSAS application is useful for computing rates of change for any boundary that incorporates a clearly-identified feature position at discrete times, such as glacier limits, river banks, or land use/cover boundaries (Himmelstoss, 2009).

The DSAS was used to calculate historical shoreline change using three methods: 1) Net Shoreline Movement (NSM), 2) End Point Rate (EPR), and Linear Regression Rate (LRR). The rates calculated by the DSAS were then analyzed using Microsoft Excel. The input data for the analysis included 10 aerial images from 1962 through 2016. A list of the imagery used in the analysis is included in Table 1. Historical imagery from Google Earth from 2000 through 2016 was also reviewed but not included in the analysis. The shoreline positions were digitized using ESRI ArcGIS 10.4. The base shoreline position was digitized from a 1962 historical topographic sheet (T-sheet) at a 1:5000 scale. All historical shoreline positions were referenced to the foreshore base (beach toe), which was the most stable and consistently identifiable feature in the historical images.

Table 1 | Aerial imagery used to digitize historical shoreline positions

Year	Resolution	Source
1962	1:5000	NOAA Historical T-sheet
1987	1.0 meter	University of Hawaii Coastal Geology Group
1988	1.0 meter	University of Hawaii Coastal Geology Group
1992	1.0 meter	University of Hawaii Coastal Geology Group
1997	1.0 meter	University of Hawaii Coastal Geology Group
1999	1.0 meter	Emerge
2012	0.5 meter	DigitalGlobe
2013	0.5 meter	DigitalGlobe
2014	0.5 meter	DigitalGlobe
2015	0.5 meter	DigitalGlobe

3. ANALYSIS

Approach

The DSAS was used to cast five transects perpendicular to the shoreline at 10-meter intervals. Transects were cast at locations that were representative of the shoreline fronting Parcel 19. The transects progress sequentially from south to north, beginning with Transect 1 near the southern end of Parcel 19 and ending at Transect 5 near the northern end of the property. The transect layout is shown in Figure 5. Historical aerial photographs and satellite imagery were used to digitize 10 historical shoreline positions along each transect. The digitized historical shoreline positions are shown in Figure 6.

The DSAS calculated Net Shoreline Movement (NSM) by reporting the distance between the oldest (1962) and most recent (2016) shorelines. The NSM represents the overall change in shoreline position for the 44 year period. The End Point Rate (EPR) was calculated by dividing the NSM by the time elapsed between the oldest and most recent shorelines (44 years). The EPR converts the NSM into an annual rate of shoreline change. A Linear Regression Rate (LRR) was calculated to model the relationship between the historical shoreline positions and the year in which they were identified. A linear regression rate-of-change statistic can be determined by fitting a least-squares regression line to all shoreline points for a particular transect (Himmelstoss, 2009). The LRR output data was exported from ArcGIS and graphically displayed using the "trendline" function in Microsoft Excel. The linear regression rate trendlines are shown in Figure 7.

Limitations

The accuracy of the analysis is dependent upon image availability, image quality and positional certainty. No imagery was available prior to 1987 so the time series was somewhat limited. Positional uncertainty is related to all features and phenomena that reduce the precision and accuracy of defining a representative shoreline position in a given year (Fletcher et al. 2003). Factors that can affect positional accuracy include seasonal error, tidal fluctuation error, conversion error, digitizing error, pixel error, rectification error, and plotting error. Several images were deemed unusable due to poor resolution, cloud cover, and high water levels that obscured the foreshore base. These images were excluded in order to maximize the positional accuracy of the digitized shoreline positions and eliminate potential outliers.

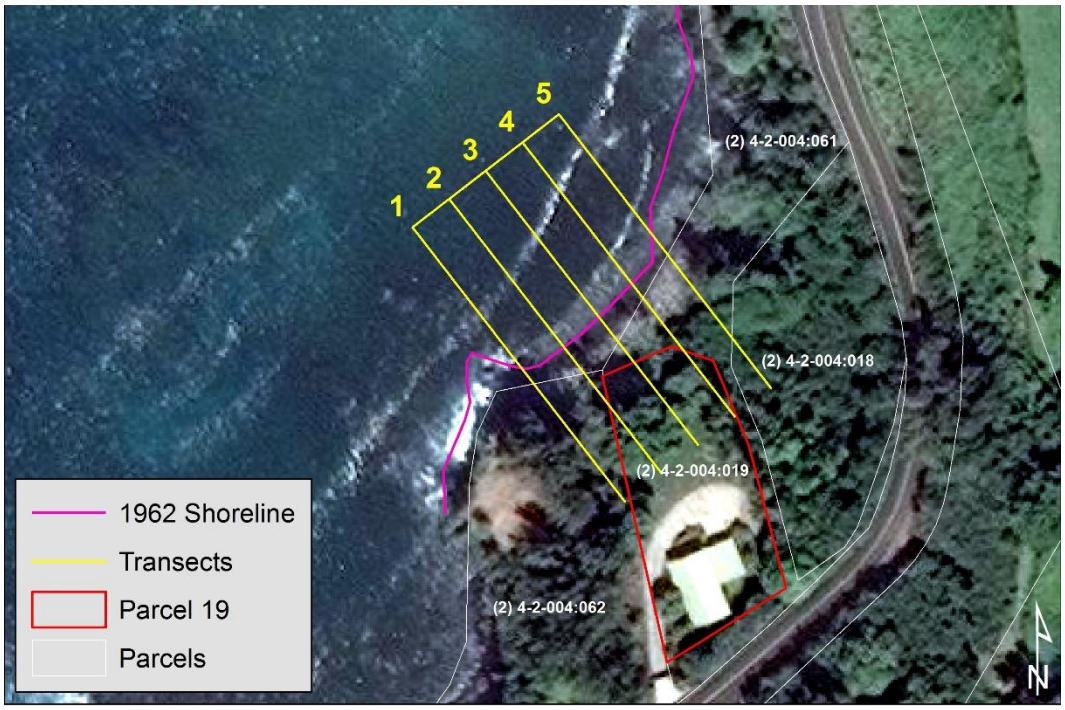


Figure 5 | Aerial view of transect layout and shoreline base (1962)

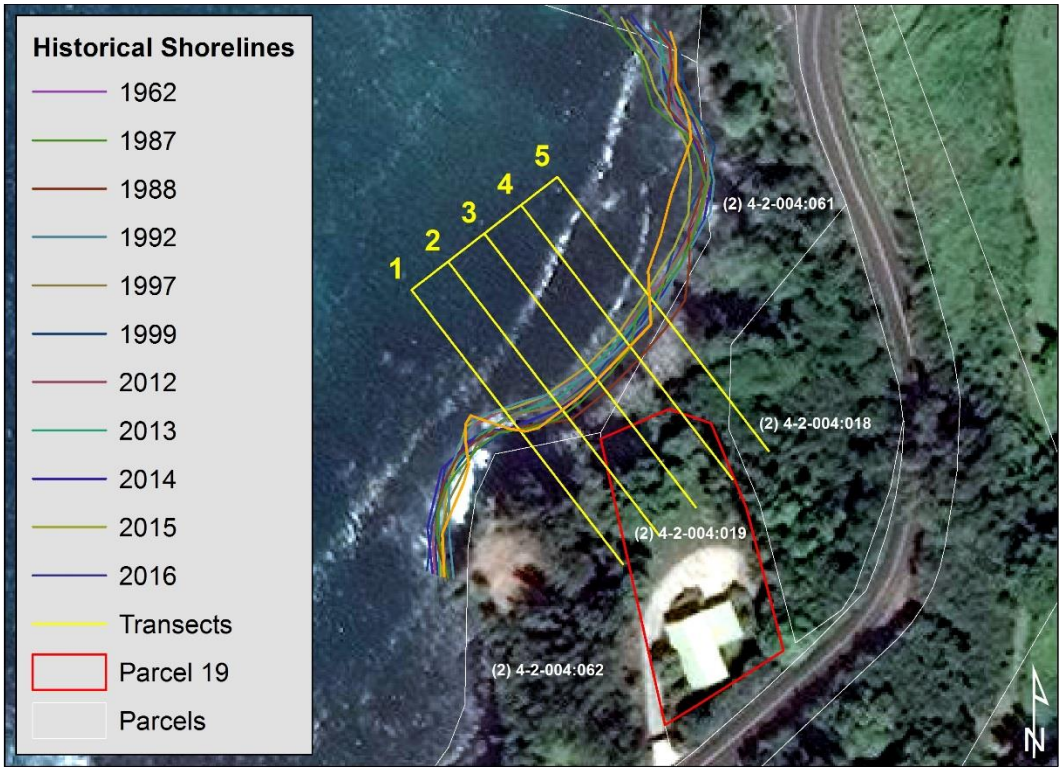


Figure 6 | Aerial view of digitized shoreline positions (1962-2016)

4. FINDINGS

The average beach width fronting Parcel 19 is 58 feet from the foreshore base (beach toe) to the backshore base (bottom bank). The average historical Net Shoreline Movement (NSM) for all transects was -0.8 feet. The average historical End Point Rate (EPR) for all transects was -0.02 feet/year. The average historical Linear Regression Rate (LRR) for all transects was 0.12 feet/year. The results of the LRR revealed virtually no correlation among the data points. The lack of a definitive trend indicates that the shoreline is neither erosional or accretional. Given the lack of statistical significance of the LRR, the EPR is the most appropriate shoreline change parameter to represent the Average Erosion Hazard Rate (AEHR). Therefore, the AEHR for Parcel 19 is -0.02 feet/year. Results suggest that the shoreline position has remained relatively stable over the past 44 years. The results of the LRR are shown in Figure 7. Statistics for all transects are showing in Table 2.

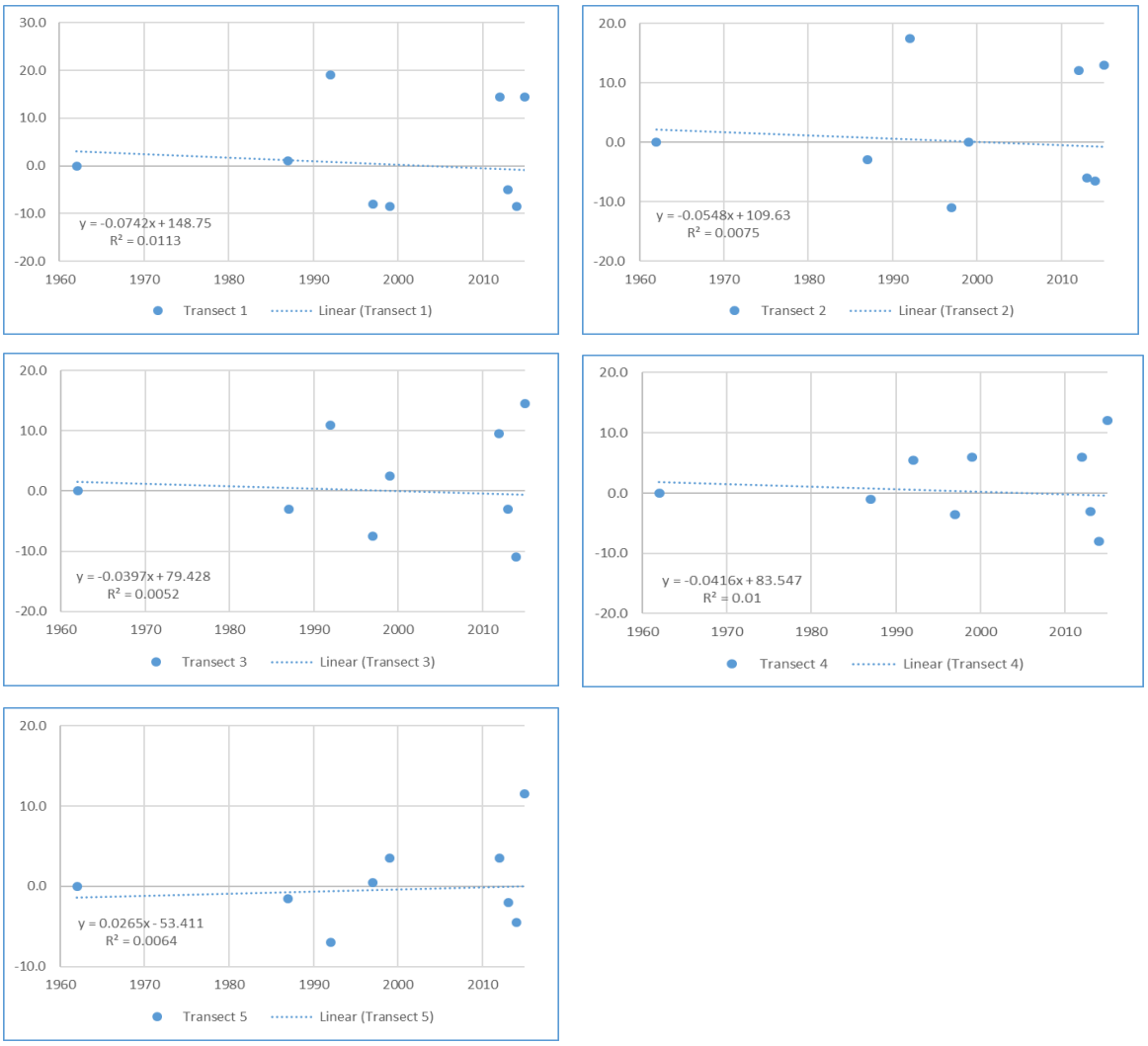


Figure 7 | Results of Linear Regression Analysis for Transects 1 through 5

Table 2 | Results of DSAS shoreline change analysis

Transect	Net Shoreline Change	End Point Rate	Change Rate
1	+ 0.8 feet	+ 0.06 feet/year	+ 0.18 feet/year
2	- 0.5 feet	- 0.01 feet/year	+ 0.16 feet/year
3	- 1.8 feet	- 0.05 feet/year	+ 0.12 feet/year
4	+ 1.3 feet	+ 0.01 feet/year	+ 0.15 feet/year
5	- 4.5 feet	- 0.09 feet/year	- 0.01 feet/year
Average	**- 0.8 feet**	**-0.02 feet/year**	**0.12 feet/year**

Discussion

Along rocky shorelines the rate of erosion and the sensitivity of the shoreline to changes in water level and erosive forces is a function of the strength of the materials. The shoreline fronting Parcel 19 is a boulder beach composed of weathered basalt cobble and boulders of the Honolua Volcanics series. These rocks are characteristically hard, durable, and resistant to erosion. There was also visible algal growth along the beach toe below the high water mark. The lack of rocks with visible algal growth in the upper portions of the beach profile suggests that these rocks are rarely, if ever, transported to this elevation. Boulder entrainment and transport is likely limited to storm and tsunami events (Naylor et al. 2016). The beach to the north of Parcel 19 showed the greatest variability over time. However, this was expected as the material along this part of the shoreline is smaller in diameter and requires less wave energy to be transported.

A continuous berm is consistently visible along the middle of the beach profile. The backshore of Parcel 19 is composed of unconsolidated reddish-brown soils of the Wailuku Volcanic series. There was evidence of minor erosion along the toe of the backshore embankment. However, there was no continuous erosion scarp and the lack of alluvial material present along the upper beach face suggests that mass wasting is minimal and the backshore embankment is stable. Vegetation along the backshore is well-established and the vegetation line appears to be stable historically.

Conclusion

Field observations suggest that the geometry (i.e. shape, contour, profile, and width) of the shoreline fronting Parcel 19 has remained consistent and stable since 1962. The NSM of -0.8 feet, EPR of -0.02 feet/year, and LRR of 0.12 feet/year indicate that the shoreline position has also remained stable since 1962. The negligible amount of shoreline change at Parcel 19 is expected for this type of rocky shoreline, and further confirmed by field observations. SEI recommends the EPR as the most appropriate value to represent the Average Erosion Hazard Rate (AEHR). Therefore, the AEHR for Parcel 19 is calculated to be -0.02 feet/year.

5. REFERENCES

Fletcher, C.H., Rooney, J.J.B., Barbee, M., Lim, S.-C. and Richmond, B.M., 2003. Mapping Shoreline Change Using Digital Orthophotogrammetry on Maui, Hawaii. Journal of Coastal Research, Special Issue 38: 106-124.

Himmelstoss, E.A. 2009. "DSAS 4.0 Installation Instructions and User Guide" in: Thieler, E.R., Himmelstoss, E.A., Zichichi, J.L., and Ergul, Ayhan. 2009 Digital Shoreline Analysis System (DSAS) version 4.0 — An ArcGIS extension for calculating shoreline change: U.S. Geological Survey Open-File Report 2008-1278. *updated for version 4.3.

Genz, A.S., Fletcher, C.H., Dunn, R.A., Frazer, L.N. and Rooney, J.J., 2007. The Predictive Accuracy of Shoreline Change Rate Methods and Alongshore Beach Variation on Maui, Hawaii. Journal of Coastal Research, 23(1): 87-105.

Larissa A. Naylor, Wayne J. Stephenson, Helen C. M. Smith, Oliver Way, James Mendelssohn and Andrew Cowley. 2016. Geomorphological control on boulder transport and coastal erosion before, during and after an extreme extra-tropical cyclone. Earth Surface Processes and Landforms Vol. 41: 685–700.

Sunamura, T. 1992. Geomorphology of Rocky Coasts. Wiley, New York.

Thieler, E.R., Himmelstoss, E.A., Zichichi, J.L., and Ergul, Ayhan, 2009. Digital Shoreline Analysis System (DSAS) version 4.0 — An ArcGIS extension for calculating shoreline change: U.S. Geological Survey Open-File Report 2008-1278. http://woodshole.er.usgs.gov/project-pages/DSAS/. Updated January 6, 2015.

Thieler, E.R., and Danforth, W.W., 1994. Historical shoreline mapping (I): improving techniques and reducing positioning errors. Journal of Coastal Research, v. 10, no. 3, p. 549-563

APPENDIX F
Archaeological Inventory Survey

DRAFT ARCHAEOLOGICAL INVENTORY SURVEY FOR A SHORELINE PARCEL SITUATED IN HONOLUA *AHUPUA'A*, LĀHAINĀ DISTRICT, KĀ`ANAPLI MOKU ISLAND OF MAUI TMK: (2) 4-2-004:019

FOR: Mr. Bill Engle-Landowner

BY: Mr. Cody Sheets (B.A.), Ms. Lisa J. Rotunno-Hazuka (B.A.),
And Mr. Jeffrey Pantaleo (MA)

MAY 2016

ARCHAEOLOGICAL SERVICES HAWAII, LLC.
POB 1015
PU`UNENE, HI 96784

"Protecting, Preserving, Interpreting the Past While Planning the Future"

EXECUTIVE SUMMARY

Under contract to landowner, Mr. Bill Engle, and pursuant to discussions with the State Historic Preservation Division-SHPD, Archaeological Services Hawaii, LLC (ASH) performed an Archaeological Inventory Survey (AIS) according to the rules and regulations set forth in the Hawaii Administrative Rules (HAR) §13-276, Honolua *ahupua'a*, Lāhainā District, Kā`anapali *Moku*, Island of Maui. The subject parcel is situated along the north shore near Alaelae Point within Kā`anapali.

The fieldwork was performed from 20-25 March 2016 by archaeological assistant Ms. Kanoe Keahi and project supervisor Ms. Lisa Rotunno-Hazuka (B.A.). Mr. Jeffrey Pantaleo was the Principal Investigator (M.A.).

Based on archival research, the subject area may have been utilized for permanent habitation with agricultural activities and marine exploitation from the pre-Contact period through the historic era. Thus, subsurface testing in areas proposed for excavations below 6 inches were performed during the current undertaking. The parcel is currently improved with sewer and waterlines, a grass lawn, extensive irrigation and landscaping, as well as a residential structure and carport. The proposed development plans include the removal of the existing structure and carport with a larger two-story residence and garage. The new residence will be constructed primarily within the existing footprint of the current residence; however there is a small portion of new development that will extend beyond the building footprint to the north and southeast and this Area of Potential Effect (A.P.E.) was subjected to subsurface excavations.

The A.P.E. on the north side was tested by the execution of three backhoe trenches (TR's 1-3). The trenches exemplified the prior grading and excavation activities across the parcel with disturbances up to 0.50 m bs. All trenches were negative for cultural materials, with the exception of a historic to possible modern remnant fire-pit Site 50-50-01-8328 within Trench 1. The fire-pit measured approximately 60 cm long by 35 cm thick and contained fire affected rock, sparse charcoal, marine shell, a small mammal fragment and a piece of unidentifiable metal. Site 8328 was assigned a significance of Criterion D and no further work beyond construction monitoring was recommended.

Since the parcel has been previously disturbed, remnant subsurface features, similar to Site 8328 may be extant; thus archaeological monitoring during construction activities is recommended. Prior to demolition and redevelopment of the property, an Archaeological Monitoring Plan (AMP) shall be prepared and submitted for review and approval by SHPD Maui office.

TABLE OF CONTENTS

EXECUTIVE SUMMARY 2
TABLE OF CONTENTS 3
LIST OF FIGURES 4
INTRODUCTION 6
PROJECT AREA DESCRIPTION 7
ENVIRONMENT 13
HISTORICAL SUMMARY 16
Pre-contact Period 16
Historic Period 19
HISTORIC LAND USE 21
PREVIOUS ARCHAEOLOGY 25
Archaeological Investigations in Close Proximity to Project Area 25
Additional Archaeological Investigations 28
SETTLEMENT PATTERN 33
SITE EXPECTABILITY 33
METHODS AND PROCEDURES 33
FIELD WORK 34
LAB WORK 34
RESULTS 34
TRENCH 1 37
TRENCH 2 39
TRENCH 3 42
INITIAL SIGNIFICANCE ASSESSMENTS 44
DISCUSSION AND RECOMMENDATIONS 44
REFERENCES 46

LIST OF FIGURES

Figure 1. USGS Map Showing Location of Project Area 8
Figure 2. Location of Project Area on Tax Map Key (TMK) 4-2-004..... 9
Figure 3. Enlarged TMK Map from Figure 2 Showing Project Area in Red 10
Figure 4. Project Area Map Showing Existing Improvements, A.P.E. (red) and Trenches 1-3 (green) 11
Figure 5. Proposed Development Plan Showing New Residential Structures and Area of Potential Effect (A.P.E.) Red and Blue 12
Figure 6. Overview Photograph of Project Area Showing Existing Improvements (View to South) 14
Figure 7. Overview Photograph from Project Area to East (View to Northeast)..... 14
Figure 8. Overview Photograph from Project Area to West (View to Northwest) 15
Figure 9. Rock Lined Ditch outside Project Area on the East (View to North) 15
Figure 10. Rock Lined Ditch outside Project Area to East (View to South)..... 16
Figure 11. Plan View Map of Kā`anapali *Moku* and Project Area..... 17
Figure 12. Photograph of the Alaloa Trail through Honolua (Ashdown 1971)..... 18
Figure 13. Hawaiian Government Survey Map from 1885 (Register Map 1408) Showing Project Area and Place Name Pohakūiole adjacent to Subject Parcel and Pohakupule to the east (red arrows)..... 19
Figure 14. Photograph of Construction of the Honolua Ditch (Wilcox 1997) 20
Figure 15. Hawaiian Government Survey Map from 1882 (Register Map 1197) Showing Project Area and North Shore in 1882..... 22
Figure 16. USGS Map Showing Plantation Camps in Close Proximity to Project Area 23
Figure 17. Tax Map Key Showing Land Commission Awards in Close Proximity to the Subject Property (Red Dot) 24
Figure 18. Plan View Map of West Maui Showing Walker Sites and Project Area 25
Figure 19. Tax Map Key 4-2-004 Showing Previous Archaeological Studies in Close Proximity to Project Area..... 27
Figure 20. USGS Map Showing Broader View of Previous Archaeological Studies (from ASH Pantaleo 2008)..... 32
Figure 21. Overview Photograph of Trenches 1-3 within A.P.E. of Areas A and B..... 35

Figure 22. Plan View Development Map Showing A.P.E. Areas A and B (Red) and Trenches 1-3 (TR1-3) 36
Figure 23. Overview Photograph of Trench 1 during Excavation (View to Northwest) 37
Figure 24. Stratigraphic Profile of North Wall at Trench 1 Showing TS1 38
Figure 25. Close-up of Remnant Fire pit Temporary Site 1 (TS1) in Trench 1 (View to North) .. 38
Figure 26. Photograph of South Wall at Trench 1 39
Figure 27. Photograph of TR 2 North Wall Showing Cast Iron Pipe (red arrow) (View to North) 40
Figure 28. Photograph of South Wall at TR 2 (View to South) 41
Figure 29. Stratigraphic Profile of North Wall at TR 2 41
Figure 30. Photograph of East Wall at TR 3 42
Figure 31. Stratigraphic Profile of West Wall at TR 3 43

INTRODUCTION

At the request of Mr. Atom Kaspryzcki for landowner Mr. Bill Engle, and pursuant to discussions with the State Historic Preservations Division-SHPD, Archaeological Services Hawaii, LLC (ASH) has completed an Archaeological Inventory Survey (AIS) according to the standards set forth in the Hawaii Administrative Rules (HAR) §13-276. The subject parcel is located along the shoreline of Honolua, Honolua *ahupua'a*, Lāhainā District, Kā`anapali *Moku*, Island of Maui (Figures 1-5).

The current investigation was conducted to determine presence absence of surface historic properties and the potential for buried cultural remains that could be adversely affected by proposed development. This initial level of investigation aids in assessing the general nature of the historic properties and or burial sites, if present, and in formulating future mitigation measures for the project area.

The project area is currently improved with a single-family residence, carport, sewer and water, grass lawn and extensive irrigation and landscaping (Figure 6). The proposed re-development plan consists of the demolition of the existing residence and carport, and the new construction of a two-story residence with garage and upgrades to utilities (see Figures 4 and 5). The majority of new construction will be within the existing building footprint: however a small portion, the Area of Potential Effect (A.P.E.), extends outside the northern and southeastern perimeters of the building, and consists of the following marginal improvements. To the north two perpendicular walls are proposed and designated Areas A and B. Area A measures approximately 11.9 m long (E/W) by 0.22 m wide (N/S) by 0.45 m to .52 m deep (39.0 ft. long by 0.75 ft. wide by 1.5 ft. deep) and Area B measures 3.35 m long (N/S) by 0.22 m wide (E/W) by 0.30 m to 0.53 m deep (11.0 ft. long by 0.75 ft. wide by 1.0 ft. to 1.75 ft. deep). Also along the north, small square footings are proposed for post and pier construction for a covered lanai. These minor excavations, along with those on the southeast side were not subjected to testing. For the southeast side, designated Area C, minor excavations to remove the grass layer and sod (4-6 inches deep) are proposed for a slab on grade that measures 7.0 m long (E/W) by 6.4 m wide (N/S) (23.0 ft. long by 21.0 ft. wide by 4 to 6 inches deep) for (see Figure 5).

Three backhoe trenches were undertaken along the northern A.P.E. and exemplified prior disturbances up to 0.50 m deep, as well as a historic to possible modern fire pit designated Site 50-50-01-8328.

PROJECT AREA DESCRIPTION

The project area is located along the northwestern flank of West Maui in Honolua. It is a rocky shoreline parcel that consists of a small inlet or alcove between a low bluff on the west and a basalt outcrop peninsula to the east (see Figures 6-8). Also present on the east, just outside the project area is a rock-lined ditch for Kahauiki Gulch (Figures 9 and 10).

No known inventory survey has been conducted of the subject parcel; however several investigations have been performed around the project area and are further discussed in the Historic Summary and Previous Archaeology sections.

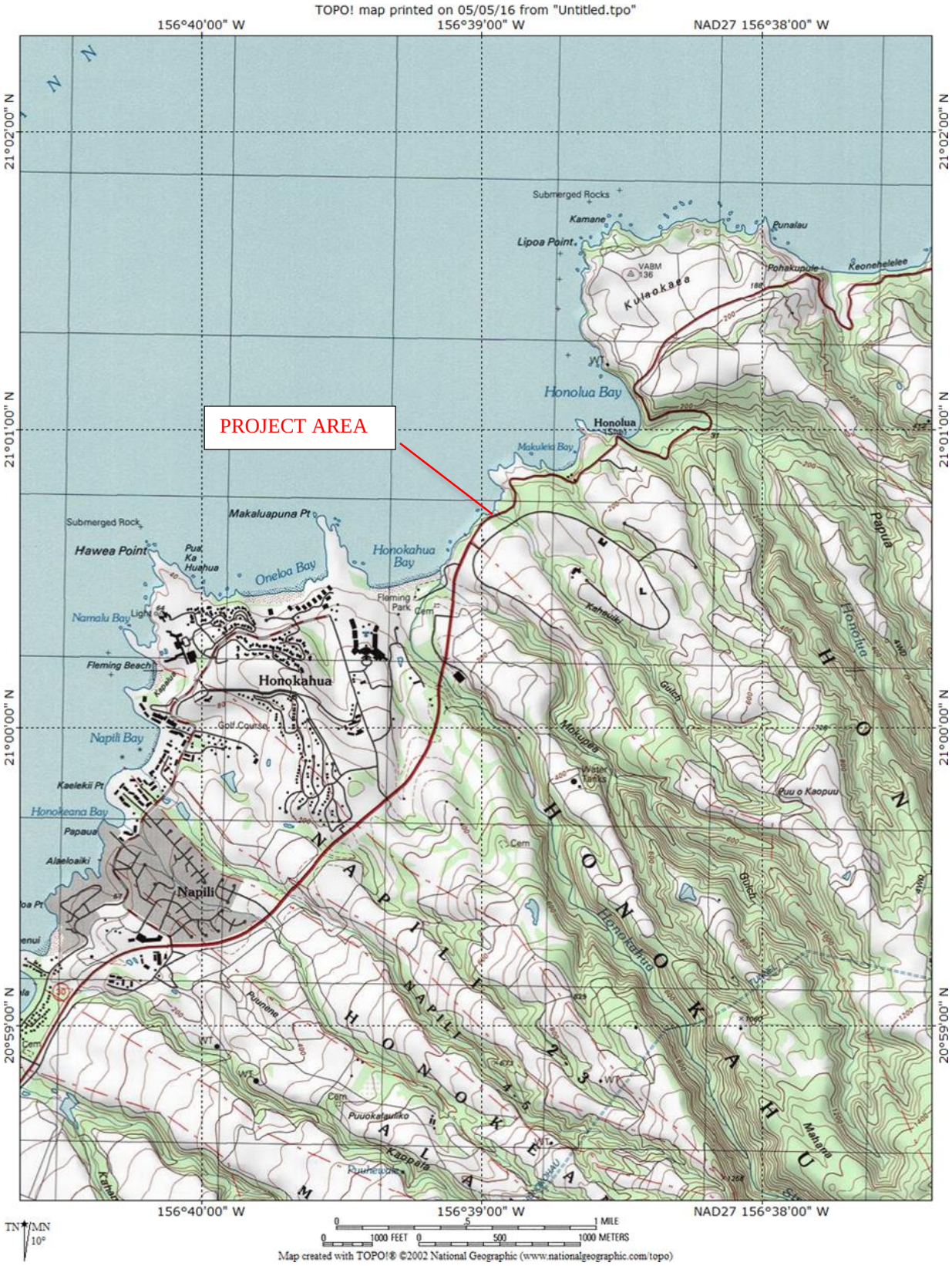


Figure 1. USGS Map Showing Location of Project Area

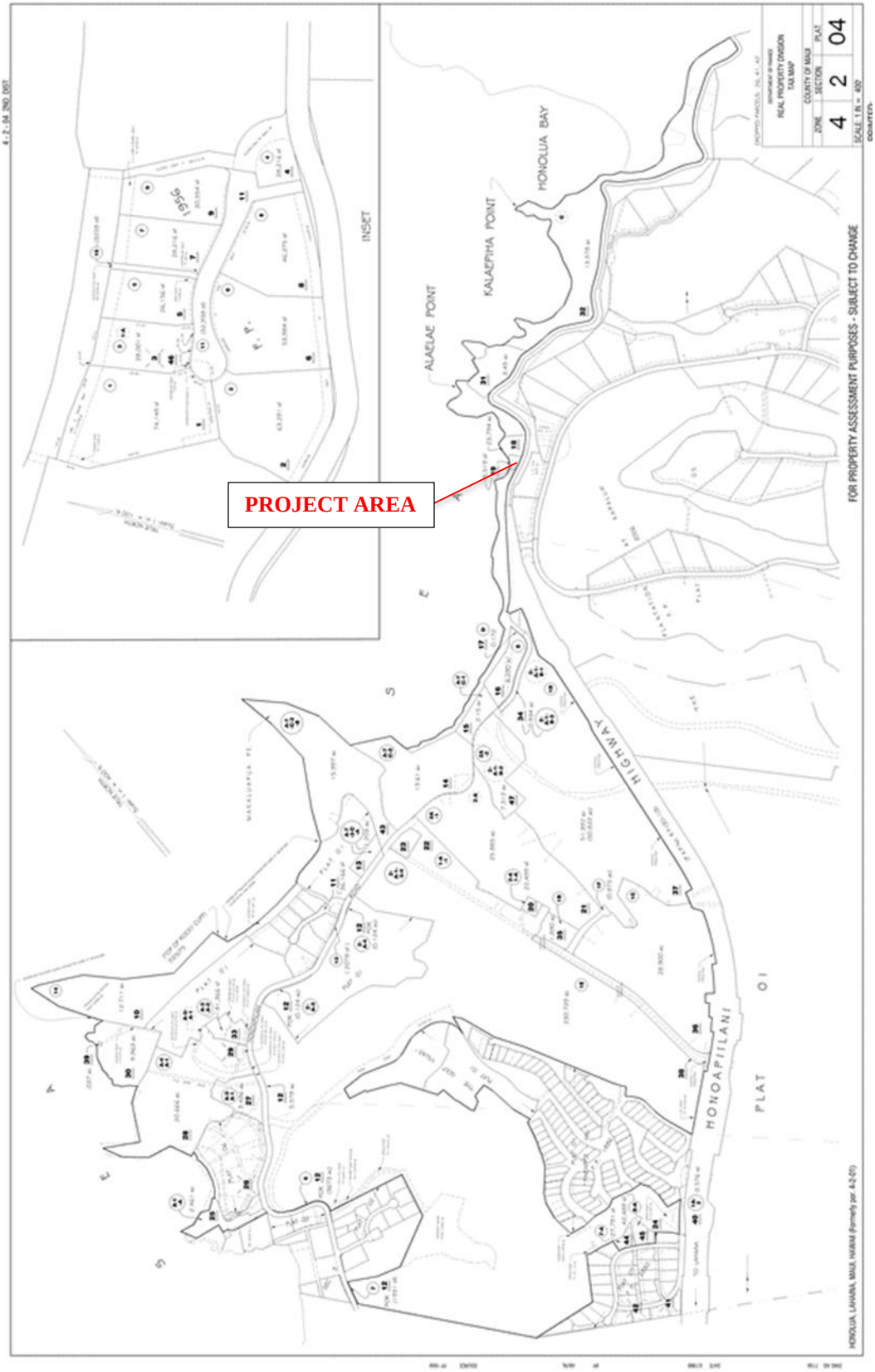


Figure 2. Location of Project Area on Tax Map Key (TMK) 4-2-004

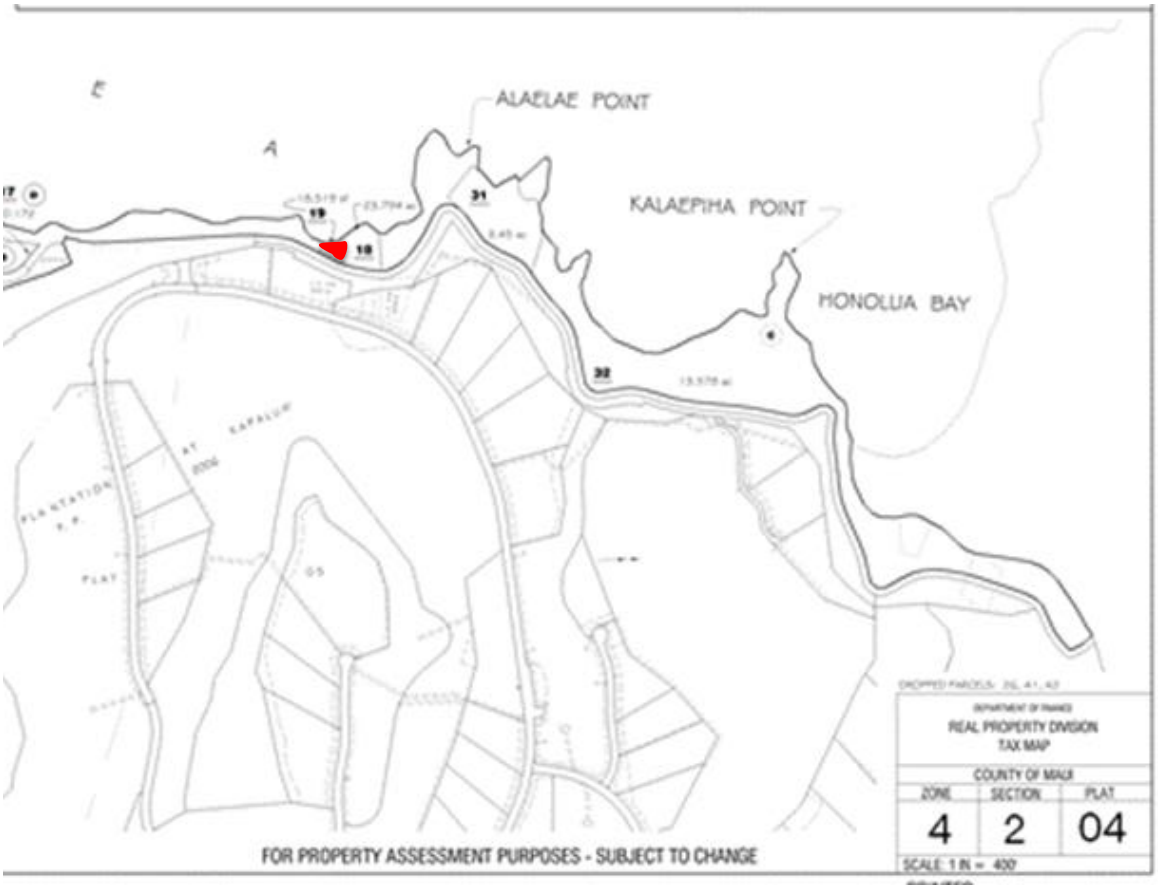


Figure 3. Enlarged TMK Map from Figure 2 Showing Project Area in Red

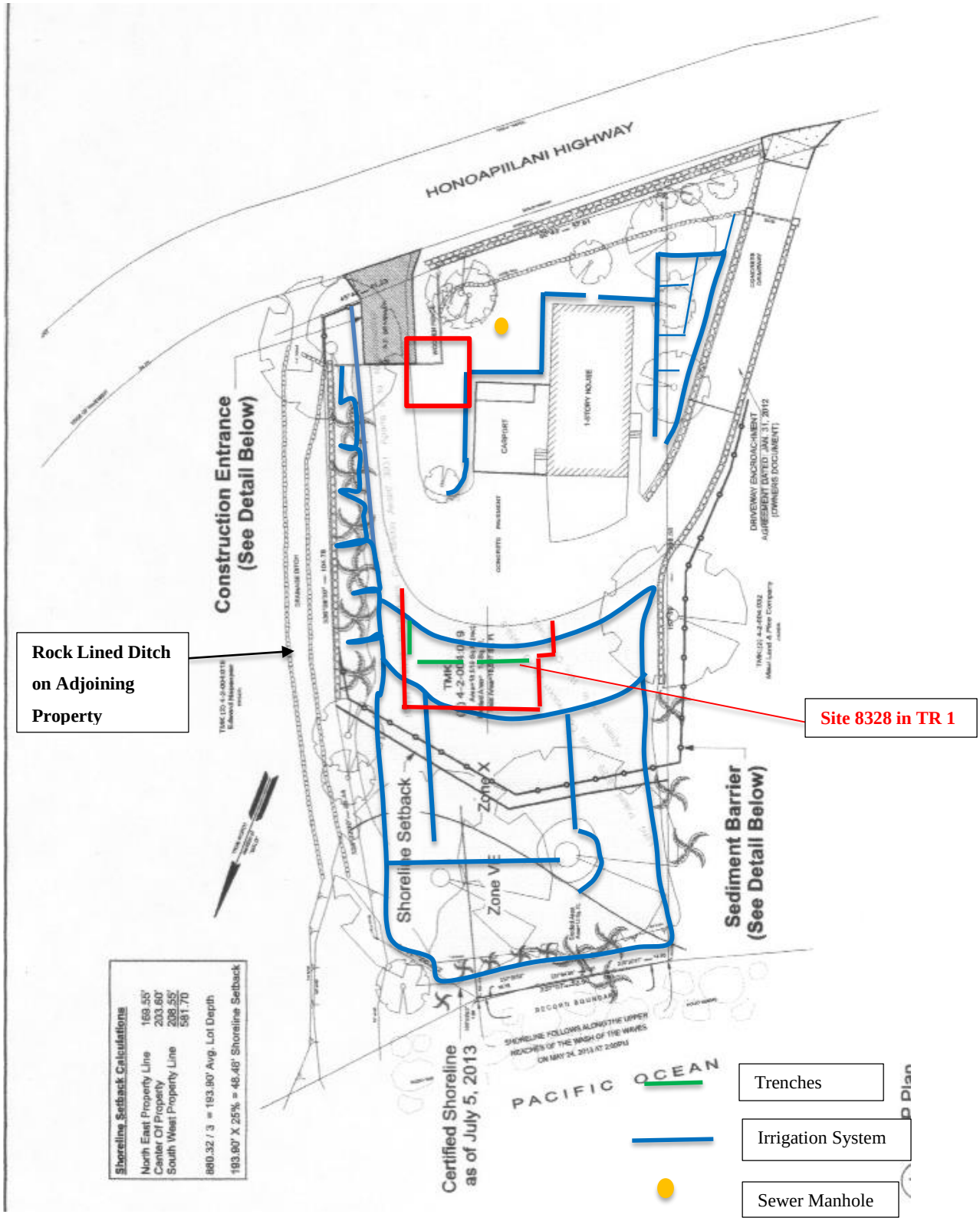


Figure 4. Project Area Map Showing Existing Improvements, A.P.E. (red) and Trenches 1-3 (green)

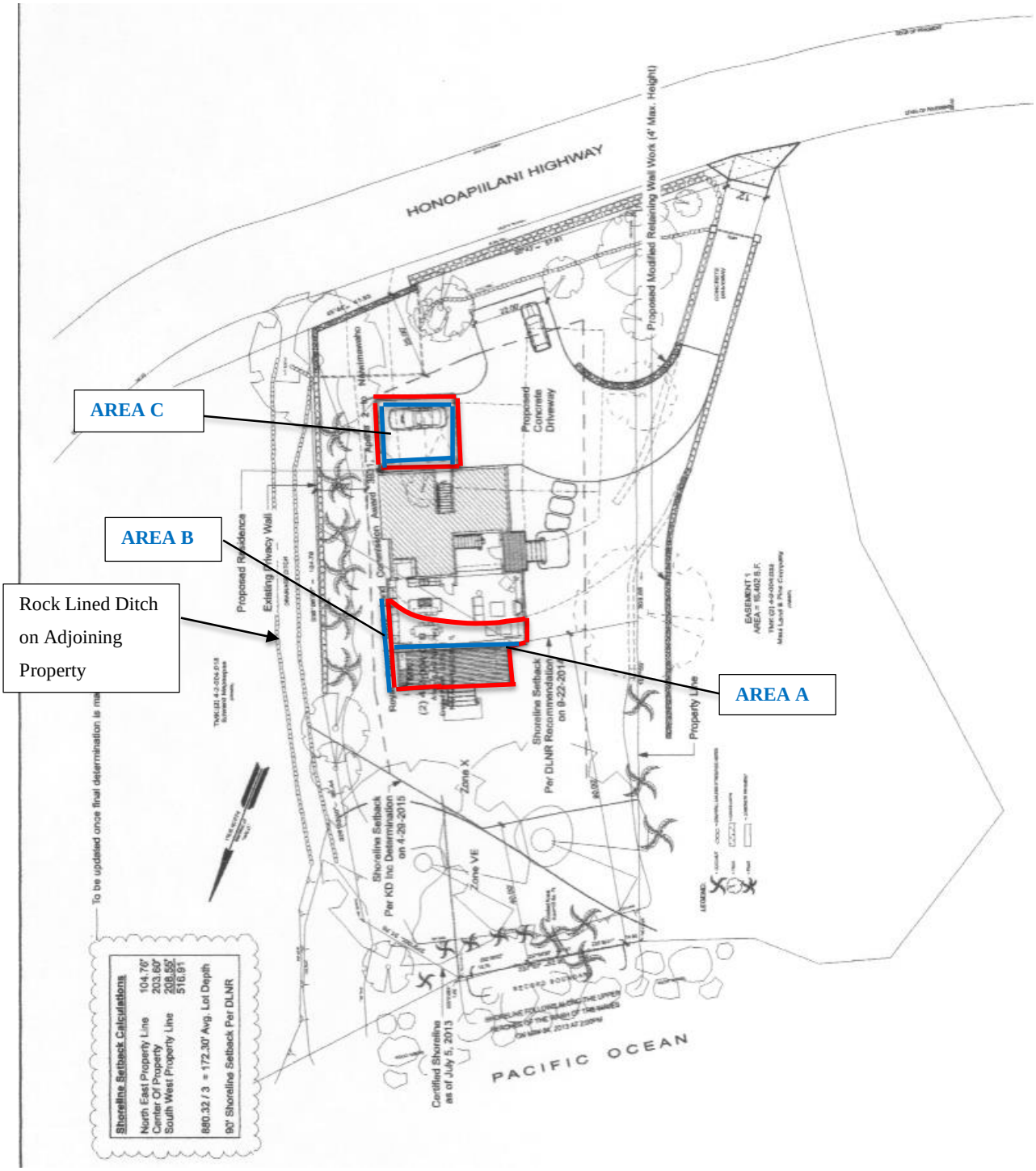


Figure 5. Proposed Development Plan Showing New Residential Structures and Area of Potential Effect (A.P.E.) Red and Blue

ENVIRONMENT

The project area is a small alcove or inlet situated along the shore between a bluff on the west and basalt ridge extending into the ocean on the east. Elevations range from 10-21 ft. above mean sea level (amsl) (*makai* to *mauka*) where the majority of the parcel is level, with the exception of the driveway in the southwest corner leading to Honoapi`ilani Highway. The median annual rainfall averages 40 inches per year for the Kapalua area with the heaviest rainfall occurring in the winter months and the driest in the summer months (Giambelluca, et al. 1986).

According to the Soil Survey Manual, soils in the project area are comprised of Kahana silty clay of the Kahana Series. Kahana silty clay (KbB) is well-drained upland soils that developed in material weathered from basic igneous rock. The surface layer is generally composed of dark, reddish brown clay loam and subsoils are reddish to dusky brown silty clay loam or clay loam (Foote et. al. 1972:9).

The flora within the project area consists of *ti* (*Cordyline fruticosa*), *naupaka* (*Scaevola taccada*), beach morning glory (*Ipomea pes-caprae*), ironwood trees (*Casuarina equisetifolia*), breadfruit tree (*Artocarpus altilis*), banyan tree (*Ficus citrofolia*), coconut trees (*Cocos* nucifera) and silver thatch palms (*Coccothrinaz barbadensis*) a grass lawn of St. Augustine (*Stenotaphrum secundatum*) and various other grasses, shrubs and weeds.

Figure 6. Overview Photograph of Project Area Showing Existing Improvements (View to South)

Figure 7. Overview Photograph from Project Area to East (View to Northeast)

Figure 8. Overview Photograph from Project Area to West (View to Northwest)

Figure 9. Rock Lined Ditch outside Project Area on the East (View to North)

Figure 10. Rock Lined Ditch outside Project Area to East (View to South)

HISTORICAL SUMMARY

Pre-contact Period

The subject parcel is situated within the traditional *moku* (district) of Kā`anapali which extends from Keka`a Point (Black Rock) at Honokōwai *ahupua`a* to Hulu Island at Ili o Kukuipuka. Kā`anapali *Moku* contains five major streams and valleys, Honokōwai, Kahana, Honokahua, Honolua and Honokōhau, within fourteen *ahupua`a* (Figure 11). These streams extend *mauka* to *makai* like the traditional *ahupua`a* land divisions and thus contain different environmental zones to support a sizable Native Hawaiian population. Handy and Handy (1972) discuss the extensive *lo`i* fields that would have been present during "olden times; as a matter of fact, a great deal was raised in Honokōwai, where there must have been 30 or 40 acres under cultivation at one time" (Sterling 1998:46). For the drier environs, dry land taro and sweet potatoes would be cultivated. Sterling states, "in ancient times there were numerous settlements on western Maui, between Honokōhau and Kahakuloa……. Settlements in these localities imply planting of sweet potatoes on the lower *kula*" (Sterling 1998:47). Additionally, the sea with its varied micro environments from the shoreline to the deeper offshore areas would have been exploited for many marine

resources during traditional times. Access from the shorelines to the upper valleys would have been accomplished through *mauka-makai* trails. Similarly, access around the West Maui coastline and island of Maui was through widely used dirt trails and later the well-known King's Highway, Pi`ilani Trail or Ke Alaloa o Maui, portions of which are extant today.

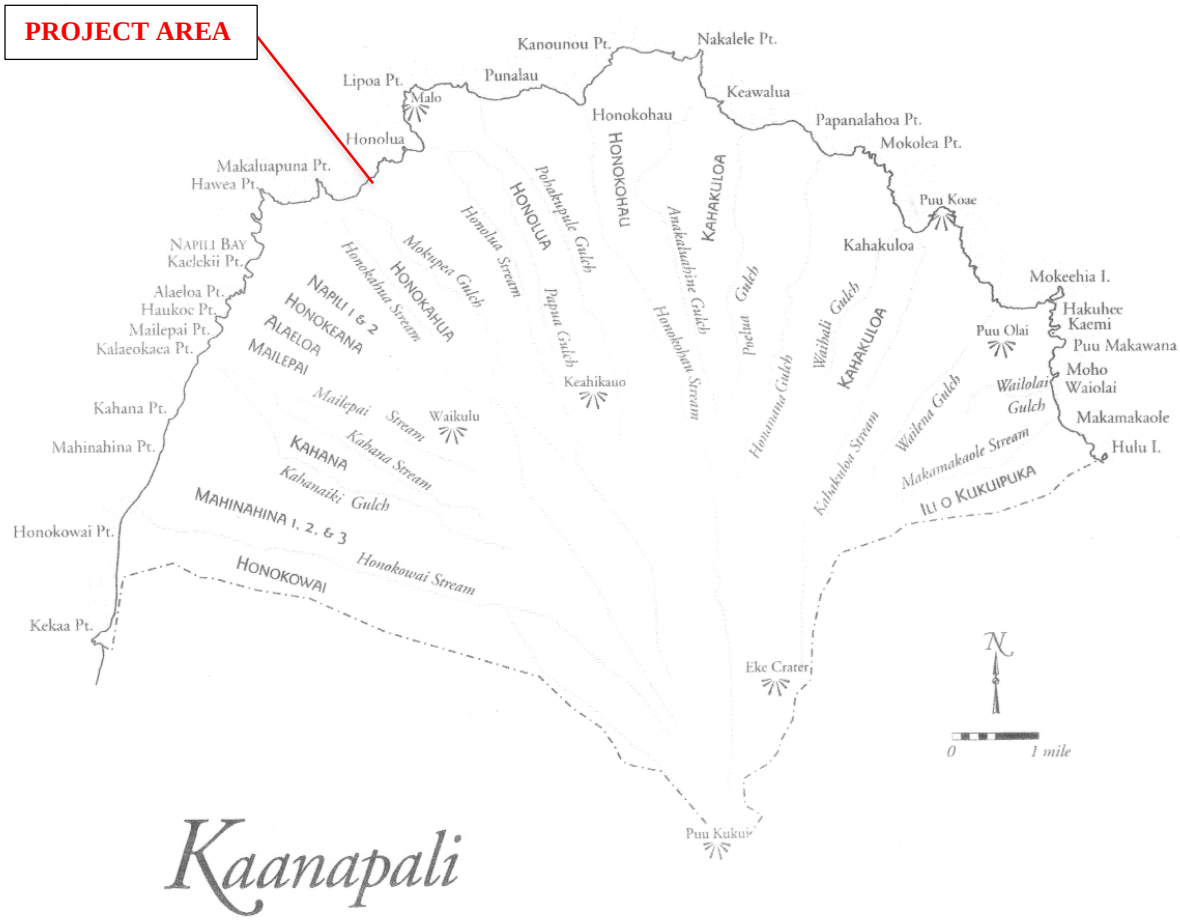


Figure 11. Plan View Map of Kā`anapali *Moku* and Project Area

Ke Alaloa o Maui refers to the broad highway built by King Pi'ilani of Maui with the help of the people and later his son, Kiha-a-pi'ilani who completed it. The name also has meaning for the pathway of life all people travel from birth to death (Ashdown, 1971). The Alaloa trail (the long path) was built around A.D. 1516 and encircled the entire island of Maui and was paved to a width of four to six feet with smooth waterworn stones. Walker describes the trail in his manuscript: "Sections of (the trail) can be seen from Honolua to Honokōhau and Kahakuloa. It is paved with beach rocks and has a width of four to six feet" (1931: 301). Part of the trail from

Ma`alaea to Nu'u was repaired by Governor Ulu-ma-hei Hoa-pili. Along Ke Alaloa were fishing shines *Ko'a* and *ko-ula* and markers that designated the best fishing grounds near the reefs and out to the deep ocean. Near these shrines foundations for *hālau*, or canoe sheds, and the smooth areas for the fishnets to be carefully dried (Ashdown 1971).

Figure 12. Photograph of the Alaloa Trail through Honolua (Ashdown 1971)

Insight into past land use or sense of place during the pre-Contact period may be inferred from Place Names. The project area is situated along the shoreline in close proximity to several peninsula's or points and gulches. The closest point to the east is `Alaelae Point which translates to having a number of capes and points; Makaluapuna Point to the east translates to spring hole as for planting taro (see Figures 1 and 2). As exhibited on Figure 13, Pohakūiole is adjacent to the project area and may translate to rat rock or possible rock for sinker of an octopus lure. Pukui and Elbert state that *`iole* may mean many things having to do with rat or rodents. It may imply a rat, or behaving like a rat or lastly *`iole* is the name of a sinker for an octopus lure or the lure (Pukui and Elbert 1986: 102). Pohakūpule to the east at Līpoa Point literally translates to prayer rock and Kahauiki Gulch adjacent and east to the project area means the small *hau* tree (Pukui and Elbert

1986 and Pukui, Elbert and Mookini 1974). From the above, several meanings might be inferred and range from the shoreline area being a place for agricultural pursuits from the planting of taro and or *hau* trees were performed; it may signify that ceremonial activities were performed at prayer rock to the east, or at the project area the rock utilized for the octopus sinker could be harvested at this location, or that the area is good fishing for *he`e* or octopus.

Figure 13. Hawaiian Government Survey Map from 1885 (Register Map 1408) Showing Project Area and Place Name Pohakūiole adjacent to Subject Parcel and Pohakupule to the east (red arrows)

Historic Period

King Kamehameha gave the area of Honokahua to Isaac Davis in return for his assistance during Kamehameha's conquest, according to Silva (Donham 1986). In 1810 Davis dies and John Young administered the land. When Young died the land was divided amongst Young's and Davis' heirs. One of the heirs, Sarah Kale Davis is buried on an adjoining property to the project area and designated Site 50-50-01-5636 (see Previous Archaeology section). Eventually Campbell Estate acquired the property which was used for cattle and coffee production. Purchased by the Baldwin's in 1890, they continued with ranch operations.

In Lahaina the land was great for growing sugar cane but water was hard to come by (Wilcox, 1997). Campbell, Turton and Dunbar who started the Lahaina Mill in 1860, later be known as the Pioneer Mill devised a way to irrigate this dry fertile land of Lāhainā. They utilized the fertile valleys and built Honokōhau Ditch (constructed and operated by Honolua Ranch) (Wilcox, 1997). Honokōhau ditch was started in 1902 and was completed in June of 1904 (Wilcox, 1997).

In 1912 David T. Fleming became the Honolua Ranch manager and under his administration began to make a new ditch running roughly parallel to the old ditch; this ditch to be known as the Honolua Ditch (Figure 14) (Wilcox, 1997).

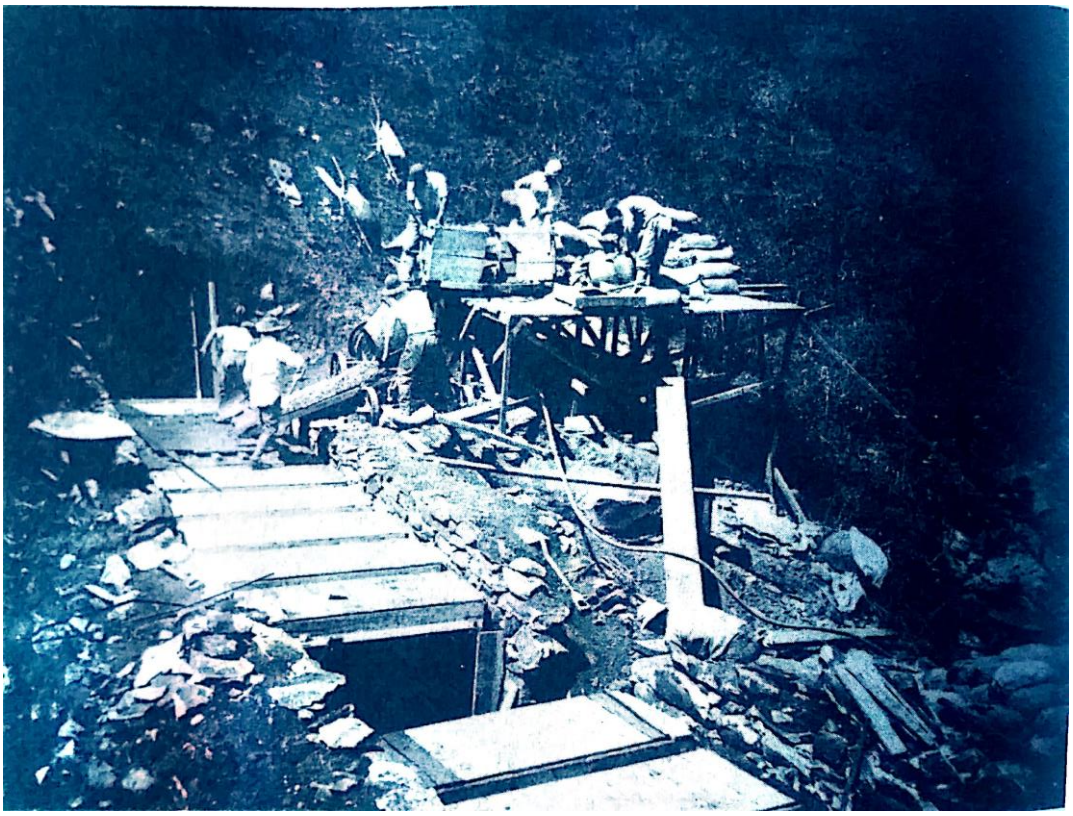


Figure 14. Photograph of Construction of the Honolua Ditch (Wilcox 1997)

Honolua Ranch under the Fleming administration began to cultivate large amounts of pineapple. Fleming was well educated in pineapple production from his days in the Ha`ikū area. In 1915 the Honolua Ranch/ Baldwin Packers complex was moved from Honolua to Honokahua where a pineapple cannery and the Honolua Stables was built. By the 1920's pineapple had become the dominant crop in West Maui. With this booming enterprise the population of the area increased

for the first four decades of the 20th century and several Plantation Camps were established (Fredericksen and Fredericksen 1998) (Figures 15 and 16).

The Honolua Plantation Camp was built in the 1920's to house the plantation workers. Several camps were built to house plantation workers of similar ethnicity (see Figure 16). Mr. Douglas McClure, Manager of Maui Land and Pineapple Company's Hali`imaile Plantation spoke to Eric Fredericksen in 1998 recalling the Japanese Camp near to where he grew up prior to 1967 (Figure 15). He recalled stone features (Site -4513) (see Previous Archaeology section) as being the vegetable garden for the camp. Mr. Wesley Nohara, Honolua Plantation Manager, grew up and lived in the Japanese camp until he graduated high school in 1972. He confirmed the site of the vegetable garden (Site- 4513). The Japanese Camp was dismantled in the 1970's as the Kapalua Development began (Fredericksen 1998). By 1963, following the merger between the Baldwin Packers with the Maui Land and Pineapple Co., Honolua Stables also ceased operations.

HISTORIC LAND USE

The project area is within Land Commission Awards (L.C.A.) 8559 B Ap. 23 to Lunalilo which encompasses the western 2/3 of the parcel, and LCA 3931 Ap. 2 to Naiwimawaho along the eastern 1/3, extending south across Honoapi`ilani Highway (Figure 17). According to Waihona data base, LCA 3931 Ap. 2 was utilized for *kula* lands or pasture/open lands. Also in close proximity to the subject parcel is LCA 4250:2 (RP 4776) to Kaui. This kuleana is located adjacent and southeast of the project area and was also utilized as *kula* land. During the review of several LCA's within Honolua *ahupua`a*, another shore line parcel near Honolua Bay LCA 3802:3 to Lohelohe was used for *kula* land, but further specified its use as *kula `uala* or sweet potato cultivation. Other LCA in close proximity to LCA 3802:3 along Honolua Stream at the bay were as follows: LCA 4065:3 (RP 3330) to Kahiki petitioned for a *kou* (*hala*) tree, and four potato *mo`o* (*mo`o* being a section of land that is narrow) and the potato was likely sweet potato (see Figure 17). LCA 4243:D2 and D1 (RP 4188) to Makaole was also for four potato *mo`o* (D2) and a house lot (D1). LCA 4246:1 (RP 4785) to Kaleo claimed a house lot (*pā hale*) and LCA 4249:1 (RP 4188) to Kameeu`i and petitioned for *kalo* land. Along Honolua Stream, further *mauka* from Honolua Bay several LCA comprised of LCA 4065:1 to Kahiki for *kula* land; LCA 4243:D4 to Makaole for *kalo* land and LCA 3924: 1, 2 and 4 to Nakupala utilized for *kula* land, 48 *lo`i* and potato *mo`o*.

Based on the above, the project area and land surrounding it was utilized primarily for *kula* lands, *`uala* or sweet potato, taro or *kalo*, as well as a few house lots. Similar results were obtained by Fredericksen and Fredericksen who compiled and analyzed data for 19 LCA at Honolua and the analysis indicated that the land use was for taro and sweet potato, *kula* lands and house lots (Monahan 2005:12).

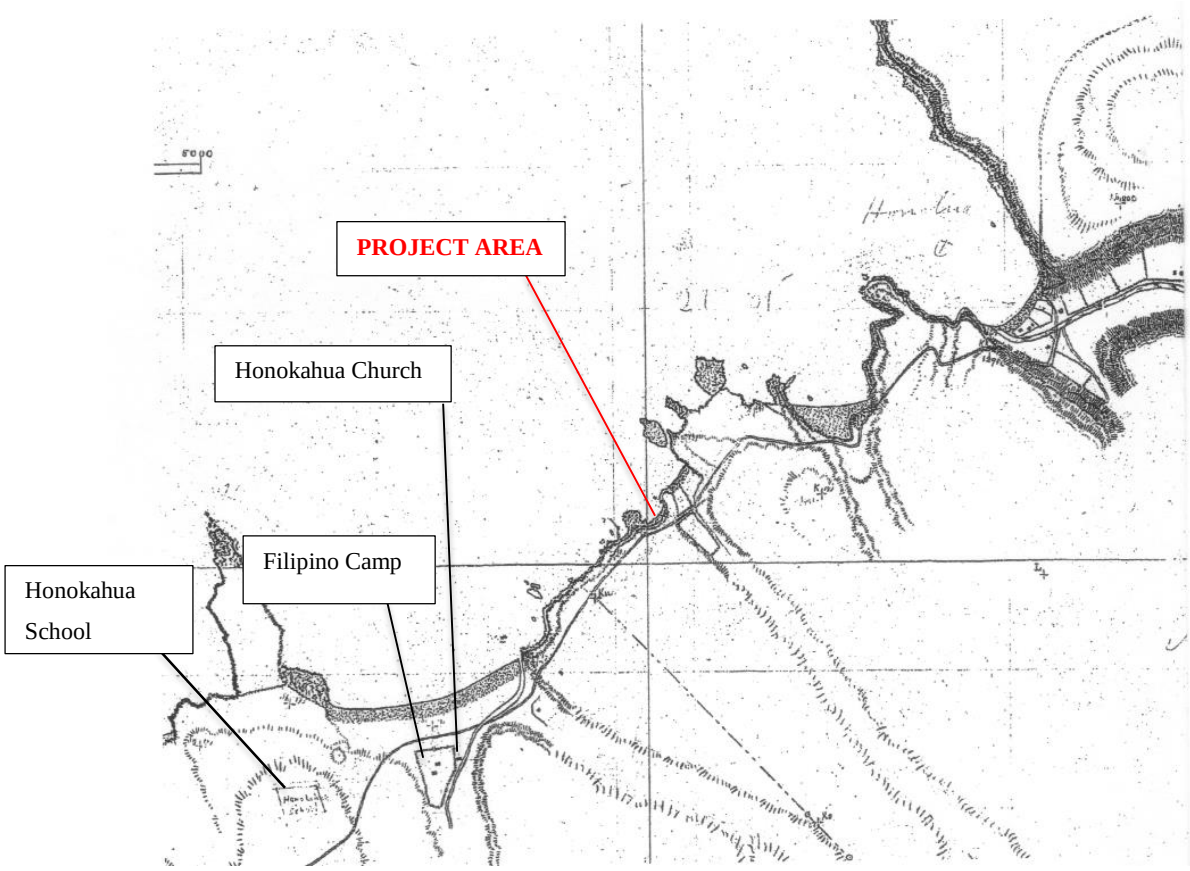


Figure 15. Hawaiian Government Survey Map from 1882 (Register Map 1197) Showing Project Area and North Shore in 1882

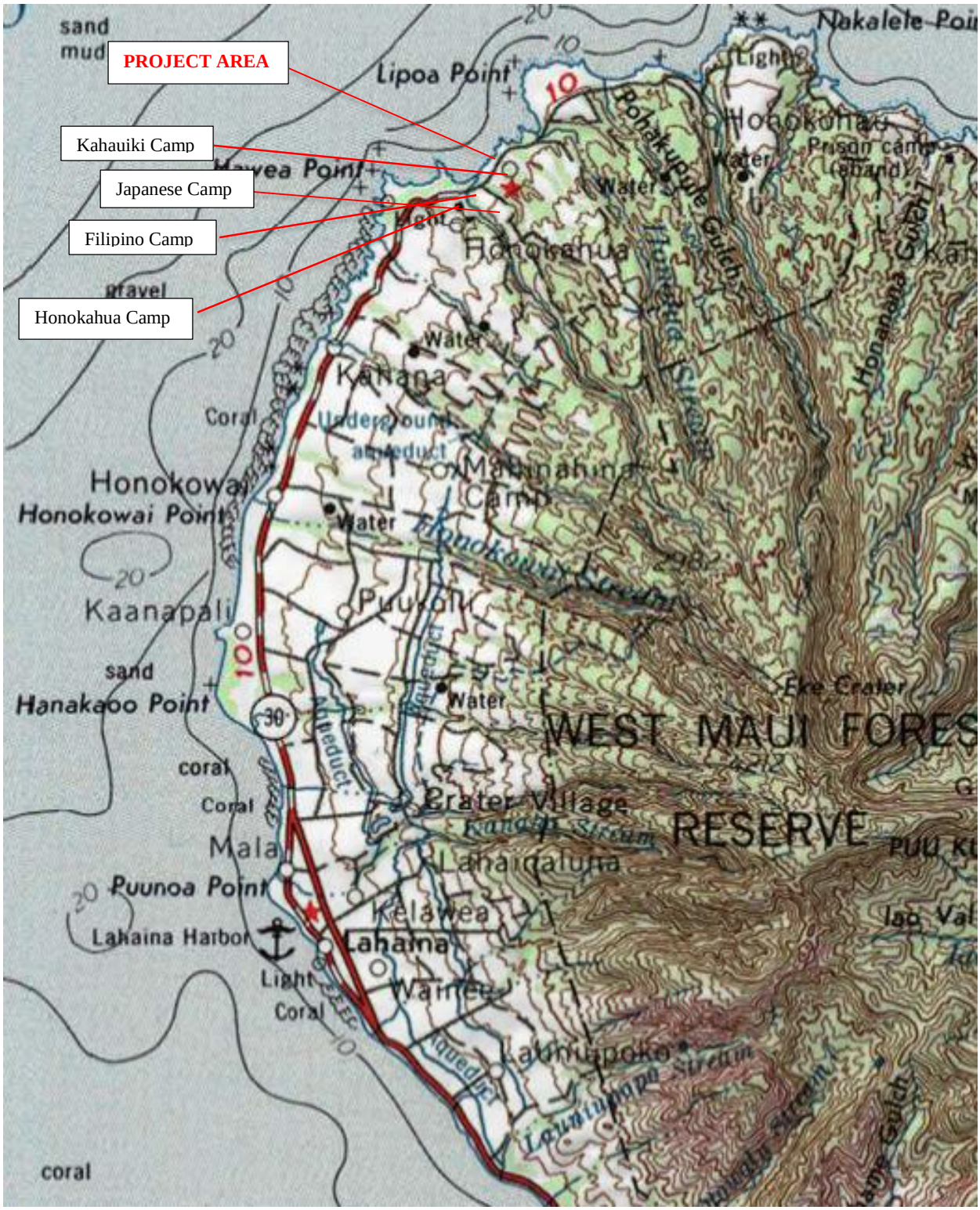


Figure 16. USGS Map Showing Plantation Camps in Close Proximity to Project Area

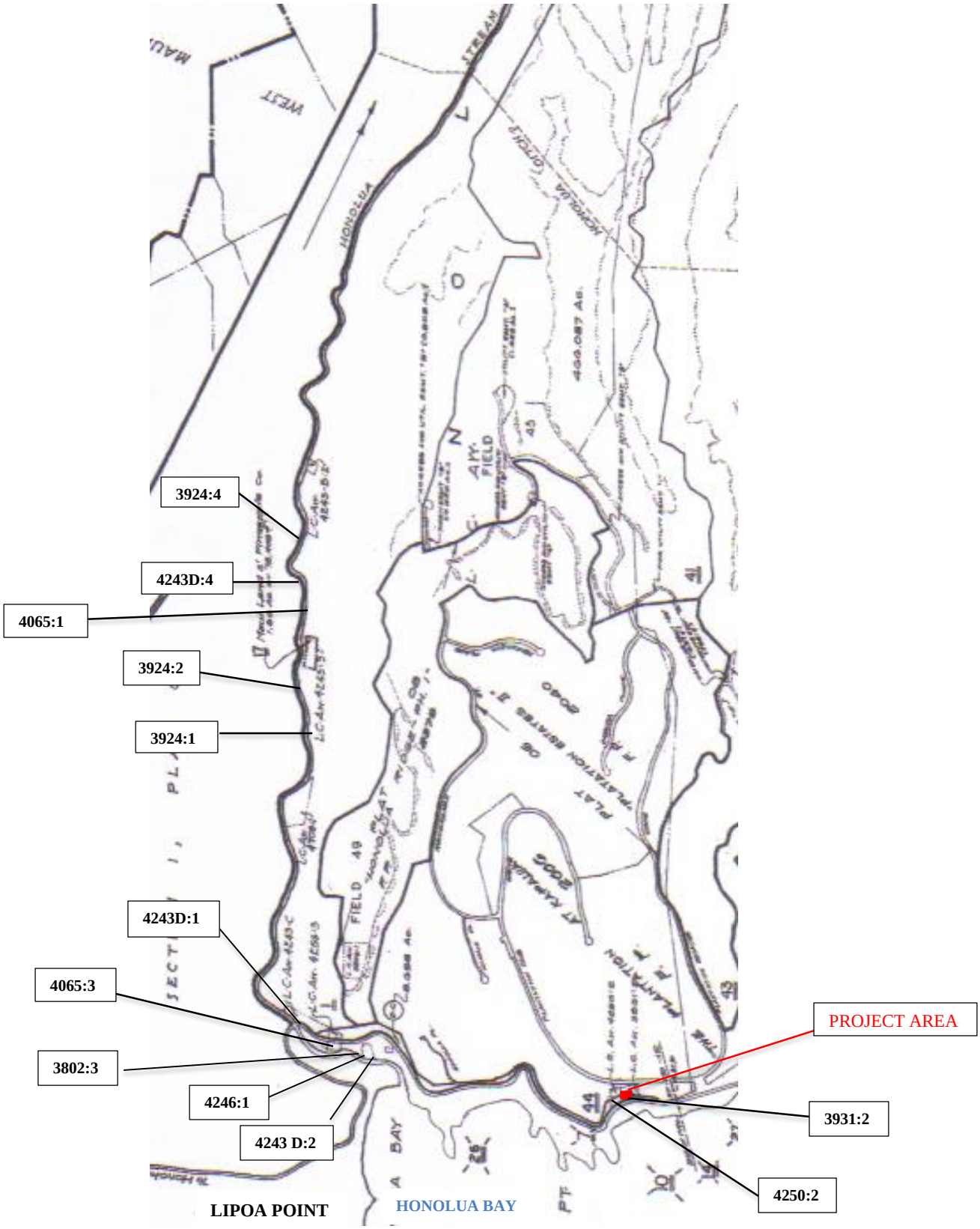


Figure 17. Tax Map Key Showing Land Commission Awards in Close Proximity to the Subject Property (Red Dot)

PREVIOUS ARCHAEOLOGY

Archaeological Investigations in Close Proximity to Project Area

Winslow Walker was the first to conduct an archaeological survey in 1930 on the island of Maui and documented two *heiau* (Sites 17 and 18) and a *holua* slide in Honolua *ahupua`a* and another, Site 16, in close proximity but within Honokahua *ahupua`a* (Figure 18). Site 16 was designated as Kahauiki *Heiau* along the west side of Kahauiki Gulch. Walker described it as a small irregular platform of stones whose walls have been removed for animal pens (Sterling 1998). Site 17, Puhalakau (*Ai Maia*) *Heiau* was situated *makai* of Honolua Park and described as being for *Ku`ula*, a fishermen's *ko'a* on the beach, which was washed away. It was documented as a level area with evidence of areas paved with small stones. Site 18, Honuaula *Heiau* is within Honolua gulch east of the bend in the road. Site 18 comprised the remains of old platforms and walls measuring 29 ft. on the south, 46 ft. on the west, 20 ft. on the north and 54 ft. on the east. The interior was formerly paved but most of the stones were removed to build animal pens (Sterling 1998). Also documented by Walker in Honolua was the *holua* slide site (no site number) which is now cultivated in pineapple (Ibid).

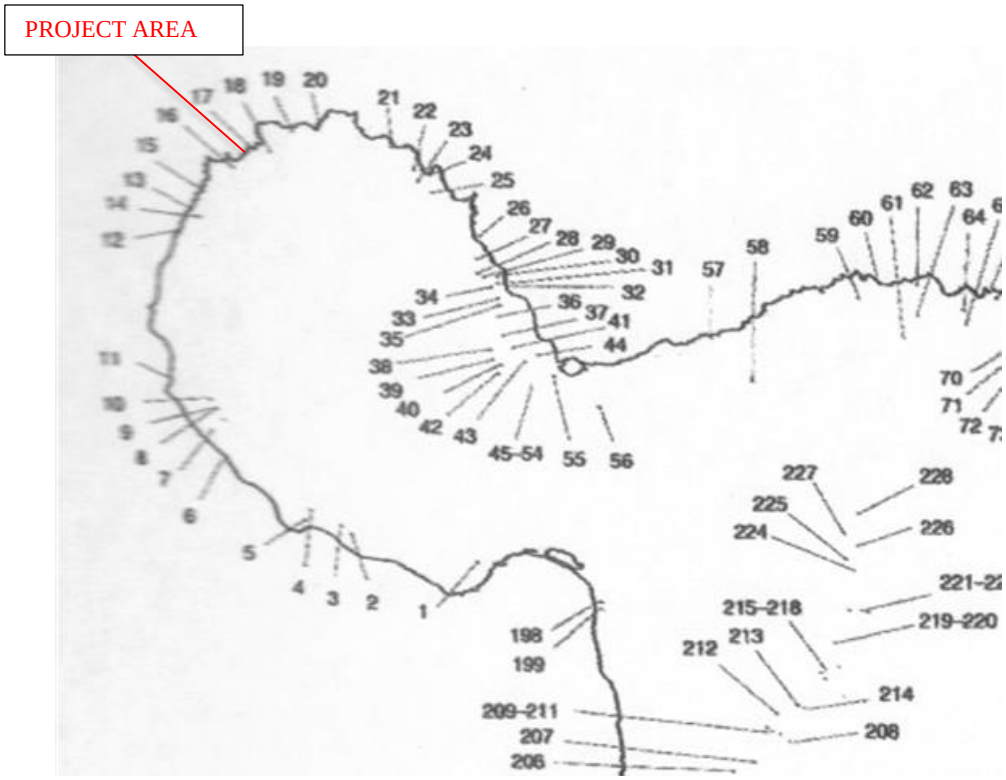


Figure 18. Plan View Map of West Maui Showing Walker Sites and Project Area

Fredericksen and Fredericksen (1998) conducted an Archaeological Inventory Survey of approximately 35 acres within TMK 4-2-004:024 pors, Honokahua *ahupua`a* for the proposed Golf Academy Project (Figure 19 see blue outline). A total of three post-contact sites, Sites 50-50-01-4501, 4510 and 4513 were recorded and consisted of rock wall built along the western bank of a gulch (Site 4501), several crudely constructed modifications to the outcrop along the western bank of the gulch (Site 4510) and a roughly constructed platform (Feature A) with terraces and retaining walls (Features B-E) all subsumed under Site 4513. All historic properties were assigned a significance of Criterion D and no further work was recommended for the sites.

A previously known burial of Kale Davis and a Portuguese bread oven were documented by Morawski and Dega (2004) while conducting an Archaeological Inventory Survey (AIS) of 10 acres in Honokahua, Lahaina District TMK: (2) 4-2-04:037 and a portion of (2) 4-2-04:024 (Figure 19 see purple outline). The Kale Davis burial was given State Site Number 50-50-01-5636 and the Portuguese bread oven was given State Site Number 50-50-01-5637. The area was located within the Honokahua Historic District, State Site Number 50-50-01-1591.

To the east of the project area is Līpoa Point. An AIS of 583-acres at Līpoa Point was performed by SCS in 2007 and identified 23 historic properties designated Sites 50-50-01-5913 through 5935 (Pickett and Dega 2007) (Figure 19 see yellow outline). The sites encompassed both the pre and post-Contact periods and consisted of the following: The traditional habitation, ceremonial, agriculture and transportation (Sites 5913-5915, 5918, 5920-5922, 5930-5932 and 5934-5935); historic habitation, ceremonial and transportation (Sites 5916, 5925, 5929); historic ranching (Site 5919), Plantation Era (Site 5926) and several sites utilized from the pre-Contact through the historic periods for temporary habitation, agriculture and transportation (Sites 5923, 5924, 5933), as well as two terrace sites with indeterminate function (Sites 5927 and 5928). One site, a square shaped enclosure (Site 5917) was indeterminate for both function and chronology.

Jeffrey Pantaleo of Archaeological Services Hawaii (ASH) conducted an archaeological assessment (AIS with negative findings) in 2008 of two adjacent parcels of land located within the Ritz-Carlton Kapalua Hotel landholdings designated Lot 2A-2-A TMK: 4-2-004:037 and 021 pors (Figure 19 see red outline).

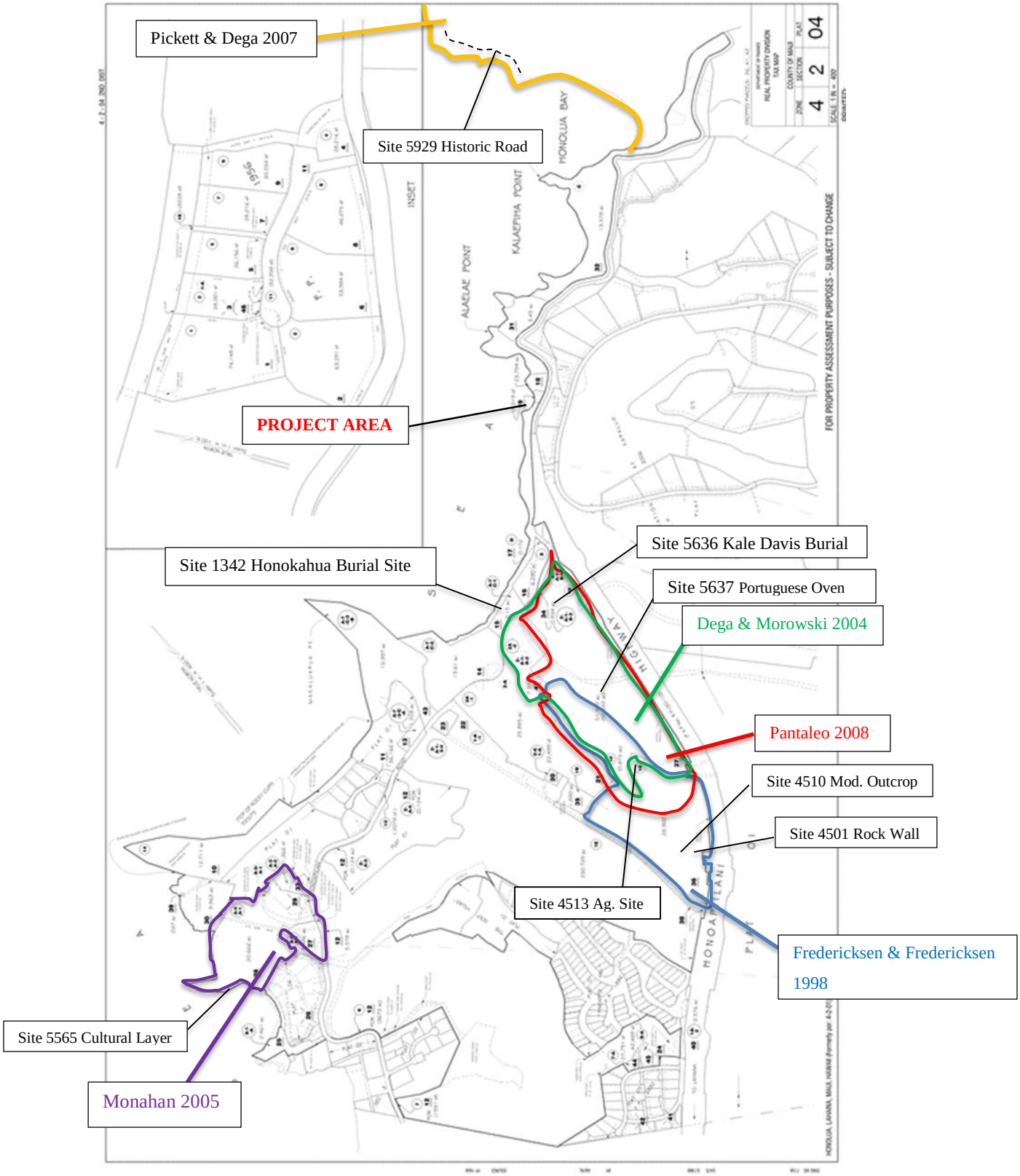


Figure 19. Tax Map Key 4-2-004 Showing Previous Archaeological Studies in Close Proximity to Project Area

Additional Archaeological Investigations

The Bishop Museum conducted archaeological research in 1973, which included a coastal strip of land from Fleming Beach at Kapalua to Fleming Park at Honokahua Bay and included four inland gulches (Figure 20). Site-1346 composed eight features recorded at Hawea Point. This site was interpreted to be a temporary Hawaiian settlement for marine exploitation and dated to *c.* A.D.1500 (Kirch, 1973a). Kirch also recorded a cave shelter on a cliff face at Hawae Point (Site-1347); and a stone terrace platform overlooking Oneloa Bay, Site -1348 (Kirch 1973a).

Kirch also documented six sites, in his 1973 survey, in the vicinity of Honokahua Bay. Makaluapuna Point (Site -1343) is made of two features, a terrace enclosure and a pavement and midden scatter. The features are associated with the traditional occupation of the area and the use of marine and the littoral environment. Site 1344 is a series of walls constructed for cattle pens. Sites -1345, -1340,-1341 and -1342 are located at D.T. Fleming Beach Park. Site -1340 is a large boulder located at the northeast end of Honokahua Beach and was purposed as a grinding stone with visible ware marks on it. Site-1341 is comprised of midden deposits located on the slope between Sites -1345 and -1340. The Honokahua Burial Site (Site-1342) was initially identified during Kirch's 1973 survey (see Figure 20).

Within Honolua at TMK 2-4-2-4:031, Paul H. Rosendahl, Ph.D., Inc. (PHRI) conducted an Archaeological Inventory Survey (AIS) of 2.47 acres. Within this surveyed area, five sites and nine features were identified. The sites consisted of a fire pit of a charcoal and ash concentration (Site-4141); four burial terraces (Site-4142); a permanent habitation platform 7.5 m by 3.5 m (Site-4143); a possible habitation site involving a modified outcrop and rock alignment with associated surface midden (Site-4144) and a boundary wall (Site-4145). Excavation of 10.0 sq. m was conducted for data recovery of (Site -4141 and -4143) and is documented by Haun, Henry, and Berrigan, (2003). The conclusion was that (Site -4143) functioned as a short term, temporary habitation and did not recommend further work on the site (Haun, Henry, Berrigan, 2003).

Development of the Ritz-Carlton Kapalua Resort has resulted in the identification and expansion of the Honokahua Burial Area (Site-1342). Archaeological work at Site-1342, originally documented by Kirch, has been expanded and has led to the identification of over 1,800 primary and secondary burials. Radiocarbon dating of 19 primary burial features gave an earliest date of A.D. 600. A clear burial sequence was also documented through archaeological investigations providing a clear pattern of earlier burials at shallower depths and later burials inadvertently

disturbing earlier ones. Radiocarbon dates were divided into three dating periods for site use, early (A.D. 600-1200), middle (A.D.1200-1800) and late (A.D. 1800-1900) (Donham, 2000). Additional sites were documented by Guerriero *et al* 1993, and was comprised of nine sites with 43 component features recorded during the monitoring phase of work at the revised Kapalua Ritz-Carlton Hotel site. These sites included numerous prehistoric cultural deposits indicating long-term occupation of this area. A prehistoric trail, fire pits and stone-faced terracing were also documented. Historic refuse areas, fire pits, western style structure and ten prehistoric burials were also recorded during monitoring (Guerriero *et al*. 1993).

Other sites in the general area of Honolua *Ahupua`a* in the Lahaina District include Site 2-H identified by Donham (1986) in her archaeological survey of the Kapalua Hotel Development were seven additional sites including two traditional features (-2015 and -2016, a trail remnant and a buried cultural feature); three historic ranching features associated with Honolua Ranch and two features with an indeterminate age. Documentation of additional burials just east of the Honokahua burial ground by Guerrero *et a*l (1993) and Fredericksen and Fredericksen (1996a; TMK: 4-2-04:26), were interpreted as an extension of the Honokahua Burial Site. Additional sites included a habitation site (-2873) and part of a historic trail (-2876).

Fredericksen and Fredericksen (2002) conducted an Archaeological Inventory Survey (AIS) on approximately 23 acres (TMK: 4-2-04:32). The area encompassed eastern Honokahua Bay to Honolua Bay. A total of eight sights, two of which were previously recorded, included a paved platform/enclosure with additional features (-5093), a possible habitation area (-5094), two rock shelters along the coast (-5097), a Native Hawaiian Burial (-5098), a concrete slab from a former slaughter house (-5096) and a remnant of the Old Government Road (-5095). A planation-era refuse dump (-5006) and an enclosure along the coast (-5007) were both previously recorded.

In 2015, Dega of Scientific Consultant Services (SCS) created an Archaeological Monitoring Plan (AMP) for improvements at D.T. Fleming Beach Park for the County of Maui Department of Parks and recreation TMK: (2) 4-2-004-:016. The AMP covered an area of 125 ft. by 225 ft. area of the 3.29-acre recreational park. During monitoring of the project, four previously recorded sites were re-identified and assessed, including Sites 50-50-01-1346 and -1347, first identified by Kirch (1973a) on Hawae Point; Site 50-50-01-5565, initially identified by Monahan (2005); and Site 50-50-01-1342, the Honokahua Burial Grounds identified by Kirch (1973a) and also studied by Donham (1989). An inadvertent burial (State Site 50-50-01-7091) was encountered during

installation of sub-surface utilities on September 29, 2010. It was a single *in situ*/primary burial of a juvenile (8+/- 2 years) presumed to be of Hawaiian ethnicity, and was preserved in place. Also discovered by Fredericksen and Frederickson (1996b) were two sites; Sites -4814 and -4815. Site-4814 was identified as an *in situ* cultural layer, related to habitation dating to A.D. 1490 to 1665. Site-4815 was a historic wooden crypt grave containing two individuals. Due to these results, SCS surmised that the project potentially has evidence of pre-contact habitation/activity areas, human burials both *in situ* and disturbed, artifacts, midden and historic refuse.

SCS conducted an addendum Archaeological Inventory Survey (AIS) in 2009 for a 25.3 acre parcel in Kapalua TMK: 4-2-04: 27, 28 and 29 formerly the Kapalua Bay Hotel and the Kapalua Shops (Perzinski and Dega 2009). Three sites were identified during the addendum AIS which consisted of three primary human burials (Sites 50-50-01-6260 Feature B and 50-50-03-6278 Features A and B) and one buried cultural layer (Site 50-50-01-5565) previously encountered during the original inventory survey (Monahan 2005). Site -5565 consisted of charcoal stained sediments, diffuse and concentrated charcoal, fire cracked rock and two lithic fragments dating to A.D. 1610-1860. Site -6260 consisted of two *insitu* burials with faint pit outlines and no grave goods; both are considered pre-contact and of Hawaiian ancestry. Site -6278 represents five *in situ* burials two of which A and B were documented during the addendum AIS, and relocated to site 6260. C, D, E were identified during construction monitoring.

Donham's data recovery of Site -1342 resulted in the identification of 867 *in situ* burials, and collected displaced remains of 133 additional individuals from a secondary context. The hotel was relocated inland due to the significant number of burial features identified. Ferguson conducted the subsurface testing of the relocated project site in Areas I, II and III. Area I is the relocated inland hotel location; area II is located across from D.T. Fleming Beach Park; and area III is the proposed beach activities area makai of the Lower Honoapi'ilani Road. This project, conducted by ASH, is within area II.

Guerrero et al. (1993) conducted data recovery and archaeological monitoring procedures at the relocated Ritz-Carlton Hotel project area. A total of ten burials were discovered, five *in situ* and five were previously disturbed; all were relocated to the preservation portion of Site- 1342. Additionally 9 non-burial sites were recorded and comprised 43 features consisting of pre-contact cultural deposits, historic refuse areas, post-contact structures, fire pits, a prehistoric trail remnant and a terrace.

Petroglyphs were discovered during expansion work for Honoapi'ilani Highway at Honokōwai and `Alaeloa. Forty-six total petroglyphs were discovered on boulders at Honokōwai Gulch (Site-1207). Other sites included two walls, a trail and a small midden deposit. Site 1208 was discovered on the north slope of Honokōwai Gulch and was comprised of numerous stonewall alignments (Griffin and Lovelace, 1977).

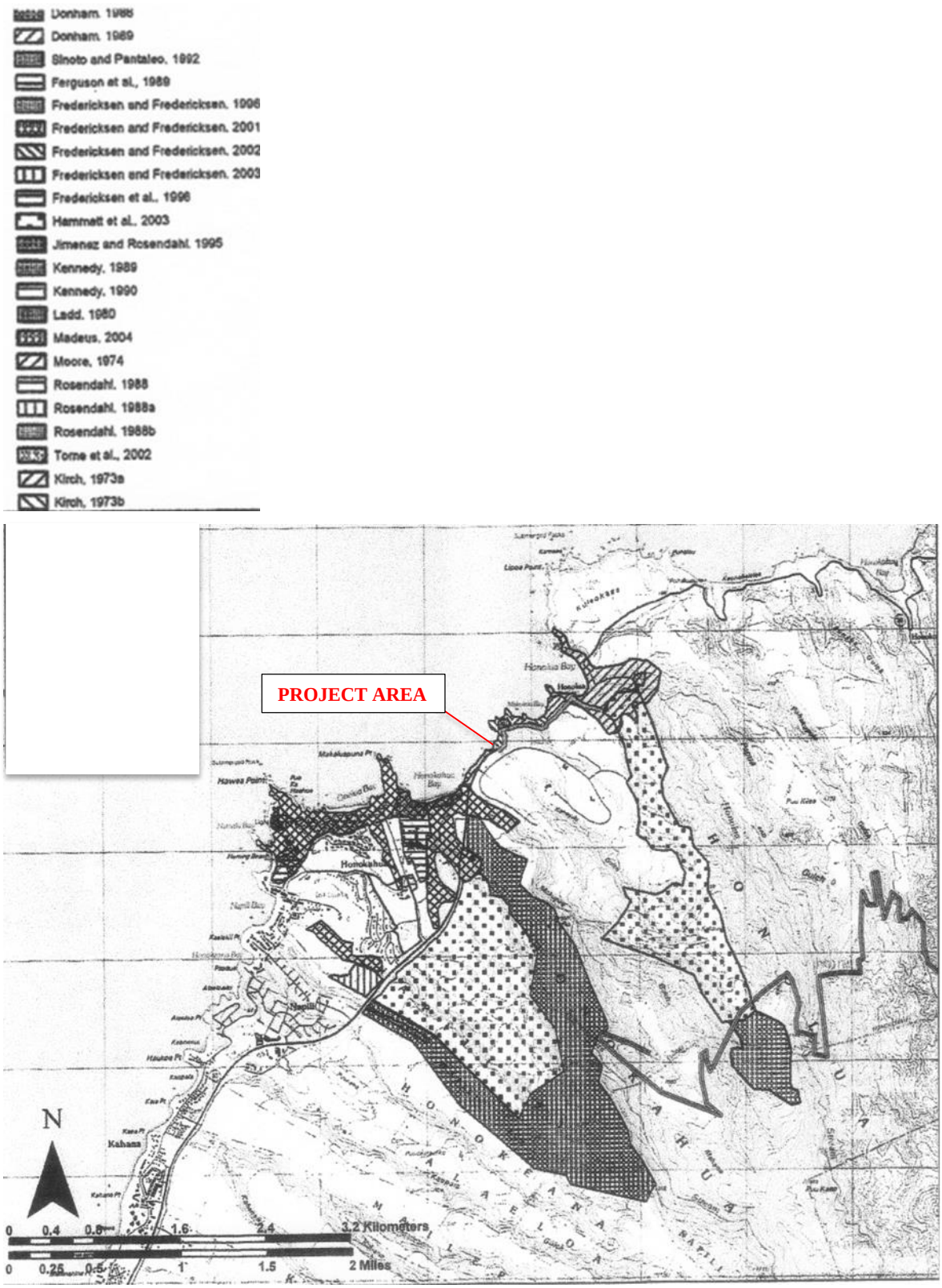


Figure 20. USGS Map Showing Broader View of Previous Archaeological Studies (from ASH Pantaleo 2008)

SETTLEMENT PATTERN

The traditional settlement pattern for the Kā'anapali coastal zone would appear to be permanent habitation with agricultural pursuits of taro *lo`i*, dryland taro and cultivation of *`uala* (sweet potato). Religious or ceremonial sites comprised of *ko`a*, *cairn* and *heiau* would also be present. Further inland, intensive and extensive *lo`i* fields with *`auwai*, temporary and permanent habitation sites along with agricultural features would be extant. These site types would comprise enclosures and platforms for permanent habitation, C-shapes and rockshelters with terraces for temporary habitation along with numerous terraces, modified outcrops and enclosures for agricultural pursuits. Religious sites may encompass large enclosures with paved platforms and internal compartments, small square-shaped enclosures with coral or upright stones and small formal rock mounds. *Mauka-makai* trails would connect the settlements along the coast with the upland complexes. Historic settlements were in response to the commercialization of sugar cane and pineapple cultivation as well as ranching activities. During this time period, permanent habitation was more prevalent along the coastline and in Plantation Camps, with minimal homesteads on *kuleana* parcels within the uplands

SITE EXPECTABILITY

Based on the foregoing discussion, along with the prior and current development of the property, subsurface cultural remains consisting of remnant alignments, posthole molds, hearths, cultural layers, trash pits, midden and artifact scatters or burials from the traditional and historic periods may be extant.

METHODS AND PROCEDURES

A review of prior archaeological studies and archival research, along with a cursory field inspection exemplified that the subject parcel may contain remnant sites from the pre-Contact and historic period. Thus, the AIS was comprised of a pedestrian survey and subsurface testing through mechanical excavations. Research was conducted at the SHPD and ASH libraries, and online.

The field inspection was performed by supervisor Ms. Lisa Rotunno-Hazuka (B.A.) on 19 February 2016, and the pedestrian survey and oversight of trench excavations was undertaken by Ms. Kanoe Keahi (Archaeological Assistant) and Ms. Lisa Rotunno-Hazuka on 23 and 24 March 2016. Overall coordination and direction and was performed by Ms. Lisa Rotunno-Hazuka and Mr. Jeffrey Pantaleo (M.A.) was the Principal Investigator.

FIELD WORK

The goal of the subsurface testing was to place all trench excavations within proposed development areas that would exceed 6 inches in depth. To accomplish this task, the A.P.E. on the north side was laid out and compared to the subsurface irrigation system. After this analysis, the proposed trenches were placed within the A.P.E. and excavations commenced. This testing method is systematic random sampling where the areas to be analyzed are chosen at random with a subsequent pre-determined strategy (Hester et. al. 2009). "Use of this sample technique guarantees more uniform coverage of an area than would likely occur with simple random sampling" (Hester et. al. 2009:29). This method also allows the investigator to obtain information about the subsurface conditions across the project area that aide in determining future excavation strategies for the area.

Trenches were excavated to 0.75 m bs which was below the proposed depth of construction which ranged from 0.40 m to 0.53 m bs. Excavations were conducted utilizing a Cat trackhoe with a 16 inch wide bucket, and all excavations were monitored and recorded. A representative stratigraphic profile was recorded at each trench location and soil samples were collected and compared among the trenches. All trenches were located on the Development Plan map provided by the client. During the course of this project, all accepted standard archaeological procedures and practices were followed.

LAB WORK

All soil samples were recorded for color and texture utilizing the Munsell color system. All soil samples shall be stored at the ASH lab until the monitoring and or construction phase of this project is complete. All raw data including but not limited to field notes, excavation and feature forms, maps, profiles and photographs is the sole property of Archaeological Services Hawaii, LLC. and shall be curated at the offices of ASH.

RESULTS

During the current course of fieldwork, a total of three trenches (TR's 1-3) were undertaken within the A.P.E. on the north side (Figures 21 and 22). As previously discussed, the proposed development or A.P.E. is marginal and will affect two localities situated on the north and southeast sides of the existing residence (see Figure 5). Along the north side, two linear areas are proposed for wall footings and designated as Areas A and B. Also proposed are small, square footings for post and pier construction of a covered lanai. On the southeast side (Area C), a slab on grade for parking is planned and will not exceed 6 inches in depth. Based on the nominal

excavations for the post and pier footings and slab on grade at Area C, no test excavations were undertaken.

For the north side, Area A measures approximately 11.9 m long (E/W) by 0.22 m wide (N/S) by 0.45 m to .53 m deep (39.0 ft. long by 0.75 ft. wide by 1.5 ft.to 1.75 ft. deep) and Area B measures 3.35 m long (N/S) by 0.22 m wide (E/W) by 0.30 m to 0.53 m deep (11.0 ft. long by 0.75 ft. wide by 1.0 ft. to 1.75 ft. deep) (see Figure 5).

TR's 1-3 were selectively placed in Areas A and B to ascertain presence absence of buried cultural remains, and to assess the subsurface conditions. The testing recovered disturbed soils up to 0.50 m deep, which were likely from prior improvements consisting of the installation of grass lawn and sod, extensive irrigation system and landscaping, as well as subsurface sewer and water lines. Within TR 2, a segment of a corroded cast-iron pipe (probably old sewer lateral) was identified near the base of excavations and within TR 1, an historic fire pit, Site 8328, was discovered and recorded. The trench excavations are further described and discussed below.

Figure 21. Overview Photograph of Trenches 1-3 within A.P.E. of Areas A and B

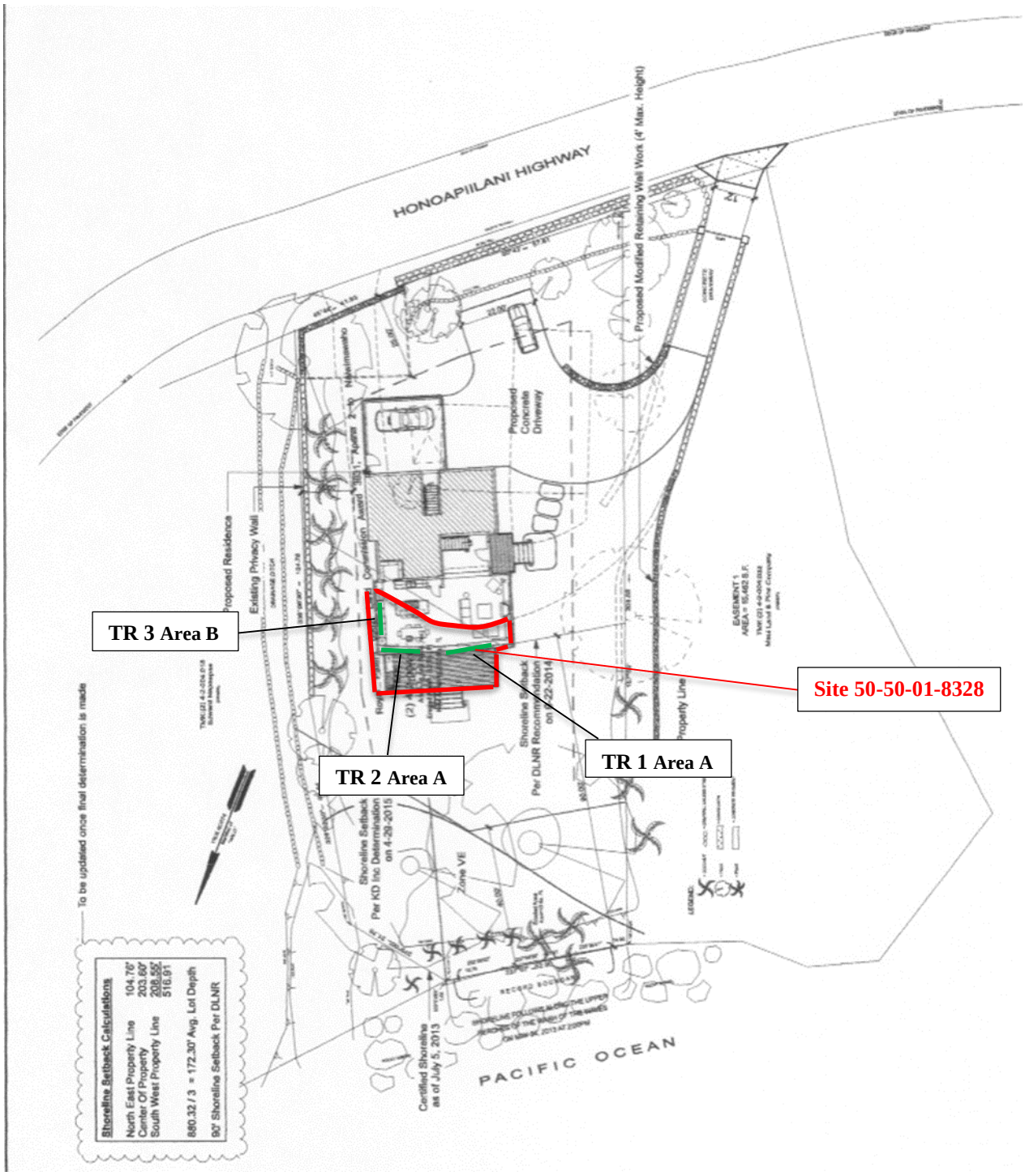


Figure 22. Plan View Development Map Showing A.P.E. Areas A and B (Red), Trenches 1-3 (TR1-3) and Site 8328

TRENCH 1

Trench 1 was placed in the northwest section of Area A for a proposed wall and measured 5.0 m long by 0.40 m wide by 0.74 m deep oriented at 247 degrees (Figures 22 and 23). The proposed depth for the wall is 0.53 m; however test excavations proceeded deeper to insure no historic properties or burial sites were extant in the area. TR 1 contained a two layer stratigraphic sequence with a remnant historic to modern fire pit in Layer II (Figures 23-26). Site 8328 was hemispherical in shape and located from 0.26 m bs to 0.50 m bs and 0.61 m wide. It contained fire-affected subangular rock with charcoal, sparse marine midden comprised of *pipipi* and cowrie (some of which was burned), land snails, small mammal jaw fragment (Feline) and unidentifiable metal. Most of the cultural materials exhibited burning; however several pieces were not fire-affected. Site 8328 appeared to be a single-use fire-pit possibly from the former landowners the Ka`aihue Ohana.

Figure 23. Overview Photograph of Trench 1 during Excavation (View to Northwest)

Layer I-0-.11/0.16 mbs is a dark brown (10YR3/3) clay loam mixed with top soil, numerous rootlets, few tubular roots, slightly sticky, slightly plastic. Non-cultural.
Layer II-0.16-0.74 mbs is a dark reddish brown (5YR3/3) silty clay to silty clay loam upper 40 cm disturbed contains sparse rootlets, several coral fragment inclusions, sparse marine shell and subangular rocks, lightly sticky, slightly plastic. Site 8328 (TS1) fire pit present within this layer.

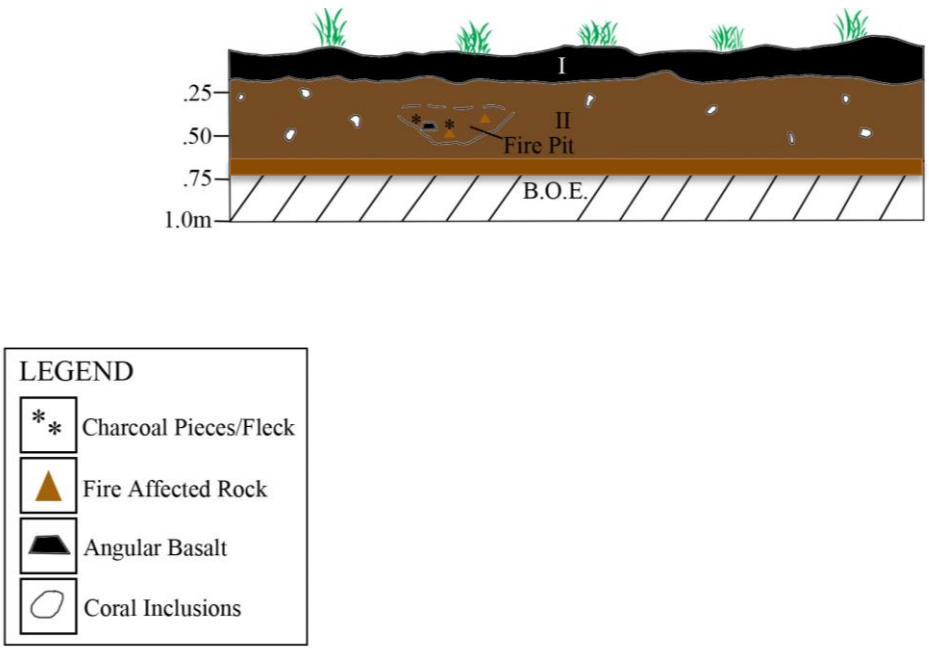


Figure 24. Stratigraphic Profile of North Wall at Trench 1 Showing Site 8328 (formerly TS1)

Figure 25. Close-up of Remnant Fire pit Site 50-50-05-8328 (TS1) in Trench 1 (View to North)

Figure 26. Photograph of South Wall at Trench 1

TRENCH 2

Trench 2 was placed in the northeast section of Area A and measured 4.6 m long by 0.40 m wide by 0.74/0.76 m deep oriented at 250 degrees (see Figure 22). It contained a two-layer stratigraphic sequence with numerous large boulders and an abandoned cast-iron pipe that was a probable sewer lateral from a former residence (Figures 27-29). TR 2 was devoid of cultural materials

> **Layer I**-0-0.08/0.12 mbs is a dark brown (10YR3/3) clay loam mixed with top soil, numerous rootlets, few tubular roots, slightly sticky, slightly plastic. Non-cultural.
> **Layer II**-0.08/0.12-0.75 mbs is a dark reddish brown (5YR3/3) gravelly, silty clay to silty clay loam portions disturbed up to 50 and 70 cm, sparse rootlets, few tubular roots, numerous large rounded (water worn) boulders, a few subangular cobbles, slightly sticky, slightly plastic. Dark yellowish brown (10YR4/3) sand was present around the abandoned cast iron pipe.

Figure 27. Photograph of TR 2 North Wall Showing Cast Iron Pipe (red arrow) (View to North)

Figure 28. Photograph of South Wall at TR 2 (View to South)

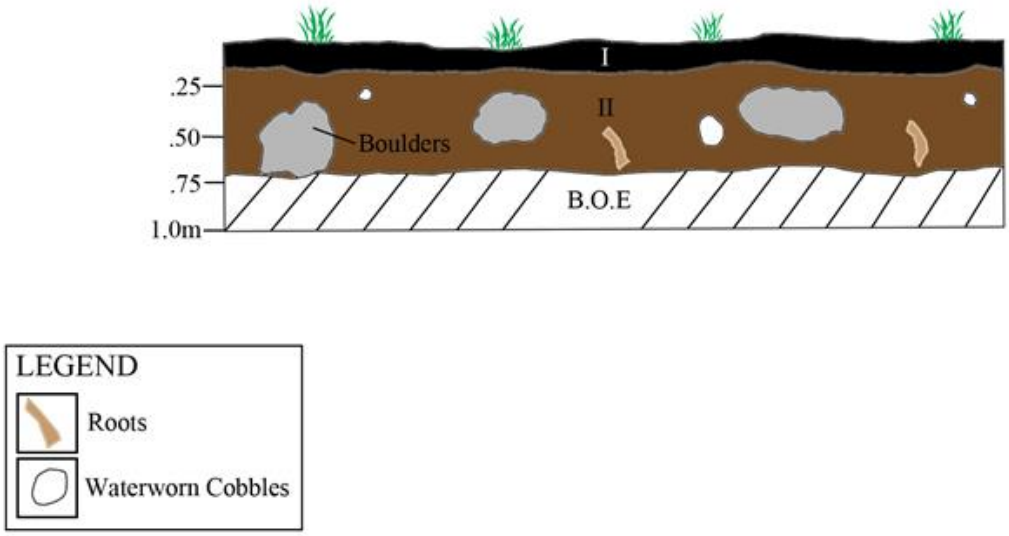


Figure 29. Stratigraphic Profile of North Wall at TR 2

TRENCH 3

Trench 3 was placed in the central portion of Area B for a proposed wall and measured 2.6 m long by 0.40 m wide by 0.74/0.76 m deep, oriented at 149 degrees (see Figure 22). It was devoid of cultural materials and contained the same two-layer stratigraphic sequence with a few rounded cobbles and numerous subangular cobbles and disturbance up to 0.50 m bs (Figures 30 and 31).

> **Layer I**-0-.11/.14 mbs is a dark brown (10YR3/3) clay loam mixed with top soil, numerous rootlets, few tubular roots, slightly sticky, slightly plastic. Non-cultural.
> **Layer II**-0.11/0.14-0.75 mbs is a dark reddish brown (5YR3/3) gravelly, silty clay to silty clay loam portions disturbed up to 50 cm, numerous rootlets, few tubular roots, several rounded (water worn) cobbles, a several subangular cobbles, slightly sticky, slightly plastic.

Figure 30. Photograph of East Wall at TR 3

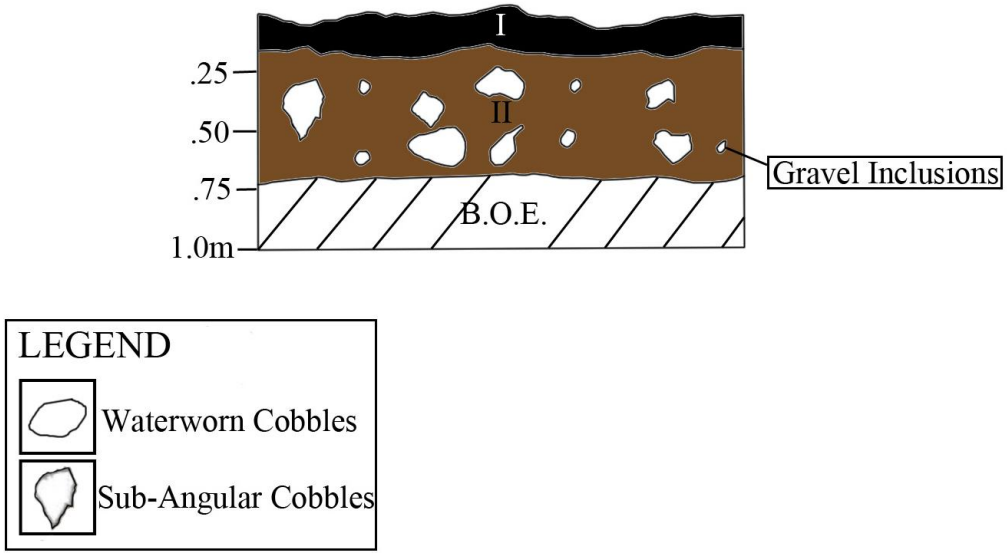


Figure 31. Stratigraphic Profile of West Wall at TR 3

INITIAL SIGNIFICANCE ASSESSMENT

In accordance with Hawaii Administrative Rules (HAR) §13-275-6, the initial significance assessments provided herein are not final until concurrence from the SHPD has been obtained. The sites identified during the survey are assessed for significance based on the following criteria:

> **Criterion A:** Be associated with events that have made an important contribution to the broad patterns of our history;
>
> **Criterion B:** Be associated with the lives of persons important in our past;
>
> **Criterion C:** Embody the distinctive characteristics of a type, period, or method of construction; represents the work of a master; or possesses high artistic value;
>
> **Criterion D:** Have yielded, or is likely to yield, information important for research on prehistory or history; or
>
> **Criterion E:** Have an important traditional cultural value to the native Hawaiian people or to another ethnic group of the state due to associations with cultural practices once carried out, or still carried out, at the property or due to associations with traditional beliefs, events or oral accounts; these associations being important to the group's history and cultural identity.

Based on the above criteria, Site 50-50-01-8328 is significant under Criterion D as it has yielded information on the prehistory and or history of the Kā'anapali region.

DISCUSSION AND RECOMMENDATIONS

Based on the background research, the subject parcel was likely utilized during both the traditional and historic periods for permanent habitation with marine exploitation along the shoreline and agricultural pursuits such as sweet potato or *lo`i* with a freshwater source to the east at Kahauiki Gulch.

During the current testing procedures, three trenches (TR's 1-3) were excavated within the Area of Potential Effect (A.P.E.) along the north side in Areas A and B. For this northern section, marginal excavations are proposed and comprise two perpendicular perimeter walls (Areas A and B) for the residential structure. Two other localities, Area C for a slab on grade and a few post and pier footings for a covered *lanai* were not subjected to testing due to the nominal excavations

(not to exceed 6 inches in depth). Excavations for the wall in Area A extends approximately 11.9 m long by 0.45 m to .53 m deep and testing of Area A was undertaken by Trenches 1 and 2 which covered around 9.6 m long by 0.75 m deep. Within Trench 1, an historic fire pit designated Site 50-50-01-8328 was documented and contained fire affected rock, charcoal, sparse marine shell, land snails, small mammal (cat) jaw fragment and unidentifiable metal. Based on significance evaluations, Site 8328 was assigned a significance of Criterion D and has been documented at the inventory level. No subsurface cultural materials were observed in TR 2. For Area B, the proposed construction excavations will measure approximately 3.35 m long by 0.30 m to 0.53 m deep and Trench 3 test excavations in Area B extended 2.6 m long by 0.75 m deep, and were negative for buried cultural materials.

The current AIS procedures comprised of background research, a pedestrian survey and subsurface excavations have adequately documented the subject parcel and tested accessible areas of the A.P.E. However, since demolition and additional excavations are planned within the current footprint of the residential structure; archaeological monitoring is recommended during these ground-altering activities. An Archaeological Monitoring Plan will be prepared and submitted to SHPD for review and approval prior to the commencement of construction activities.

REFERENCES

Armstrong, R.W. (Editor)

1983 *Atlas of Hawaii*, 2nd edition. The University of Hawaii Press, Honolulu, Hi.

Ashdown, I.

1971 *Ke Alaloa O Maui, The Broad Highway of Maui*. Ace Printing, Wailuku, Maui, HI.

Dega, Michael.

2015 *An Archaeological Monitoring Plan for Improvements at D.T. Fleming Beach Park for the County of Maui, Department of Parks and Recreation, Honokahua Ahupua'a, Lahaina District, Island of Maui, Hawaii (TMK: (2) 4-2-004:016).*

Donham, T.

1986 *Archaeological Survey and Test Excavations, Kapalua Hotel Development Site 2-H, Kapalua Bay Resort, Land of Honokahua, Lahaina, Island of Maui (TMK: 4-2-01:31).* PHRI, Hilo, HI.

1989 *Addendum Report: Additional Subsurface Testing of Area III: Subsurface Archaeological Testing, Revised Ritz-Carlton Kapalua Hotel, Project Site Areas I, II, and III. Land of Honokahua, Lahaina District, Island of Maui.* PHRI. On File SHPD Honolulu.

2000 *Data Recovery Excavations at the Honokahua Burial Site; Land of Honokahua, Lahaina District, Island of Maui*. PHRI. On File at SHPD Honolulu, Hi.

Ferguson, L., A. Carlson, B. Burgett, and P. Rosendahl

1989 *Subsurface Archaeological Testing, Revised Ritz-Carlton Kapalua Hotel Project Site Areas I and II, Land of Honokahua, Lahaina District, Island of Maui (TMK: 4-2-01:18 por.,19por.).* PHRI, Hilo.

Foote, D.E., E.L. Hill, S. Nakamura, and F. Stephens

1972 *Soil Survey of the Islands of Kauai, Oahu, Maui, Molokai and Lanai, State of Hawaii.* U.S. Department of Agriculture, Soil Conservation Science and University of Hawaii Agriculture Experimentation Station. Washington D.C., U.S. Govt. Printing Office.

Fredericksen, E.M.

2001 *Archaeological Monitoring Report for the Coconut Grove Development (Site 29), Honokahua and Napili* 2-3 Ahupua'a, *Lahaina District, Island of Maui* (TMK: 4-2-04:26). Xamanek Researches, Pukalani, Hi. On file SHPD, Kapolei, HI.

Fredericksen, E.M., D.L. Fredericksen, and W.M. Fredericksen

1994 *Archaeological Inventory Survey, of a 12.2 Acre Parcel, Honokahua and Napili2-3 Ahupua'a Lahaina District, Maui Island (TMK: 4-2-04:26).* Xamanek Researches, Pukalani, HI. On file SHPD, Kapolei, HI.

Fredericksen, E.M., W.M. Fredericksen, and D.L. Fredericksen
1996 *Archaeological Inventory Survey, Subsurface Testing at Kapalua Bay Hotel (TMK: 4-2-04:26), Honokahua and Napili 2-3 Ahupua'a Lahaina District, Maui Island*. Xamanek Researches, Pukalani, HI. On file at SHPD, Kapolei, HI.

Fredericksen, E.M., and D.L. Fredericksen
1998 *Archaeological Inventory Survey for the Proposed Golf Academy Project Kapalua, Maui, Hawaii (TMK: 4-2-04: por.23)* Xamanek Researches, Pukalani, HI. On file at SHPD, Kapolei, HI.

Giambelluca, T.W., M.A. Nuller, and T.A. Schroeder
1986 *Rainfall Atlas of Hawaii. Report R76*. Water Resources Research Center University of Hawaii, Manoa, for the Department of Land and Natural Resources, State of Hawaii, Honolulu, HI.

Guerriero, D., A. Charvet-Pond, and S. Goodfellow
1993 *Archaeological Monitoring and Data Recovery: Kapalua Ritz-Carlton Hotel Site*. PHRI, Hilo, HI. On file at SHPD, Kapolei, HI.

Haun, Alan, J. Henry, and D. Berrigan
2003 *Archaeological Data Recovery Sites 4141 and 4143 Land of Honolua Lahaina District, Island of Maui (TMK: (2) 4-2-4:31)* Haun & Associates Keaau, Hawaii.

Kamakau, S.M.
1992 *Ruling Chiefs of Hawaii Revised Edition*. Kamehameha Schools Press, Honolulu, Hawaii.

Kennedy, J.
1990 *Hawea Point Residential Project: archaeological Review, Survey and Assessments*. Archaeological Consultants of Hawaii, Haleiwa, HI. On file at SHPD, Kapolei, HI.

Kirch, P.V.
1973a *Archaeological Survey of the Honolua Development Area, Maui*. Department of Anthropology, B.P. Bishop Museum, Ms. 060673, Honolulu, HI.

1973b *Archaeological Excavations at Site D13-1, Hawae Point, Maui, Hawaiian Island*. Department of Anthropology, B.P. Bishop Museum, Ms. 091173, Project 77, Honolulu, HI.

1985 *Feathered Gods and Fishhooks: An Introduction to Hawaiian Archaeology and Prehistory*, University of Hawaii Press. Honolulu, HI.

Monahan, Christopher M.

2005 *An Archaeological Inventory Survey Report On Three Contiguous Parcels Measuring Approximately 25.3 Acres In Kapalua, Napili 2-3 Ahupua'a, Lahaina District, Maui Island, Hawaii (TMK:4-2-04: 27, 28, and 29).*

Morawski, Lauren, and M. Dega
2004 *Archaeological Inventory Survey Report of an Approximate 10-Acre Parcel in Kapalua in the Ahupua'a of Honokahua, District of Lahaina (Formerly Kā'anapali), Island of Maui, Hawaii (TMK (2) 4-2-004: 037 and a Portion of 4-2-004:24).*

Perzinski, David, and M. Dega
2009 *Addendum Archaeological Inventory Survey on a Portion of 25.3-Acre Parcel in Kapalua, Napili 2-3 Ahupua'a Lahaina District, Maui Island, Hawaii (TMK: 4-2-04: 27, 28, and 29).*

Pukui, Mary Kawena, Samuel H. Elbert and Esther T. Mookini
1974 Place Names of Hawaii. Honolulu: University of Hawaii Press

Pukui, Mary Kawena and Samuel H. Elbert
1986 Hawaiian Dictionary. Honolulu: University of Hawaii Press.

Rosendahl, M.
1988 *Archaeological Reconnaissance Survey, The Cottages Project Area, Kapalua Development Site 2-A Lands of Honokahua and Napili 2 and 3, Lahaina District Island of Maui. PHRI, Hilo HI*. On file SHPD, Kapolei, HI.

Rosendahl, P.H.
1988 *Archaeological Field Inspection, Hawea Point Residences Site, Hawea Point, Lands of Napili 2 and 3, Lahaina District, Island of Maui. PHRI, Hilo, HI.* On file SHPD, Kapolei, HI.

1988b *Subsurface Reconnaissance Testing, Kapalua Place Project Area, Kapalua Development Site 2-A, Lands of Honokahua and Napili 2 and 3, Lahaina District, Island of Maui (TMK: 4-2-01:25). PHRI, Hilo, HI. On file SHPD, Kapolei, HI.*

Sterling, Elspeth P.
1998 *Sites of Maui.* Bishop Museum Press Honolulu, HI.

Tome, Guerrin and Michael Dega
2008 *An Archaeological Inventory Survey for the Proposed Kapalua Coastal Trail Located in the Areas of Napili, Kapalua, Honokahua, and Honolua, Ahupua'a of Napili 2 and 3 Honokahua, Lahaina District, Island of Maui, Hawaii (TMK: (2) 4-2-001 through 005).* Scientific Consultant Services, Honolulu, HI.

Walker, Winslow
1931 *Archaeology of Maui*. Ms. In Dept. Anthropology. B.P. Bishop Museum, Honolulu.

Wilcox, Carol
1997 *Sugar Water Hawaii's Plantation Ditches*. University of Hawaii Press, Honolulu Hawaii.

APPENDIX G
Archaeological Monitoring Plan

DRAFT ARCHAEOLOGICAL MONITORING PLAN FOR DEMOLITION AND NEW CONSTRUCTION AT A SHORELINE PARCEL IN HONOLUA *AHUPUA'A*, LĀHAINĀ DISTRICT, KĀ`ANAPLI MOKU ISLAND OF MAUI TMK: (2) 4-2-004:019

FOR: Mr. Bill Engel-Landowner

BY: Lisa J. Rotunno-Hazuka (B.A.)

MAY 2016

ARCHAEOLOGICAL SERVICES HAWAII, LLC.
POB 1015
PU`UNĒNĒ, HI 96784

"Protecting, Preserving, Interpreting the Past, While Planning the Future"

INTRODUCTION

Under contract to Mr. Bill Engel–landowner, and pursuant to past recommendations by the State Historic Preservation Division-SHPD and the Archaeological Inventory Survey (AIS), Archaeological Services Hawaii, LLC (ASH) of Pu`unēnē has prepared this Archaeological Monitoring Plan (AMP) according to the rules and regulations set forth in the Hawaii Administrative Rules (HAR) §13-279. Archaeological monitoring will be performed during all ground-disturbing activities to be conducted at Honolua *ahupua'a*, Lāhainā District, Kā`anapali Moku, Island of Maui, TMK [2] 4-2-004:019 (Figures 1-5).

The proposed activities consist of the demolition of an existing residential structure and carport, as well as the new construction of a two-story residence and garage and upgrades to water, sewer and electrical where applicable (see Figures 4 and 5). The new residence will be constructed primarily within the existing footprint of the current residence; however a small portion of new development will extend beyond the building footprint to the north and southeast.

Inventory level testing was recently performed by ASH along the northern portion of the existing residence (Sheets et. al. 2016). A total of three backhoe trenches (TR's 1-3) were executed during the AIS and exemplified that the subsurface had been disturbed up to 0.50 m; however one remnant historic fire-pit designated Site 50-50-01-8328 was identified (see Figure 5). The fire-pit measured approximately 60 cm long by 35 cm thick and contained fire affected rock, sparse charcoal, marine shell, a small mammal fragment and a piece of unidentifiable metal. Site 8328 was assigned a significance of Criterion d and no further work beyond construction monitoring was recommended.

PROJECT AREA DESCRIPTION

The project area is an 18,519 sq. ft. improved parcel located along the northwestern flank of West Maui in Honolua. It is fully developed with a residential structure, carport, subsurface water, sewer and an extensive irrigation system and landscaping along a rocky shoreline. The subject parcel consists of a small inlet or alcove between a low bluff on the west and a basalt outcrop peninsula to the east. Also noted to the east is a rock-lined ditch for Kahauiki Gulch.

EXPECTABILITY OF SITES

Based on the foregoing discussion, the parcel has been subjected to compounded disturbances from prior development during the historic and modern era's; however due to the documentation of a remnant fire pit, Site 8328, additional disturbed or truncated features may be extant. Thus, all ground-disturbing activities associated with construction will be monitored full-time.

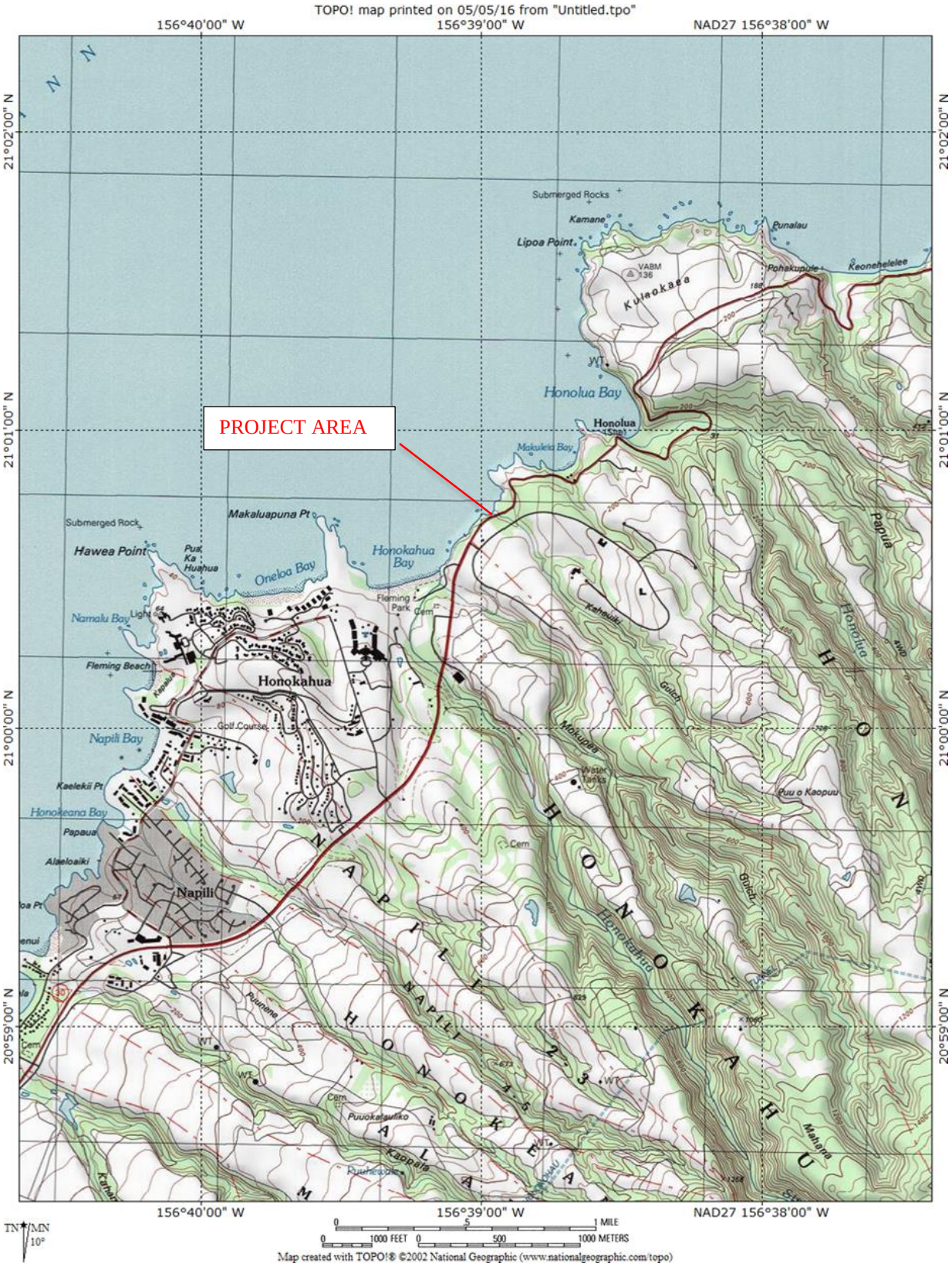


Figure 1. USGS Map Showing Location of Project Area

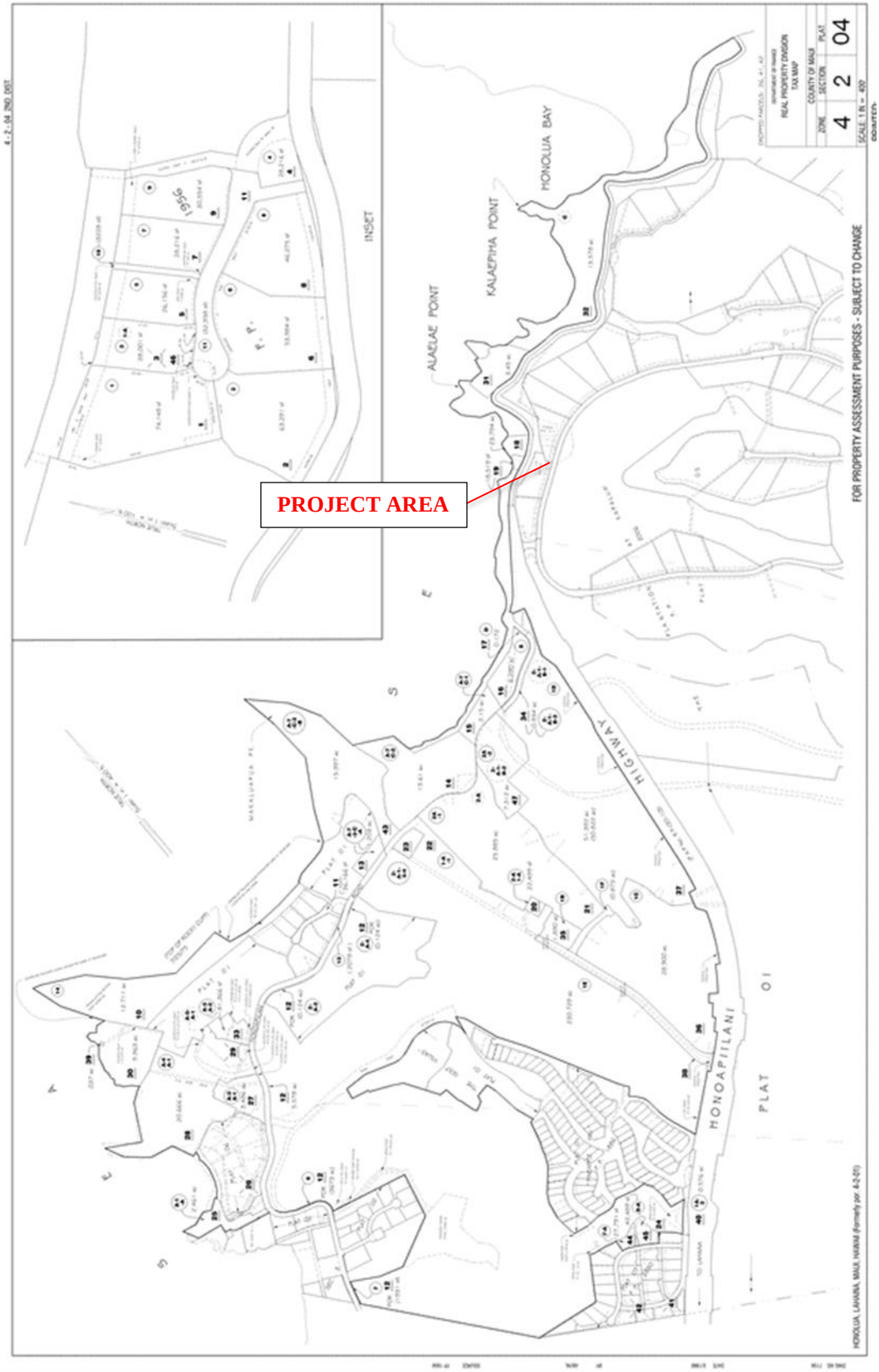


Figure 2. Location of Project Area on Tax Map Key (TMK) 4-2-004

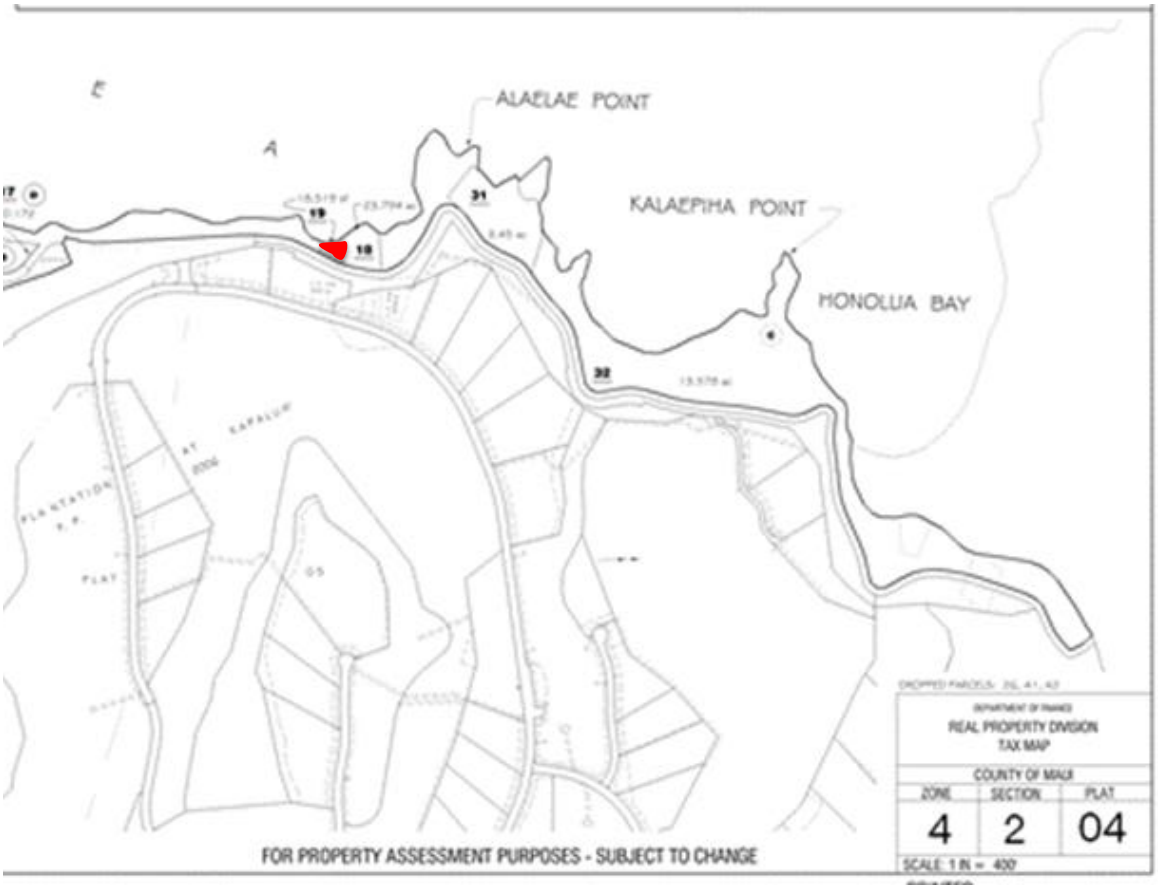


Figure 3. Enlarged TMK Map from Figure 2 Showing Project Area in Red

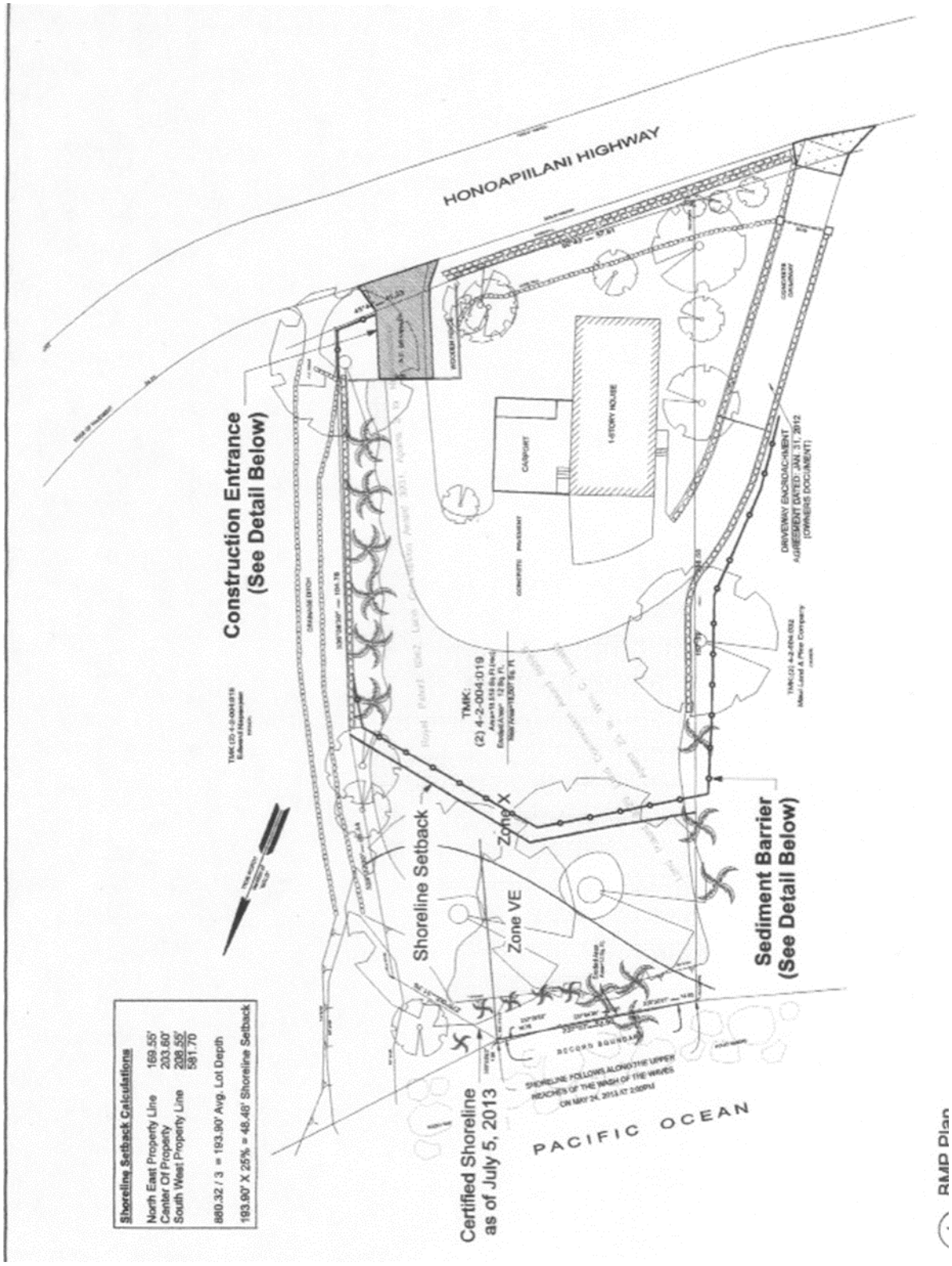


Figure 4. Project Area Map Showing Existing Conditions

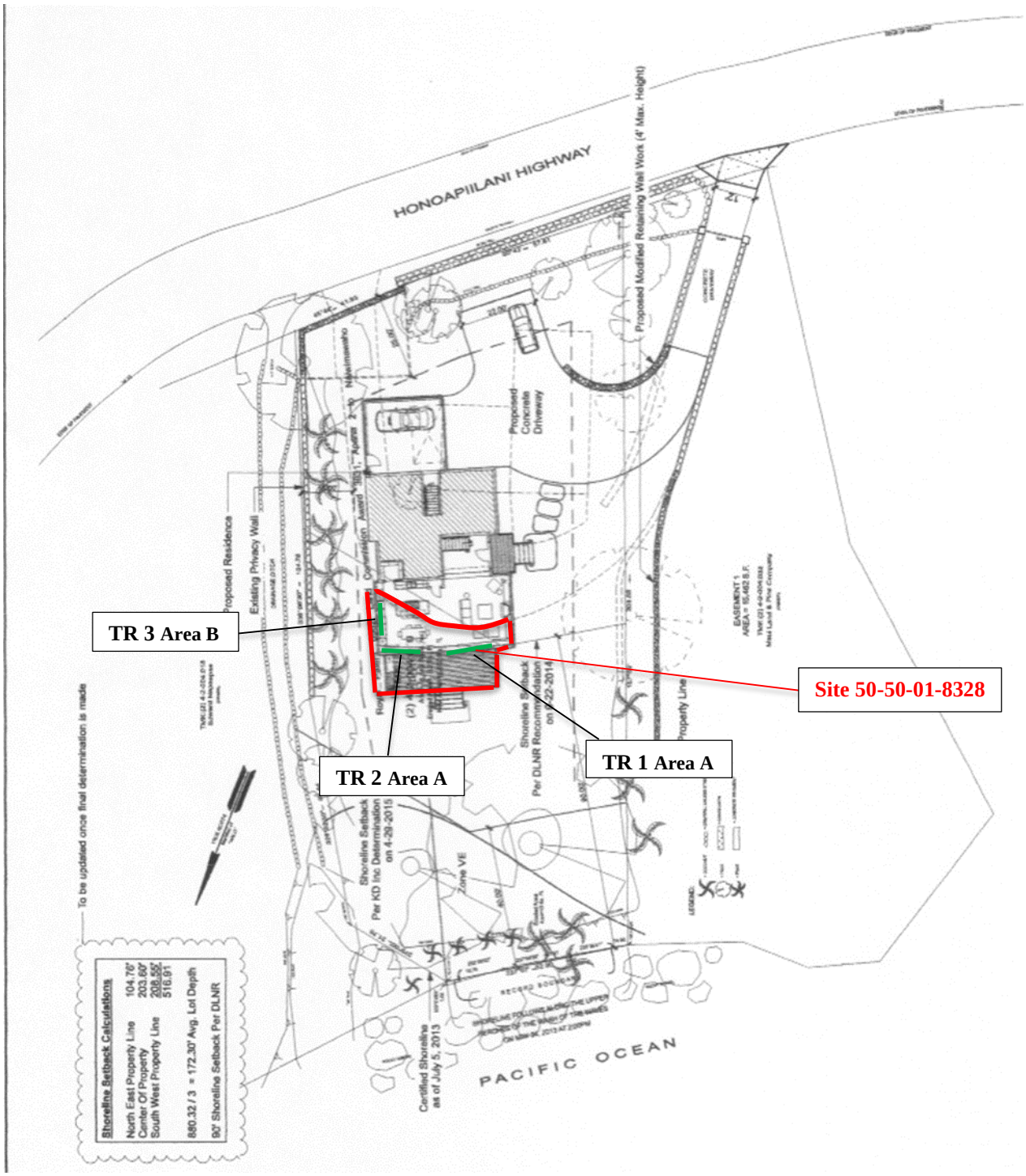


Figure 5. Plan View Development Map Showing A.P.E. Areas A and B (Red), Trenches 1-3 (TR1-3) and Site 8328

MONITORING PLAN

The construction plans call for excavations ranging from 0.5 ft. to 2.0 ft. deep. Full-time monitoring will be the protocol for this project. In the event that bedrock is encountered, monitoring procedures may need to be adjusted; however no changes may be made without consultation and approval by SHPD in writing. SHPD will also be notified of the onset and completion of the proposed undertaking.

One archaeological monitor per piece of ground-disturbing equipment is the protocol for this monitoring project. Dependent on availability, Maui resident archaeologists will be assigned to this project. Prior to the commencement of construction, all pertinent parties including but not limited to construction and archaeological personnel will be informed of the monitoring procedures as stipulated in this monitoring plan, including the monitors' authority to halt work in the vicinity of a find. If subsurface sites are exposed during construction, the procedures for the inadvertent discovery of historic properties pursuant to HAR §13-280 and §13-279 (5)-(6) will be instituted. First, all activities in the immediate area will temporarily halt and construction may shift to other areas of the project. Once the archaeologist makes an assessment, they will then consult with SHPD Archaeology Branch to determine the appropriate mitigation measures for the findings (site). The area around the site shall be protected by erecting orange fencing or yellow caution tape and the site will be recorded utilizing all standard archaeological methods and procedures. Stratigraphic profiles will be drawn, photographs will be taken, and soil samples collected not only from the subsurface site, but from selected locations within the project area. If nighttime work is performed, the general contractor must notify the consulting archaeologist at least 3 days in advance. The archaeological monitor has sole discretion to determine if lighting is adequate to perform visual inspections of the soil.

If historic bottles are found they are to be collected by the archaeologist. No bottles may be collected or taken by construction personnel, inspectors and etc.

In the event that human remains are inadvertently exposed during this undertaking, the procedures for the inadvertent discovery of human skeletal remains pursuant to HRS Chapter 6E-43.6 and HAR §13-300-40 will be instituted. Similar to the above, all activities in the immediate area of the find will temporarily be suspended. After an initial assessment is made by SHPD-Culture and History Branch, and representative of the Maui/Lana'i

Islands Burial Council-MLIBC (if the skeletal remains are believed to be Native Hawaiian), procedures for documenting the burial find shall be undertaken. These mitigation measures may include mapping and collecting displaced human skeletal remains; however no human skeletal remains will be collected without authorization from SHPD. Additional documentation and recovery procedures may include, raking and screening of the area to collect all disturbed human remains, as well as formal manual excavations to ascertain the context (*in situ* or displaced) and number of individuals represented by the skeletal remains.

POSSIBLE PROCEDURES FOR INADVERTENLY DISCOVERED HUMAN SKELETAL REMAINS

Potential procedures for exposed skeletal remains and possible burial pit outlines are presented below.

1. Upon the identification of scattered or fragmented human remains, possible burial pits, and or basalt and coral manuports, all construction activities in the immediate area of the find will be temporarily suspended.

2. SHPD and the MLIBC shall be notified.

3. Identify the perimeter of the avoidance area with yellow caution tape, and or orange construction fencing and if applicable, cover exposed skeletal remains to protect them from the elements.

4. Inspect the base and walls of trench or excavation pit to identify if a primary burial feature is extant. If present, notify SHPD and request permission to test the possible burial feature. Once authorization has been received, conduct the necessary testing and documentation to ascertain the context.

5. Manually rake and screen (if applicable) bulldozed or other mechanically produced push piles to collect all disturbed and fragmented skeletal remains.

6. Complete an osteological inventory of the collected remains to determine the number of individuals and if components may be left *in situ* or missing.

7. Fill out all test excavation and burial forms and cover burial feature with a thin layer of sand (if SHPD and MLIBC have seen the feature) and tarp.

After the above referenced procedures have been performed, a Burial Component of an Archaeological Data Recovery Plan or Preservation Plan shall be prepared in consultation with the owner, SHPD and the MLIBC (if the remains are believed to be Native Hawaiian).

Upon completion of the fieldwork, all necessary lab procedures including but not limited to processing, cataloguing and analyses of artifacts and photographs; analyses of soil samples

as warranted, and submission of charcoal samples for radiocarbon dating, if applicable will be performed. The above analyses will be synthesized into a final monitoring report, and the report shall be submitted to the SHPD-Maui office for review and approval. All artifacts, with the exception of grave goods, will be returned to the landowner. All soil samples, photographs and field forms will be archived at the consulting firms' office.

REFERENCES

Sheets, Matthew Cody, Lisa Rotunno-Hazuka and Jeffrey Pantaleo
2016 *Draft Archaeological Inventory Survey of a Shoreline Parcel situated in Honolua ahupua`a, Lāhainā District, Kā`anapali Moku, Island of Maui. TMK: (2) 4-2-004:019*. Prepared for Mr. Bill Engel.

APPENDIX H
Preliminary Engineering Report

PRELIMINARY ENGINEERING REPORT

FOR

The William Engel Trust

6245 Honoapi'ilani Highway
Honolua, Maui, Hawaii

TMK: (2) 4-2-004: 019

Prepared by
Alika P. Seki, P.E.

May 24, 2016

LINDA VANDEGRAAFF TAYLOR
LICENSED PROFESSIONAL ENGINEER
No. 6507-C
HAWAII, U.S.A.

This work has been prepared by me or under my supervision.

Linda V. Taylor, P.E.

Linda Taylor Engineering, Inc.
P.O. Box 779, Makawao, Maui, Hawai'i, 96768
(808) 572-2688

The William Engel Trust
6245 Honoapi'ilani Highway
Honolua, Maui, Hawaii
TMK: (2) 4-2-004:019

TABLE OF CONTENTS

	Page
Introduction	3
Existing Infrastructure	
Roadways	3
Drainage	4
Sewer	4
Water	4
Other Utilities (Phone, Cable, Electrical)	4
Anticipated Infrastructure Improvements	
Roadways	5
Drainage	5
Sewer	5
Water	5
Other Utilities (Phone, Cable, Electrical)	5

EXHIBITS

A. Existing Condition – topographic survey, Valencia Land Surveying (July 5, 2013)
B. Proposed Condition – proposed site plan, Kasprzycki Design, Inc. (July 4, 2015)

CALCULATIONS

Universal Rational Method Calculation with Unit Hydrograph

INTRODUCTION

The purpose of this report is to provide information on the existing infrastructure which will be servicing the proposed project. It will also evaluate the adequacy of the existing infrastructure and anticipated improvements which may be required for the proposed project.

The site is located at 6245 Honoapi'ilani Highway, Honolua, Maui, Hawaii, and is designated by Tax Map Key (2) 4-2-004: 019. The property is approximately 18,519 square feet in size. The property is accessed via Honoapi'ilani Highway by an access easement over the adjacent lot to the west, designated by TMK (2) 4-2-004: 032.

The property is bounded on the north by the Ocean, to the south by Hanoapi'ilani Highway, to the east directly by an existing drainage ditch, and to the east and west by undeveloped land. Directly across Hanoapi'ilani Highway to the south is the Kapalua Plantation Estates Subdivision. Currently there is a house on the property with an existing driveway from Hanoapi'ilani Highway.

The owner intends to donate the existing 1,012 square foot structure to a family in Paia. The house will be dismantled and transported to another property with the proper permits. This will leave the property vacant in order to construct an approximately 3,498.12 square foot, two-story, single-family residence with a two car garage, covered decks, driveway, retaining walls, and related landscape plantings and site amenities (See: Figure Nos. 5.1–5.4, "Architectural Plans"). The existing structure and majority of the existing driveway will be removed along with the large overgrown ficus tree and a portion of the retaining wall along the driveway.

The overall depth of the dwelling is approximately 89 feet 6 inches including stairs and its width is approximately 47 feet 3 inches including stairs but not including any roof overhangs. The highest point of the structure is approximately 22 feet 6 inches above grade.

The proposed residence consists of 3 bedrooms, 3 bathrooms, 1 powder room, kitchen, dining room, living room, study, laundry room, entry foyer, and two car garage with direct access to the structure. There is a covered entry deck and covered decks off the living/dining areas and the master bedroom upstairs. Both covered lanais face the ocean to the north.

EXISTING INFRACTRUCTURE:

ROADWAYS

The property is fronted to the south by Hanoapi'ilani Highway. Vehicular access to the property is currently via an access easement over the adjacent lot to the west, designated by TMK (2) 4-2-004: 032.

The posted speed limit along Hanoapi'ilani Highway fronting the subject property is 35 miles per hour. The required sight distance for 35 mph to the left is 350 feet and to the right is 350 feet. The sight distance for the existing driveway to access is evaluated as follows; LEFT approximately 180', RIGHT approximately 400'. Sight distance for the subject driveway is adequate to the right and inadequate to the left.

DRAINAGE
The lot is slightly lower in elevation than the adjacent roadways and properties. On-site stormwater runoff appears to flow from the property to the south to the Pacific Ocean in an southeast to northwest direction. The subject lot slopes an average of 5% from east to west.

According to the "Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii (August, 1972)," prepared by the United States Department of Agriculture Soil Conservation Service, the soils within the project site are classified as rRR Rough Broken Land and rRK Rock Land. This soil type is characterized as having low runoff and high permeability. The hazard of erosion is moderate.

WASTEWATER
The existing structure is served by a cesspool. The cesspool will be backfilled and abandoned.

WATER
The existing 5/8" water meter providing water from Kapalua Water Company and serviced by Aqua Engineers currently serves the existing structure.

FIRE PROTECTION
There is no apparent fire protection existing for the site.

ELECTRIC, TELEPHONE AND CABLE TV
Electric service to the property is brought by overhead power line.

<u>ANTICIPATED INFRASTRUCTURE IMPROVEMENTS:</u>

ROADWAYS
According to the proposed plan, the existing driveway on the northern portion of the property will be removed and blocked by a new wall. The other existing driveway to the south of the subject property frontage will remain, and continue to serve the property via access easement through the intermediary property delineated by TMK (2) 4-2-004: 032.

DRAINAGE
For onsite drainage, drainage areas of 100 acres of less, the Rational Method, as described in the "Title MC-15, Department of Public Works and Waste Management, County of Maui, Chapter 4, rules for the design of Storm drainage Facilities in the County of Maui" are used in calculating rainfall runoff. Calculations are based on a 50-year storm event.

An **increase** in runoff of approximately **0.20 cfs** will be expected due to the proposed improvements. The existing runoff volume for the subject site is **369 CF**. The proposed runoff due to the anticipated improvements will be **481 CF**. The net increase in runoff due to the anticipated improvements is **112 CF**. See attached calculations. The net increase in runoff volume

of **112 CF** should be retained on site in an above ground retention basin or underground retention system.

WASTEWATER
A new Individual Wastewater System (IWS) will be installed with a new septic tank. The new soil absorption field will be sized for a capacity of 3 bedrooms. The minimum 50 ft setback from the shoreline certification line per Hawai'i Administrative Rules, DOH, Title, 11- 62, Appendix D-Table II can be met by placing a traffic rated soil absorption field under the turn around area of the driveway. This will maximize separation from the ocean and the effluent disposal area. Should the IWS be located closer to the ocean, within the 50 feet setback, an aerobic tank will be required to treat the effluent before it enters the soil absorption field.

WATER
The existing 5/8" water meter has a capacity of 30.1 fixture units or 20 gallons per minute, according to the County of Maui Department of Water Supply standards. Water use calculations shall be completed for the new usage to determine whether the existing 5/8" water meter will have adequate capacity for new fixtures in the proposed residence, or if an upgrade will be required.

FIRE PROTECTION
A sprinkler system shall be provided for the new structure.

ELECTRIC, TELEPHONE AND CABLE TV
Power poles will remain in place on the shoulder of Honoapi'ilani Highway. Electrical service will continue from the overhead power lines from the existing power poles.

EXHIBITS

A. Existing Condition – topographic survey, Valencia Land Surveying (July 5, 2013)
B. Proposed Condition – proposed site plan, Kasprzycki Design, Inc. (July 4, 2015)

TRUE NORTH
Meridian of "MALO"
SCALE: 1"=10'

TMK:(2) 4-2-004:018
Edward Napaepae
(OWNER)

DRAINAGE DITCH

A. C. SWALE

336°08'30" — 104.78

328°02'30" — 65.44

279°00' — 31.76

45°44' — 41.93

50°43' — 57.61

157°59' — 208.55

FND.3/4"PIPE

TOP BANK
TOE BANK

ROCKY SHORE

333°02'02"
1.00

232°26'02"
16.75

237°07' — 52.90 (rec)

237°04'30"
21.41

239°29' — 15.52

Eroded Area
Area=34 Sq. Ft.

TMK:
(2) 4-2-004:019
Area=18,519 Sq.Ft.(rec)
Eroded Area= 34 Sq. Ft.
New Area=18,488 Sq. Ft.

Royal Patent 6962, Land Commission Award 3931, Apana 2 to Naiwimawaho

Land Commission Award 8559-B, Lunalilo

Land Patent 8129, Apana 23 to Wm. C.

A.C. DRIVEWAY

GATE

WOODEN FENCE

CONCRETE PAVEMENT

CARPORT

1-STORY HOUSE

CONCRETE DRIVEWAY

STONE WALL

EDGE OF PAVEMENT

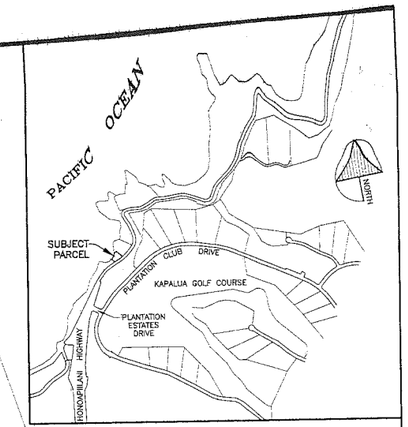
HONOAPIILANI HIGHWAY

PACIFIC OCEAN

SHORELINE FOLLOWS ALONG THE UPPER REACHES OF THE WASH/OF THE WAVES ON JULY 30, 2016 AT 5:00 PM

JULY 5, 2013 CERTIFIED SHORELINE

TMK:(2) 4-2-004:032
Maui Land & Pine Company
(OWNER)



VICINITY MAP
(NTS)

The shoreline as delineated in red is hereby certified as the shoreline as of
NOV - 3 2016
Chairperson, Board of Land and Natural Resources

Shoreline Verification

(FOR BUILDING SETBACK PURPOSES)

TMK:(2) 4-2-004:019

Being portions of Royal Patent 6962, Land Commission Award 3931 Apana 2 to Naiwimawaho and Land Patent 8129, Land Commission Award 8559-B, Apana 23 to Wm. C. Lunalilo

HONOLUA, KAANAPALI, MAUI, HAWAII

NOTES:

1. This map is based from a survey performed on May 24, 2013, and July 30, 2016.
2. Coordinates and azimuths are based from Triangulation Station "MALO" and its meridian was established from found boundary corner monuments of this lot.

LEGEND:

= COCONUT = CRM WALL UNLESS OTHERWISE NOTED
= TREE = GRASS LAWN
= PALM = CONCRETE PAVEMENT

T.M.K.: (2) 4-2-04:019

Scale 1" = 10 ft

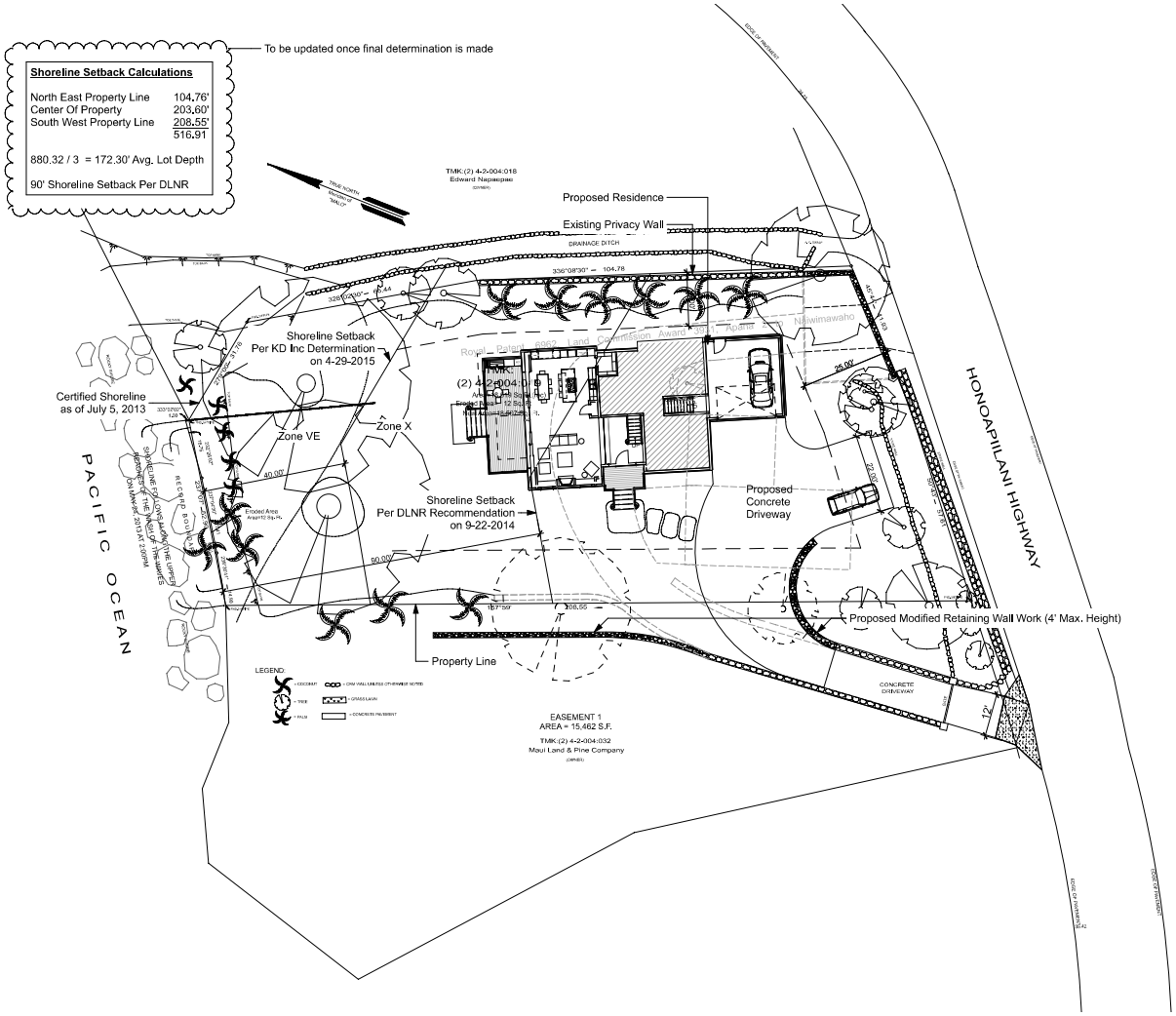
Property Address:
6245 Honoapiilani Highway
Lahaina, Hawaii 96761

Owner:
William and Mary Engel
6245 Honoapiilani Highway
Lahaina, Hawaii 96761

Prepared by:
VALENCIA LAND SURVEYING
P.O. Box 546
Lahaina, Hawaii 96767
Tel. 808-661-3257 /385-6110

This work was prepared by me or under my direct supervision.
VALENCIA LAND SURVEYING
Arthur P. Valencia 8/12/16
ARTHUR P. VALENCIA
Licensed Professional Land Surveyor
State of Hawaii Certificate No. 10026
Exp. Date: 4-30-18
Tel. 808-661-3257 /385-6110

ARTHUR P. VALENCIA
LICENSED PROFESSIONAL LAND SURVEYOR
No. 10026
HAWAII, U.S.A.



1 Site Plan
SCALE: 1/16" = 1'-0"

Revisions:	By:

KASPRZYCKI DESIGNS, INC.
Hawaii Architects
Main (808) 667-9116
P.O. Box 10517 Lahaina HI 96761 USA
kasprzyckidesigns@maui.net.com
www.KasprzyckiDesigns.com

ALDIK. KASPRZYCKI
LICENSED PROFESSIONAL ARCHITECT
NO. AR-16158
HAWAII U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION. EXPIRATION DATE OF LICENSE 4/30/16

Signature

Engel Residence
A Proposed Residence
6245 Honoapiilani Hwy., Lahaina HI 96761 USA
TMK: (2) 4-2-004:019

Preliminary Site Plan

Date: 7-4-2015
Phase: DD Set V3
Drawn: AA
Job: 14-ERK
Sheet Number: A-1
Total Sheet Count: ##

The William Engel Trust
6245 Honoapi'ilani Highway
Honolua, Maui, Hawaii
TMK: (2) 4-2-004:019

CALCULATIONS

Universal Rational Method Calculation with Unit Hydrograph

Linda Taylor Engineering, Inc
P.O. Box 779, Makawao, Maui, Hawai'i, 96768
(808) 572-2688

Date: May 17, 2016

HYDROLOGIC CALCULATIONS: TOTAL ANTICIPATED IMPROVEMENTS

Objective: To Determine the storage requirements for anticipated increase in onsite surface runoff attributable to the project development. A recurrence interval of fifty (50) years is used.

I. Project Parameters:

50-Yr. - 1-Hr. Rainfall:

From "Rainfall Frequency Atlas of the Hawaiian Islands", for Kapalua, Maui,
R(50 Yr. - 1 Hr.) = 3.00 inches

Total Area:

Area (Ac.):		**18,519 SF =**	**0.425**

II. Determine Pre-Development Runoff:

Pre-Development Runoff Coefficients:

Infiltration:	Medium	0.07
Relief:	Rolling (5-15%)	0.03
Vegetal Cover:	High (50-90%)	0.00
Development Type:	Agricultural	0.15
Runoff Coeff., $c_{undeveloped}$:		0.25

$c_{undeveloped}$: 0.25 ; $C_{impervious}$: 0.95

$$C_{weighted} = \frac{A_{impervious}C_{impervious} + A_{undeveloped}C_{undeveloped}}{A_{total}}$$

$$\frac{4{,}575 \text{ SF} \times 0.95 + 13{,}944 \text{ SF} \times 0.25}{18{,}519 \text{ S.F.}} = \mathbf{0.42}$$

Pre-Development Time of Concentration:

Approx. Elev. Diff'l (ft):		4
Higher Elev. (ft):	24	
Lower Elev. (ft):	20	
Approx. Runoff Length (ft):		70
Average Slope:		5.7%
Time of Concentraion (min.):		7.5

Pre-Development Intensity:

Intensity (in/hr.): **6.88**

Pre-Development Runoff:

$Q = C_{weighted} \times I \times A$ (cfs): **1.23**

Allowable Release Volume - Q (allowable): **1.23**

III. Determine Post-Development Runoff:

Post-Development Runoff Coefficients:

Runoff Coeff., $c_{undeveloped}$: 0.25

$c_{undeveloped}$: 0.25 ; $C_{impervious}$: 0.98

$$C_{weighted} = \frac{A_{impervious}C_{impervious} + A_{undeveloped}C_{undeveloped}}{A_{total}}$$

$$\frac{6{,}450 \text{ SF} \times 0.95 + 12{,}069 \text{ SF} \times 0.25}{18{,}519 \text{ S.F.}} = \mathbf{0.49}$$

(next page)

HYDROLOGIC CALCULATIONS: TOTAL ANTICIPATED IMPROVEMENTS (continued)

Post-Development Time of Concentration:

Approx. Elev. Diff'l (ft):		4
Higher Elev. (ft):	24	
Lower Elev. (ft):	20	
Approx. Runoff Length (ft):		70
Average Slope:		5.7%
Time of Concentraion (min.):		7.5

Post-Development Intensity:

Intensity (in/hr.): **6.88**

Post-Development Total Runoff:

$Q = C_{weighted} \times I \times A$ (cfs): **1.43**

IV. Determine Adequacy of Storage Colume Provided:

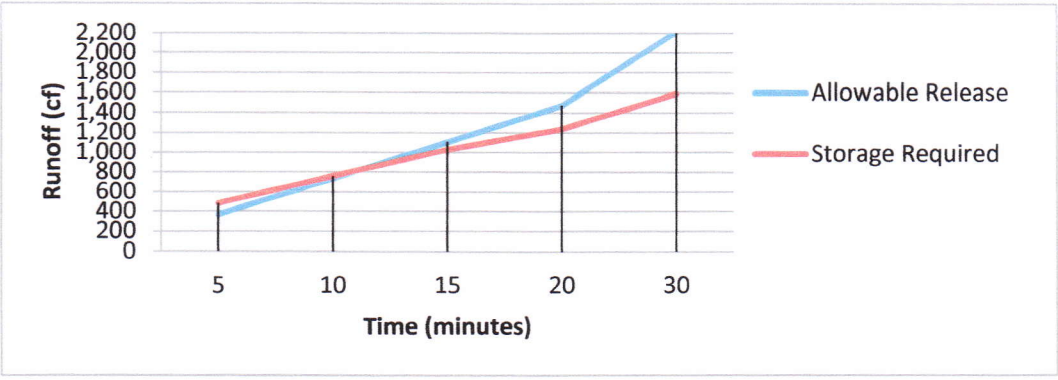
Total Anticipated Improvements - Determine Required Storage Volume:

Intensity values are obtained from the Intensity-Duration Curves in Title MC-15, Maui County Code

Time (min.)	I (in.hr)	Post-Dev. C x A (ac)	Accum. Runoff Vol. (cf)	Allow. Release (cf)	Storage Required (cf)	Comments
(1)	(2)	(3)	(4)	(5)	(6)	
5	**7.7**	**0.21**	**481.06**	**369.00**	**112.06**	**PEAK RUNOFF**
10	6.1	0.21	762.20	738.00	24.19	
15	5.5	0.21	1,030.84	1,107.00	-76.16	
20	5.0	0.21	1,237.01	1,476.00	-239.00	
30	4.3	0.21	1,593.11	2,214.00	-620.89	
45	3.6	0.21	2,041.06	3,321.00	-1,279.94	
60	3.0	0.21	2,249.10	4,428.00	-2,178.90	
90	2.4	0.21	2,698.92	6,642.00	-3,943.08	

(COL 4) = (COL 1) x (COL 2) x (COL 3) x (60 sec./min.)

(COL 5) = $Q_{allowable}$ x (COL 1) x (60 sec./min.)

(COL 5) = (COL 4) - (COL 5)

Total Anticipated Improvements Storage Req'd (cf): **112** **cubic feet**